DRAFT FINAL

ENVIRONMENTAL ASSESSMENT

DEFENSE LOGISTICS AGENCY

REPLACE HYDRANT FUELING SYSTEM CONSTRUCTION PROJECT AT

WRIGHT-PATTERSON AFB, OHIO

DESC 1907

October 2019

Prepared by:

U.S. Army Corps of Engineers, Omaha District

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COVER SHEET

DRAFT FINAL
ENVIRONMENTAL ASSESSMENT
DEFENSE LOGISTICS AGENCY
REPLACE HYDRANT FUELING SYSTEM
CONSTRUCTION PROJECT AT
WRIGHT-PATTERSON AIR FORCE BASE, OHIO

Responsible Agency: 88th Civil Engineer Group (88 CEG), Wright-Patterson Air Force Base (WPAFB/Base), Ohio

Affected Location: WPAFB, Ohio

Proposed Action: Demolish and replace existing Type II fuel hydrant system with a modern Type III fuel hydrant system.

Report Designation: Draft-Final Environmental Assessment (EA)

Written comments and inquiries regarding this document should be directed to 88th Air Base Wing (ABW)/Public Affairs, 5135 Pearson Road, Building 10, Room 252, WPAFB, Ohio, 45433, 88abw.pa@us.af.mil.

Abstract: The purpose and need of this environmental assessment is to provide a safer, more reliable and automated system to deliver jet fuel to the aircraft on the West Ramp of WPAFB in compliance with the 15 July 2015 revisions to 40 CFR 280 underground storage tank (UST) regulations, which became effective 15 July 2018. The original Type II hydrant fuel system that was installed in the early 1960s does not comply with current regulations.

The analysis in the EA considers alternatives and the No-Action Alternative, and will aid in determining whether a Finding of No Significant Impact (FONSI) can be prepared or whether an Environmental Impact Statement (EIS) is needed.

DRAFT FINAL
FINDING OF NO SIGNIFICANT IMPACT
TYPE III PRESSURIZED FUELING SYSTEM, WEST RAMP
WRIGHT-PATTERSON AIR FORCE BASE, OHIO
October 2019

Pursuant to the Council on Environmental Quality regulations for implementing the procedural provisions of the National Environmental Policy Act (NEPA), 40 Code of Federal Regulations (CFR) 1500 - 1508, Department of Defense Directive (DoDD) 6050.1 and Air Force regulation 32 CFR Part 989, the United States Army Corps of Engineers (USACE), Omaha District, Military Munitions and Environmental Science Section, in coordination with the 88th Civil Engineer Group (CEG) Installation Management Division prepared an Environmental Assessment (EA) to construct a Type III Pressurized Fueling System to enable the Defense Logistics Agency (DLA) to meet its mission to deliver fuel on the West Ramp at Wright-Patterson Air Force Base (WPAFB), Ohio to meet the flying mission needs. This finding incorporates Section 4 – Environmental Consequences and Cumulative Effects of the EA per 40 CFR 1508.13.

Purpose and Need (EA §§ 1.2 and 1.3 pages 10-11): The purpose of the proposed project is to provide a safer, more reliable and automated system to deliver jet fuel to the aircraft on the West Ramp of WPAFB in compliance with the 15 July 2015 revisions to 40 CFR 280 underground storage tank (UST) regulations. The original Type II hydrant fuel system that was installed in the early 1960s is not in compliance with current regulations. A system is needed to upgrade and provide greater safety, decrease potential environmental consequence along with improved fuel receipt, storage, and issue capabilities to enhance the system's capability to support its mission.

The existing system consists of a pump house and four 50,000-gallon USTs that receives fuel from the bulk fuel storage area on the east side of the airfield. In case of an emergency where the fuel line is rendered unusable, the fuel hydrant system on the West Ramp would be useless and the aircraft would require refueling by refueler trucks which is very time consuming because the current system does not permit tanker truck filling of the USTs. Also, the fuel pressure from the existing pump house provides 200 gallons per minute (gpm) when refueling two C-17 aircraft simultaneously which can take over 2 hours.

The Type III system replaces the USTs with two 210,000 gallon aboveground storage tanks (AST), provides an updated automatic pump house which reduces required manpower for fueling activities, installs a tanker truck off-load station for emergency filling of the ASTs should the primary means (pipeline) fail, and a hydrant hose truck (HHT) checkout stand. The increase of fuel storage from 200,000 gallons to 420,000 gallons is required to meet mission requirements as well as allow for the increased settling time of the larger capacity tanks before fuel distribution can occur. The new pump house provides increased pressure for refueling and can provide 600 gpm for up to four C-17 aircraft simultaneously, greatly reducing the time for fuel servicing procedures.

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Description of Proposed Action, Alternatives (EA, § 2.2, page 13): The Proposed Action would construct a new Type III Hydrant System with two 5,000-barrel ASTs with secondary containment and a 2,400-gpm pump house at the existing West Ramp site. The action will also construct a single position emergency/secondary truck offload stand, HHT checkout stand, and product recovery tank. The existing

Type II pump house and four USTs would be demolished after completion of the construction and the new Type III system is operational.

No Action, Alternative B (EA § 2.4, page 14): Under the No Action Alternative, the current facilities would be left in place and existing conditions would persist. WPAFB would continue to spend unnecessary man-hours refueling the mission aircraft because of the manually controlled pump house and low fuel flow rates. The current system installed in 1965 uses single walled USTs that are susceptible to corrosion and leakage. In order to protect the ground water from contamination, the United States Environmental Protection Agency (USEPA) requires all USTs have secondary containment (double walled). Interior coating of single walled tanks was allowed by the 1988 UST Regulations to extend the service life and protect the tank from corrosion related leakage. The revised 2015 UST regulations require interior lined USTs to be closed and removed from service if the coating fails. Although the hydrant system would not be upgraded, tanks will need to be removed and replaced with a doubled wall UST or a single wall above ground tank with secondary containment. Closing the USTs will seriously affect the time required to refuel the mission aircraft by requiring POL refueler trucks to travel from the east side of the base to the West Ramp.

Alternatives Considered but Eliminated from Further Study (EA § 2.5, pages 14-15): As part of the NEPA process, potential alternatives to the Proposed Action must be evaluated. To be considered reasonable and warrant further detailed analysis, alternatives must be implementable, and meet the purpose and need for the Proposed Action. Potential alternatives were evaluated against the following selection criteria:

- Within 100 feet of the West Ramp hydrant system loop connection in order to minimize piping lengths for system efficiency and cost considerations,
- Adequate space (approximately 3.5 acres) for storage tanks, pump house and tanker truck maneuvering in order to meet Unified Facilities Criteria (UFC) 3-460-01 and National Fire Protection Association (NFPA) 30 clearance criteria,
- Comply with airfield clearance restrictions in accordance with UFC 3-260-01,
- Within 100 feet of the existing bulk fuel supply pipeline to minimize pipe lengths for cost considerations.

All existing infrastructure including runway and taxiway access needed to support aircraft refueling currently reside within this location of the West Ramp. The aircraft parking area is directly to the east of the current location. There are two primary factors to consider, these are the proximity to the hydrant system connection and the fuel supply line from the bulk fuel storage facility, ideally within 100 feet. Any relocation of the site would increase the cost of the project due to extra trenching and piping to make the appropriate connections.

Relocating the entire refueling system was not considered because any movement of the project to the west and southwest would be closer to surface waters and the floodplain. Movement of the project to the north is restricted by the base boundary.

Remodeling the current pumphouse was considered, but the structure is too small for the components of the Type III system. The need for a secondary contingency for fuel supply to the tanks requires the construction of offload stations which requires sufficient space for tanker trucks to maneuver.

Secondary factors to consider are; available space (approximately 3.5 acres) to construct the ASTs with secondary containment, pumphouse, and have room for tanker trucks to maneuver to offload fuel (UFC 3-460-01). The proposed action and the no action alternative satisfy the standards identified in section 2.3 and are evaluated in this EA.

ENVIRONMENTAL CONSEQUENCES

Environmental analysis focused on the following resource areas: land use, noise, air quality, water resources, safety and occupational health, hazardous materials, hazardous waste, biological resources, cultural resources, earth resources, socioeconomics and environmental justice. No resource was dismissed from further review.

Land Use/Noise (EA § 3.2, page 17): The Proposed Action (Alternative A) would result in the construction and installation of a Type III hydrant system at the West Ramp of WPAFB. The hydrant system will be constructed in the same area where the current Type II hydrant system is located. Based on this analysis, implementation of the Proposed Action will not have significant impact to land use. The No Action (Alternative B) would have no impact on land use.

The Proposed Action (Alternative A) will result in short-term impacts on ambient noise generated from construction-related activities (i.e. excavation, concrete and delivery trucks, etc.). Impacts would be minor because construction activities will be carried out during normal working hours, will be short in duration and will be isolated to the West Ramp area at WPAFB. Based on this analysis the Proposed Action would result in no long-term adverse impact on noise. The No Action (Alternative B) would have no short or long-term impacts over current conditions.

Air Quality (EA § 3.3, pages 18-19): WPAFB is located within Greene and Montgomery Counties, which have been designated by U.S. EPA as in attainment for all criteria air pollutants, except ozone, which has been designated as attainment/maintenance. The Proposed Action (Alternative A) would result in minor short-term adverse impact from particulate matter and engine exhaust emissions generated during construction and demolition activities. Impacts would be minor because emissions would be short in duration and are negligible with respect to overall emissions expected for the region. Based on this analysis the Proposed Action (Alternative A) would result in no long-term adverse impact to Air Quality. The No Action (Alternative B) would have no impact on air quality.

Water Resources (EA § 3.4, pages 19-23): There are no surface water features and/or wetland areas within the proposed project site. While this location is outside the 100-year floodplain, it falls within the retarding basin. The Miami Conservancy District (MCD) was consulted and indicated this action would not adversely affect the retention basin. To manage storm water throughout the installation, WPAFB has prepared both a base wide storm water management plan (SWMP) and storm water pollution prevention plan (SWPPP) and has been issued an Ohio EPA industrial permit and a municipal National Pollutant Discharge Elimination System (NPDES) general permit covering their storm water program. The SWMP and SWPPP provide specific best management practices (BMPs) to mitigate migration of surface water contamination from construction activities. WPAFB, through the construction contractor, will be required to apply for an Ohio EPA NPDES *General Storm Water Permit for Construction Activities* since the action will disturb more than one acre. Known as a Construction General Permit, this document specifies storm water protection practices to be implemented to reduce the likelihood of pollutants entering the WPAFB storm system. Finally, the project design will incorporate requirements established by the Energy Independence and Security Act (EISA). EISA requires federal agencies to establish storm water design requirements for construction projects that disturb a footprint greater than 5,000 ft^2 of land in order to maintain or restore the property to its predevelopment hydrology state. Long-term impacts to surface water from the Proposed Action (Alternative A) will be minimized due to incorporating storm water control features into design and adhering to permitted storm water limits. Based on this analysis, the Proposed Action (Alternative A) would result in no long-term adverse impact to Water Resources. Alternative A would have a long-term direct, moderate and beneficial impact to the ground water with the removal of the four USTs. The No

Action (Alternative B) would have no direct adverse effects on water resources; however, a long-term indirect adverse effect to the ground water is possible with the continued use of the USTs through potential corrosion and leakage.

