

**Environmental Assessment  
Provide New Hangar Space  
For The Wright B Flyer**

**Wright-Patterson Air Force Base**

**Wright-Patterson Air Force Base  
88th Air Base Wing  
Environmental Management Division**

**December 2005**

# Report Documentation Page

Form Approved  
OMB No. 0704-0188

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1. REPORT DATE <b>DEC 2005</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2005 to 00-00-2005</b>	
4. TITLE AND SUBTITLE <b>Environmental Assessment Provide New Hangar Space For The Wright B Flyer Wright-Patterson Air Force Base</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>88th Air Base Wing, Environmental Management Division, Wright-Patterson AFB, OH, 45433</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

**FINDING OF NO SIGNIFICANT IMPACT  
AND  
FINDING OF NO PRACTICABLE ALTERNATIVE  
PROVIDE NEW HANGAR SPACE FOR WRIGHT B FLYER  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO**

Pursuant to the Council on Environmental Quality regulations for implementing procedural provisions of the National Environmental Policy Act (NEPA) (40 Code of Federal Regulations [CFR] 1500-1508), the 88 Air Base Wing Civil Engineer, Environmental Management Division has conducted an Environmental Assessment (EA) of probable consequences for providing new hangar space for the Wright B Flyer at Wright-Patterson Air Force Base (WPAFB), Ohio. The Valentine Wright B Flyer, a replica of a 1911 Wright Brothers airplane, has been designated as a legacy piece in conjunction with the Dayton Aviation Heritage Historical Park and the Huffman Prairie Flying Field (HPFF), a National Historic Landmark that is a key component of the park. The flyer replica is currently stored from May-Oct in Building 30145, Area C, WPAFB. This building is situated on the East Ramp flight line of Patterson Field.

The project need is to eliminate serious constraints associated with the current flyer storage scenario at Building 30145. The first problem is use of premium flight line space for a non-flight line related activity, including limiting the potential uses of Building 30145 when the Wright B Flyer is not at WPAFB (Nov-Apr). The second problem involves transporting the plane along the active flight line, which requires security, airfield operations, plane owners and HPFF coordination. These considerations require manpower from Base Operations, Security Forces, Wright B Flyer, Inc. and the National Park Service. And lastly, the current storage site is remote from the purpose and context of the Wright B Flyer, which is in relationship to the HPFF.

**Description of Proposed Action and Alternatives**

The proposed action would include construction of a 60 foot by 70 foot hangar building at the location of the former Combat Arms Training and Maneuvers (CATM) facility off Hebble Creek Road in Area C. The building would include 110-volt electric service and a fire suppression system. A water line tap-in would be needed to support the fire suppression system and would be approximately 1,000 feet in length. This would require plans approval from the Ohio EPA for the installation of a new water main. Lastly, a gravel road or access lane from Hebble Creek Road and a small parking area would be constructed (EA Section 2.4.1, page 2-2).

Alternative one proposes constructing the new hangar near the junction of Symmes Road and Marl Road adjacent to the HPFF. As with the proposed action, this requires the installation for a new water line of considerable more distance than the proposed action (EA Section 2.4.2, page 2-4). Plans approval from Ohio EPA would be required.

Under the no action alternative, current operations and space utilization would remain. No new construction would occur (EA Section 2.4.3, page 2-4).

The proposed action, alternative one and the no action alternative have been designated as the only reasonable alternatives for evaluation. No other significant action or remote storage location alternatives were deemed as reasonable. The use of an existing facility on base was eliminated from further analysis because all storage facilities that would meet operational criteria are located on the active flight line and comprise premium flight line space. Not providing storage space at WPAFB was also eliminated from further analysis since it would violate the existing memorandum of agreement with NPS. Any other alternative would require even more transport, logistics, time and manpower to accomplish the purpose (EA Sections 2.2 and 2.3, pages 2-1 - 2-2).

### **Environmental Consequences**

All three alternatives would have minimal environmental impacts on the following issues: biological resources, water resources, wetlands, air quality and noise (EA Sections 4.2, 4.3, 4.8, and 4.9).

### **Floodplain (EA Section 4.3.3, Page 4-4 - 4-5)**

The project area lies within the 100-year floodplain elevation of 814.3 feet above mean sea level. Construction activities from the proposed action and alternative one would include site preparation and grading. Any additional fill material would be obtained from within the 100-year floodplain. Therefore impacts from the proposed action and alternative one due to loss or gain of soils within the retention basin are expected to be minimal. The Miami Conservancy District (MCD), who regulates the flood control basin up gradient of Huffman Dam, has reviewed the proposed location and has determined the project is compliant with their current policy. The no action alternative would have no impact on floodplains since ground disturbing activities would not occur.

### **Installation Restoration Program (IRP) (EA Section 4.4, Page 4-6)**

While no IRP sites are known to exist in proposed locations, there is a potential for contaminated ground water to be encountered when underground utilities are installed. This is because contaminated groundwater from Operable Unit 4 is potentially migrating towards the hanger site. Therefore, precautions, which include sampling, disposal and health and safety requirements, need to be taken during construction activities. The no action alternative would have no impact on IRP since no ground disturbance would occur.

### **Land Use (EA Section 4.5, Pages 4-7 - 4-8)**

The proposed action is consistent with WPAFB area land use plans and is consistent with HPFF purpose and context. Some potential open space would be lost, but the hangar represents an enhancement to the purpose and uses of the adjoining HPFF. There would be a minor, short term impact to visitor experience during the construction phase. There would be no impact to land use from alternative one. The no action alternative would have a minor, long term impact on land use since the current storage scenario would continue to represent a non-conforming use that has the potential to become increasingly disruptive in the future.

### **Soils (EA Section 4.6, Page 4-8)**

The proposed action and alternative one would disturb more than one acre of land and would require a notice of intent (NOI) for ground disturbance under the storm water Phase II rules. A

project storm water management plan including erosion control, drainage and dust controls would be required as part of the NOI. There would be a minor, short term impact to soils if the proposed action or alternative one were implemented. There would be no impact from the no action alternative since no construction would occur.

#### **Cultural Resources (EA Section 4.7, Pages 4-9 - 4-10)**

There are no known archaeological resources in the proposed action project area and no such resources are anticipated to be impacted. Minor potential impacts from the proposed action, including aesthetic considerations related to siting and construction of the new hangar, would be minimized through design and through coordination with the base cultural resource program manager. There would be a potential minor impact to the interurban rail bed from the implementation of alternative one. Proper siting and design would minimize any potential adverse impact to this historic resource. The no action alternative would have no impact on cultural resources. The current hangar storage building is eligible for the National Register of Historic Places; however, storage of the flyer has no adverse cultural resource effect on the building.

#### **Cumulative Impacts (EA Section 4.14, Pages 4-14 - 4-15)**

Other Federal actions that have occurred or are planned to occur at WPAFB include demolition of the former CATM facilities and site remediation, enclosing Open Ditch #5 at the western portion of the active flight line, the 445 Airlift Wing conversion from C-141C to C-5 aircraft, and realigning visitor circulation at HPPF. Each of these projects has undergone an environmental assessment that resulted in a Finding of No Significant Impact/ Finding of No Practicable Alternative (FONSI/FONPA).

The CATM demolition/site remediation is expected to conclude in 2005. The Open Ditch #5 project was completed in 2004. The C-5 conversion project is scheduled for implementation in 2006. The project to realign visitor circulation at HPPF remains in the planning stages, awaiting funding.

The ditch project and demolition work would result in minimal adverse impacts to the 100-year floodplain. The C-5 conversion project would result in a minor adverse impact to the floodplain. MCD and WPAFB policy would be strictly followed that requires any additional fill material be obtained from within the same floodplain basin to realize a net zero increase of fill material within the 100-year floodplain. Therefore, impacts due to loss or gains of soils within the retention basin are expected to be minimal. As such, this action, when combined with other actions completed or proposed for WPAFB would result in no cumulative impacts to the 100-year floodplain.

#### **Public Notice**

The document was made available for public review from 17 Jun - 16 Jul 05. No public comments were received.

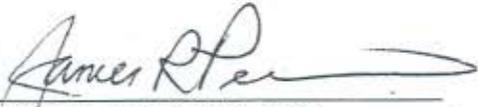
#### **Finding of No Practicable Alternative (FONPA)**

Taking the above information into consideration, pursuant to Executive Order (EO) 11988, *Floodplain Management*, EO 11990, *Protection of Wetlands*, and the authority delegated by

Secretary of the Air Force Order 791.1, I find there is no practicable alternative to the actions proposed in floodplains and wetlands and the proposed action includes all practicable measures to minimize harm to the environment. This finding fulfills both the requirements of the referenced EOs and the Air Force *Environmental Impact Analysis Process* requirement (32 CFR 989.14) for a Finding of No Practicable Alternative.

**Finding of No Significant Impact (FONSI)**

The proposed action entails constructing a new hangar facility at the site of the former CATM facility in Area C, WPAFB. The alternative one location is near the intersection of Symmes Road and Marl Road in Area C. Under the no action alternative, no construction would occur and current storage conditions would remain unchanged. Based on my review of the facts and analysis contained in the EA, I conclude that the proposed action, alternative one and the no action alternative would not have a significant impact. Accordingly, the requirements of the NEPA, the Council on Environmental Quality Regulations and 32 CFR 989 have been fulfilled and an environmental impact statement is not required and will not be prepared.

  
\_\_\_\_\_  
JAMES R. PENNINO, SES  
Command Civil Engineer  
Directorate of Installations and  
Mission Support

19 Jan 06  
\_\_\_\_\_  
Date

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## **List of Acronyms/Abbreviations**

ACM	Asbestos Containing Material
AFI	Air Force Instruction
AFPD	Air Force Policy Directive
AFMC	Air Force Material Command
AICUZ	Air Installation Compatible Use Zone
APZ	Accident Potential Zone
ASC	Aeronautical Systems Center
bgs	below ground surface
BHE	BHE Environmental, Inc.
BTEX	benzene, toluene, ethylbenzene and xylene
BWMP	Basewide Monitoring Program
CAAA	Clean Air Act Amendments
CATM	Combat Arms Training and Maintenance Facility
CBOD	Carbonaceous Biochemical Oxygen Demand
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CFS	cubic feet per second
CO	carbon monoxide
CRMP	Cultural Resources Management Plan
CRPM	Cultural Resources Program Manager
DAHNP	Dayton Aviation Heritage National Historical Park
dbh	diameter breast high
dB	decibel
DO	Dissolved Oxygen
DOC	Department of Commerce/Bureau of Census
DoD	U.S. Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FCCATMC	Fully Contained Small Arms Range Complex
FY	Fiscal Year
gpm	gallons per minute
HAP	Hazardous Air Pollutant
HPFF	Huffman Prairie Flying Field
ICI	International Consultants Incorporated
INRMP	Integrated Natural Resource Management Plan
IRP	Installation Restoration Program
IT	IT Corporation
LBP	Lead-based paint
LF	Landfill
MCD	Miami Conservancy District
MILCON	Military Construction Program
MSA	Metropolitan Statistical Area
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act

## List of Acronyms/Abbreviations (continued)

NOI	Notice of Intent
NO <sub>x</sub>	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
O <sub>3</sub>	Ozone
OAC	Ohio Administrative Code
ODNR	Ohio Department of Natural Resources
OEPA	Ohio Environmental Protection Agency
ORC	Ohio Revised Code
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
PCBs	Polychlorinated Biphenyls
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter (less than 10 microns in diameter)
PM <sub>25</sub>	Particulate Matter (less than 25 microns in diameter)
PSD	Prevention of Significant Deterioration
PTI	Permit to Install
RAPCA	Regional Air Pollution Control Agency
RI	Remedial Investigation
ROD	Record of Decision
CATM	Small Arms Range
SCS	Soil Conservation Service
SHPO	State Historic Preservation Office
SO <sub>2</sub>	Sulfur Dioxide
SWPPP	Storm Water Pollution Prevention Plan
TCE	Trichloroethene
T&E	Threatened and Endangered
tpy	tons per year
USAF	U.S. Air Force
USACOE	U.S. Army Corps of Engineers
USC	United States Code
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VOC	Volatile Organic Compound
WPAFB	Wright-Patterson Air Force Base

## 1.0 Purpose and Need for Action

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This environmental assessment (EA) discusses the proposed action by 88 ABW/CE at Wright-Patterson Air Force Base (WPAFB) of relocating the Valentine Wright B Flyer from its current flight line location in Building 30145 to a location that would minimize or eliminate the negative impacts associated with the current storage site. The flyer is displayed on selected weekends from May to October each year in a display tent at Huffman Prairie Flying Field (HPFF), a National Historic Landmark that is part of the Dayton Aviation Heritage National Historical Park (DAHNP). This EA has been performed in accordance with the National Environmental Policy Act (NEPA) of 1969, 40 Code of Federal Regulations (CFR), Part 1500, the Council on Environmental Quality (CEQ) regulations implementing NEPA, and the U. S. Air Force (USAF) Environmental Impact Analysis Process (EIAP) [32 CFR Part 989]. This EA has also been developed simultaneously with the Draft General Management Plan Amendment (GMPA) for the Dayton Aviation Heritage National Historical Park Environmental Impact Statement (EIS) (October 2004). The GMPA EIS identifies current constraints and proposes management guidance for all the sites of the national park for the next twenty years. While it does identify the need for a new location for the Valentine Wright B Flyer, it only generally suggests new locations. The draft GMPA EIS is currently scheduled for public release in late 2005.

The purpose of the proposed action is to free up critical hangar space. The flyer is currently stored in Building 30145 in Area C at WPAFB which is a restricted access area on the active flight line, and ties up valuable flight line space that could be put to more appropriate mission-related use. The storage scenario has proven to be cumbersome, complicated and inefficient. A new storage location is needed to alleviate or solve the existing issues.

The Valentine Wright B Flyer is a museum-quality replica of the original 1911 Wright Brothers Wright B Flyer and must be stored inside to prevent damage from the elements. It is owned and maintained by Wright B Flyer, Inc, a private, non-profit organization, and made available to the National Park Service (NPS) for static display at the HPFF on selected weekends during May to October each year. A memorandum of understanding between the NPS and the Wright B Flyer, Inc. governs the relationship and defines the conditions for display. The Air Force entered into a memorandum of agreement (MOA) with the NPS in 2002, identifying Building 30145 as the best available facility for storage of the flyer at night and on days it was not on display at a display tent at HPFF (USDI, NPS, GMPA EIS, 2004). During November to April of each year, the flyer is stored at the Wright B Flyer, Inc. facility at an off base location.

The current storage scenario requires use of the WPAFB facilities for non-airfield related functions, causes WPAFB security and airfield operations interruptions, and requires manpower commitments from multiple organizations, including security forces, base civil engineering and airfield operations. Additionally, transporting the flyer to the display tent presents safety issues and the current storage site requires a lengthy transit to and from the intended display site. The replica flyer is towed by truck in the morning

and returned in the late afternoon. It must be towed across the active runways and taxiways to a gate in the airfield perimeter fence. The airfield gate must be opened and closed each and every time the flyer passes through. Volunteers from Wright B Flyer, Inc. and NPS staff require about an hour for transport in each direction.

Relocating the flyer to another location would free up an airfield hangar facility for mission-related operations, reduce Air Force manpower requirements, and reduce or eliminate flight line safety issues, as well as significantly reduce transport time.

## **1.1 Project Description**

WPAFB is located in the southwest part of Ohio in Greene and Montgomery counties, about 8 miles east of downtown Dayton (Figure 1). The Base covers some 8,145 acres with a variety of land uses ranging from administrative and residential to research and industrial. WPAFB is divided into three functional areas: A, B, and C. Area A is primarily an administrative area, Area B is primarily research, and Area C includes airfield operations (ICI/SAIC, 1995; Woolpert, 2001).