Safety and Occupational Health (EA § 3.5, page 23): The Proposed Action could result in potential minor impact to workers during construction activities; however, impacts would be minimized by adherence to health and safety regulations and standards. There would be no adverse impacts to security as the facility would be fenced and designed to meet required standoff distances. Based on this analysis the Proposed Action (Alternative A) would result in no long-term adverse impact to Safety and Occupational Health. The No Action (Alternative B) would also have no short- or long-term impacts over current conditions.

Hazardous Materials/Waste (EA § 3.6, pages 23-24): WPAFB utilizes a hazardous material management program through which hazardous materials are controlled from procurement, through storage and issue to disposal. Wastes generated at WPAFB include flammable solvents, contaminated fuels and lubricants, paint/coating, stripping chemicals, waste oils, waste paint-related materials, mixed-solid waste, and other miscellaneous wastes. The installation produces more than 1,000 kilograms of hazardous waste per month and is considered a large quantity hazardous waste generator. During the design phase of the project, a comprehensive environmental survey will be conducted. The survey will identify the presence of toxic, hazardous, and other regulated substances. Known hazardous substances identified and encountered during construction/demolition would be managed and disposed of through the WPAFB Environmental Branch in accordance with the WPAFB Hazardous Waste Management Plan. Based on this analysis the Proposed Action (Alternative A) would result in no long-term adverse impact to Hazardous Materials/Waste. The No Action (Alternative B) would continue short-term and long-term, direct, moderate adverse impacts due to the presence and management of these hazardous materials and the potential to release.

Biological Resources (EA § 3.7, pages 24-25): The U.S. Fish and Wildlife Service (USFWS) was consulted regarding the Proposed Action and Alternatives. The USFWS responded indicating that due to the project type, size, and location, they do not anticipate adverse effects to federally endangered, threatened, proposed, or candidate species. The Ohio Department of Natural Resources (ODNR) consultation for the Fire Structural/Rescue Station Environmental Assessment included the area of the Proposed Action (Alternative A) which indicates the project site is not located in an area that provides suitable wildlife or threatened or endangered species habitat; the current land use would not change; proposed construction activities are not in close enough proximity to any threatened or endangered species to generate noise-related impacts; and no wetlands exist on the proposed project site or in the immediate vicinity. Based on this analysis the Proposed Action (Alternative A) would result in no long-term adverse impact to vegetation, wildlife, or threatened/endangered species as the proposed project site is located in the same area as the existing hydrant system. The No Action (Alternative B) would have no short-term or long-term impact on vegetation, wildlife, threatened/endangered species wetlands.

Cultural Resources (EA § 3.8, page 25): The Proposed Action would result in no short- or long-term impacts to cultural resources because no National Register of Historic Places-eligible buildings are being demolished or are located in proximity to the proposed project site. The Ohio State Historic Preservation Office (SHPO) as well as Native American tribes were consulted regarding the Proposed Action. The SHPO responded indicating the Proposed Action (Alternative A) should not alter the integrity of the Strategic Air Command (SAC) compound in a way that would impact its potential for National Register-eligibility in the future. The WPAFB Cultural Resources Manager has established an Installation Tribal Relations Plan (ITRP) with the five federally recognized tribes who have interest in WPAFB actions: Keweenaw Bay Indian Community, Sac and Fox of the Mississippi in Iowa, Saginaw Chippewa Indian Tribe, Seneca Cayuga Tribe of Oklahoma, and Seneca Nation of Indians. In accordance with this plan, these tribes request notification on any action that either involves ground disturbance or falls within areas

not previously disturbed. The WPAFB Cultural Resources Manager sent out a consultation request on 18 March 2019 to the tribes. Only the Senneca Nation of Indians responded to the request indicating there is no adverse effect. Based on this analysis, the Proposed Action (Alternative A) would result in no long-term adverse impact to Cultural Resources. The No Action (Alternative B) would have no short-term or long-term impact to cultural resources.

Earth Resources (EA § 3.9, page 25-26): Most soils within the project area have previously been disturbed. Excavated soil will be used as fill as needed within the construction area. Impacts to soil would be minimized through the implementation of sediment and erosion controls. Long-term, moderate, beneficial impacts to earth resources would be realized should contaminated soil be encountered during the removal of the USTs. Any soil that is encountered during the project found to be impacted by petroleum would be properly disposed by the WPAFB Environmental Branch in accordance with the Hazardous Waste Management Plan. Based on this analysis the Proposed Action (Alternative A) would result in no long-term adverse impact to Earth Resources. The No Action (Alternative B) would have no impact on earth resources.

Socioeconomic Resources/Environmental Justice (EA § 3.10, pages 25-27): The Proposed Action (Alternative A) would result in short-term, negligible, beneficial effects on the local workforce and economy due to a few short-term construction jobs. Based on this analysis the Proposed Action (Alternative A) would result in no long-term adverse impact to Socioeconomic Resources/Environmental Justice. The No Action (Alternative B) would have no adverse impacts to socioeconomic resources.

AGENCY CONSULTATION

In accordance with NEPA, 42 U.S.C. §4321 et seq. (1969), informal consultation was solicited with applicable agencies to seek input on the likelihood of environmental or other impacts resulting from the development of the Proposed Action. Communications from these agencies are included in the appendices.

PUBLIC NOTICE

A public notice was posted in the *Dayton Daily News* and the *Fairborn Daily Herald* on October 26, 2019. The 30-day comment period was held from October 26, 2019 until 24 November, 2019. XX comments were received during the public comment period.

FINDING OF NO SIGNIFICANT IMPACT

Based upon my review of the facts and analysis summarized above and contained within the subject EA, I find the Proposed Action to demolishing the existing Type II Hydrant System and construct a Type III Pressurized Hydrant System at the West Ramp area of WPAFB will not have a significant impact on the natural or human environment; therefore, an environmental impact statement is not required. This analysis fulfills the requirements of NEPA, the President's Council on Environmental Quality 40 CFR §§ 1500-1508, and the USAF EIAP regulation at 32 CFR § 989.

_____ Date: _____

RONALD J. ONDERKO, P.E.
Command Senior Civil Engineer
Logistics, Civil Engineering and Force Protection
Air Force Material Command

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ACRONYMS AND ABBREVIATIONS

ACM	Asbestos Containing Material
AF	Air Force
AFCEC	Air Force Civil Engineer Center
AFMC	Air Force Material Command
AFOSH	AF Occupational and Environmental Safety, Fire Protection, and Health
AFPD	Air Force Policy Directive
AICUZ	Air Installation Compatible Use Zone
AQCR	Air Quality Control Region
ARPA	Archeological Resources Protection Act
AST	Aboveground Storage Tank
BASH	Bird/Wildlife Aircraft Strike Hazard
BLS	Bureau of Labor Statistics
CAA	Clean Air Act
CDC	Child Development Center
CEG	Civil Engineer Group
CEQ	Council on Environmental Quality
CES	Civil Engineer Squadron
CFR	Code of Federal Regulations
CGP	Construction General Permit
CO	Carbon Monoxide
CWA	Clean Water Act
dB	Decibel
DLA	Defense Logistics Agency
DoD	Department of Defense
EA	Environmental Assessment
EIFS	Economic Impact Forecast System
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EO	Executive Order
EP	Environmental Professional
ESA	Endangered Species Act
FME	Foreign Material Exploitation
FONSI	Finding of No Significant Impact
FS/RS	Fire Structural/Rescue Station
GCP	General Construction Permit
GPM	Gallons per Minute
HHT	Hydrant Hose Truck
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resources Management Plan
LBP	Lead Based Paint

MA	Metropolitan Area
MBTA	Migratory Bird Treaty Act
MCD	Miami Conservancy District
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act
NOAA	National Oceanic and Atmospheric Administration
NO_2	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System
NR	National Registry
NRHP	National Register of Historic Places
NRCS	Natural Resource Conservation Service
O_3	Ozone
ODNR	Ohio Department of Natural Resources
OEPA	Ohio Environmental Protection Agency
OSHA	Occupational Safety and Health Act (Administration)
OU	Operable Unit
Pb	Lead
PM	Particulate Matter
POL	Petroleum, Oil, and Lubricants
PPE	Personal Protective Equipment
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
SHPO	State Historic Preservation Office
SO_2	Sulfur Dioxide
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
TSCA	Toxic Substance Control Act
UFC	Unified Facilities Criteria
USACE	United States Army Corps of Engineers
USAF	United States Air Force
USDA	U.S. Department of Agriculture
USC	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UST	Underground Storage Tank
VOC	Volatile Organic Compound
WPAFB	Wright-Patterson Air Force Base

LIST OF FIGURES

LIST OF TABLES

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SECTION 1 – PURPOSE OF AND NEED FOR ACTION

1.1 INTRODUCTION

The United States Army Corps of Engineers (USACE) has prepared this Environmental Assessment (EA) for the United States Air Force (USAF) in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S. Code [USC] §4321-4370h), as implemented by the Council on Environmental Quality (CEQ) Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force regulations for implementing NEPA (32 CFR Part 989).

The EA is used when a proposed action is one not usually requiring an Environmental Impact Statement (EIS) but is not categorically excluded. Every EA must lead to a Finding of No Significant Impact (FONSI), a decision to prepare an EIS, or no action on the proposal (32 CFR 989.14)

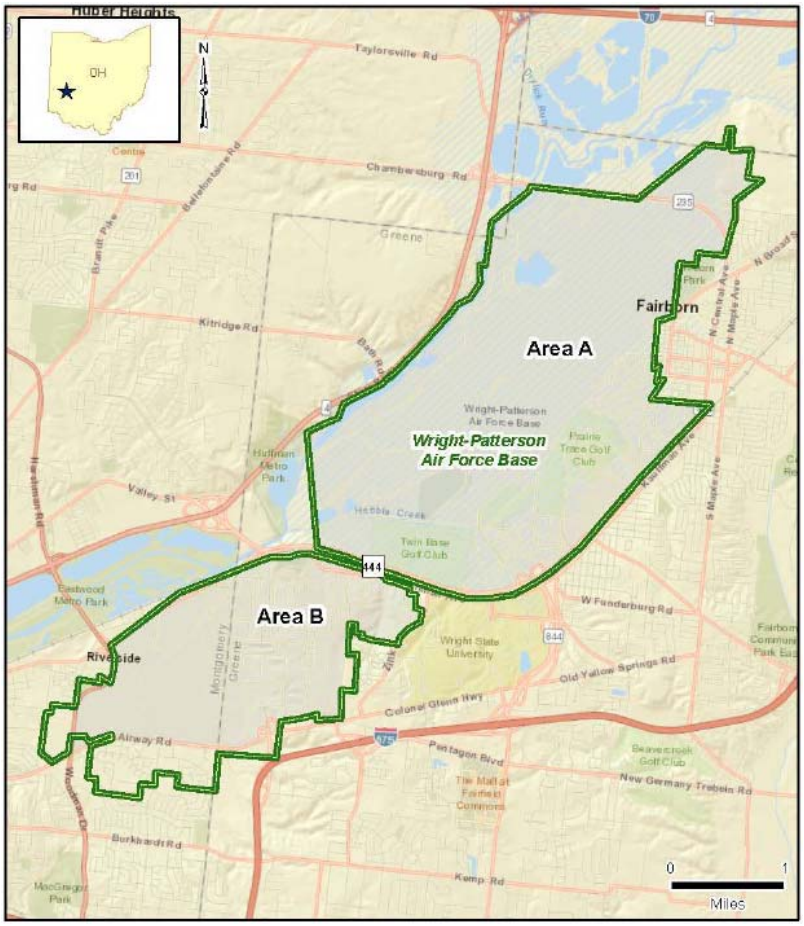


Figure 1. Wright-Patterson AFB.

WPAFB is located in Greene and Montgomery counties, Ohio, approximately 10 miles east of Dayton, Ohio (Figure 1). WPAFB encompasses 8,145 acres and is classified as non-industrial with mixed development. The physical layout of the installation is divided into two distinct areas, Area A and Area B.

The West Ramp is located northwest of the runway in Area A (Figure 2). The proposed construction site is approximately 3.7 acres along the northwest edge of the aircraft parking apron and is the current petroleum, oil and lubricants (POL) pumphouse and underground storage tank (UST) location (see Figure 3, Section 2.2).

Figure 2. Project Location.

1.2 PURPOSE OF THE ACTION

The purpose of this proposed action would replace the current and antiquated Type II hydrant fuel system installed in 1965 that services the West Ramp at WPAFB with a Type III hydrant system. This system would provide greater safety, decrease potential environmental consequence and improve fuel receipt, storage, and issue capabilities to enhance the system's capability to support its mission.

The increased fuel storage with this project, from 200,000 gallons to 420,000 gallons is required to meet mission requirements as well as allow for the increased settling time of the larger capacity tanks before fuel distribution can occur. The 210,000 gallon aboveground storage tank (AST) is standard for the Type III system and this meets the mission requirements. The second AST ensures proper settling of impurities in the fuel from transfer operations before distribution to the aircraft (AF 2016 & DoD 2012). Please note the smallest American Petroleum Institute Standard 650 tank size in DoD Standard Design AW 78-24-27 (Aboveground Vertical Steel Fuel Tanks with Fixed Roofs) is a 5,000 barrel (usable capacity) tank (Burns 2017).

1.3 NEED OF THE ACTION

The need of this action is to replace the current Type II hydrant system that consists of four single-wall USTs each with a single vertical turbine hydrant pump, which provides 600 gallons per minute

(gpm) of jet fuel and requires manual operation of at least two technicians. Fuel flowing at 600 gpm is sufficient for refueling one aircraft at a time, but when two aircraft are refueled (maximum for the Type II system) the flow decreases to 200 gpm per aircraft increasing refueling times. The Type III system will greatly increase the gpm allowing the simultaneous refueling of up to four aircraft.

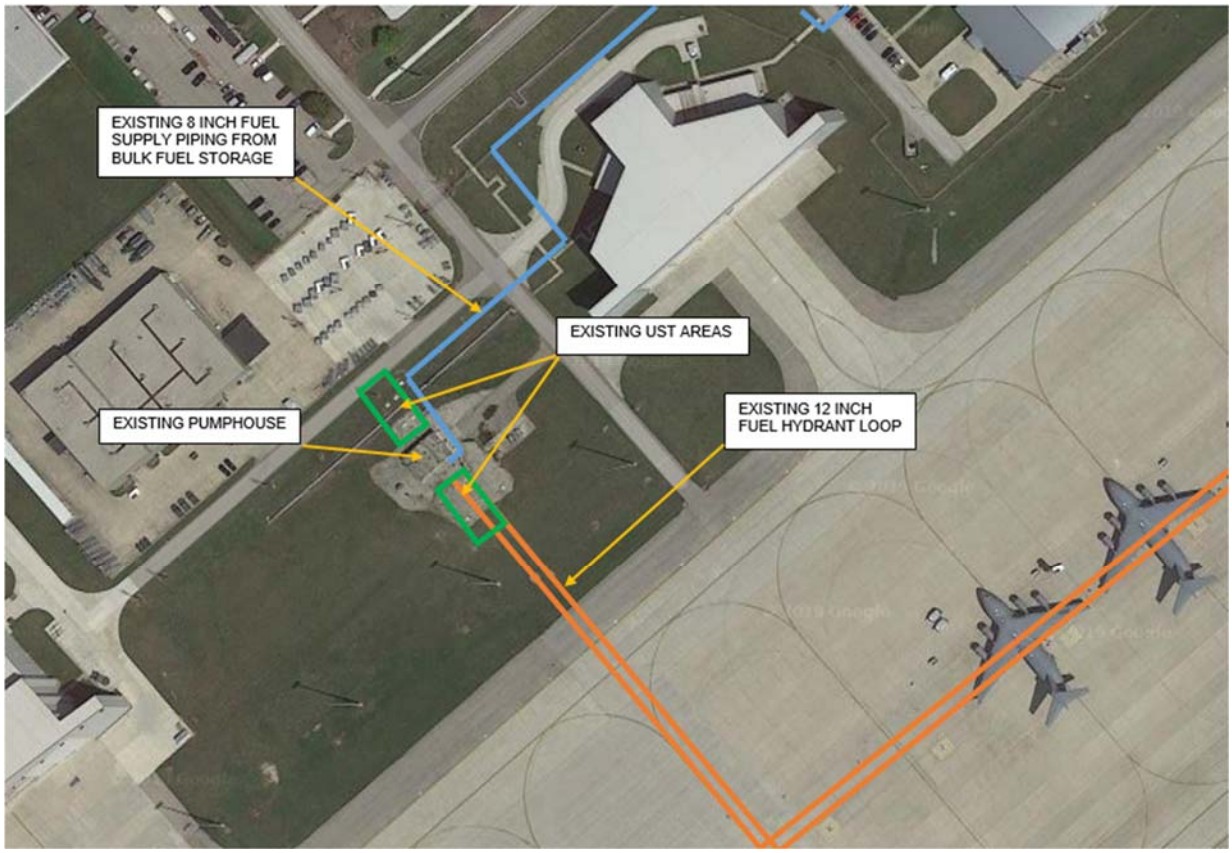


Figure 3. Existing Fuel Component Layout

The 40 CFR 280 regulations for USTs previously excluded airport hydrant systems from regulation, but the revised document published on 15 July 2015 removes this exclusion. Regulation of the four 50,000 gallon USTs went effective on 15 July 2018. These revised regulations require the installation to either remove the tanks from service or prepare for the containment and monitoring requirements of the regulations (Burns 2017).

The current hydrant system is restricted to one way it can accept fuel for tank filling operations and that is through a supply line from the bulk fuel storage area on the east side of the base. Any interruption of this fuel supply will require fuel truck refueling of the mission aircraft increasing manpower and servicing time requirements affecting mission effectiveness.

1.4 DECISION TO BE MADE

This EA presents the proposal to construct a Type III Hydrant System at WPAFB. The Type III Hydrant System offers a maximum of 2400 gpm that will allow for the simultaneous refueling of up to four C-17 aircraft with fuel flow at each aircraft of 600 gpm. This system also operates automatically reducing the number of personnel required for operations and operates on a

continuous loop eliminating dead spaces where fuel can stagnate over time. The decision to construct a Type III Hydrant System at WPAFB would enable the DLA to safely and efficiently provide fuel to meet the AF flying mission needs.

If the analyses presented in the EA indicate that implementation of the preferred alternative would not result in significant environmental impacts, a FONSI would be prepared. A FONSI briefly presents reasons why a preferred alternative would not have a significant effect on the human environment and why an EIS is unnecessary. If significant environmental issues would result that cannot be mitigated to insignificance, an EIS would be required, or the preferred alternative would be abandoned and no action would be taken.

1.5 COOPERATING AGENCY AND INTERGOVERNMENTAL COORDINATION/CONSULTATIONS

1.5.1 Interagency/Intergovernmental Coordination/Consultations

Federal Agencies

- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency
- U.S. Department of Housing and Urban Development.

State Agencies

- Ohio Department of Natural Resources
- Ohio Department of Transportation
- Miami Conservancy District
- Ohio Historic Preservation Office.

1.5.2 Government to Government Consultation

Tribal Governments:

- Sac and Fox of the Mississippi in Iowa
- Saginaw Chippewa Indian Tribe
- Keweenaw Bay Indian Community
- Cherokee Nation
- Seneca Nation of Indians
- Seneca Cayuga Tribe of Oklahoma.

1.6 PUBLIC AND AGENCY REVIEW OF EA

A Notice of Availability (NOA) for the EA and FONSI will be published in the Dayton Daily News and the Fairborn Daily Herald, initiating a 30-day public review period. The EA and FONSI will be made available in the Greene County Public Library, Fairborn Branch. An electronic copy of the EA will also be provided on the WPAFB Environmental Management website at http://www.wpafb.af.mil/units/cev. During this time period, public comments may be received. The NOA and comments received will be included in Appendix F.