Building 30145 is located in Area C, along the Patterson Field flight line (Figure 2). This hangar is a centrally located flight line facility that serves a number of functions related to the flight line. Evolving missions at WPAFB make it crucial that premium flight line space be available for flight line related activities. Storage of the replica Wright B Flyer at this location, which was implemented in 2003, has resulted in a number of concerns and issues that render this scenario impractical as a long-range solution. 88 ABW/CE needs the entire building year around for critical equipment storage. Building 30145 is remote from the intended display site at HPFF and moving the flyer across the active flight line and taxiways requires base manpower. Therefore, space, transport, manpower, exposure, safety and security issues associated with the current storage scenario have driven the need for an alternate solution.

To address these concerns and issues, this EA explores a series of alternative storage locations for the replica flyer. Options include utilizing other existing hangar facilities, constructing a new hangar at two different base locations, or to not provide storage space at any on base location.

## **1.2 Decisions Needed**

The decision to be made is to determine whether using Building 30145 as hangar space for the replica flyer is the best solution, or whether building a new hangar facility on the former Combat Arms Training and Maintenance (CATM) site, utilizing another existing facility, constructing a new hangar at some other site on base or choosing not to hangar the replica flyer at any base location would be the best solution. Measures to mitigate any adverse effects are recommended and whether a determination of a Finding of No Significant Impact (FONSI) /Finding of No Practicable Alternative (FONPA) is appropriate, or whether the action requires further analysis in an EIS.

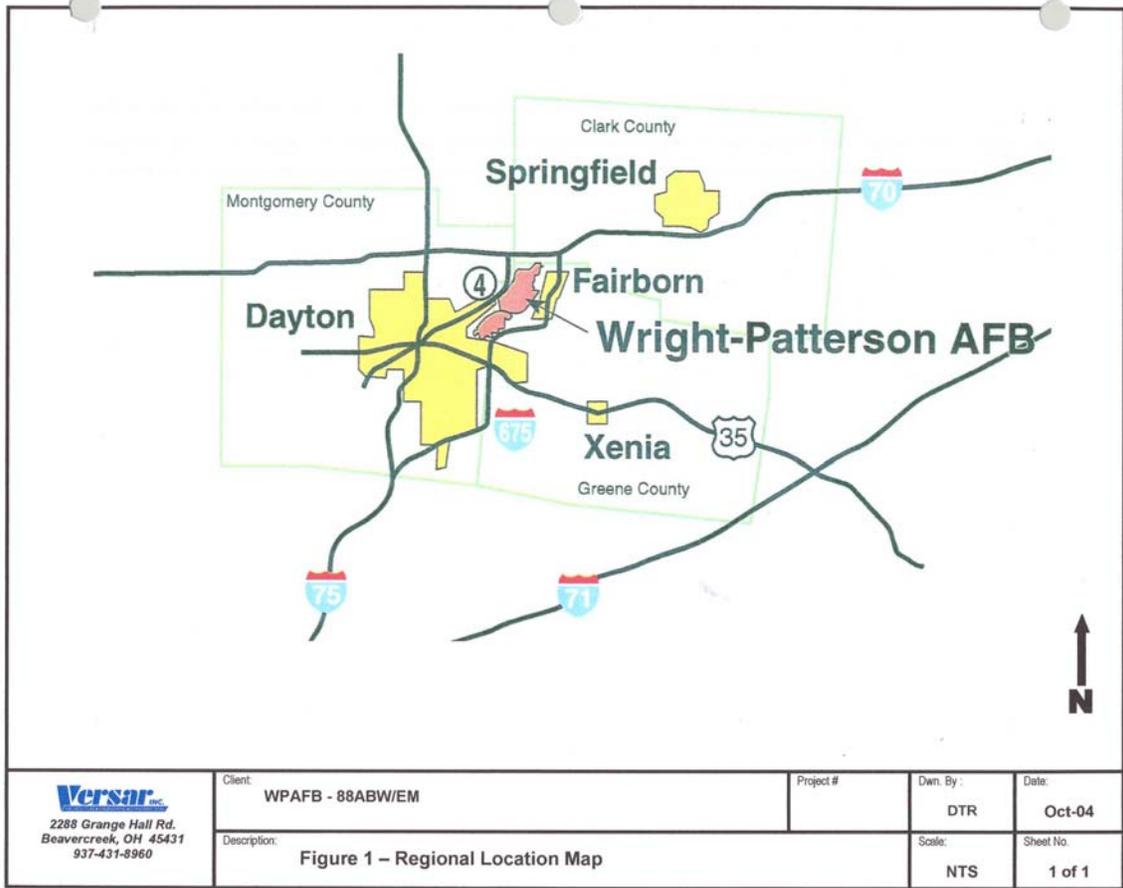


Figure 1

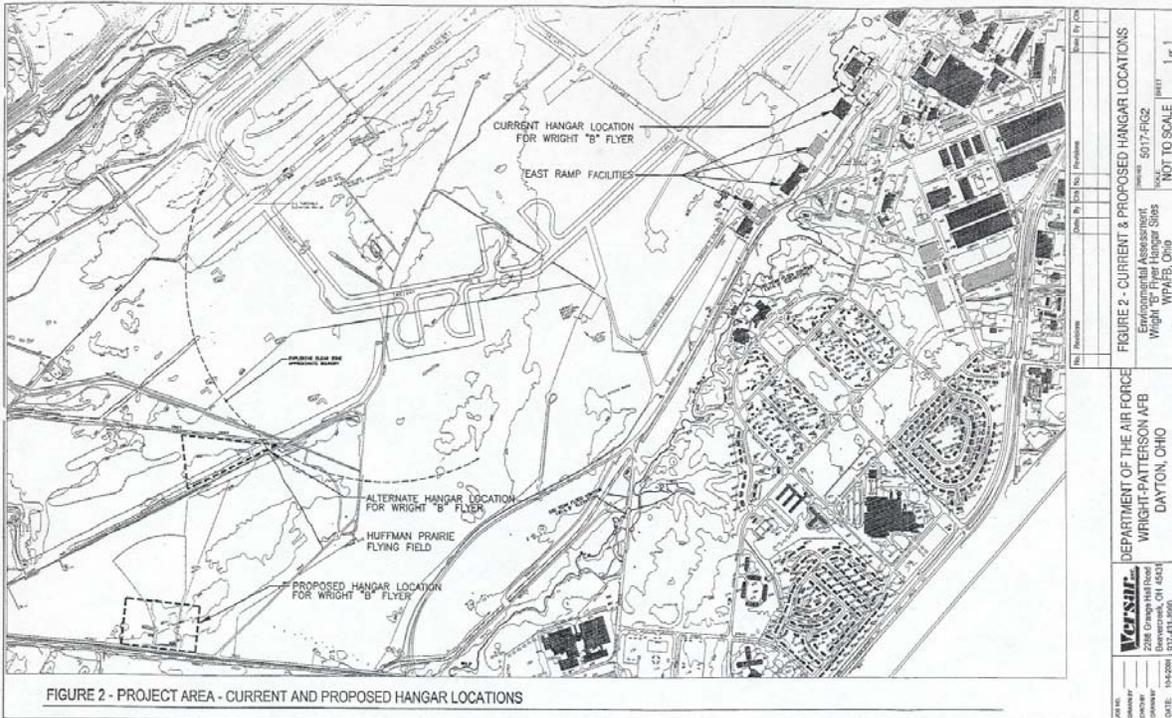


Figure 2

### **1.3 Scope of Environmental Analysis**

This EA analyzes potential environmental consequences associated with relocating the replica flyer to a new location by constructing a new hangar facility at two different locations as well as the consequences of utilizing an existing hangar facility. Consequences of the No Action alternative and not providing storage space at WPAFB are also considered. The primary areas of concern associated with the proposed action and alternatives include:

- water resources
- natural resources
- land use
- transportation/traffic
- cultural/historic resources
- health and safety

Other areas of potential impact include:

- air quality
- noise
- socioeconomics
- IRP sites
- geology/soils

### **1.4 Regulatory Requirements**

The USAF must comply with numerous statutes, regulations, and policy/instruction directives. These are largely embedded in the EIAP and NEPA evaluation processes. One permit and one notice, issued by the Ohio Environmental Protection Agency (OEPA), apply to the Proposed Action and Alternative One. The notice required is a Plans Approval to install water supply mains, and a Notice of Intent (NOI) is a permit for ground disturbance required under Phase II of NPDES rules. No other environmental permits or notices are required for the relocation of the replica flyer to a new storage location. Because of the potential to impact the HPFF, any alternatives involving construction near HPFF would require coordination with and regulatory review by the SHPO. Coordination with the Miami Conservancy District (MCD) is required for any action that would involve construction within the 100-year floodplain. The U.S. Fish and Wildlife Service (USFWS) coordination would also be obtained.

## **2.0 Description of Proposed Action and Alternatives**

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### **2.1 Introduction**

This section presents a description of alternatives that were evaluated for potential environmental impacts associated with relocating the replica flyer to another storage location. For purposes of this document, operational criteria were used to screen potential alternatives. Operational criteria are important to design and location and affect the degree to which the Proposed Action and other alternatives can meet project needs and objectives. Operational criteria identified for the relocation action are:

- Free up flight line hangar space for use by 88 ABW/CE year round
- Provide at least 4200 square feet of hangar storage space with a gravel access road and approximately 1000 square feet of space for parking
- 110-volt electric service for lighting
- Water service line to support a fire suppression system
- No more than 15 minutes transport time from storage facility to HPFF
- Storage facility must be outside of established explosive clear zones

### **2.2 Process Used to Formulate Alternatives**

Given the need to eliminate serious constraints associated with the current storage situation in Building 30145, the base came up with a series of possible solutions. Relocating the replica flyer to another existing facility is one alternative. Constructing a new storage facility was also identified as a possible solution. Given the proximity of the airfield to HPFF and the existing uses of some of the land adjacent to HPFF, the options for a new construction site were fairly limited. Two possible locations were identified. Another alternative identified was to not provide storage space at any location at WPAFB.

Lastly, the No Action alternative was also analyzed. Under the No Action alternative, construction of a new hangar or relocation of the aircraft to another facility would not occur. Building 30145 would continue to be used as the storage site. The No Action alternative also serves as a baseline for comparative evaluation of potential environmental consequences.

## **2.3 Alternatives Eliminated from Further Study**

Based on the operational criteria established for the proposed action, using existing facilities was eliminated from further consideration because all existing facilities that could be utilized for storage are located on the active flight line and comprise premium flight line space. Transport of the replica flyer would still cause safety and security issues and require at least 30 minutes for each trip. Not providing storage space at WPAFB was also eliminated from further consideration since it would violate the existing MOA with the NPS. This alternative would also violate the terms and conditions under which the community purchased the replica flyer for display on base.

## **2.4 Alternatives Considered**

### **2.4.1 Proposed Action: Construct New Hangar at Former CATM Site**

The Proposed Action would include construction of a 60 foot by 70 foot storage only hangar building at the location of the former CATM site off Hebble Creek Road in Area C (Figure 3). The replica flyer would be stored in the new facility and transported a short distance to a display tent where it could be viewed by the public during daylight hours. The building would include 110-volt electric service, a manually operated hangar door, a personnel entry door, lighting, ceiling fans, and a lockable storage area. A water line would need to be installed from the nearest water main in order to support a fire suppression system. The tap-in would require approximately 1,000 feet of a new water line. No restrooms or other amenities are planned. The facility would also require a gravel road or access lane from Hebble Creek Road and a small parking area. Total area required would be approximately 6,000 square feet.

The former CATM was slated for total closure in 2004 as a new, fully contained range has been constructed in Area A. The three range buildings, 30883, 30886, and 30887 are scheduled for demolition. Following demolition, a site investigation will be conducted to determine potential lead contamination. The extent of any contamination and prospective remediation requirements/actions, have not been determined. The CATM facility operated from the 1960s until 2004 and some level of lead contamination at the site is likely. These CATM program activities have been described and assessed in the Environmental Assessment for the Fully Contained Small Arms Range Complex (USAF, 2002). This is a MILCON project which has been fully funded to accomplish all of the remaining tasks by sometime in 2005 (WPAFB, 2004, 1).

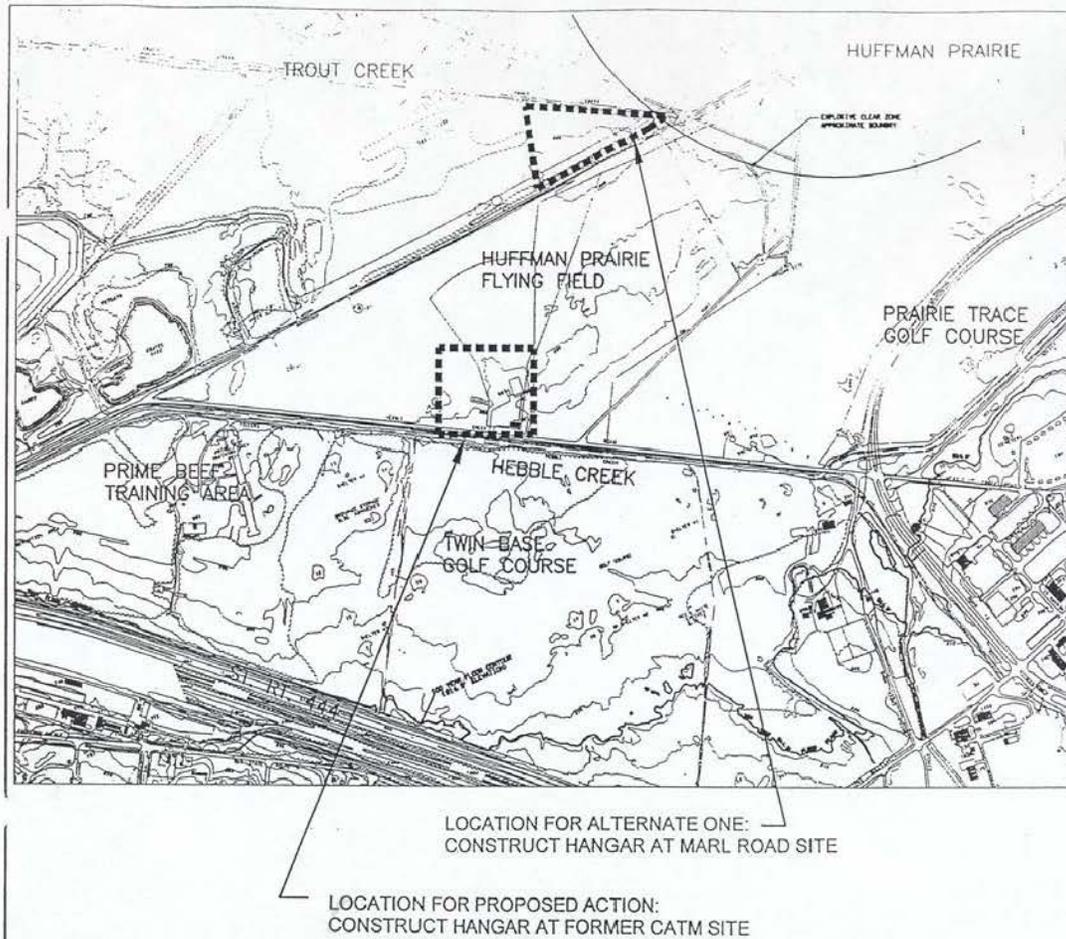


Figure 3 – Vicinity of Proposed Action and Alternate One

**Versar**  
 2288 Grange Hall Road  
 Beavercreek, OH 45431  
 937-431-8960

DEPARTMENT OF THE AIR FORCE  
 WRIGHT-PATTERSON AFB  
 DAYTON, OHIO

Figure 3

### **2.4.2 Alternative One: Construct New Hangar at Marl Road Location**

An alternative location for construction of the new storage only hangar has been proposed near the junction of Marl Road and Symmes Road (Figure 3). The location is along Marl Road extending southwest from Symmes Road junction. This location is just beyond the airfield explosive safety clear zone, which essentially excludes any structures and affects any activities east of this junction (WPAFB, 2005-1).