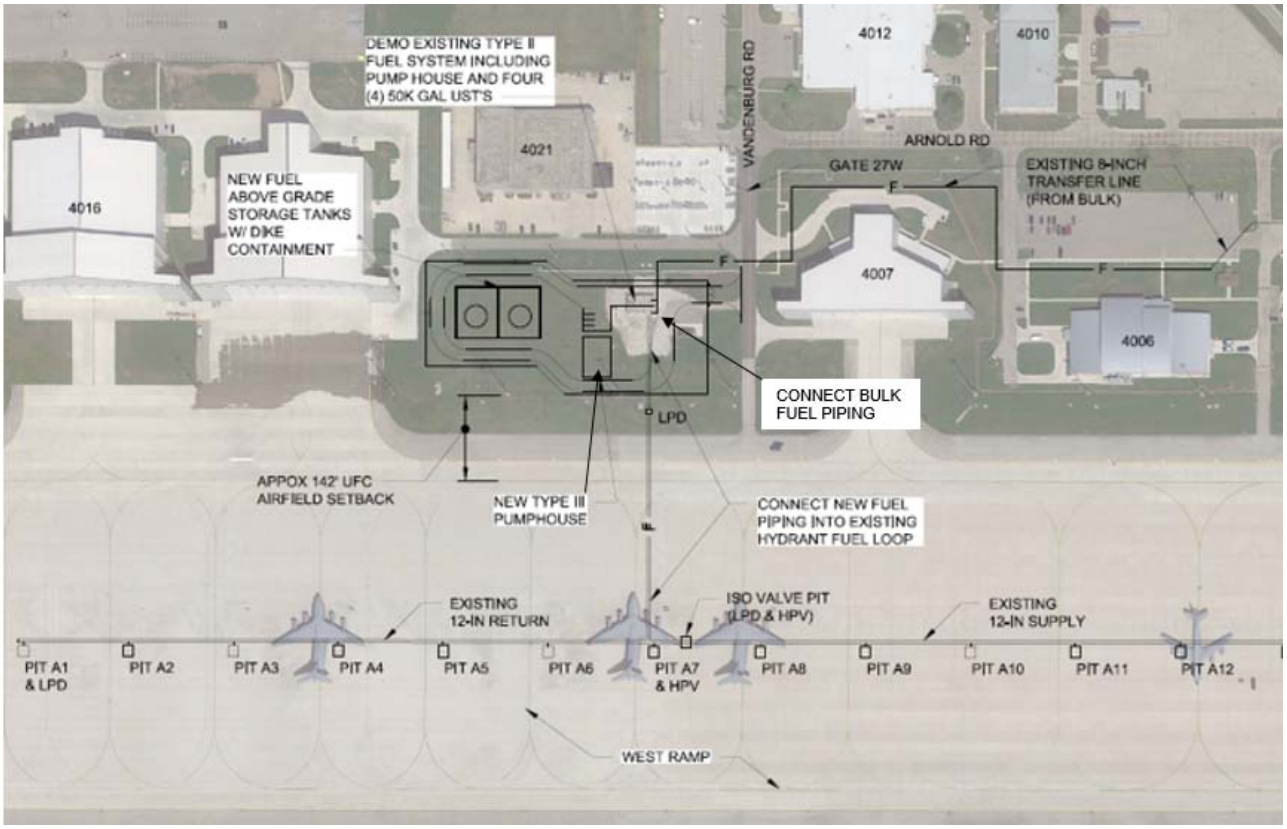
SECTION 2 – DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

Alternatives considered under NEPA must analyze alternatives to the proposed action (Preferred Alternative), and the No-Action alternative. The No-Action alternative is included as a means of comparison to the action alternative to help distinguish the relative merits and disadvantages between alternatives. In order for any alternative to be acceptable for consideration, it must meet the purpose to include need for action.

2.2 PROPOSED ACTION

The proposed project would construct a new Type III Hydrant System with two 5,000 barrel (210,000 gallon) ASTs with secondary containment, a 2,400 gpm pumphouse at the existing West Ramp site, and connect to the existing 12-inch hydrant loop. Also included is the connection to the 8 inch pipeline from bulk fuel storage, installation of a tanker truck offload station and a hydrant hose truck (HHT) checkout station. Finally, the proposed project would include demolishing the current Type II pumphouse and removing the 4 single walled USTs.



(Burns 2017)

Figure 4. Proposed Action

This area is currently used as a POL pumphouse and storage tanks indicating the connections for fuel supply pipeline and the hydrant loop system are nearby as well as connections for utilities, communication, and sewers. The approximately 7,500 foot long 8-inch transfer pipeline is the sole source for receiving F-24 to the Type II system and the majority of the pipeline was constructed in the 1950s, with approximately 900 feet of the transfer pipeline being relocated in approximately 2009/2010. The existing Type II system does not include an emergency truck offload stand as backup to the aging transfer pipeline. The existing system currently serves a 12-inch stainless steel hydrant loop that was constructed in 2001/2002 that is suitable for reuse with the new Type III system (Burns 2017).

2.3 SELECTION STANDARDS

Potential alternatives that meet the purpose and need were evaluated against the following selection criteria:

- Within 100 feet of the West Ramp hydrant system loop connection in order to minimize piping lengths for system efficiency and cost considerations,
- Adequate space (approximately 3.5 acres) for storage tanks, pump-house and tanker truck maneuvering in order to meet Unified Facilities Criteria (UFC) 3-460-01 and National Fire Protection Association (NFPA) 30 clearance criteria,
- Comply with airfield clearance restrictions in accordance with UFC 3-260-01,
- Within 100 feet of the existing bulk fuel supply pipeline to minimize pipe lengths for cost considerations.

2.4 NO ACTION ALTERNATIVE

Under the No Action Alternative, the current facilities would be left in place and the following existing conditions would persist. WPAFB would continue to spend unnecessary man-hours refueling the mission aircraft because of the manually controlled pump house and low fuel flow rates. The current system installed in 1965 uses single walled USTs that are susceptible to corrosion and leakage. In order to protect the ground water from contamination, the USEPA requires all USTs have secondary containment (double walled). Interior coating of single walled tanks was allowed by the 1988 UST Regulations to extend the service life and protect the tank from corrosion related leakage. The revised 2015 UST Regulations requires interior lined USTs must be closed and removed from service if the coating fails. Closing the USTs as they fail will seriously affect the time required to refuel the mission aircraft by requiring POL refueler trucks to travel from the east side of the base.

The current hydrant system is restricted to one way it can accept fuel for tank filling operations and that is through a supply line from the bulk fuel storage area on the east side of the base. Any interruption of this fuel supply will require fuel truck refueling of the mission aircraft increasing manpower and servicing time requirements affecting mission effectiveness.

2.5 ALTERNATIVES ELIMINATED from FURTHER STUDY

All existing infrastructure including runway and taxiway access needed to support aircraft refueling currently reside within this location of the West Ramp. The aircraft parking area is directly to the east of the current location. There are two primary factors to consider, these are the proximity to the hydrant system connection and the fuel supply line from the bulk fuel storage facility, ideally

within 100 feet. Any relocation of the site would increase the cost of the project due to extra trenching and piping to make the appropriate connections.

Relocating the entire refueling system was not considered because any movement of the project to the west and southwest would be closer to surface waters and the floodplain. Movement of the project to the north is restricted by the base boundary.

Remodeling the current pump house was considered, but the structure is too small for the components of the Type III system. The need for a secondary contingency for fuel supply to the tanks requires the construction of offload stations which requires sufficient space for tanker trucks to maneuver.

Secondary factors to consider are; available space (approximately 3.5 acres) to construct the ASTs with secondary containment, pump house, and have room for tanker trucks to maneuver to offload fuel (UFC 3-460-01). The proposed action and the no action alternative satisfy the standards identified in section 2.3 and are evaluated in this EA.

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SECTION 3 – AFFECTED ENVIRONMENT

3.1 SCOPE OF THE ANALYSIS

The following sections present a description of the environmental resources and baseline conditions that could potentially be affected from implementing the Proposed Action. Affected environmental resources are confined to a Region of Influence (ROI) in the immediate area of the proposed project (see figure 3). The analysis was provided by the 88th Civil Engineer Group (CEG), Environmental Branch.

In compliance with NEPA, CEQ regulations, and 32 CFR Part 989, the description of the affected environment focuses on resources and conditions potentially subject to impacts. Analysis of potential environmental effects focuses on resource areas that are appropriate for consideration in light of a proposed action. All resource areas are initially considered, but some may be eliminated from detailed examination because they do not directly apply to a particular proposal. The potentially affected environment is described below.

3.2 LAND USE/NOISE

There is a wide variety of land use classifications on WPAFB. Open Space and Outdoor Recreation represent some of the land constrained from development. Over 2,000 acres of this undeveloped land lies within the natural constraints area, which is composed of areas such as floodplains, lakes, wetlands, or areas with unsuitable soil for building. Also located within the natural constraint area is the 109-acre Huffman Prairie Flying Field containing remnant prairie habitat, which includes several rare plant and animal species.

All proposed work falls within the installation property limits of WPAFB. The property is surrounded by industrial/airport support buildings and is currently used for the same purpose as the proposed action use. While WPAFB is divided into 12 land use categories for installation planning purposes, the parcel is zoned and has a land use as a military installation. The Proposed Action area's existing and future land use is identified as industrial per the WPAFB General Plan (WPAFB 2014).

Human-made constraints also restrict development within the WPAFB boundaries. Included in these types of constraints are archaeological sites and historic buildings, which can be identified sites or those that remain undiscovered. Operational restrictions can also impede development. Noise contours from aircraft operations and explosive safety zones must be considered when looking at developing areas on the Base. Airfield and airspace control surfaces, such as runway approach clear zones, are to remain clear of building obstructions.

The noise environment at WPAFB is dominated by aircraft operations. The location of the Proposed Action is within the 65-70 decibels (dB) noise level contour for the most recent AICUZ study for WPAFB. Land use compatibility guidelines are documented in the AICUZ study for WPAFB, the AICUZ study identifies the noise zones and the operations/activities that are compatible within those noise zones. The location of the proposed action is compatible with the AICUZ noise zone (WPAFB 2014).

3.3 AIR QUALITY

In accordance with the Clean Air Act (CAA) (42 USC 7409) requirements, the air quality in a given region of area is measured by the ambient concentration of criteria pollutants in comparison with established standards. These criteria pollutants are; ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter equal to or less than 10 microns (PM_{10}), particulate matter equal to or less than 2.5 microns ($PM_{2.5}$), and lead (Pb) (40 CFR 50).

The Base is located in Greene and Montgomery counties, which are located in the Metropolitan Dayton Intrastate Air Quality Control Region (AQCR) (40 CFR 81.34). Each AQCR is classified as an attainment area or nonattainment area for each of the criteria pollutants depending on whether it meets or fails to meet the National Ambient Air Quality Standards (NAAQS) for the pollutant. Ambient air quality for the Metropolitan Dayton Intrastate AQCR was formerly classified as an attainment/maintenance area for the 8-hour O_3 (USEPA 2012a); attainment for the NO_2 annual standard and unclassifiable/attainment for the new 1-hour standard NO_2 (USEPA 2012b); attainment for the SO_2 3-hour standard and unclassifiable/attainment for the new 1-hour standard SO_2 established in 2013 (USEPA 2013a); and attainment for the Pb and CO standards. Area designations for the 2015 revised 8-hour O_3 NAAQS are anticipated to be finalized by the end of 2017 (USEPA 2015a).

The ambient air quality for $PM_{2.5}$ is classified as attainment for the 24-hour standard and re-designated to attainment/maintenance for the 1997 annual standard (USEPA 2013b). For the new annual $PM_{2.5}$ NAAQS, the OEPA submitted a report in December 2013 recommending that Montgomery and Greene counties be designated as "unclassified/attainment" (OEPA 2013). This designation was approved by the USEPA effective April 1, 2015 (USEPA 2015b). The USEPA has also approved Ohio SIP revisions implementing the $PM_{2.5}$ NAAQS including OAC Rule 3745-31-01 (WWWW) defining $PM_{2.5}$ precursors to include sulfur dioxide and nitrogen oxides (USEPA 2015c).