The Marl Road location abuts the HPFF and is proximate to the original Simms Station on the historic Ohio Electric Company's Dayton Springfield and Urbana Interurban Rail Line, which parallels Marl Road (USDI, NPS, GMPA EIS, 2004; IT Corporation, 1999/2003). The location is also characterized by fence row tree lines and wooded areas that offer potential visual buffers for the HPFF. The location also includes the current HPFF visitor parking lot and interpretive kiosks.

### **2.4.3 No Action Alternative**

Under the No Action alternative, current operations and space utilization in Building 30145 would remain. No new construction or relocation would occur.

Table 2-1  
Comparative Summary of East Ramp Facilities

Facility	Building Use/ Occupant	Description of Facility	Suitable for Storage?	Status of Future Use	Comments
30145	Open Storage	88 ABW/CE equipment storage/seasonal storage of Wright B Flyer	Yes	88 ABW/CE needs entire building for other flight line activities	Current seasonal storage of flyer Transport issues not resolved
30103	Open Skies Media Center	Offices and processing facilities	No	Current user projected to remain	
30268	C135E maintenance hangar	Offices with maintenance hangar	Yes	Current user projected to remain	Current user requirements need entire building
30148	54 <sup>th</sup> Air Lift C21 maintenance	Offices with maintenance hangar	Yes	Current user projected to remain	Current user requirements need entire building
30101	445 <sup>th</sup> Airlift Wing C141 Flight Training School	Offices, classrooms and flight simulation facilities	No	Building will continue to be occupied by 445 <sup>th</sup> Mission Support Group	
30093	Air Ground Equipment Maintenance	Equipment maintenance facilities with small bays	No	Current user projected to remain	
30091	Transient Maintenance Hangar	Hangar used as on call facility for immediate repair of visiting aircraft	No	Current user projected to remain	
30144	Hush House	Storage of equipment; building has limited hangar space	No	Current user projected to remain	
30135	Storage Shed	Storage Shed	No	Current user projected to remain	

Table 2.1

## **2.5 Comparison Matrix of Alternatives**

The potential environmental consequences, associated with the Proposed Action, Alternative One, and the No Action alternative are summarized in Table 2-2. The information is presented in a brief, concise format based on the analyses detailed in Sections 3 and 4 of this EA.

**Table 2.2  
Comparative Summary of Environmental Consequences**

**1 of 5**

<b>Resource/Area</b>	<b>No Action Alternative</b>	<b>Alternative One</b>	<b>Proposed Action</b>
Vegetation	<u>Short Term:</u> No impact	<u>Short Term:</u> Negligible impact from construction activities.	<u>Short Term:</u> Negligible impacts from construction activities.
	<u>Long Term:</u> No impact	<u>Long Term:</u> Minor impact due to loss of potential green space.	<u>Long Term:</u> Minor impact due to loss of potential green space.
Wildlife	<u>Short Term:</u> No impact	<u>Short Term:</u> Negligible impact from construction activities.	<u>Short Term:</u> Negligible impact from construction activities.
	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact
Threatened & Endangered Species	<u>Short Term:</u> No impact	<u>Short Term:</u> Negligible impact; no threatened or endangered species at the project location, but primary habitat abuts location.	<u>Short Term:</u> Negligible impact; no threatened or endangered species at the project location, but primary habitat abuts location.
	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact
Wetlands	<u>Short Term:</u> No impact	<u>Short Term:</u> No impact no wetlands occur at the project location.	<u>Short Term:</u> No impact; no wetlands occur at the project location.
	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact

**Table 2.2  
Comparative Summary of Environmental Consequences**

2 of 5

<b>Resource/Area</b>	<b>Alternative: No Action</b>	<b>Alternative One</b>	<b>Proposed Action</b>
Groundwater	<u>Short Term:</u> No impact	<u>Short Term:</u> No impact due to implementation of best management practices	<u>Short Term:</u> No impact due to implementation of best management practices
	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact
Surface Water	<u>Short Term:</u> No impact	<u>Short Term:</u> Minimal impact from increased surface runoff during construction activities.	<u>Short Term:</u> Minimal impact from increased surface runoff during construction activities.
	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact
Floodplain	<u>Short Term:</u> No impact	<u>Short Term:</u> Minor impact to floodplain; project has MCD concurrence.	<u>Short Term:</u> Minor impact to floodplain; project has MCD concurrence.
	<u>Long Term:</u> No impact	<u>Long Term:</u> Minor impact	<u>Long Term:</u> No impact
IRP Sites	<u>Short Term:</u> No impact	<u>Short Term:</u> Minor impact; site occurs within OU5	<u>Short Term:</u> No impact; site will be remediated before construction.
	<u>Long Term:</u> No Impact	<u>Long Term:</u> No impact	<u>Long Term:</u> No impact

**Table 2.2  
Comparative Summary of Environmental Consequences**

**3 of 5**

<b>Resource/Area</b>	<b>Alternative: No</b>	<b>Alternative One</b>	<b>Proposed Action</b>
Land Use	<p><u>Short Term:</u> No impact</p> <p><u>Long Term:</u> Minor impact due to non-conforming use.</p>	<p><u>Short Term:</u> No impact; use conforms with current land use plans and the objectives of the cultural landscape plan.</p> <p><u>Long Term:</u> No impact; use conforms with current land use plans and the objectives of the cultural landscape plan.</p>	<p><u>Short Term:</u> Minor impact due to temporary disruptions to current infrastructure and adjoining land uses.</p> <p><u>Long Term:</u> Minor impact; facility location is consistent with WPAFB master plans, but minor impact to cultural landscape plan/viewshed. Impact would be minimized through siting and design.</p>
Geology and Soil	<p><u>Short Term:</u> No impact</p> <p><u>Long Term:</u> No impact</p>	<p><u>Short Term:</u> Potential minor impacts from excavation of soil during construction phase. Impacts would be minimized with erosion control methods implemented during construction.</p>	<p><u>Short Term:</u> Potential minor impacts from excavation of soil during construction phase. Impacts would be minimized with erosion control methods implemented during construction.</p>
Cultural/Historic Resources	<p><u>Short Term:</u> No impact</p> <p><u>Long Term:</u> No impact</p>	<p><u>Short Term:</u> Minor impact to interurban rail bed. Impact mitigated through siting and design.</p> <p><u>Long Term:</u> Beneficial impact to cultural integrity of HPFF.</p>	<p><u>Short Term:</u> Negligible impact to archeological resources. Impacts would be minimized by consultation with base cultural resource manager.</p> <p><u>Long Term:</u> Minor adverse impact due to aesthetic intrusion on HPFF. Impact would be minimized through siting and design.</p>

**Table 2.2  
Comparative Summary of Environmental Consequences**

4 of 5

<b>Resource/Area</b>	<b>Alternative: No Action</b>	<b>Alternative One</b>	<b>Proposed Action</b>
Air Quality	<p><u>Short Term:</u> No impact</p> <p><u>Long Term:</u> No impact</p>	<p><u>Short Term:</u> Minor impact from emissions generated during construction activities. Impacts would be minimized by using reasonably available dust control measures.</p> <p><u>Long Term:</u> No impact</p>	<p><u>Short Term:</u> Minor impact from emissions generated during construction activities. Impacts would be minimized by using reasonably available dust control measures.</p> <p><u>Long Term:</u> No impact</p>
Noise	<p><u>Short Term:</u> No impact</p> <p><u>Long Term:</u> No impact</p>	<p><u>Short Term:</u> Minor impact</p> <p><u>Long Term:</u> Beneficial impact due to improved safety/security.</p>	<p><u>Short Term:</u> Minor impacts on ambient noise from construction activities.</p> <p><u>Long Term:</u> No impact; facility would be in AICUZ noise zone.</p>
Health & Safety	<p><u>Short Term:</u> No impact</p> <p><u>Long Term:</u> Minor impact due to continued flight line safety/security issues.</p>	<p><u>Short Term:</u> Minor impacts to workers due to accident potential. Impacts would be mitigated with adherence to health and safety regulations.</p> <p><u>Long Term:</u> Beneficial impact due to improved safety/security</p>	<p><u>Short Term:</u> Minor impacts to workers due to accident potential. Impacts would be mitigated with adherence to health and safety regulations.</p> <p><u>Long Term:</u> Beneficial impact due to improved safety/security.</p>

**Table 2.2  
Comparative Summary of Environmental Consequences**

5 of 5

<b>Resource/Area</b>	<b>Alternative: No Action</b>	<b>Alternative One</b>	<b>Proposed Action</b>
Socioeconomics	<p><u>Short Term:</u> No impact</p> <p><u>Long Term:</u> Negligible impact. Loss of additional visitor experience.</p>	<p><u>Short Term:</u> No impact on local economy from revenue generated by construction project.</p> <p><u>Long Term:</u> Beneficial impact to DAHNHP tourism potential and visitor experience.</p>	<p><u>Short Term:</u> No impact on local economy from revenue generated by construction project.</p> <p><u>Long Term:</u> Beneficial impact to DAHNHP tourism potential and visitor experience.</p>
Transportation & Traffic	<p><u>Short Term:</u> No impact</p> <p><u>Long Term:</u> Continued potential adverse impact due to flight line risks/delays and conflicts.</p>	<p><u>Short Term:</u> Potential minor disruptions due to construction</p> <p><u>Long Term:</u> Beneficial impact due to elimination of flight line delay/risks and conflicts associated with flyer transport.</p>	<p><u>Short Term:</u> Potential minor disruptions due to construction.</p> <p><u>Long Term:</u> Beneficial impact due to elimination of flight line delay/risks and conflicts associated with flyer transport.</p>
Utilities	<p><u>Short Term:</u> No impact</p> <p><u>Long Term:</u> No impact</p>	<p><u>Short Term:</u> No impact</p> <p><u>Long Term:</u> No impact</p>	<p><u>Short Term:</u> No impact</p> <p><u>Long Term:</u> No impact</p>

## **3.0 Affected Environment**

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### **3.1 Introduction**

This chapter describes the environment of the project area, (Figure 2) that would be potentially affected by the proposed action or alternatives. This chapter also provides the background information and a basis for the analysis of environmental impact in Chapter 4.0. Where applicable, information from multiple sources including the Draft Environmental Impact Statement, General Management Plan Amendment, Dayton Aviation Heritage National Historical Park, (USDI, NPS, 2004); the Final Environmental Impact Statement for Demolition of Multiple Historic Facilities at Wright-Patterson Air Force Base (USAF, 1997); and the Final Environmental Assessment Fully Contained Small Arms Range Complex, Wright-Patterson Air Force Base (USAF, 2002) is utilized.

### **3.2 Biological Resources**

#### **3.2.1 Vegetation**

Vegetation in the East Ramp portion of project area is limited. This area is covered largely by concrete, asphalt, and building structures. Most vegetation consists of weeds and grass species growing between airfield taxiways and along perimeter fencing and buffers. Some landscape shrubs are found along portions of Skeel Avenue. More natural vegetation is found to the north and west of the project area in conjunction with the Huffman Prairie, the HPFF, along Hebble Creek/Hebble Creek Road, and along Trout Creek and Marl Road. The Twin Base Golf Course and Prime BEEF Training Area abut Hebble Creek to the southwest (Figure 3).

The Proposed Action location (Figure 3) is currently occupied primarily by several buildings and an asphalt driveway and parking lot. Following demolition and possible soil remediation, the site would be revegetated with grass. The location of Alternative One (Figure 3) is characterized primarily by second growth hardwood fence-rows and woodlands, and old fields. Marl Road and the HPFF visitor parking lot occupy portions of the location. Trees at the location include hackberry, ash, black locust, sycamore, oak, and cherry ranging from saplings to 40 inches diameter breast high (dbh), although most are less than 30 inches (dbh). Understory vegetation is totally dominated by Amur honeysuckle.

The old field areas are dominated by mixed grasses and forbs in mowed areas and numerous shrubs, weeds, and saplings in unmaintained areas. The adjacent Huffman Prairie, a 109-acre Ohio Natural Landmark, includes 25 acres of high quality prairie habitat including many relatively rare species (BHE, 2001).

### **3.2.2 Wildlife**

According to the Site-wide Characterization Report (ICI/SAIC, 1995), resident mammals commonly found in commercial/industrial areas and other disturbed areas, such as part of the project area, include eastern cottontail rabbit, groundhog, field mice, chipmunk, opossum, raccoon, and gray squirrel. Birds, such as pigeon, killdeer, English sparrow, starling, robin, and Carolina chickadee are also often observed in this area type. Numerous birds, squirrels, and groundhogs have been sighted in the project area.

These wildlife species can also be found at the preferred and alternate locations along with species more common in the abutting natural areas. These include other songbirds, waterfowl, hawks, owls, fox, game birds such as pheasant, and white-tailed deer. The adjacent Huffman Prairie provides habitat for numerous rare and unusual species including butterflies and moths newly recorded in Ohio (BHE, 2001).

### **3.2.3 Threatened and Endangered Species**

Compliance with Air Force Policy Directive (AFPD) 32-70 and Air Force Instruction (AFI) 32-7064 requires all Air Force properties to protect species classified as endangered or threatened under the Endangered Species Act of 1973 (ESA) and to comply with State of Ohio Law 1531.25 and its implementing regulations for species listed by the state as threatened and endangered (T & E). To comply with these requirements, WPAFB developed an Endangered Species Management Plan, which is part of the base Integrated Natural Resources Management Plan (INRMP) (BHE, 2001).

Currently there are 12 federal- and state- listed T & E species at WPAFB including the Indiana bat (*Myotis sodalis*), bald eagle (*Haliaeetus leucocephalus*), eastern massasauga rattlesnake (*Sistrurus catenatus*), clubshell (*Pleurobema clava*, a mussel), and blazing star stem borer (*Papaipema beeriana*, a moth). There is no primary habitat for the bald eagle or the mussel in the project area.

The eastern massasauga rattlesnake is a federal candidate species usually found in wet areas including wet prairies, marshes, and low lying areas. Candidate species are those that are in danger of extinction within the foreseeable future, but have yet to be included on the list of threatened or endangered species. Although there are no federal protection guidelines established for candidate species, WPAFB has established conservation goals for all areas that could be potential habitat through the base INRMP. WPAFB restricts new development and other ground disturbing activities in areas that provide hibernaculum through review of all civil engineering work requests.

Reports of massasauga sightings have been limited to the Prime BEEF Training Area and Twin Base Golf Course, which constitute primary habitat just southwest

of the preferred location. Both the preferred and alternate locations represent potential habitat.

The Indiana bat is a federally listed endangered species whose primary habitat exists along the lower reaches of Hebble Creek, along Trout Creek and along the Mad River riparian corridor. This species is afforded protection under the ESA including prohibitions on killing, harming or otherwise “taking” the species. Forested areas of WPAFB that provide potential roosting sites for the species are protected from disturbance during the nesting season each year. No trees are allowed to be cut or removed from 15 April to 15 September to prevent any disturbance of the nesting season in accordance with the INRMP. Again, all civil engineering work requests are reviewed for any potential tree cutting or ground disturbance to forested areas.

Indiana bat habitat areas are generally west and north of the project area, although both the proposed action location and alternate Marl Road location are in the Indiana bat primary habitat zone and management area, which include forage and summer nesting areas. Indiana bats have been netted along Trout Creek which abuts the alternate location. Although most of the telemetry fixes on the bats have been west and north of both locations, the alternate location clearly has potential as bat habitat. The preferred roosts for the bats are loose bark trees with 16-inch or greater dbh (BHE, 2001).