Air quality is typically good in the vicinity of WPAFB, and is generally affected only locally by military and civilian vehicle emissions, particulate pollution from vehicle traffic, emissions from wastewater treatment plants, industrial sources, and construction activities. Mobile sources, such as vehicle and aircraft emissions, are generally not regulated at the local level and are not covered under existing stationary source permitting requirements. Stationary emissions sources at WPAFB 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.

The Base is under the jurisdiction of USEPA Region 5 and the OEPA. The Regional Air Pollution Control Agency, under the jurisdiction of the OEPA, conducts annual compliance inspections at WPAFB. The Base has long had an aggressive program of internal audits and inspections to ensure continual compliance with all applicable air permit terms and conditions. Detailed records are maintained to demonstrate compliance with emission limits, and reports are submitted in a timely manner to the local regulatory agency.

The WPAFB air emissions inventory includes over 1,400 emissions sources. Of these, approximately 1,050 are included in the Base's Title V permit application, which was originally submitted to the OEPA in February 1996 in accordance with CAA requirements. Many of the Title V sources are insignificant, including emergency generators, small boilers, and laboratory fume

hoods. There were 29 permitted non-insignificant emissions units identified in the original application, most of which were boilers and paint spray booths. The OEPA finalized the Title V Operating Permit for WPAFB in January 2004 with an effective date of February 17, 2004 (OEPA 2004). A Title V renewal permit application was submitted to the OEPA in May 2008 and is currently under review. The Title V renewal application notified OEPA that the number of permitted non-insignificant emission units was reduced from 29 to 26. A revision to the Title N renewal application was submitted to OEPA on September 11, 2013 to include a coal-to-gas fuel conversion project at the Base central heating plants.

3.3.1 Attainment Status

WPAFB is located in both Greene and Montgomery counties in Ohio. According to the Ohio Environmental Protection Agency (OEPA) these counties are in attainment with the NAAQS for PM_{10}, NO_2, SO_2, CO, and Pb (OEPA 2017a).

3.3.2 General Conformity Applicability

The General Conformity Rule at 40 CFR 93 Subpart B requires that any federal action meet the requirements of a State or Federal Implementation Plan. More specifically, CAA conformity is ensured when a federal action does not cause a new violation of the NAAQS; contribute to an increase in the frequency or severity of violations of NAAQS; or delay the timely attainment of any NAAQS, interim progress milestone, or other milestones toward achieving compliance with the NAAQS. The General Conformity Rule applies only to federal actions in nonattainment or maintenance areas.

WPAFB was located in maintenance areas for O_3 and $PM_{2.5}$. However, USEPA revoked the 1997 O_3 standard and the 1997 $PM_{2.5}$ standard in attainment and maintenance areas on 6 March 2015 (USEPA 2015) and on 24 August 2016 (USEPA 2016), respectively. The General Conformity requirements for the NAAQS end when the NAAQS is revoked. Hence, the Proposed Action under this consideration is not subject to General Conformity. See the Air Conformity Applicability Model report in Appendix F.

3.4 WATER RESOURCES

3.4.1 Surface Water

The Base is in the Mad River Valley. The Mad River originates approximately 40 miles north of Springfield, Ohio, flows south and southwest past WPAFB to its confluence with the Great Miami River in Dayton, Ohio, and flows into the Ohio River. Sustained flow of the Mad River originates from groundwater discharge of glacial deposits upstream of Huffman Dam. The Mad River approaches WPAFB from the north and flows along the western border of Area A. The OEPA has divided the Mad River watershed into five areas: headwaters; Mad River between Kings and Chapman Creeks; Buck Creek; Mad River from Chapman to Mud Creeks; and the lower Mad River (Mud Creek to the Great Miami River). Mud Creek enters the Mad River 2,000 ft north of the SR 235 bridge, near the northwest corner of Area A. The Base lies adjacent to the northernmost portion of the lower Mad River segment.

The OEPA has identified the lower segment of the Mad River, which flows through WPAFB, as an impaired water under Section 303(d) of the Clean Water Act (CWA) for not meeting aquatic life and recreation use standards (OEPA 2010). The USEPA has established the total maximum daily load (TMDL) of effluent for the Mad River in the Mad River Total Maximum Daily Loads for

Sediment and Turbidity (USEPA 2007). A TMDL specifies the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and allocates pollutant loadings among point and nonpoint pollutant sources.

The TMDL for the Mad River watershed has been set at 120 percent of natural sediment loading. According to the report, the natural sediment loading in the basin is approximately 894 tons/square mile/year based on an annual average.

The WPAFB Storm Water Management Plan (SWMP) and the Storm Water Pollution Prevention Plan (SWPPP) (prepared to comply with the CWA and the Ohio Water Pollution Control Act) provides descriptions of storm drainage areas and their associated outfalls, potential storm water pollution sources, and material management approaches to reduce potential storm water contamination (WPAFB 2011b, 2011c). The SWPPP was last updated in September 2011 while the SWMP was last updated in April 2011. An OEPA industrial permit National Pollutant Discharge Elimination System [NPDES] 1IO00001) and a municipal NPDES General permit (OHQ000002) cover the WPAFB storm water program (WPAFB 2011c).

The SWPPP and SWMP provide specific BMPs to prevent surface water contamination from activities such as construction, storing and transferring of fuels, storage of coal, use of deicing fluids, storage and use of lubrication oils and maintenance fluids, solid and hazardous waste management, and use of deicing chemicals (WPAFB 2001).

There are 20 defined drainage or "Outfall Areas" on Base (WPAFB 2011c). There are 24 NPDES discharge monitoring points on Base that are addressed under the NPDES permit. All storm water from WPAFB flows into the Mad River.

Regionally, the Mad River is located adjacent to the northwestern boundary of Area A and flows northeast to southwest. Surface water in the WPAFB area includes the Mad River, Trout Creek, Hebble Creek, Bass Lake, Twin Lakes, Gravel Lake, and wetland areas. These surface water features are recharged by both precipitation and groundwater. Trout Creek and Hebble Creek provide drainage of surface water runoff at WPAFB.

The majority of the West Ramp (adjacent and east/northeast and southeast/south of Bass Lake, approximately 1,200 ft south of the project area) drains to Bass Lake through Outfall 18 (see figure 5). Drainage from the West Ramp includes an approximate 150-acre aircraft parking area where aircraft deicing, fueling, and minor maintenance occur. Storm water runoff from this area passes through oil-water separator 3-WRAMP prior to discharging to Bass Lake at Outfall 18, located on the southeast corner of Bass Lake. The remainder of the West Ramp area drains to Outfall 19 (discharging to the northeast corner of Bass Lake) with activities in this area being performed primarily indoors. Sampling at Outfalls 18 and 19 is routinely performed for but is not exclusive of the following parameters: volatile organic compounds (VOCs), oil/grease, benzene, toluene, ethylbenzene, xylenes, propylene glycol, and ammonia (WPAFB 2011c).

Trout Creek is located in the western portion of Area A and discharges to the Mad River north of Huffman Dam. Hebble Creek passes through the southwestern portion of Area A and discharges to the Mad River several hundred ft north of Huffman Dam. Gravel Lake, Twin Lake East and Twin Lake Westare located in the southwest portion of Area A in OU5. These lakes were created as a result of gravel quarrying activities at WPAFB. Currently, the lakes are maintained as recreational areas for Base personnel and their families.

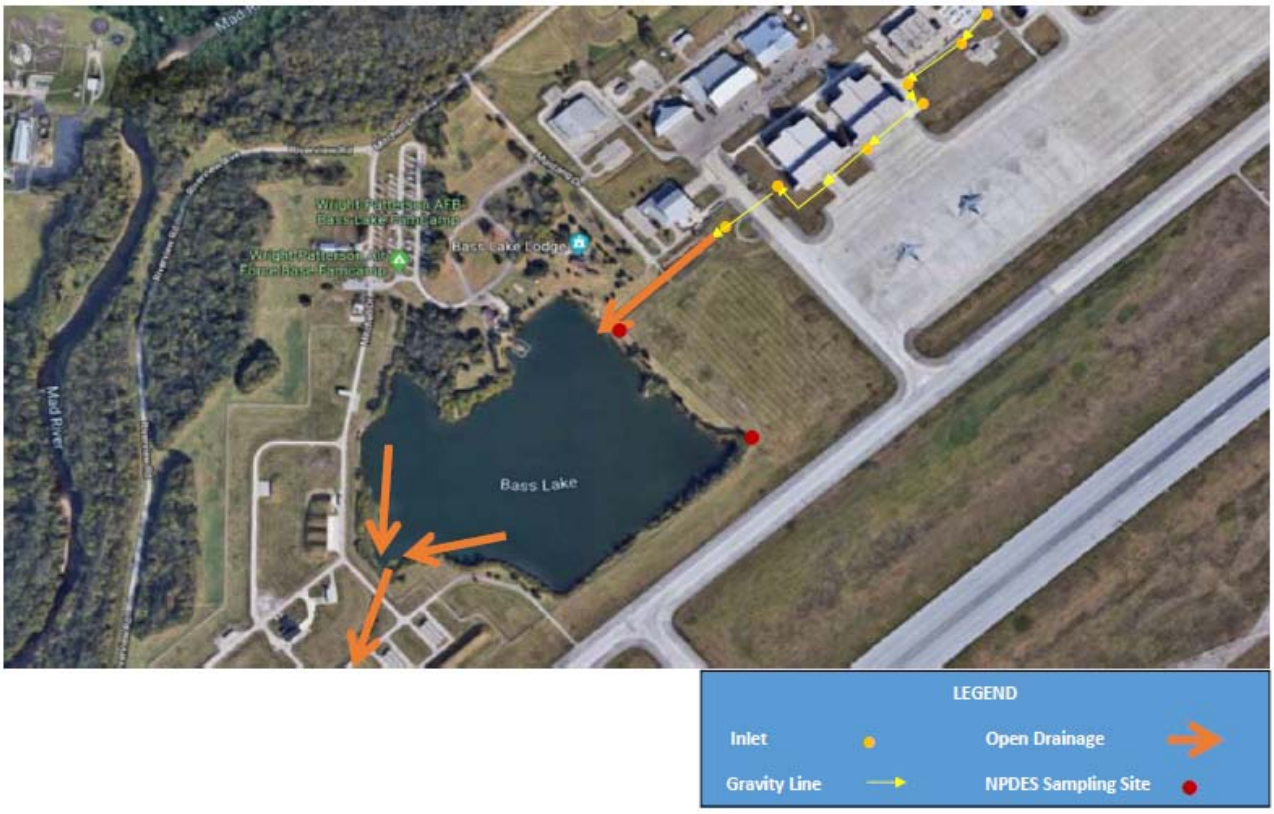

Figure 5. Storm Water Flow for Project Location.