The sedge wren (*Cistothorus platensis*), has been identified by the Ohio Department of Natural Resources (ODNR) as a “species” of concern. The Huffman Prairie has been listed as habitat for this species (ODNR, 2004, Correspondence).

Copies of correspondence with the Ohio Department of Natural Resources and the USFWS regarding the potential occurrences of threatened and endangered species in the overall project area are provided in Appendix A.

### **3.3 Water Resources**

#### **3.3.1 Groundwater**

The deep, porous glacial materials along the Mad and Great Miami River valleys are part of the Buried Valley Aquifer, which reaches a maximum thickness of approximately 230 feet and thins to only a few feet at the edges. Water production in this area is very prolific, yielding over 2,000 gallons per minute (gpm) to water supply wells, with the aquifer being very responsive to applied stresses. Data indicates a typical seasonal variation in water levels of approximately 10 feet. The annual low water levels occur during the autumn months (September-October) with annual high levels occurring in spring (April-May). Regional groundwater flow is typically west toward the Mad River and the Huffman Dam well field.

A groundwater investigation was conducted in the vicinity of the project area as part of the Operable Unit (OU) 4 Remedial Investigation (RI) and identified four potential contaminant migration pathways (CH2M Hill, 1994). Groundwater velocity along the four pathways (three pathways in the upper sand and gravel zone and one in the lower sand and gravel zone) ranged from 6.6 to 15.7 feet per day.

The Buried Valley Aquifer is a designated sole source aquifer under United States Code (USC) 1424(e) of the Safe Drinking Water Act (53 FR 15876) and OAC 3745-27-07(B)(5). The Buried Valley Aquifer is a prolific source of water and is highly utilized as a municipal and industrial source of water. Groundwater in the preferred project location occurs at approximately 10 to 12 feet below ground surface (WPAFB, 2004, 2). Groundwater extraction in this vicinity occurs at the "Marksman" Well adjacent to Building 30883. Groundwater at this well is contaminated with trichloroethene (TCE) at a concentration of approximately 4 ug/L. Lead has not been detected in the well (USAF, 2002). This well has been closed and may be removed as part of the CATM demolition project. OU4 RI groundwater investigations indicate low concentrations of target VOCs and metals with the groundwater gradient moving toward the preferred project location.

The project area falls within the City of Dayton's 1-year wellhead protection capture zone. The purpose of the wellhead protection program is to provide control mechanisms to discourage the storage of hazardous chemicals above the aquifer.

### **3.3.2 Surface Water**

WPAFB is located within the Mad River Valley of the Great Miami River Basin. The Mad River empties into the Great Miami River near downtown Dayton, Ohio, approximately 6 miles downstream of the project area. Surface water in the vicinity of the project area includes Hebble Creek to the south and west along Prairie Trace Golf Course and Hebble Creek Road along the Twin Base Golf Course and Trout Creek, a perennial stream, which flows from the west end of the airfield northwest through the project area to the Mad River (Figure 2). Hebble Creek is a perennial stream that runs parallel to Skeel Avenue and Hebble Creek Road, and ultimately discharges into the Mad River.

The Mad River is the primary surface water drainage within this region, draining 625 square miles upstream of Huffman Dam [U.S. Geological Survey (USGS, 1993)]. Huffman Dam was constructed on the Mad River, completed in 1921, to control flooding in nearby Dayton, Ohio.

The proposed action location is located near National Pollutant Discharge Elimination System (NPDES) Outfall 8. Runoff in this area generally drains to

Hebble Creek. The alternate project location is located near NPDES Outfall 14. This outfall area drains to Trout Creek. Outfall 14 is sampled and monitored for the parameters of oil and grease, total suspended and dissolved solids, pH dissolved oxygen (DO), carbonaceous biochemical oxygen demand (CBOD), nitrogen, ammonia, benzene, toluene, ethylbenzene and xylene (BTEX), glycols and a few semi-volatile (WPAFB, 2005-1). Booms have been placed on the stream to protect against spills. Much of the HPFF, and the preferred location itself, drain primarily through overland flow to Trout Creek (IT Corporation/Versar, 2003). Water quality at WPAFB is covered by NPDES permit No. 1I000001, approved in June, 2004 (USDI, 2004, NPS).

Storm water runoff from construction activities can impact water quality by contributing sediment and other pollutants exposed at construction sites. The NPDES Storm Water Program, Phase II rules, addresses construction activities that disturb one or more acre of land. The WPAFB Storm Water program is covered by an individual permit with OEPA (NPDES OH 0010243). The Base Storm Water Pollution Prevention Plan (SWPPP) provides specific best management practices (BMP) to prevent surface water contamination.

Storm water flowing from the substantially impervious surfaces in portions of the project area including streets, taxiways, parking lots, and rooftops (East Ramp) is collected by numerous inlets and routed through a network of storm sewers to Outfalls 13, 14, and 15 (IT Corporation/Versar, 2003).

### **3.3.3 Floodplain**

The Base Civil Engineering Office uses 814.3 feet above Mean Sea Level (MSL) as the 100-year floodplain elevation of the Mad River (ICI/SAIC, 1995). This elevation is based on U.S. Army Corps of Engineers (USACOE) data and HEC-1 modeling. The flood elevation has been verified by the U.S. Geological Survey (USGS) using MCD Data in 1994 which also determined other recurrence interval flood levels. These include the 5-year – 801.4 feet, 10 year – 804.7 feet and 25 year – 808.8 feet. Although the current storage facility, Building 30145 is above the 100-year floodplain elevation, most of the project area lies within this 100-year floodplain.

Both the proposed action and alternate locations lie well below the 100-year floodplain. Parts of both locations are also within the 5 to 10 year floodplain of the Mad River 801.4 feet MSL to 804.7 feet MSL. Parts of the alternate location are even below the 5-year flood level. Much of the alternate location, including the parking lot, was under water on 6 January, 2005 as observed and photographed. Pondered water covered significant portions of the HPFF and the lower Hebble creek Road and Marl Road areas were covered by flood flows. According to the MCD, this January flooding was the 18th highest on record at Huffman Dam. Since the location is within the 100-year floodplain and the Huffman Dam Retarding Basin, any building activity must be coordinated with

and authorized by MCD. Correspondence with the MCD regarding the project is included in Appendix A.

### **3.3.4 Wetlands**

A wetland inventory was conducted on WPAFB in 1999-2000 and updated in 2004 (SHAW and BHE, 2005) and is cited in the INRMP (BHE, 2001). A total of 27 wetlands were delineated in Area C. No wetlands have been identified in Area A. No wetlands are located in the immediate vicinity of the project area. The nearest wetlands are west and south of the preferred and alternate locations in the Prime BEEF area and southwest end of Marl Road, about 0.5 miles distant.

### **3.4 Installation Restoration Program (IRP)**

WPAFB has currently identified 68 IRP sites per the Air Force Restoration Information Management System (AFRIMS). WPAFB has grouped all confirmed or suspected sites requiring investigation and characterization into 11 geographically-based Operable Units (OUs), designated OUs 1 through 11 (IT, 1999). In addition to the 11 OUs, WPAFB addressed basewide issues of groundwater and surface water contamination under the Basewide Monitoring Program (BWMP) (IT, 1995a).

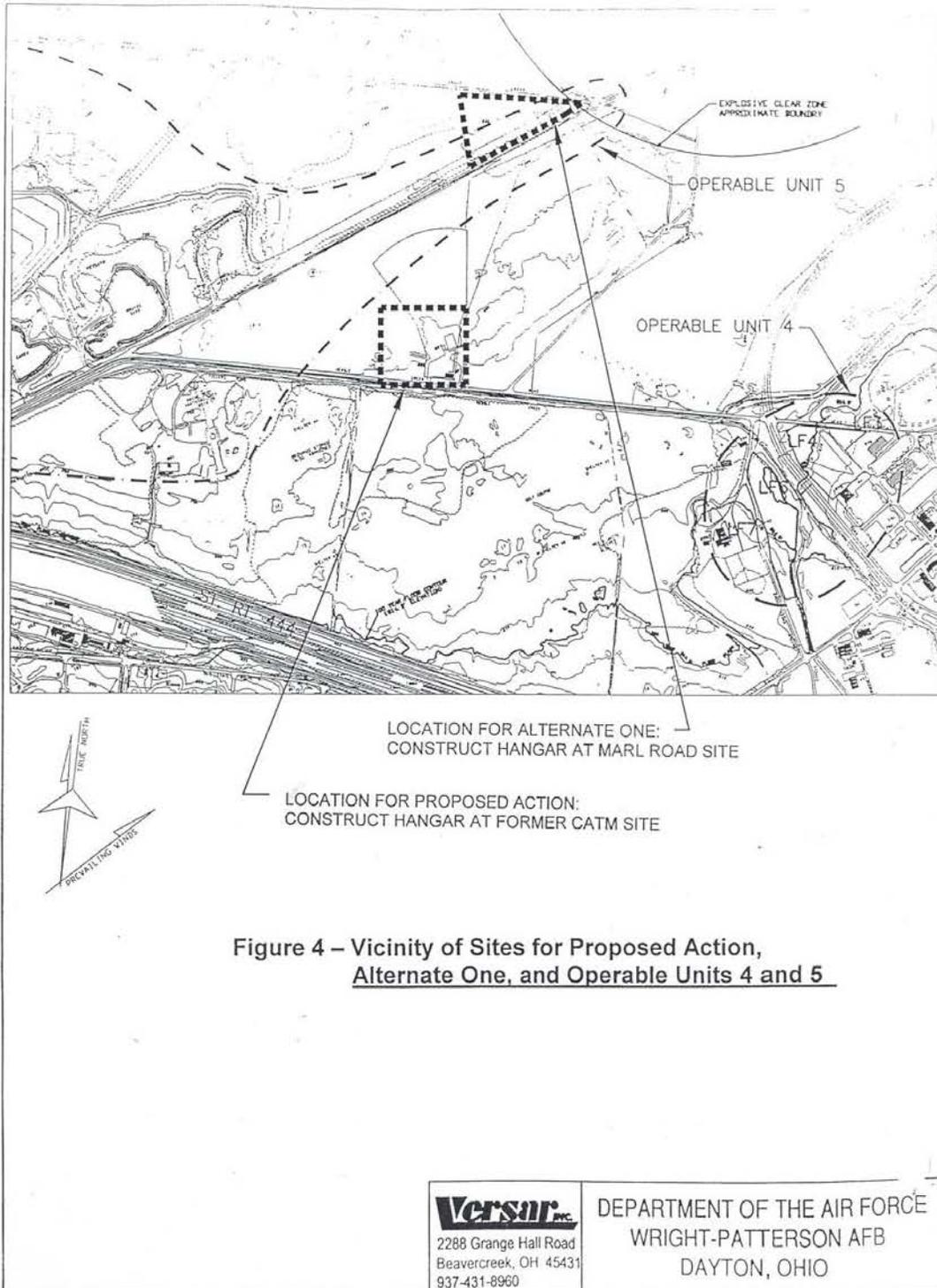
Although most of the project area is not located on an IRP site, the proposed action location is situated between OU4 and OU5 and the alternate location is located at the northeast end of OU5 (Figure 4). OU4 consists of the following IRP sites: Landfill (LF) 3, LF4, LF6, LF7, and the Drum Disposal/Storage Area. Source control measures have been completed at LFs 3,4,6, and 7 under the Basewide Removal Action Plan for Landfill Capping (IT, 1994). Source control measures at LFs 3 and 4 consisted of implementing routine operation and maintenance for landfill gas monitoring and cover maintenance.

Contaminated leachate and groundwater are associated with both LF3 and LF4, with the slow gradient toward the project area. No releases to the nearby streams or ditches have occurred.

Subsequent to the implementation of source control measures at LFs 3, 4, 6 and 7, a Record of Decision (ROD) was prepared and accepted for No Further Action at these sites (WPAFB, 1998).

OU5 consists of the following discrete IRP sites: Landfill 5 (LF5), Fire Training Area 1 (FTA 1), the Gravel Lake Tanks Site (GLTS), and Burial Site 4 (BS4). Results of the RI are presented in *Final Remedial Investigation (RI) Report, Wright-Patterson Air Force Base, Operable Unit 5, Ohio*, (IT, 1995b). An overview of the investigations at OU5 can be found in the *Final Environmental Assessment for the Huffman Prairie Flying Field Cultural Landscape Plan* (USAF, 2001a).

LF5 was capped as a presumptive remedy (WPAFB, 1998). Because sampling data did not indicate a significant risk or threat to public health or the environment, no further action was taken at FTA1, GLTS, and BS4 (WPAFB, 1996). It does not appear that the alternate location includes any of the discrete IRP sites. Groundwater in the Buried Valley Aquifer within OU5 contains nine chemicals at levels above Preliminary Remediation Goals (PRGs). There is no evidence that groundwater from OU5 affects groundwater in the current project location vicinity (WPAFB, 2004, 2).



**Figure 4 – Vicinity of Sites for Proposed Action, Alternate One, and Operable Units 4 and 5**

**Figure 4**

### **3.5 Land Use**

WPAFB encompasses 8,145 acres. It is divided into three areas: A, B, and C. Area A contains primarily administrative activities; Area B focuses on research and development; and Area C is dominated by airfield operations, maintenance, and civil engineering activities. Other major land use categories include housing, industrial, outdoor recreation, and open space. WPAFB Civil Engineering maintains the current and future land use plans for the base – WPAFB General Plan (Woolpert, 2001)

The proposed action location and vicinity are characterized by a variety of land use classifications and facilities including airfield, runway/taxiway/apron, aircraft operations/maintenance, community commercial, industrial, open space and outdoor recreation.

The current storage site, Building 30145, is compatible with the existing runway/taxiway/apron and aircraft operations/maintenance designations. Planned future land use in this area continues the existing uses and areas. These activities and use of facilities in the East Ramp area may become more intensive in conjunction with mission changes and relocation following the BRAC 2005 process (WPAFB, 2005-2).

The proposed action location is currently designated as an industrial land use, which reflects its long-time use as a small arms range. Nearly all of the surrounding area is classified as open space (Huffman Prairie) or outdoor recreation (golf courses, HPFF). Future land use remains essentially the same, but with some of the open space shifted to outdoor recreation. This change reflects the development of the HPFF and the DAHNHP. Although the designation for the proposed action location remains industrial, once the range is demolished, the location would essentially revert to outdoor recreation.

The alternate hangar location at Marl Road is currently classified as outdoor recreation and open space. Part of the location is used as the Trout Creek licensed shooting preserve during the hunting season.

In addition to the WPAFB General Plan (Woolpert, 2001), which provides a general land use framework for the base, Area and Sub Area Plans are routinely updated to account for future land use, facility, and infrastructure needs in a 15 year horizon. An East Ramp Sub Area Plan has been developed which includes some projects currently underway or already completed (WPAFB, 2004, 3). The future plans call for continuation and expansion of runway/taxiway/apron areas as potential ramp expansions and aircraft operations/maintenance areas/functions to support flight line mission redevelopment.

Given the locational relationship between both proposed construction alternatives and the airfield, various operational constraints have been established in the vicinity. These include AICUZ noise contours, quantity distance (Q/D) zones which refer to hazardous/explosive cargo areas, and accident potential zones (APZ).

The proposed action location is within the inner most AICUZ noise zone and the current hangar building is within or abuts a Q/D zone. The northern edge of the alternate Marl Road location is within or abuts the airfield APZ. The Q/D clear zones associated with the airfield hazardous cargo pads are just east of the alternate location.

A cultural landscape report and plan has been prepared by the NPS for the HPFF (USDI, 2002 NPS). This report details the land use and landscape history of HPFF and surrounding vicinity. It also assesses the potential for and makes recommendation for treatment and restoration of the HPFF landscape vicinity and facilities.