3.4.2 Groundwater

The Base is located in the Great Miami River Valley, which is filled with glacial deposits of sand and gravel. The glacial outwash deposits are very permeable and exhibit high transmissivity and hydraulic conductivity. The resulting aquifer system, called the Miami Valley Buried Aquifer, is a highly productive source of water for the people in southwest Ohio. The USEPA designated the Miami Valley Buried Aquifer system as a sole-source aquifer in 1988, requiring USEPA Region 5 approval on all new projects to ensure continued use as a drinking water supply (53 Federal Register 15876). The buried aquifer system provides drinking water for more than 1.6 million people in southwest Ohio (Debrewer et al. 2000).

Groundwater can also be found in large volumes in the Silurian-age (415 to 465 million years ago) limestone and dolomite bedrock underneath the buried valley aquifer system. Private wells and smaller public systems typically use this bedrock aquifer because, though not as productive as the buried aquifer, it is adequate for such uses (MCD 2002). Underneath the limestone and dolomite bedrock is Ordovician-age (465 to 510 million year ago) bedrock shale and limestone of the Richmond Group. The lower bedrock aquifer system generally produces less than 5 gallons per minute (gpm) and is only productive enough for livestock use.

The buried valley aquifers coincide with the present Great Miami River and its tributaries. Water underground generally follows the same flows as surface waters with upland areas serving as recharge areas and groundwater divides (MCD 2002). At WPAFB, the Mad River follows the course of the Mad River Buried Aquifer, part of the Miami Valley Buried Aquifer system. South

of Huffman Dam (a flood control dam that is managed by the Miami Conservancy District [MCD]), a till zone divides the Mad River Buried Aquifer into an upper water table unit and a lower confined unit. However, north of the dam and in other parts of the buried valley aquifer, till zones occur less frequently as discontinuous, less-permeable zones within the more permeable outwash deposits (WPAFB 1995b). Most of the wells in the outwash deposits yield between 750 and 1,500 gpm, but can vary from less than 200 to more than 4,000 gpm (WPAFB 1995b). The City of Dayton groundwater production wells at Huffman Dam are screened at depths of over 100 ft below ground surface.

General groundwater flow in the area of the project area is in a radial pattern to the north, east, and west; however, flow is predominantly in a westerly direction toward the Mad River. This flow pattern is most likely due to the proximity of the area to Bass Lake located approximately 600 ft south of the project are. Average depth to groundwater is approximately 10 ft below ground surface within Operable Unit 11 (OU11).

3.4.3 Floodplains

Floodplain management on WPAFB includes floodplain protection (EO 11988, EO13690), floodplain boundary determination, and assessment of proposed actions within floodplains. Floodplain protection and assessment of proposed actions is the responsibility of the 88 CEG EIAP. Federal actions occurring within flood zones require a finding of no practical alternative (FONPA). Floodplain boundary maps are housed in the WPAFB GIS database.

A large portion of WPAFB and most of Area A lies within the Mad River floodplain. The 10-year floodplain is at 804.7 ft above mean sea level (MSL) and the 100-year floodplain is at 813.4 ft above MSL (North American Vertical Datum [NAVD] 1988). Land surface elevation at the project is approximately 815 ft above MSL, which is above the 10- and 100-year floodplain elevations. In addition, the ASTs are protected by 5 ft high secondary containment berm that would increase the elevation to 820 ft above MSL.

3.4.4 Wetlands

Executive Order 11990, Protection of Wetlands, May 24, 1977, directs federal agencies to consider alternatives to avoid adverse effects on and incompatible development in wetlands. Federal agencies are directed to avoid new construction in wetlands, unless the agency finds there is no practicable alternative to construction in the wetland, and the proposed construction incorporates all possible measures to limit harm to the wetland.

The CWA sets the basic structure for regulating discharges of pollutants to U.S. waters. Section 404 of the CWA establishes a federal program to regulate the discharge of dredge and fill material into waters of the United States, including wetlands. The National Wetlands Inventory, a department within U.S. Fish and Wildlife Service (USFWS); USEPA; and the National Resource Conservation Service (NRCS) help in identifying wetlands.

Forty wetlands covering approximately 19.8 acres were identified at WPAFB in 2009 (WPAFB 2015a). Twenty-three wetlands were identified in Area A and 17 wetlands in Area B. The nearest wetland (C21) to the project area is approximately 2,400 ft south of the project area. Wetland C21 is approximately 0.5 acres in size and is a Category 2, palustrine, aquatic bed, wetland located on the shore of Bass Lake. Wetland C21 provides limited cover for larval and juvenile fish present in

Bass Lake and the dense aquatic vegetation provides habitat for aquatic invertebrates that serve as food for fish as well as for shorebird feeding habitat (WPAFB 2015a).

The total jurisdictional stream length reported on Base in 2010 was 61,358 linear feet and included 13 jurisdictional streams in Area A (6 perennial, 6 intermittent, 1 intermittent/perennial) and 13 jurisdictional streams in Area B (1 perennial, 2 intermittent/perennial, 5 intermittent, 1 ephemeral/intermittent, 4 ephemeral) (WPAFB 2015a).

3.5 SAFETY AND OCCUPATIONAL HEALTH

Contractor Safety

All contractors performing construction activities are responsible for following ground safety regulations and for worker compensation programs, and are required to conduct construction activities in a manner that does not pose any risk to workers or personnel. Industrial hygiene programs address exposure to hazardous materials, use of personal protective equipment, and availability of Safety Data Sheets. Industrial hygiene is the responsibility of contractors, as applicable. Contractor responsibilities are to review potentially hazardous workplace operations; to monitor exposure to workplace chemical (e.g., asbestos, lead, hazardous materials), physical (e.g., noise propagation), and biological (e.g., infectious waste) agents; to recommend and evaluate controls (e.g., ventilation, respirators) to ensure personnel are properly protected or unexposed; and to ensure a medical surveillance program is in place to perform occupational health physicals for those workers subject to any accidental chemical exposures.

Military Personnel Safety

Each branch of the military has its own policies and regulations that act to protect its workers, despite their work location. The AFI 91-301, Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program, which implements Air Force Policy Directive (AFPD) 91-3, Occupational Safety and Health, governs the recognition, evaluation, control, and protection of AF personnel from occupational health and safety hazards. The purpose of the AFOSH Program is to minimize the loss of AF personnel from occupational death, injuries, or illnesses by managing risks.

Public Safety

The 88 CEG Fire Department at WPAFB provides fire, crash, rescue, and structural fire protection at the Base. The emergency services department provides WPAFB with fire suppression, crash response, emergency medical response, hazardous substance protection, and emergency response planning and community health and safety education through the dissemination of public safety information to the installation. The 88 CEG Fire Department abides by a general safety policy relating to the performance of all activities at the Base. Individuals, supervisors, managers, and commanders are expected to give full support to safety efforts and safety awareness and strict compliance with established safety standards are expected.

3.6 HAZARDOUS MATERIALS/WASTE

Hazardous Materials

Air Force Instruction 32-7086, Hazardous Materials Management, establishes procedures and standards that govern management of hazardous materials throughout the USAF. It applies to all

USAF personnel who authorize, procure, issue, use, or dispose of hazardous materials, and to those who manage, monitor, or track any of those activities. The Base utilizes a hazardous material management program through which hazardous materials are tracked and controlled from procurement through storage and issue to disposal.

Hazardous and toxic material procurements at WPAFB is approved and tracked by the Hazardous Material Management Process (HMMP) Team. The HMMP Team is a network of safety, environmental and logistics experts who work with hazardous material Issue Point Managers, Unit Environmental Coordinators, and other hazardous material users to ensure safe and compliant hazardous material management throughout the Base (WPAFB 2006). The Installation Management Division supports and monitors environmental permits, hazardous material and hazardous waste storage, spill prevention and response, and participation on the Base Environmental Protection Committee.

Hazardous Waste

The 88 CEG maintains a Hazardous Waste Management Plan (WPAFB 2019a) as directed by AFI 32-7042, Solid and Hazardous Waste Compliance. This plan prescribes the roles and responsibilities of all members of WPAFB with respect to the waste stream inventory, waste analysis plan, hazardous waste management procedures, training, emergency response, and pollution prevention. The plan establishes the procedures to comply with applicable federal, state, and local standards for solid waste and hazardous waste management.

Wastes generated at WPAFB include waste flammable solvents, contaminated fuels and lubricants, paint/coating, stripping chemicals, waste oils, waste paint-related materials, mixed-solid waste, and other miscellaneous wastes. Management of hazardous waste is the responsibility of each waste-generating organization and the Compliance Division (88 CEG/CEIEC). The Base produces more than 1,000 kilograms of hazardous waste per month and is considered a large quantity hazardous waste generator.

3.7 BIOLOGICAL/NATURAL RESOURCES

Vegetation

The Base contains four general types of natural vegetative communities including forest, old fields, prairie, and wetlands. Areas that may be impacted by the Proposed Action are primarily disturbed areas. These include maintained areas that are frequently mowed such as right-of-ways, lawns, and recreational areas, and have been designated by the Base as turf and landscaped areas.

The Base has been awarded the Arbor Day Foundation's Tree City USA designation for fourteen years (WPAFB 2012). The Tree City USA award originates from the National Arbor Day Foundation, an organization founded in 1976 dedicated to tree plantings, conservation, and promotion of community forestry. Benefits of being a Tree City designee include creating a framework for action, education, a positive public image, and citizen pride.

Wildlife

The Base is home to a variety of wildlife. Previously conducted surveys documented the presence of 23 mammals, 118 birds, 8 reptiles, 6 amphibians, 36 fishes, 14 mussels, 35 butterflies, 8 moths,

15 odonates (dragonflies/damselflies), 6 carrion beetles, and 3 crayfish on the Base (WPAFB 2015a). The project area is located within a heavily disturbed area on Base and those species occurring in such areas are common species to the Base and surrounding area.

Because birds as well as mammals pose a hazard to airfield and aircraft operations, the Air Force has established bird air strike hazard and wildlife management plans. The Base implements a comprehensive Bird/Wildlife Aircraft Strike Hazard (BASH) plan that involves prevention, monitoring, and reduction of bird/wildlife hazards (WPAFB 2015a).

Threatened and Endangered Species

Endangered and threatened species on the Base are protected under the ESA. In addition, AFPD 32-70 and AFI 32-7064 require all Air Force installations to protect species classified as federally or state endangered or threatened. The Endangered Species Management Plan (BHE Environmental [BHE] 2001), which has been incorporated into the Integrated Natural Resources Management Plan (INRMP), provides species-specific protection and conservation measures to protect known special status species occurring on the Base (WPAFB 2015a).

As stated in the United States Fish and Wildlife Service letter in Appendix A, there are no threatened or endangered biological or natural resources on the proposed action property.

3.8 CULTURAL RESOURCES

The Base owns over 250 historic buildings, several that are individually eligible for inclusion on the National Register of Historic Places (NRHP) and most of which are located in one of three NRHP-eligible historic districts. The Integrated Cultural Resources Management Plan (ICRMP) for WPAFB, prepared in consultation with the State Historic Preservation Office (SHPO), indicates the existing pumphouse is not located within a Historic District nor is it individually eligible for listing on the NRHP.

There are no historic or tribal resources on the property as this area has been developed since 1962. The AF has made a 36 CFR Part 800.5(b) “no adverse effect” finding with SHPO concurrence on 13 March 2019 as stated in letter from Ohio History Connection in Appendix B. In the letter the SHPO adds the upgrades to the fuel hydrant system should not alter the integrity of the Strategic Air Command (SAC) compound in a way that would impact its potential for National Register eligibility in the future. The west ramp area is not eligible for the National Registry (NR) and is not an eligible historic district.

The five Tribes culturally affiliated with WPAFB have said that no properties of religious and cultural significance are present on the installation, and that they only wish to be consulted on a ground-disturbing activity that takes place in a previously undisturbed area as stated in Appendix C.

3.9 EARTH RESOURCES

The surface soil at WPAFB was formed by unconsolidated deposits, primarily alluvium, glacial outwash, glacial till, and loess. Most of the installation is mapped by the Natural Resources Conservation Service as urban land complexes (WPAFB 2015).

The highest land surface elevations on Base are in Area B and occur along a bedrock ridge that extends from the southeast corner of Area B to the Wright Memorial. The majority of the Base is

on the broad alluvial plain of the Mad River Valley, which overlies Ordovician-age Richmond shale and limestone bedrock. The land surface elevation Base-wide range from approximately 760 to 980 ft above MSL.

Surface soil at WPAFB formed on unconsolidated deposits, primarily alluvium, glacial outwash, glacial till, and loess (WPAFB 2015). Development and substantial earthmoving activities have altered the natural soil characteristics at WPAFB, making precise classifications difficult. The U.S. Department of Agriculture (USDA), NRCS mapped most of WPAFB as urban land complexes. Major soil complexes represented at WPAFB include Warsaw-Fill, Sloan-Fill, Miamian-Urban, Fox-Urban, Linwood Muck, Westland-Urban, and Warsaw-Urban.

The predominant soil type in the vicinity of the proposed site is the Warsaw-Fill land complex. Warsaw-Fill land complex soils are described as approximately 2 to 5 ft of fill material overlying well-drained soils that formed in loam glacial outwash over sand and gravel at a depth of 24 to 60 inches. Permeability is moderate in the upper portions and high in the underlying sand and gravel (USDA 1978).

3.10 SOCIOECONOMIC RESOURCES

Socioeconomics is the relationship between economics and social elements such as population levels and economic activity. Factors that describe the socioeconomic environment represent a composite of several interrelated and nonrelated attributes. There are several factors that can be used as indicators of economic conditions for a geographic area, such as demographics, median household income, unemployment rates, percentage of families living below the poverty level, employment, and housing data. Data on employment identify gross numbers of employees, employment by industry or trade, and unemployment trends. Data on industrial, commercial, and other sectors of the economy provide baseline information about the economic health of a region.

3.10.1 Affected Environment

Demographics. Metropolitan statistical areas are geographic entities defined by the Office of Management and Budget for use by federal statistical agencies in collecting, tabulating, and publishing federal statistics. A metro area contains a core urban area of 50,000 or more of a population. Each metro area consists of one or more counties and includes the counties containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core (Census 2017).

The Base is located 10 miles outside of Dayton, Ohio. According to the 2010 Census data, the city of Fairborn had a population of 32,352; the city of Dayton had a population of 141,527; and the Dayton Metropolitan Area (MA) (consisting of Clarke, Greene, Miami, Montgomery, and Preble counties) had a population of 979,835 residents. Based on the 2010 Census data, the Dayton MA was the fourth largest metropolitan area in Ohio.

Employment Characteristics. The Base provides a major source of employment in the five-county area. In addition, WPAFB awards numerous contracts every year to local businesses. For Fiscal Year (FY) 14 (October 1, 2013 through September 30, 2014), the total number of jobs provided by WPAFB was over 27,000. This number includes military active duty, trainees and reservists, DoD civilians, and other civilians, such as contractors. This number of indirect jobs supported by the Base, such as restaurants, dry cleaners, and others is estimated at 34,560. The total economic impact to the local Dayton MA was $4.3 billion (WPAFB 2017c). A large portion of residents in

the Dayton MA are employed in education, health and social services; a lower percentage of residents are employed in retail trade, finance, insurance, real estate, and rental and leasing.

Recent unemployment rates indicate the unemployment rate for the Dayton MA was 4.4 percent in September 2017 (Bureau of Labor Statistics [BLS] 2017a), which was reported to be lower than the state average of 5.3 percent in September 2017 (BLS 2017b). The Dayton MA unemployment rate was slightly higher than the U.S. average of 4.2 percent in September 2017 (BLS 2017c).

3.10.2 Environmental Consequences

This section identifies potential economic and social impacts that might result from the proposed project. The methodology for the economic impact assessment is based on the Economic Impact Forecast System (EIFS) developed by the DoD in the 1970s to efficiently identify and address the regional economic effects of proposed military actions (EIFS 2001). The EIFS provides a standardized system to quantify the impact of military actions, and to compare various options or alternatives in a standard, non-arbitrary approach.

The EIFS assesses potential impacts on four principal indicators of regional economic impact: business volume, employment, personal income, and population. As a "first tier" approximation of effects and their significance, these four indicators have proven very effective. The methodology for social impacts is based on the Guidelines and Principles for Social Impact Assessment, developed by an inter-organizational committee of experts in their field (National Oceanic and Atmospheric Administration [NOAA] 1994).

The proposed project at WPAFB would have an adverse impact with respect to the socioeconomic conditions in the surrounding MA if it would:

- Change the local business volume, employment, personal income, or population that exceeds the MA's historical annual change; and/or
- Negatively affect social services or social conditions, including property values, school enrollment, county or municipal expenditures, or crime rates.

Proposed Action - The Proposed Action would have a negligible impact on the local workforce. A short-term beneficial impact would be expected on the local economy from revenue generated by demolition and construction activities. The Proposed Action does not involve changes in off-Base land use; therefore, no impacts on social conditions are expected.

No Action - The No Action alternative would have no effect on socioeconomics.

3.11 ENVIRONMENTAL JUSTICE

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires that all federal agencies address the effects of policies on minorities and low-income populations and communities, and to ensure that there would be no disproportionately high and adverse human health or environmental effects to minority or low-income populations or communities in the area.

The CEQ guidance states that "minority populations should be identified where either (a) the minority population of the affected area exceeds 50 percent or (b) the population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographical analysis."

Minority populations are defined as: Alaskan Native, American Indian, Black, Native Hawaiian, Pacific Islander, or persons of Hispanic origin. A low-income population is defined as persons living below the poverty threshold as determined by the Census Bureau. A youth population is defined as children under 18 years.

Low-income status was based upon comparing the income of the proposed project site and larger study area residential population to the U.S. Census Bureau Poverty Threshold. The CEQ guidelines do not specifically state the percentage considered meaningful in the case of low-income populations. The definition of "low income populations" is defined by Housing and Urban Development or HUD as populations where "50 percent or greater are low-income individuals".

3.11.1 Affected Environment

A screening analysis using U.S. Census Bureau racial and economic information catalogued by Demographic Profile 5-Year Estimates for the years 2012 through 2016 was reviewed using the American Community Survey economic and demographic and housing estimates to identify low income and minority populations living in the vicinity of Areas A and B of WPAFB and in the geographic region.

Wright-Patterson Air Force Base and surrounding areas are included in Census Tracts 903.02, 906, 911, 9800 and 2803. Montgomery County Tract 9800 includes the west portion of Area B of WPAFB; however, no data is reported for Tract 9800. Demographics for Tract 9800 are included within Tract 2803, which includes the entirety of WPAFB (Census 2018). Census Tract 2803 represents the on-Base population. Off-Base Census Tract relevant to this EA are included in the following Tracts: 2001.01, 2001.04, 2003, 2004, 2005, and 2007.

Tract 2001.04 had the largest total population (5,924 persons) of the comparison geographies as compared to the on-Base population (2,596 persons). Census Tract 2007 had the highest percentage of the population (40.4%) with income below the Census Bureau Poverty Threshold than the on-Base population (1.1%) [NOTE: poverty threshold was set at $25,086 in 2018 by the Census Bureau for a household of four persons]. Census Tract 2007 had a total household income range of $75,000 to $99,999 that was estimated slightly higher (one point) than the same range for the on-Base population but had a considerably lower median household income ($22,691) than that compared with the median household income of the on-Base population ($82,763).

Children are present at WPAFB as residents and visitors. The protection of children area for the Type III Hydrant System facility would primarily be focused on military housing located in Area A at WPAFB. There is one full-day Child Development Center (CDC) in Area A that provides day care for children 6 weeks to 5 years old. Hourly care is also offered for children 6 months to 12 years old (WPAFB 2014a). In addition, children might visit the Medical Center and the recreational areas, such as lakes and golf courses. Precautions are taken for child safety through a number of means, including using fencing, limiting access to certain areas, and requiring adult supervision.

3.11.2 Environmental Consequences

This section evaluates environmental justice concerns to include disproportionate impacts on low-income or minority populations. The construction of the Type III Hydrant System facility at WPAFB would have

an adverse impact with respect to environmental justice in the surrounding metropolitan area if it would disproportionately impact minority populations or low-income populations. Impacts on identified environmental justice (minority and low-income) communities and the protection of children would be considered significant if one or more of the following would occur:

- Activities or operations substantially altering lifestyles or quality of life of WPAFB employees and their families or civilian households living near WPAFB.
- Disproportionately high and adverse environmental or human health impacts on an identified minority or low-income population, which appreciably exceed those of the general population around the project area.
- Disproportionately high and adverse environmental health or safety risks to an identified population of children.

Proposed Action - To comply with EO 12898, ethnicity and poverty status in the study area have been examined and compared to state and national statistics to determine if minority or low-income groups could be disproportionately affected by the Proposed Action. It is noted that the Proposed Action would only involve construction of the Type III Hydrant System facility and demolition of the current pumphouse and USTs. Only on-Base properties would be affected; none of these properties would be used by the surrounding community.

Potential effects from construction activities for the Proposed Action could occur on Base, with no off- Base adverse effects. The environment around WPAFB is influenced by AF operations, land management practices, vehicle traffic, and emissions sources outside the Base. Site preparation and construction activities included as part of the Proposed Action would cause short-term increases in air emissions and noise, but effects would be less than significant and would not disproportionately affect a single population. Additionally, the Proposed Action would not disproportionately impact children.

There are no residential or recreational areas adjacent to the project area. The closest residential area is approximately 1.3 miles to the east; the CDC in Area A is approximately 3,500 ft. Access to the proposed site would be limited during construction and the facility would ultimately be secured by fencing once in operation.