In short, the landscape has changed relatively little since the 1904-1905 time frame of the historic context. The level, open, and limited development context of the HPFF area create a broad viewshed that should be protected into the future, including a maintained buffer zone with no new construction.

The report also details the intrusive effects of several existing facilities that have significant visual and auditory impacts on the historic character of the vicinity including the CATM, the Rod & Gun Club range, and Pylon Road. Several WPAFB operational constraints including hazardous cargo clear zones also affect the use of HPFF.

Park plans that mesh with the cultural landscape treatment alternatives include upgrading Marl Road to an in/out boulevard, removing Pylon Road, removing the CATM and painting the skeet range buildings. Another 40 parking spaces would also be developed.

### **3.6 Soils**

The U.S. Department of Agriculture (USDA) Soil Conservation Service (SCS) soil survey of Greene County, Ohio (USDA-SCS, 1978), indicates that the majority of the proposed action area is characterized by the Warsaw soil series including Warsaw-Fill Land Complex and Warsaw-Urban Land Complex. Warsaw soils are nearly level and well drained having formed in loamy glacial outwash over sand and gravel. The Warsaw-Fill type is up to 50% covered by 2 to 5 feet of fill with 10% to 15% covered by runways, etc. The remaining zones are undisturbed Warsaw loams.

The Warsaw-Urban Land Complex consists of Warsaw soils that have been altered by grading and 15% to 30% covered by impervious surfaces, with 25% to 50% altered by borrow/fill.

The proposed action and Marl Road locations are characterized by the Linwood Muck Series. This soil consists of dark, poorly-drained organic material 16 to 50 inches thick. The soil is typical in depressions and swales in floodplain and low terrace areas.

Soils in the vicinity of the proposed action location are likely to be contaminated with lead from the current/former firing range activities. A prior suspected contaminated area, including a sump and dry well, was excavated, tested, and disposed of as hazardous waste. Clean fill was returned to the excavation (USAF, 2002, EA, FCSAR). Further soil testing and remediation, as required, are planned as part of the MILCON project for the new range following demolition of the current range buildings. Since part of the alternate location is in OU5, the possibility of some soil contamination must be considered, although none is currently known.

### **3.7 Cultural Resources**

The Valentine Wright B Flyer was built over a two and one-half year period by Tom and Nancy Valentine. It was completed in 1978 and is a replica of a 1911 civilian version Wright Flyer. It is historically very accurate having been copied from the Wright B Flyer which is in the Franklin Institute in Philadelphia, PA.

The plane has been used in movies and for exhibition flying. It was sold to Wright B Flyer, Inc. in 2001 with funds from Inventing Flight; Greene County, Ohio; and the Dayton Aviation Heritage Commission. It is intended to serve as a Legacy Piece for the DAHNHP at the HPFF and to contribute to the interpretative mission.

Over 300 recorded or potential cultural resources have been identified within WPAFB, including prehistoric and historic archeological sites, historic structures, and historic landscapes (WPAFB, 1999a). The base contains a number of significant cultural resources among those recorded. Results from surveys have been summarized and presented in the Integrated Cultural Resources Management Plan (ICRMP) (WPAFB, 1999a). The ICRMP identifies archeological sites, historic structures, and other significant cultural resources on WPAFB.

The East Ramp area along Skeel Avenue has historically been used for aircraft operations dating to the original Wilbur Wright Field during World War I. The current Wright B Flyer storage location, Building 30145, was constructed in 1928 and is the oldest surviving hangar at WPAFB. It is historic and is eligible for listing on the National Register of Historic Places.

The East Ramp area consists largely of disturbed soils and/or is covered by buildings and other surfaces that date back to WWII or even WWI. Based on information in the ICRMP, it does not appear any archaeological surveys have been conducted in the immediate area and the potential for archaeological resource to be present is low to moderate. No prehistoric resources are known to exist in this area and none are anticipated.

The HPFF area is a key element of the DAHNHP, which was established in 1992. The HPFF, a National Historic Landmark, is an historic site which preserves the location and context of the Wright Brothers development during 1904 and 1905 of the first practical airplanes and how to fly them. In 1910, the brothers opened and operated a flying school at the site where numerous pioneers of aviation learned to fly. WPAFB owns and operates the HPFF with consultation from the NPS.

The proposed action location has been disturbed and according to the ICRMP, has a low to moderate potential for prehistoric resources (WPAFB, 1999a). An archaeological survey was conducted in the adjoining CATM area in 2001, but no prehistoric resources were found (USAF, 2002, EA, FCSARC).

The plans for the demolition of the CATM and prospective site remediation have been coordinated with the SHPO as part of the EA process (WPAFB, 2004, 1). Further coordination would be anticipated for the proposed action at this location.

No prehistoric archaeological resources are known to exist at the alternate location along Marl Road (USDI, 2004, NPS). Two sites are known to exist beyond the location of northwest Marl Road.

Numerous historic sites exist in the vicinity of the HPFF and their importance and context are discussed in the Cultural Landscape Report (USDI, 2002, NPS) and the GMPA EIS (USDI, 2004, NPS).

Of importance to the alternate location for the new hangar is the former interurban rail bed, much of which still exists parallel to Marl Road and its companion tree line. The alternate location includes portions of this historic resource. The remnant track bed from the interurban rail line that ran adjacent to the western boundary of HPFF is a historic feature associated with the flying field. The track bed, which can still be identified, represents the historic circulation system that provided access to the field. Although the track and railroad ties have been removed, the rail bed's original orientation and association with the field remains intact.

### **3.8 Air Quality**

The Clean Air Act Amendments of 1990 (CAAA) tasked the USEPA with generating a revised set of rules governing the establishment of air quality standards and rules governing emissions of pollutants. The National Ambient Air Quality Standards (NAAQS) set concentration levels for the following pollutants, often referred to as “criteria air pollutants”: carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), lead, ozone (O<sub>3</sub>; note: emissions of volatile organic compounds or VOCs are regarded as precursors of ozone), and particulate matter equal to or less than 2.5 microns in diameter (PM<sub>2.5</sub>). Lead is also regulated as a hazardous air pollutant (HAP). Air quality issues associated with the proposed action are primarily related to the potential generation of pollutants during construction activities and fugitive emissions from vehicles.

Air quality is typically good in the vicinity of Wright-Patterson AFB, and is generally affected only locally by military and civilian vehicle emissions, particulate pollution from vehicle traffic, fumes from wastewater treatment plants, industrial sources, and construction activities. Mobile sources such as vehicle and aircraft emissions are generally not regulated and are not covered under existing permitting requirements. Specific emissions sources at Wright-Patterson AFB include natural gas and coal-fired boilers; research and development sources, such as laboratory fume hoods and test cells; paint spray booths; refueling operations; and emergency power generators.

WPAFB is located in the Dayton-Springfield Metropolitan Statistical Area (MSA) which is designated as maintenance for ozone. In April 2004, the USEPA designated the Dayton-Springfield area as basic non-attainment for the 8-hour ozone standard. The designations result in a requirement for an air quality conformity applicability analysis for Federal actions to determine whether or not Conformity Rules apply. Applicability hinges on emission increases from the action or exceedences of de minimus emissions of criteria pollutants.

WPAFB has prepared and submitted a base-wide federal operating permit application for air emissions as specified under Title V of the Clean Air Act Amendments of 1990. This activity included an emissions inventory of criteria air pollutants for approximately 1,450 stationary sources. Many of the Title V sources are insignificant including emergency generators and laboratory fume hoods. WPAFB has approximately 139 air emission sources that required permits to install (PTI). The remaining sources were exempt from a PTI by various provisions of OAC 3745-31-03 and OAC 3745-15-05. Of these permitted sources, only 29 are classified as major air pollution sources. Nine of these major sources are coal and natural gas-fired boilers at the two central heating plants. These nine boilers generate by far the largest quantity of emissions from stationary sources at the base. The OEPA finalized the Title V Operating Permit for WPAFB with an effective date of February 17, 2004.

### **3.9 Noise**

Noise levels associated with WPAFB operations can create conflicts related to activities both on and off the base. Flight activities on WPAFB that contribute to the noise environment include the 445<sup>th</sup> Airlift Wing, the 47<sup>th</sup> Airlift Flight, and the Aero Club. The base also receives transient aircraft that represent the largest user group at 45 to 50 percent of the aircraft arriving and departing (USAF, HQAFRC, 2004).

Noise levels can be considered in terms of levels ranging from those in a typical home at 40dB, and levels at which noise begins to harm hearing if exposed for a long period (8 hours) at 90dB. Typical noise sources in and around the project area include aircraft and human activities. Military aircraft operations and vehicle traffic are the existing primary sources of noise in the vicinity of the project area. The Air Installation Compatible Use Zone (AICUZ) threshold 65dB noise contour has been established for airfield operations at WPAFB with an “inner noise” contour of 80 dB. The entire project area is located in the <80 dB noise zone. This noise level represents existing conditions to which potential noise levels from construction can be compared and which can be expected on occasion to affect visitors to the hangar.

Noise associated with the CATM has ceased with the opening of the new indoor range. When in use, however, the skeet range continues to create non-compatible noise affecting the HPPF vicinity.

### **3.10 Health and Safety**

General health and safety issues associated with the proposed project include worker safety and public safety during construction. Occupational and public safety issues are addressed with respect to construction. Safety issues associated with WPAFB operations and the DAHNHP/HPPF are also addressed in the GMPA EIS ( USDI, 2004, NPS)

Health and safety issues for the project include hazards associated with construction of a new hangar facility and supporting infrastructure. Such hazards include physical hazards (including heavy and light on-site equipment usage), and underground/overhead utility work.

The Air Force AICUZ program is intended to reduce the potential for aircraft mishaps in populated areas. As a result of this program, WPAFB has altered basic flight patterns to avoid heavily populated areas. In addition, airfield safety zones have been established under AICUZ to minimize the number of people who would be injured or killed if an aircraft crashed. Three safety zones are designated at the end of all active runways: Clear Zone, APZ I, and APZ II. The Clear Zone represents the most hazardous area. Although administrative uses

(industrial, business services, manufacturing) are permitted in the APZs, “people-intensive” uses (e.g., auditoriums, classrooms) are discouraged in these areas. According to AFI 32-7063, all new construction is required to comply with the AICUZ. Most of the project area is located outside of all APZs, although the alternate Marl Road location abuts and/or includes APZ’s.

Q/D or Quantity Distance Zones, which are Explosive Safety Ordnance Zones, have also been established to demark where aircraft carrying explosive cargo or ordnance may be parked or generally operating. The current storage hangar location (30145) is not within a Q/D zone. The current transport path to the HPFF from Building 30145 travels through several Q/D zones. Both proposed new hangar locations are beyond the Q/D zones, however, the alternate location on Marl Road is just beyond the zone. The Q/D zones are currently being updated (WPAFB, 2005-3)

### **3.11 Socioeconomics**

WPAFB is the largest employer in the Dayton-Springfield MSA and the largest single-site employer in the state of Ohio. Its combined workforce of more than 22,000 in 2004 accounts for nearly one in twelve workers in the greater Dayton area. The Base generates an annual payroll of more than \$1.1 billion with regional contracts adding to that amount. WPAFB’s total economic impact to the local economy is estimated at more than \$2.6 billion/year (WPAFB, ASC, 2004).

Given WPAFB’s economic importance, various state and local advocacy groups have focused on the base to promote its research potential, including collaborative ventures with regional universities and others; to ensure utmost consideration in DOD funding decisions; and to enhance its standing in any future base realignment and closure (BRAC) considerations. With declining city populations and somewhat stagnant regional population growth over the last 10-15 years due, in part, to the loss of manufacturing employment, the focus on new technologies and defense-related industries is vital to the future of this region.

With the opening of key elements of the DAHNHP in 2002, including the HPFF, tourism and visitors to the various sites has continued to increase. Prior to 2003, there were fewer than 50,000 visits/year, but this increased to 100,000/year in 2003 and visitation is expected to increase in future years (USDI, 2004 NPS). Economic expenditures by tourists/visitors are, therefore, a beneficial result of the DAHNHP of which the HPFF and Wright B Flyer are important aspects.

### **3.12 Transportation/Traffic**

From off base, restricted portions of the project area are directly accessed through gate 15A or 12A. Gate 16A, off of State Route 444, is generally open to the public for access to the HPFF. Access reconfiguration is addressed in detail in the GMPA EIS (USDI, 2004, NPS).

The primary transportation issues associated with the flyer relocation project involve the need to transport the Wright B Flyer from its storage location to the HPFF. The flyer is stored in a fenced area located in the southwest corner of Building 30145 adjacent to stored CE equipment (e.g. snow plows, asphalt surface repair materials, etc.).

On an intermittent basis the flyer is towed from Building 30145 south on Taxiway B to the Huffman Prairie gate located at the south end of the flight line. The route requires the flyer to travel through a Q/D area designated for temporary parking of aircraft carrying explosive ordnance. The flyer must be transported to the display tent in the morning and back to Building 30145 in the early evening (rain or shine). Military aircraft and the National Airborne Operations Center (NAOC) jet use the same taxiway. This requirement results in the following issues:

- The distance and time required for towing the flyer from the East Ramp to HPFF and back again, takes up to one hour in each direction.
- The risks associated with transporting the flyer down an active military taxiway which experiences higher than average volumes of military aircraft traffic during the summer display season (e.g., air shows, placement of aircraft evacuated during hurricanes, and mission critical aircraft traffic).
- The risks associated with towing the flyer through an Explosive Safety Ordnance Zone where aircraft carrying explosive cargo or ordnance are parked.
- Potential conflict with the NAOC jet at the same time the replica flyer is being towed down the taxiway. Towing the flyer is a slow process (5 mph) and the limited turning radius poses a risk of damage to the flyer replica if quick response would be required.

### **3.13 Utilities**

A complex array of utility systems exists in the project area, all of which are important to the current hangar storage building and alternative construction locations. Systems include potable water, sanitary and storm sewers, electricity, communications, and high pressure steam lines. The systems are complicated by lines and vaults that are abandoned including a former fuel line.

A number of utility lines are situated at the proposed action location. These include a water line from the existing well, an abandoned sanitary line as well as one in use, communication cables, and electric lines. These utilities will be addressed during the demolition phase of the CATM MILCON project. The existing well has already been closed (grouted/sealed), but the demolition design and WPAFB Facility Standards will determine final disposition of the various utilities.

No utilities are located within the alternate Marl Road location except for a communication line.

## **4.0 Environmental Consequences**

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### **4.1 Introduction**

The purpose of this chapter is to provide an evaluation of the potential impacts associated with the Proposed Action, construction of a new hangar facility at the former CATM location, Alternative One, construction of a new facility at the Marl Road location and the No Action alternative as presented in Chapter 2.0. The No Action alternative represents the baseline conditions to which the Proposed Action and Alternative One are compared. The impact evaluation of the Proposed Action, Alternative One and No Action alternative are summarized in Table 2-2.

### **4.2 Biological Resources**

#### **4.2.1 Vegetation**

##### **4.2.1.1 Proposed Action – Construct Hangar at Former CATM Site**

Much of the proposed construction location is currently covered by asphalt or buildings. Vegetation at the balance of the CATM location consists primarily of grasses, which are commonly found throughout the base. After demolition and remediation of the CATM site, the area would be re-landscaped with grasses. Construction of the new hangar at the site would result in removal of some of the replanted vegetation and would occupy an area that would otherwise revert to re-vegetated open space. There would be excavation for utility placement. The impact would be negligible.

##### **4.2.1.2 Alternative One – Construct Hangar at Marl Road**

Most of the alternative hangar location at Marl Road is wooded. Site specific design and location could address specific vegetation features, however, construction of the hangar would require removal and grading of up to one-half acre, thereby resulting in the removal of trees, shrubs, and other understory and groundcover vegetation. Additional vegetation, including mature trees, would require removal along Marl Road to allow transport of the replica flyer. Similarly extension of utilities to the site would likely result in further loss of vegetation from excavation, since the nearest tie-ins are remote from the Marl Road location. Thus, the project would result in both indirect short-term minor adverse impact and a direct, long term, minor adverse impact.

##### **4.2.1.3 No Action Alternative**

No vegetation would be affected by the No Action alternative

## **4.2.2 Wildlife**

### **4.2.2.1 Proposed Action – Construct Hangar at Former CATM Site**

Temporary impacts to wildlife could occur during construction as some small common mammal and bird habitat would be disturbed. Any affected wildlife, such as squirrels, chipmunks, groundhogs, and birds would be expected to move to adjoining undisturbed areas such as the Twin Base Golf Course, Huffman Prairie, etc. There would be no long-term impact to any wildlife from construction of the new hangar at the site of the former CATM facility.

### **4.2.2.2 Alternative One – Construct Hangar at Marl Road**

Minor temporary impacts to wildlife would occur during hangar construction at the alternate Marl Road location. Wildlife typical of the area would be disturbed and some habitat would be lost. However, most of the affected wildlife would be expected to move to adjoining undisturbed areas. Long-term loss of habitat would be negligible in the context of surrounding habitat.

### **4.2.2.3 No Action Alternative**

Continuing to store the flyer in Building 30145 would not impact wildlife since the area is surrounded by concrete and asphalt. There is no wildlife habitat present.

## **4.2.3 Threatened and Endangered Species**

### **4.2.3.1 Proposed Action – Construct Hangar at Former CATM Site**

No threatened or endangered species or their habitats are located in the immediate vicinity of the preferred hangar location construction site. Therefore, no impacts would be expected. The location, however, does border on the primary habitat zone of the Indiana Bat. There is potential for the bat to forage in the location. Storage or short-term display of the Flyer replica at the preferred location would pose no long-term impact to threatened and endangered species or habitats.

### **4.2.3.2 Alternative One – Construct Hangar at Marl Road**

The alternative hangar location is entirely within the primary habitat of the Indiana bat. The bat has been netted along Trout Creek, which is adjacent to the location. Most remote telemetry “fixes” of the bat, however, have been west of the location (BHE, 2001). Nonetheless, the location provides good forage areas and potential summer nesting habitat, particularly in preferred trees.

Loss of a small amount of potential Indiana bat habitat would be expected as a result of facility construction. The amount of Indiana bat habitat that would be

lost from the implementation of this alternative would not be significant because large amounts of bat habitat that would remain undisturbed. To minimize the impact to the Indiana bat, trees with exfoliating bark would be saved whenever possible. In accordance with recommendations from USFWS and WPAFB policy, no trees would be cut between 15 April and 15 September as bats would only be expected on the base during this period seeking maternity roosting sites.

No other T&E species found in the HPFF area or rare/species status species would be affected by this alternative. The primary habitat for the eastern massasauga rattlesnake lies to the west of the location. No T&E surveys are required for this alternative since no T&E critical habitat exists.

#### **4.2.3.3 No Action Alternative**

Threatened and endangered species would not be impacted under the No Action alternative since this alternative would cause no disruption to the environment.

### **4.3 Water Resources**

#### **4.3.1 Groundwater**

##### **4.3.1.1 Proposed Action – Construct Hangar at Former CATM Site**

Construction activities at the preferred hangar location site would be limited to shallow subsurface excavation and grading. Because groundwater in this area occurs at approximately 10 to 12 ft below ground surface (bgs) the proposed action would not alter the subsurface hydrogeology and would not create a potential source of groundwater contamination due to BMPs that would be implemented as required for all construction projects on base. Similarly, the excavation work is not expected to encounter any contaminated groundwater associated with LF3 or LF4. The existing contaminated well at the site has been closed and has been removed as part of the CATM demolition project.

##### **4.3.1.2 Alternative One – Construct Hangar at Marl Road**

Construction activities at the alternate Marl Road location would be similar to those at the proposed action location with similar results. Although the location is partially within OU5, no contaminated groundwater is likely to be encountered. Any construction, however, should account for the possibility of encountering contaminated groundwater

Nonetheless, because of the sensitivity of the Buried Valley Aquifer protection area, provisions of the WPAFB SWPPP, Spill Prevention and Response Plans, and construction BMPs would be followed as project specifications and spill plans require.

#### **4.3.1.3 No Action Alternative**

The No Action alternative would have no impact on groundwater since this alternative would not cause any disruption to the environment.

#### **4.3.2 Surface Water**

##### **4.3.2.1 Proposed Action – Construct Hangar at Former CATM Site**

Building a new hangar at this location would require extending a water supply main approximately 1,000 feet. A permit for ground disturbance (NOI) associated with disturbance of one acre or more of land would be required under Phase II of the NPDES rules as well as submission of a Plans Approval to install water supply mains. As the land surface at this location is essentially flat, erosion control measures would inhibit erosion during heavy rain events. Construction activities would not alter the surface water hydrology and would not create a potential source of surface water contamination since spill prevention and BMPs would be employed. Therefore, the construction activities would cause minimal impact to surface water resources. Long-term impacts associated with the project would include reduced impermeable surfaces associated with the former land use at this location. This would represent a nominal beneficial impact.

##### **4.3.2.2 Alternative One – Construct Hangar at Marl Road**

Building construction activities at this alternate location would be similar to those of the proposed location, but would involve more area due to the longer utility extension needs. While more land area would be impacted due mainly to more excavation required to install utility lines, the impacts would be similar to those for the Proposed Action. Plans Approval to install water supply main and a permit for ground disturbance for disturbance of one acre or more of land would be required for Alternative One under Phase II of the NPDES Storm Water Regulations.

##### **4.3.2.3 No Action Alternative**

The No Action alternative would have no effect on surface water resources since there would be no disruption to the environment.

#### **4.3.3 Floodplain**

##### **4.3.3.1 Proposed Action – Construct Hangar at Former CATM Site**

As discussed the 100-year flood plain elevation at WPAFB is 814.3 feet MSL. The Miami Conservancy District (MCD) regulates the flood control basin upgradient of Huffman Dam. Structures or additions of any type within the floodplain behind Huffman Dam shall not be erected more than 5 feet below the

Huffman Dam Spillway elevation (835 ft MSL) except by authorization by the MCD (MCD, 1996). The land surface in the proposed action location is at an elevation of approximately 800 feet MSL, well below the 100-year floodplain. Since there is a relatively greater probability of lower recurrence interval flooding at this location, design and/or operational considerations would be employed to reduce the risk of possible flood damage to the replica flyer including setting the foundation elevations above the flood levels or including methods to raise the flyer above flood levels.

MCD has reviewed the proposed development and has no objections to the proposed construction at the proposed location as the project would be in compliance with current MCD policy. Therefore, there would be a minor, adverse impact to the floodplain if the proposed action was implemented.

#### **4.3.3.2 Alternative One – Construct Hangar at Marl Road**

This alternative hangar location occurs at approximately 800 feet above MSL which is well below the 100-year flood elevation of 814.3 feet above MSL. This location abuts Trout Creek and includes some relatively low-lying swales. Much of the location including the existing parking area was under water when observed on January 6, 2005.

Given the lower elevation and more riparian nature of this location, potential floodplain impacts would be minor and would require realistic design and/or operational considerations to prevent flood impact to the replica flyer.

Generally, the MCD requires no net floodplain impact in the Huffman Dam Retarding Basin, typically meaning no net loss of storage capacity or elevational changes. Coordination with the MCD has been initiated with this EA (Appendix A) and the 10 February 2003 response letter from MCD indicated project concurrence with MCD policy restrictions. Therefore, there would be a minor, adverse impact to the floodplain if this alternative was implemented.

#### **4.3.3.3 No Action Alternative**

This alternative would have no effect on any floodplains. Storage of the replica flyer at the current site would keep it above the 100-year floodplain.

#### **4.3.4 Wetlands**

##### **4.3.4.1 Proposed Action – Construct Hangar at Former CATM Site**

While there are wetlands located within 0.5 miles of the proposed hangar site, construction activities would have a negligible impact due to the implementation of BMPs required for base construction projects. Some measures required for construction activities include blocking storm drains and low lying swales during

the initial construction phase with silt fences and straw bales to prevent migration of soil from the project site into wetlands. With the implementation of these erosion control measures, wetlands would not be impacted by the Proposed Action.

#### **4.3.4.2 Alternative One – Construct Hangar at Marl Road**

Impacts to wetlands from Alternative One would be the same as those described for the Proposed Action. Erosion control measures that would include straw bales and silt fences would be implemented as required for base construction projects. As a result, Alternative One would not impact wetlands.

#### **4.3.4.3 No Action Alternative**

Wetlands would not be impacted under the No Action alternative since no construction activity would occur.

### **4.4 Installation Restoration Program Sites**

#### **4.4.1 Proposed Action – Construct Hangar at Former CATM Site**

The Proposed Action site is located between OU4 and OU5 (Figure 4). A small portion of the current CATM is actually within OU5, but it is not on an IRP site. Although leachate from IRP sites in OU4 had been migrating toward the proposed hangar site, the well at the site has been closed and there is no reason to suspect based on current data, that groundwater from either OU will affect the site (WPAFB, 2004, 2). Construction at this site would have no effect on either OU or any IRP site. Conversely, none of the IRP sites would affect constructing a hangar at this location.

#### **4.4.2 Alternative One – Construct Hangar at Marl Road**

This alternate location includes a part of the eastern end of OU5 (Figure 4). No specific IRP sites are known to exist in this location although contaminated groundwater is possible, resulting in a potential short-term minor impact. Construction at this location would likely have no effect on any IRP site. Construction in the OU5 area, particularly for underground utilities, would need to consider the potential to encounter contaminated groundwater, including sampling, health and safety requirements, and disposal precautions.

#### **4.4.3 No Action Alternative**

The No Action alternative would have no impact on any IRP sites.

## **4.5 Land Use**

### **4.5.1 Proposed Action – Construct Hangar at Former CATM Site**

Construction of the new hangar at this location would result in some temporary, short-term impact to the visitor experience at the HPFF. Road access, viewsheds, and park ambience would be impacted somewhat by construction activities. These impacts would be minor.

In the long term, a new hangar is consistent with the DAHNHP and HPFF purpose and context. In addition to housing a Legacy Piece for the HPFF, the facility will enhance the visitor experience and opportunities, particularly if the long-range park improvements are implemented (USDI, 2004 NPS).

The Proposed Action would constitute an improvement over the current land use, which reflects the industrial use of the CATM. This industrial use is incompatible with all of the surrounding land uses. The proposed new facility is consistent with future land uses in the vicinity and represents a long-term beneficial impact when compared with the current land use, and the No Action and Alternative One scenarios.

Construction of the hangar in this location, however, is somewhat at odds with the long-term objectives of the Cultural Landscape Plan (USDI, 2002, NPS). While this report and plan does not indicate a location for the new hangar, it does document the intrusive nature of the Skeet and CATM Ranges. As part of the HPFF viewshed integrity and visual buffer objectives, no structures are planned along Hebble Creek Road.

Construction of the hangar, particularly toward the southwestern end of the location and near the edge of the viewshed buffer, would still represent an improvement over the CATM. Versus open space, however, the hangar would have a long-term, adverse visual effect on the HPFF. With sensitive design this effect could be minimized to more closely blend into the Hebble Creek tree line and/or to reflect the architectural character of some of the farm structures evident in the early 1900 photographs of the HPFF vicinity. Coordination with and regulatory review by the SHPO would be required. Therefore, the potential impact would be minor.

### **4.5.2 Alternative One – Construct Hangar at Marl Road**

Construction of the hangar at the alternate location would have the advantage of being screened from the HPFF viewshed by the Marl Road tree line and other vegetation. Hangar construction in this location is generally consistent with WPAFB land use plans (open space/recreation) and with the objectives of the Cultural Landscape Report/Plans (USDI, 2002, NPS). A new hangar, if

constructed, would be sited outside the airfield APZ. As a result, there would be no impact to land use if Alternative One were implemented.

#### **4.5.3 No Action Alternative**

Land use would not change under the No Action alternative. However, from an airfield operations and East Ramp Area Plan perspective, storage of the replica flyer in this area represents a non-conforming use that has the potential to become increasingly disruptive in the future. As such, this arrangement results in minor impacts to land use/operations at the East Ramp

### **4.6 Soils**

#### **4.6.1 Proposed Action – Construct Hangar at Former CATM Site**

Construction of the new hangar facility at this site would have the potential for soil erosion. This impact would be short-term. Erosion and dust control measures would be utilized as detailed in the storm water management plan that would be required for the project. Under Phase II of the NPDES rules, a permit for ground disturbance (NOI) must be submitted to OEPA for the project, since more than one acre of land will be disturbed. The NOI must include the storm water plan, including erosion control measures. Regular monitoring is required to ensure proper implementation. However, due to the relatively flat topography of the project area, excessive erosion is not anticipated and no long-term impacts to soils are expected.

Soil remediation at this site was accomplished during the demolition of the former CATM facility in 2004. Lead contaminated soil in and around the CATM building was removed and disposed of as hazardous waste. The excavated area was backfilled with clean soil and the top soil was replaced. Site work is completed.

#### **4.6.2 Alternative One – Construct Hangar at Marl Road**

Effects of construction of the new hangar at the Marl Road location are similar to that of the Proposed Action. Under the storm water Phase II rules, an NOI must be submitted to OEPA for the project, since more than one acre of land will be disturbed. The NOI must include the storm water plan, including erosion control measures. Regular monitoring is required to ensure proper implementation. Impacts to soils would be short term during the construction phase. There would be no long term impacts to soils if Alternative One were implemented.

#### **4.6.3 No Action Alternative**

Soils would not be impacted under the No Action alternative. No soils would be affected.

## **4.7 Cultural Resources**

### **4.7.1 Proposed Action**

Construction at this location could potentially encounter cultural resources. This is unlikely, however, both because of the low probability of such resources at the site as well as the prior CATM demolition and soil remediation project. Any potential impacts would be minimized through coordination with the Cultural Resources Program Manager (CRPM).

Since the HPFF is a National Historic Landmark, the Proposed Action has the potential to affect this historic resource. In addition to the short-term construction disruption, the facility itself could present an aesthetic intrusion or impact on the site as discussed under land use (Section 4.5). This potential would be mitigated through careful siting and design and the net outcome would be a viewscape similar to that in existence during the Wright brother's years at the field, which is detailed in the Cultural Landscape Report/Plan (USDI, 2002, NPS). Although coordination with the SHPO has already begun in stages through the CATM demolition project, further coordination will be required (WPAFB, 2004, 1).

As discussed in the land use section, the landscape plan for the HPFF seeks an open agricultural viewshed approximating 1904-1905 conditions (USDI, 2002, NPS). Current intrusions such as the ranges and parts of Pylon Road are recommended for removal. NPS policy discourages reconstruction of buildings within the historic/landscape and a literal reconstruction of the 1910 hangar (to potentially house the replica flyer) would not be permitted, as the 1905 and 1910 hangars never occupied the site at the same time during the period of significance (1904-1905).

Accordingly, construction of the new hangar near the site of the current CATM would represent an improvement over the existing condition, but would not achieve the full objective of the landscape plan. With siting beyond the historic landmark boundary and viewshed buffer area (just west of the CATM) and proper design treatment, the cultural integrity of the HPFF can be largely met. Thus, the impact from the cultural resources perspective would be negligible to archeological resources, but would represent a long-term adverse minor impact to the historic cultural context, which could be mitigated through siting and design.

### **4.7.2 Alternative One – Construct Hangar at Marl Road**

Construction of the hangar at the alternate location would be consistent with the Cultural Landscape Plan (USDI, 2002, NPS), for the HPFF, but would potentially affect the former interurban rail bed. Proper siting and design would minimize any potential adverse effects on this historic resource. No known archeological sites would be affected at this location. Construction would involve coordination

with the CRPM to account for the potential of encountering any such resource. The impact of implementing this alternative would be minor.

#### **4.7.3 No Action Alternative**

The No Action alternative would have no impact to cultural resources. Although the replica flyer is currently stored in an historic hangar, the plane has no effect on the building.

### **4.8 Air Quality**

#### **4.8.1 Proposed Action**

Impacts from implementation of the Proposed Action are expected to be similar to those identified in Alternative One.

No conformity nor further air quality analyses are required.

#### **4.8.2 Alternative One – Construct Hangar at Marl Road**

Minor, short-term impacts would be expected from the construction phase of the relocation project, including fugitive dust and airborne materials from various sources, and exhaust emissions from construction vehicles and equipment. Construction BMPs, including dust suppression and equipments controls, would minimize particulate and emission materials.

The Annual Emission Fee Report submitted by WPAFB to OEPA (WPAFB, 2002) estimates approximately 17.5 tons per year (tpy) of PM<sub>10</sub> emissions at the Base. Other recent construction projects in Areas A and C, including a disturbance area of more than one acre have generated estimated PM<sub>10</sub> emissions of less than 2 tpy (WPAFB, FCCATMC EA, 2002). Even at an order of magnitude greater, the emissions from the proposed project would be well within the baseline and far below de minimus levels for conformity applicability.

#### **4.8.3 No Action Alternative**

Because no renovation or construction would take place, no increase in emissions would be expected. There would be no change to air quality and no impact.

### **4.9 Noise**

#### **4.9.1 Proposed Action**

Short-term minor impacts from construction activities, particularly from truck and heavy equipment operations, would be expected to increase ambient noise levels. At 50 feet, noise levels generated by standard construction equipment

range from 72 to 94 dB. While noticeable and potentially annoying to nearby HPFF or other vicinity visitors such as golfers at the Twin Base course, the noise will be intermittent and temporary. Construction crews would be subject to more noise; however, adherence to OSHA health and safety regulations would minimize any adverse effects.

No long-term noise impacts are anticipated. Due to the location of the proposed facility near the flight line, periodic impacts from noise can be expected for DAHNHP staff and HPFF visitors. The aircraft noise, although intense, is typically very short term.

#### **4.9.2 Alternative One – Construct Hangar at Marl Road**

Both short-term and long-term noise impacts due to construction of the hangar at the site of Alternative One are essentially the same as for the Proposed Action.

#### **4.9.3 No Action Alternative**

The No Action alternative would have no effect on ambient noise levels.

### **4.10 Health and Safety**

#### **4.10.1 Proposed Action – Construct Hangar at Former CATM Site**

Because project construction workers would be responsible for complying with standard operating procedures and applicable health and safety regulations, no impacts to health and safety would be expected from the Proposed Action. Digging clearances would be obtained from Base Civil Engineering prior to any excavating. The likely construction area is outside the boundaries of IRP sites in OU4 and OU5.

Although the location of the Proposed Action is within the AICUZ 80dB noise contours, the site is beyond all Q/D and APZ zones associated with the airfield/flight line.

#### **4.10.2 Alternative One – Construct Hangar at Marl Road**

Construction of the hangar at the Marl Road location would potentially place workers very near or within the airfield APZ zone. This would represent the only difference between the Proposed Action and Alternative One. Proper siting and design could eliminate or minimize the APZ potential.

#### **4.10.3 No Action Alternative**

The No Action alternative would continue to have a minor impact on health and safety. This is because of the current necessity to disrupt flight line operations

during transport of the replica flyer and because of the exposure of the flyer and transport personnel to Q/D – Explosive Safety Ordnance Zones.

## **4.11 Socioeconomics**

### **4.11.1 Proposed Action – Construct Hangar at Former CATM Site**

The proposed action would have a long-term, nominal, beneficial socioeconomic impact for both WPAFB and the Dayton region. The benefit is related to the improved and enhanced visitor/tourist attractiveness of the DAHNHP/HPFF, which is expected to result in increasing numbers of visitors/tourists in future years. Expenditures from these persons on everything from food and gasoline to souvenirs and hotels would benefit the local economy. This impact, however, is relatively small given the overall economic effect of WPAFB and the size of the Dayton MSA economy.

There is no difference between the Proposed Action and Alternative One from a socioeconomic perspective. Impacts would be the same.

### **4.11.2 Alternative One – Construct Hangar at Marl Road**

Nominal, beneficial, short-term socioeconomic impacts would occur during construction activities. Although there would be no significant impact on the overall economic activities surrounding the Base, there would be nominal beneficial impact on the local economy. Contractors and local businesses would benefit from employment and income through contracts associated with the construction project.

### **4.11.3 No Action Alternative**

The No Action alternative would have no immediate effect on socioeconomics. In the long-term, however, the time consuming and manpower intensive nature of the flyer transport to the HPFF could potentially force cutbacks resulting in a reduced display schedule. This would represent a loss for the HPFF visitor.

## **4.12 Transportation/Traffic**

### **4.12.1 Proposed Action – Construct Hangar at Former CATM Site**

Project construction at the former CATM site could result in short-term traffic and parking disruptions. Construction traffic, including worker parking and construction staging/laydown areas, could have a minor impact on visitor patterns at the HPFF.

No long term adverse effects on transportation/traffic are anticipated from the Proposed Action. Elimination of the flight line transportation problems associated with moving the Flyer replica would represent a beneficial impact of the Proposed Action. This would also free up time and manpower and eliminate security concerns.

#### **4.12.2 Alternative One – Construct Hangar at Marl Road**

Both short and long-term effects of hangar construction at the Marl Road location would be similar to those at the proposed action location. The beneficial impacts would be the same. However, transport of the flyer from the hangar to the display tent would be more difficult at the alternate location due to necessary ground and wing clearances (2 feet by 40 feet respectively). Towing the flyer on a trailer should provide sufficient clearance over the Marl Road bridge abutments, but a significant strip of vegetation, including some large trees, would have to be removed for wing clearance (see vegetation, Section 4.2).

#### **4.12.3 No Action Alternative**

The No Action alternative would continue the potential adverse impacts to flight line operations and risks to staff and the replica flyer from slow transport through weather elements, security fencing, and Q/D zones. Operation in this fashion would continue the numerous potential risks associated with an active military taxiway, including potential disruption to the national security missions of the NAOC jet plane. The existing condition would still require Air Force manpower to support non-airfield related functions.

### **4.13 Utilities**

#### **4.13.1 Proposed Action – Construct Hangar at Former CATM Site**

Construction at the proposed action location would require the relocation and/or replacement of several utility systems, particularly electrical service. It is unknown as to whether or which existing utility systems at the CATM will be removed, relocated, or left in place although the electric lines and transformers are adjacent to the CATM. A new water line would have to be extended to the proposed hangar in order to feed a fire suppression system. This extension is estimated at approximately 1,000 feet and would require OEPA Plans Approval to install water supply mains. These actions, however, would have no impact to WPAFB utilities.

#### **4.13.2 Alternative One – Construct Hangar at Marl Road**

Construction of hangar at this location may require relocation or modification of a communications line, the only existing utility in the area. Both water for fire suppression and electricity would have to be extended to the site and would

require OEPA Plans Approval to install water supply mains. Existing electric lines run from the CATM across the open fields to the Marl/Water Road junction area. The nearest water main, however, is even further than from the proposed action location. Impact to WPAFB utility systems is not expected.

#### **4.13.3 No Action Alternative**

No impact would occur to project area utilities under the No Action alternative.

### **4.14 Cumulative Impacts**

Cumulative effects are those which may result from the incremental impact of the federal action when added to other past, present, and reasonable foreseeable future projects in the area. Cumulative impacts can result from individually minor, but collectively substantial actions undertaken over a period of time by various agencies (Federal, state and local) or individuals (40 CFR 1508.7).

Other federal actions that have occurred or are planned to occur at WPAFB include demolition of the former CATM facilities and site remediation, enclosing Open Ditch #5 at the western portion of the active flight line, the 445<sup>th</sup> Airlift Wing conversion from C-141C to C-5 aircraft, and realigning visitor circulation at HPFF. Each of these projects has undergone an environmental assessment that resulted in a Finding of No Significant Impact/ Finding of No Practicable Alternative (FONSI/FONPA).

The CATM demolition/site remediation action is fully funded and is expected to occur in 2005. The Open Ditch #5 project was completed in 2004. The C-5 conversion project is scheduled for implementation in 2006 and involves construction of new hangar facilities and associated parking aprons. Portions of the parking apron occur within the 100-year floodplain, but the majority of the construction activities would occur outside the floodplain. The project to realign visitor circulation at HPFF remains in the planning stages awaiting funding.

The ditch project and demolition projects would result in minimal adverse impacts to the 100-year floodplain. The C-5 conversion project would result in a minor adverse impact to the floodplain. MCD and WPAFB policy would be strictly followed that requires any additional fill material be obtained from within the same floodplain basin to realize a net zero increase of fill material within the 100-year floodplain. Therefore, impacts due to loss or gains of soils within the retention basin are expected to be minimal. As such, this action, when combined with other actions completed or proposed for WPAFB would result in no cumulative impacts to the 100-year floodplain.

#### **4.15 Unavoidable Adverse Effects**

No significant unavoidable adverse environmental effects from implementation of the Proposed Action or Alternative One have been identified through this EA. The No Action alternative would continue the current security, manpower and transportation problems.

#### **4.16 Relationship of Short-Term Uses and Long-Term Productivity**

Neither the Proposed Action, Alternative One, nor the No Action alternative would affect the long-term productivity of the environment; no significant environmental consequences nor depletion of natural resources have been identified through this EA.

#### **4.17 Irreversible and Irrecoverable Commitments of Resources**

CEQ regulations in 40 CFR 1502.16 require that an agency identify any irreversible or irretrievable commitments of resources that would be involved in the proposed action, should it be implemented. Capital, energy, materials, and labor would be required for the action. These resources are not retrievable.

#### **4.18 Environmental Justice**

Executive Orders 12898 and 13045 mandate that federal agencies identify disproportionately high and adverse human health or environmental effects on minority and low-income populations and children. Minority or low-income individuals or communities would not be disproportionately and/or adversely affected by the implementation of the Proposed Action or Alternative One. Additionally, no disproportionate environmental health or safety risks to children would occur as a result of implementation of the Proposed Action or Alternative One. Both sites proposed for construction of a new hangar are within the base perimeter fence in remote locations away from housing areas. No family housing units are currently planned and will likely never be planned in the vicinity of the proposed action alternative sites. There are also no public schools in the vicinity of either action alternative sites. Similarly, the No Action alternative would not cause any disruption to the environment or adversely impact minorities or low-income populations or children.

## **List of Preparers**

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## 5.0 List of Agencies and Persons Consulted

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The following persons and agencies have been consulted during the preparation of this EA.

<u>Name</u>	<u>Affiliation</u>	<u>Subject</u>
Lawrence Blake	DAAV/NPS	Hangar Plans/NPS Operations
Timothy Good	DAAV/NPS	Hangar Plans/NPS Operations
Joseph Capelli	88ABW/CE	Project Design
Harold Edinger	Wright B Flyer Inc	Replica Display/Storage
Dave Egner	88OSS/OSA	Air Field/Flight Line Operations
Jan Ferguson	88ABW/CEVO	Cultural Resources/DAHNP
Bill Kassinos	88OSS/OSA	Air Field Manager
Gary Koenig	88ABW/CE	Project Design
Ken Lammers	USF&WS	Threatened & Endangered Species
Dale Masin	88ABW/CE	Area Plans
Thomas Perdue	88ABW/CEVO	NEPA Program Manager
Linda Rogers	88ABWCEVO	Surface Water/Water Quality
Sherm Siegal	88ABW/CEVO	IRP Program/Groundwater
Connie Strobbe	88ABW/CEVO	Air Quality/Stormwater/Permits
Debbie Woischke	ODNR/Div Natural Areas	Natural Resources

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Wright-Patterson Air Force Base, 2005, Personal Communication with Jan Ferguson (WPAFB) and Tom Wenk, February 2005, 7.

Wright B Flyer, Inc, 2005, Personal Communication with Ed Edinger and Tom Wenk, February 2005, 8.

***Appendix A***  
***Project Photos & Correspondence***



View 1 – The Wright B Flyer replica.

View 2 – The Wright B Flyer replica in the display tent located at Huffman Prairie Flying Field (on Pylon Road).



View 3 – The Wright B Flyer replica being towed from the display tent on Pylon Road.

 2288 Grange Hall Rd. Beavercreek, OH 45431 937-431-8960	Client: <b>WPAFB 88ABW /                  Office of Environmental Management</b>	Project: <b>110.254.4001.0014</b>	Dwn. By : <b>TEW</b>	Date: <b>May 05</b>
	Description: <b>Photo Documentation – Environmental Assessment                  For Proposed Hangar for the Wright B Flyer Replica</b>	Scale: <b>NTS</b>	Sheet No. <b>1 of 10</b>	



View 4 – The Wright B Flyer replica being towed from HPFF to Building 30145. Conditions were windy with an approaching thunderstorm.

View 5 – The Wright B Flyer replica at Building 30145.



View 6 – Seasonal storage location for the Wright B Flyer replica in southwest corner of Building 30145.

**Versar inc.**  
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 937-431-8960

Client:  
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 Office of Environmental Management**

Project  
**110.254.4001.0014**

Dwn. By :  
**TEW**

Date:  
**May 05**

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**NTS**

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View 7 – Aerial view of East Ramp looking south. Photo shows Buildings 30145 & 30103 in foreground, Skeel Avenue on left and Taxiway B on right.

View 8 – Flight line view of Building 30145.



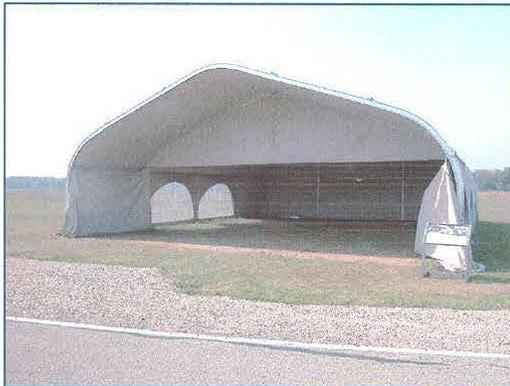
View 9 – Current seasonal storage location for Wright B Flyer in southwest corner of Building 30145.

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View 10 – Flight line view looking southwest toward Huffman Prairie Gate.

View 11 – View of display tent and barn looking northeast. The East Ramp is visible in the background.



View 12 – View of mobile display tent looking south.

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View 13 – View of former CATM site from Hebble Creek Road looking east.

View 14 – View looking west at the former CATM site from Pylon Road. Photo shows existing above ground electrical utility lines.



View 15 – View across HPFF looking south at the display tent on Pylon Road and former CATM site (in background).

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Office of Environmental Management

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TEW

Date:  
May 05

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For Proposed Hangar for the Wright B Flyer Replica

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View 16 – View of HPFF looking south down Pylon Road.



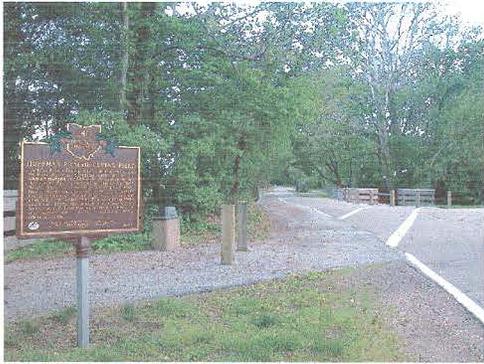
View 17 – View across HPFF looking north. The Marl Road location (Alternate One) is behind the tree line on the right.

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View 18 – View across HPFF looking southwest at the alternate location area near the northeast end of Marl Rd. The replica of the wood train platform (Simms Station) is visible in left/center of the photo.

View 19 – View across HPFF looking east through a break in the tree line. The replica of the 1905 hangar is visible near the center of the photo.



View 20 – View looking southwest at HPFF historical marker and Marl Road bridge over Trout Creek. The alternate location is located across the bridge on the north side of Marl Road.

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View 21 – View looking northeast at the Marl Road bridge over Trout Creek. View is from front of the Simms Station railroad platform replica.

View 22 – View looking northwest at Trout Creek from the railroad platform replica. Trout Creek runs northwest/west immediately behind the Marl Road parking area (visible in left side of photo).



View 23 – View looking west at Marl Road parking area. The fence line behind the parking lot separates public access to HPFF from WPAFB recreational hunting areas on the northwest side of the fence. The alternate location for the hangar runs from this area to the north and west.

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	Description <b>Photo Documentation – Environmental Assessment          For Proposed Hangar for the Wright B Flyer Replica</b>			Sheet No. <b>8 of 10</b>



View 24 – View looking northwest from Marl Road parking area. Trout Creek is visible directly behind the parking lot.

View 25 – View looking southwest from Marl Road in the vicinity of the historic railroad bed running along Marl Road. A groundwater-monitoring well is visible in the railroad bed.



View 26 – View looking west along the fence line just northwest of the Marl Road parking lot.

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View 27 – View looking north along the fence line on the north side of Marl Road. Photo was taken from a point approximately 0.1 miles west of the Marl Road parking lot.

View 28 – View looking northeast at an access road crossing the railroad bed on the north side of Marl Road approximately 0.1 miles south of the parking lot. The dirt road crossing the railroad bed provides access to the fence line shown in the previous photo.



View 29 – View looking northeast at HPFF marker on Marl Road approximately 0.12 miles south of the parking lot.

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DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 88TH AIR BASE WING (AFMC)  
WRIGHT-PATTERSON AIR FORCE BASE OHIO

29 Sept 04

88 ABW/EMO  
5490 Pearson Road, Building 89  
Wright-Patterson Air Force Base, OH 45433-5332

Mr. Ken Lammers, Acting Director  
U.S. Fish and Wildlife Service  
Ecological Services  
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Reynoldsburg, Ohio 43068-4115

Dear Mr. Lammers,

The U.S. Air Force is seeking informal consultation with the U.S. Fish and Wildlife Service in compliance with Section 7 of the Endangered Species Act for the proposed new hangar space for the Wright B Flyer at Wright-Patterson Air Force Base (WPAFB). The Base has initiated an environmental assessment (EA) for this project in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969.

The geographic location of the proposed construction site is Greene County, R.8,T.2, Sec 1 in Area C of WPAFB. This location is depicted in Figure 1. The location of the project area is in a land use area described as Open Space including the Huffman Prairie and the Huffman Prairie Flying Field. The actual site, however, is currently the location of the former small arms range and is classified as Industrial. Trout Creek and Hebble Creek and other natural resources including Indiana Bat habitat are located in the vicinity. Two Indiana bats (*Myotis sodalis*) were captured on the base in July 2000 near the intersection of Prairie Road and Symmes Road along Trout Creek. This site appears to be within about one-half mile of the project area.

The expansion project includes construction of a 60' x 70' hangar with an access road. The existing small arms range facilities will be demolished and the site remediated under an earlier project.

In addition to the proposed action of constructing the new hangar, an alternative action will be considered for the assessment of an alternate storage facility located proximate to the Huffman Prairie Flying Field. The No Action alternative will also be evaluated. Under the No Action alternative, the hangar and access road would not be constructed. No other alternatives will be evaluated.

I am requesting comment from your agency regarding the presence or absence of Federal and State-listed species that may be located within 0.5 miles of the proposed project location. Threatened and endangered species known to exist within the vicinity of the base include the Indiana bat, bald eagle (*Haliaeetus leucocephalus*), eastern massasauga rattlesnake (*Sistrurus c. catenatus*), clubshell (*Pleurobema clava*, a mussel), and blazing star stem borer (*Papaipema beeriana*, a moth).

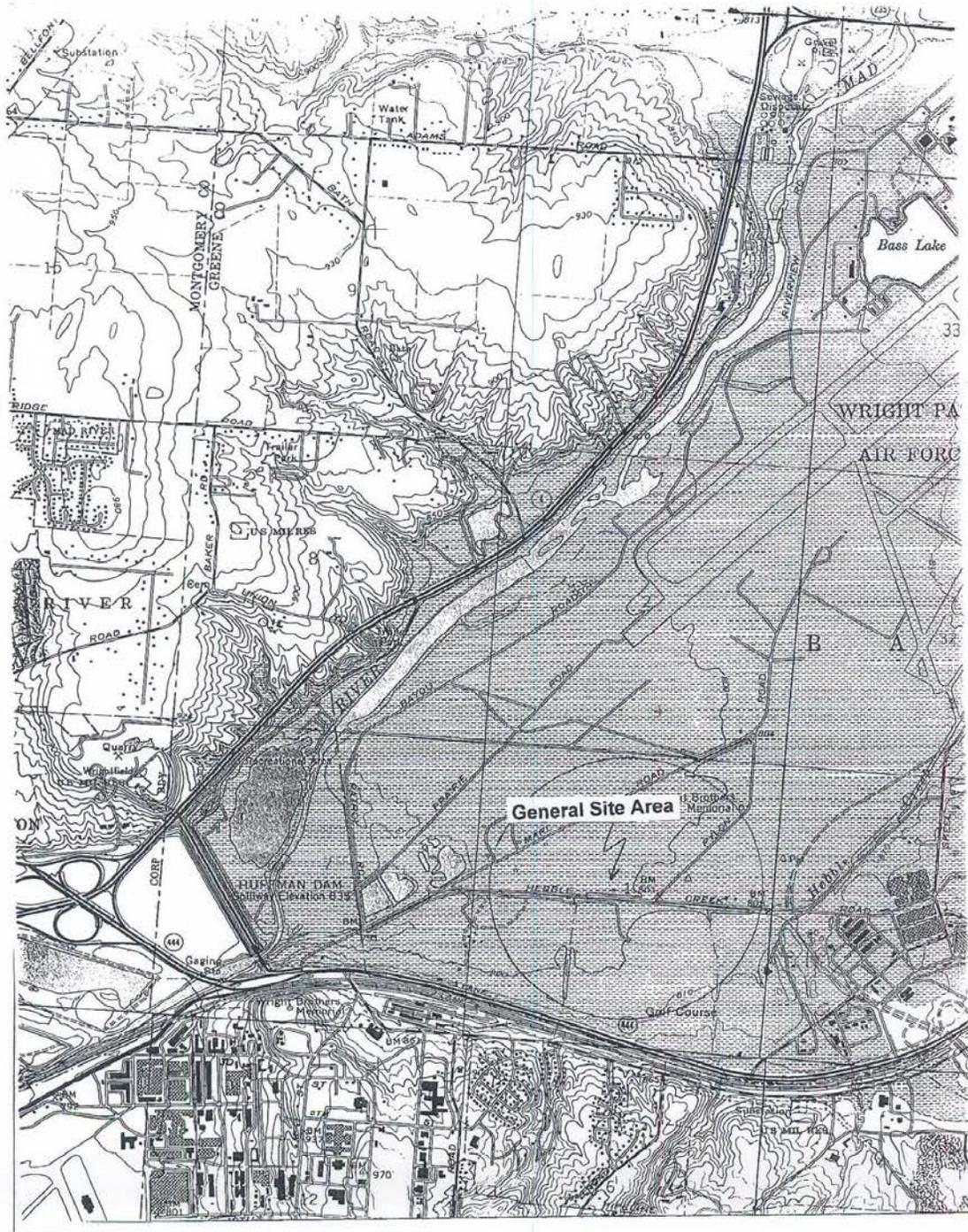
In addition, please comment on the presence or absence of areas of ecological concern including wetlands, national wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries that may be located within the areas likely to be disturbed by the project. The attached map (see Figure 1), depicts the location of the proposed project area. We have also contacted the ODNR's Division of Natural Areas and Preserves for a search of their Natural Heritage Database.

Please send your comments to me at the address located on the letterhead. If you have any questions, please call me at 937-257-5535 ext.257. Thank you in advance for your time.

Sincerely,



Thomas Perdue  
EIA/P Program Manager  
Operations Branch  
Office of Environmental Management



22 Feb 05

88 ABW/EMO  
5490 Pearson Road, Building 89  
Wright-Patterson Air Force Base, OH 45433-5332

Mr. Ken Lammers, Acting Director  
U.S. Fish and Wildlife Service  
Ecological Services  
6950 Americana Parkway, Suite H  
Reynoldsburg, Ohio 43068-4115

Dear Mr. Lammers,

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Sincerely,

Thomas Perdue  
EIAP Program Manager  
Operations Branch  
Office of Environmental Management

MEMORANDUM FOR RECORD

Letters to the U.S. Fish and Wildlife were sent on 29 Sep 04 and again on 22 Feb 05 requesting informal consultation in compliance with Section 7 of the Endangered Species Act. Personal communication with Mr. Ken Lammers at the U.S. Fish and Wildlife Service was completed on 3 Oct 05. Mr. Lammers requested a map detailing the location of both the preferred and alternate sites for the new hangar. A map was sent to Mr. Lammers, but no reply to either letters has been received by 88 ABW/CEVO



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 88TH AIR BASE WING (AFMC)  
WRIGHT-PATTERSON AIR FORCE BASE OHIO

88 ABW/EMO  
5490 Pearson Road, Building 89  
Wright-Patterson Air Force Base, Ohio 45433-5332

29 Jan 03

Miami Conservancy District  
38 E. Monument Avenue  
Dayton, Ohio 45402-1210

Dear Sir/Madam

The U.S. Air Force is seeking informal consultation with the Miami Conservancy District with respect to the potential impacts to the conservancy district associated with a proposal by the National Park Service to construct a storage building to store a replica Wright B flyer aircraft in Area C at Wright-Patterson Air Force Base (WPAFB). The proposed storage building would be constructed utilizing the existing slab of classroom Building 883. This building is currently scheduled for demolition in the near future. The geographic location of the proposed construction site is Greene County, R.8, T.2, Section 1 and is depicted in Figures 1 and 2. The proposed site for the new storage building is at an elevation of approximately 800 feet above mean sea level (MSL) and is within the 100-year floodplain of the Mad River at Huffman Dam of 814.3 feet MSL. Using the HEC-1 watershed model and Bulletin 71 precipitation data, the U.S. Army Corps of Engineers established the 100-year floodplain elevation for WPAFB in 1994.

Be advised that this is only a proposal from the National Park Service and no funding to initiate the design or construction has been obtained. The purpose of this letter is to ask for your comments regarding utilizing an existing building foundation on which to construct a new aircraft storage building within the 100-year floodplain. Proposed building dimensions are 50'LX50'WX16'H. New construction is being considered because the current classroom building does not lend itself to renovation and conversion to an aircraft storage building. The proposed building would be adjacent to Huffman Prairie Flying Field, a unit of Dayton Aviation Heritage National Historical Park. Currently, plans are to house the replica aircraft – when it is not on display at the flying field – in a hangar on the active flightline at the base. The proposed new building would eliminate the need to tow the replica plane across the flightline twice a day for those days it is on display. It is convenient in location and would make use of an existing foundation.

An environmental assessment (EA) will be conducted in advance of any construction provided there is general concurrence that new construction in the 100-year floodplain utilizing an existing building slab is feasible. WPAFB would seek your formal input during the initial

development of the EA. We would appreciate your initial feedback regarding the level of significance that the proposed project would have on the Miami Conservancy District. Your timely response is appreciated.

If you need more information or have comments on the proposed plan, please contact me at (937) 257-5535, ext. 257.

Sincerely



Thomas Perdue  
EIAP Program Manager  
Operations Branch  
Office of Environmental Management

Attachments:

1. Figure 1
2. Figure 2



MIAMI  
CONSERVANCY  
DISTRICT

BOARD OF DIRECTORS

William H. Hobart  
Gayle B. Price, Jr.  
Thomas B. Rentschler  
GENERAL MANAGER  
Janet M. Bly

February 10, 2003

Mr. Thomas Perdue  
88 ABW/EMO  
5490 Pearson Road, Building 89  
Wright-Patterson Air Force Base, Ohio 45433-5332

Re: Huffman Retarding Basin, WPAFB, Huffman Prairie Flying Field, MCD Permit No. 20-2767-1,  
Project No. 5

Dear Mr. Perdue:

In response to your letter date January 29, 2003 we have reviewed the proposed development. We have confirmed that the property, upon which the proposed building is to be constructed, is located within the Huffman Retarding Basin.

In accordance with those rights retained by the Miami Conservancy District in Sale No. 258 (Greene County Deed Book 129, Page 146) all development of this property remains subject to the District's Building Restriction Policy. Therefore, all new structures located below the minimum building elevation of 830.0 must be used for Non-Habitable purposes. Furthermore, use of these non-habitable structures is to be limited to non-commercial, recreational and/or farming purposes.

As the proposed (50' x 50') Aircraft Hanger appears to be in compliance with our Building Restriction Policy the Miami Conservancy District has no objections to the proposed construction. As a permit will not be required the above-referenced permit number has been designated for reference purposes only.

Should you have any further questions or need additional information please contact me at (937) 223-1278, Ext. 3219.

Very truly yours,

Richard L. Doran  
Property Administrator

cc: Bill Bogan

File: Wright "B" Flyer Aircraft Storage Facility

38 E. Monument Avenue • Dayton, OH 45402-1265 • 937-223-1271 • Fax 937-223-4730



February 22, 2005

Heritage Data Services  
Division of Natural Areas and Preserves  
Ohio Department of Natural Resources  
Fountain Square Building F  
Columbus, Ohio 43224

Request for Data for Proposed Project  
At Hebble Creek Road (Area C) Wright-Patterson Air Force Base, Ohio

Dear Ms. Woischke,

The purpose of this letter is to request information from the Natural Heritage Program for State and Federally-listed threatened or endangered plants and animals in the vicinity of Hebble Creek Road east of the intersection of Hebble Creek Road and Marl Road (Area C) at Wright-Patterson Air Force Base (WPAFB). Under contract to WPAFB, we are currently preparing an environmental assessment (EA) to address potential impacts associated with the construction of a new hangar for the Wright B Flyer. The intent of the EA is to satisfy requirements under the National Environmental Policy Act (NEPA) of 1969.

The geographic location of the proposed construction site is Greene County, R.8., T.2., Sec 1. This location is depicted in Figure 1. The location of the project area is in a land use area designated as Outdoor Recreation with adjacent areas classified as Open Space including the Huffman Prairie and the Huffman Prairie Flying Field. The actual site, however, is currently the location of the former combat arms training and maintenance facility (CATM) and is classified as Industrial. Two Indiana bats (*Myotis sodalis*) were captured on the Base in July 2000 near the intersection of Prairie Road and Symmes Road along Trout Creek. This site appears to be within about one-half mile of the project area.

The expansion project includes construction of a 60' x 70' hangar with an access road. The existing small arms range facilities will be demolished and the site remediated under an earlier project.

2288 Grange Hall Road • Beavercreek, Ohio 45431 • 937-431-8960 • fax: 937-431-8920

Page 2  
February 22, 2005

A form for a Data Request has been attached. We would appreciate any information from your database that applies to our project area. Please expedite our request, if possible, and contact me at 937/431-8960 if you have any questions or require further information. Thank you for your attention to this request.

Sincerely,

Tom Wenk  
Project Manager

cc: T. Perdue (88 ABW/EMO, WPAFB)

2288 Grange Hall Road • Beavercreek, Ohio 45431 • 937-431-8960 • fax: 937-431-8920