Therefore, there would be no adverse effects on environmental justice communities, and no significant impacts would occur from the Proposed Action.

No short- or long-term impacts would be expected from the Proposed Action because the project site is located within WPAFB's secured perimeter boundary.

No Action - The No Action alternative would have no impact over current conditions with respect to environmental justice.

Table 3-1. WPAFB Economic and Demographic Characteristics Compared to the Surrounding Communities Using Census Bureau 5-Year Estimates

Census Tract	Area	Subject	Estimates and Percentages	
			Estimate	Percent
2803	WPAFB – Areas A and B	Total Population	2,596	
		Male	1,602	61.7%
		Female	994	38.3%
		Employed	571	28.3%
		Unemployed	30	1.5%
		White	2,192	84.4%
		Black	306	11.8%
		Hispanic	319	12.3%
		Mexican	249	9.6%
		Median Age	22.8	(X)
		Under Poverty Threshold – Families	(X)	1.1%
		Total Household Income $75,000 to $99,999	146	24.5%
		Median Household Income (dollars)	82,763	(X)
Surrounding Areas				
2001.01	South of Area B	Total Population	2,912	
		Male	1,381	47.4%
		Female	1,531	52.6%
		Employed	1,387	61.5%
		Unemployed	97	4.3%
		White	2,611	89.7%
		Black	256	8.8%
		Hispanic	247	8.5%
		Mexican	166	5.7%
		Median Age	36.6	(X)
		Under Poverty Threshold – Families	(X)	20.1%
		Total Household Income $75,000 to $99,999	134	11.7%
		Median Household Income (dollars)	42,862	(X)
2001.04	West of Area A	Total Population	5,924	
		Male	2,567	43.3%
		Female	3,357	56.7%
		Employed	3,052	53.8%
		Unemployed	347	6.1%
		White	4,119	69.5%
		Black	1,325	22.4%
		Hispanic	168	2.8%
		Mexican	19	0.3%
		Median Age	21.2	(X)
		Under Poverty Threshold – Families	(X)	18.2%

Census Tract	Area	Subject	Estimates and Percentages	
			Estimate	Percent
		Total Household Income $75,000 to $99,999	118	6.9%
		Median Household Income (dollars)	27,568	(X)
2003	East of Area A (northeastern section)	Total Population	3,578	
		Male	1,798	47.8%
		Female	1,960	52.2%
		Employed	1,562	54.4%
		Unemployed	134	4.7%
		White	3,619	96.3%
		Black	153	4.1%
		Hispanic	27	0.7%
		Mexican	27	0.7%
		Median Age	38.0	(X)
		Under Poverty Threshold – Families	(X)	23.8%
		Total Household Income $75,000 to $99,999	131	8.9%
		Median Household Income (dollars)	44,795	(X)
2004	East of Area A (mid-section)	Total Population	2,300	
		Male	1,158	50.3%
		Female	1,142	49.7%
		Employed	1,044	54.6%
		Unemployed	249	13.0%
		White	2,052	89.2%
		Black	202	8.8%
		Hispanic	21	0.9%
		Mexican	14	0.6%
		Median Age	36.1	(X)
		Under Poverty Threshold – Families	(X)	14.2%
		Total Household Income $75,000 to $99,999	51	5.0%
		Median Household Income (dollars)	26,307	(X)
2005	East of Area A	Total Population	5,446	
		Male	2,948	54.1%
		Female	2,498	45.9%
		Employed	2,416	58.0%
		Unemployed	242	5.8%
		White	4,900	90.0%
		Black	357	6.6%
		Hispanic	223	4.1%
		Mexican	192	3.5%
		Median Age	34.9	(X)
		Under Poverty Threshold – Families	(X)	24.7%
		Total Household Income $75,000 to $99,999	136	6.8%
		Median Household Income (dollars)	37,143	(X)
2007	South of Area A	Total Population	3,925	
		Male	2,023	51.5%
		Female	1,902	48.5%
		Employed	1,831	58.5%
		Unemployed	233	7.4%
		White	3,127	79.7%
		Black	909	23.2%
		Hispanic	214	5.5%
		Mexican	78	2.0%
		Median Age	30.2	(X)
		Under Poverty Threshold – Families	(X)	40.4%

Census Tract	Area	Subject	Estimates and Percentages	
			Estimate	Percent
2007	South of Area A	Total Household Income $75,000 to $99,999	147	7.3%
		Median Household Income (dollars)	22,691	(X)

(X) = Not applicable
Source: Census 2018

SECTION 4 – ENVIRONMENTAL CONSEQUENCES AND CUMULATIVE EFFECTS

4.1 SCOPE OF THE ANALYSIS

An analysis of the potential environmental consequences of implementing the Proposed Action, as well as the No Action Alternative, on each resource discussed in Chapter 3 is presented in Chapter 4. In accordance with CEQ guidelines (40 CFR 1508.8), each alternative considered was evaluated for its potential effect on physical, biological, and socioeconomic resources.

The impact analyses consider each alternative discussed in Chapter 2 that have been identified as reasonable for meeting the purpose and need for action. Those alternatives include the Proposed Action and the No Action Alternative.

For the purpose of this report, the existing conditions are used as a baseline comparison for the Proposed Action or No Action Alternative impacts. Environmental consequences will be described using one of the following eight categories:

- No effect would be expected
- Minor adverse effects would be expected
- Minor beneficial effects would be expected
- Moderate adverse effects would be expected
- Moderate beneficial effects would be expected
- Major adverse effects would be expected
- Major beneficial effects would be expected
- Combination of the above (minor beneficial and minor adverse effects would be expected).

To further clarify the nature of the various impacts upon each resource in the Environmental Consequences section of this EA, the following terms were used and are defined.

Short-Term or Long-Term – These characteristics are determined on a case by case basis and do not refer to any rigid time period. In general, short-term impacts are those that would occur only with respect to a particular activity or for a finite period or only during the time required for construction or installation activities. Long-term impacts are those that are more likely to be persistent and chronic.

Direct or Indirect – A direct impact is caused by and occurs during the same time period at or near the location of the action. An indirect impact is caused by a Proposed Action and might occur later in time or be farther removed in distance but still be a reasonably foreseeable outcome of the action.

Negligible, Minor, Moderate, or Major – These relative terms are used to characterize the magnitude or intensity of an impact. Negligible impacts are generally those that might be perceptible but are at a lower level of detection. A minor effect is slight, but detectable. A moderate impact is readily apparent. A major impact is one that is severely adverse or exceptionally beneficial.

Adverse or Beneficial – An adverse impact is one having unfavorable or undesirable outcomes on the man-made or natural environment. A beneficial impact is one having positive outcomes on the man-made or natural environment. A single act might result in adverse impacts on one resource and beneficial impacts on another resource.

4.2 LAND USE/NOISE

The Proposed Action will have no long term impacts on the noise environment and is compatible with land use at WPAFB

4.2.1 Land Use Evaluation Criteria

Potential impacts on land use are based on the level of land use sensitivity in areas affected by a proposed action and compatibility of proposed actions with existing conditions. A land use impact would be adverse if it met one or more of the following criteria:

- Inconsistency or noncompliance with existing land use plans or policies;
- Preclude the viability of existing land use;
- Preclude continued use or occupation of an area;
- Incompatibility with adjacent land use to the extent that public health or safety is threatened; and
- Conflict with planning criteria established to ensure the safety and protection of human life and property.

4.2.2 Noise Evaluation Criteria

The noise environment at WPAFB is dominated by aircraft operations. The location of the Proposed Action is within the 65-70 dBA DNL noise level contour for the most recent AICUZ study for WPAFB. Land use compatibility guidelines are documented in the AICUZ study for WPAFB, the AICUZ study identifies the noise zones and the operations an activities that are compatible within those noise zones. The location of the proposed action is compatible with the AICUZ noise zone.

Typical noise levels of representative construction equipment that would be used for the Proposed Action are provided in Table 4-1.

Table 4-1 Noise Levels of Construction Equipment

Equipment	Noise Level (dB) *
Backhoe	78
Concrete Saw	90
Crane	81
Dozer	82
Dump Truck	76
Excavator	81
Front End Loader	79
Grader	85
Pumps	81
*Noise levels are given at a distance of 50 feet from the source. Source: Construction Noise Handbook (Federal Highway Admin 2006).	

4.2.3 Proposed Action

Land Use – The Proposed Action will have no long term impacts on the noise environment and is compatible with land use at WPAFB.

Noise – Construction related noise will be intermittent, short term and have no adverse or long term impacts on the noise environment. Following construction the noise levels would return to normal conditions consistent with the site usage of a POL pumphouse.

The 88th LRS Fuel Flight is a contracted function that manages refueling operations on WPAFB. Contract employees provide 24/7 support through-out the year to 445th AW. The 445th LRS Fuels Flight members augment the 88th LRS contractors during training weekends. The employer of contracted employees is responsible for the following OSHA requirements for implementing a hearing protection program. AF personnel follow organization specific hearing protection plan IAW AFI 48-127.

4.2.4 No Action Alternative

Land Use – There would be no immediate changes to land use as a result of the No Action Alternative. The chances of failure of the USTs causing petroleum contamination in the soil and ground water increases with the time the tanks are in use. Should such a leak occur, land use would be effected by contamination. Soil and groundwater remediation could be required resulting in major excavations for soil removal and/or the installation of groundwater monitoring and injection wells.

Noise – Under the No Action Alternative, the construction would not occur. As a result, no effects to noise resources would be expected.

4.3 AIR QUALITY

4.3.1 Evaluation Criteria

To evaluate the potential impacts to air quality resulting from the Proposed Action, an Air Conformity Applicability Model was used. From a regulatory standpoint, the emissions and associated air quality impacts are addressed in two contexts, Air Quality Permitting and General Conformity. Air quality permitting is not required since no emission units are being installed as part of the Proposed Action. General Conformity addresses the sources of emissions not covered by air quality permitting and ensures that they conform to the applicable State Implementation Plans. As indicated in Chapter 3, the proposed Action is not subject to General Conformity. See the Air Conformity Applicability Model report in Appendix F.

There likely will be no emergency or standby generator at the new pump house according to the WPAFB Air Program Manager. If a generator is added it will not be a significant impact by simply adding a new emissions unit to the Title V permit. If the unit is an emergency or standby generator it gets a Permit by Rule. If it's non-emergency, it requires a Permit to Install.

4.3.2 Proposed Action

Short-term, direct, adverse air quality impacts are expected during the construction period followed by a return to normal. For the Proposed Action, it was assumed that the project would occur during a 1-year period in fiscal year 2020. Table 4-2 summarizes the expected emission estimates for the construction period of the Proposed Action.

A review of the data indicates the projected total emissions from construction are minimal for all criteria pollutants. There would be no significant impact from emissions of greenhouse gases as well (OEPA 2017).

4.3.3 No Action Alternative

The No Action Alternative is not expected to affect the air quality.

Table 4-2 Emission Estimates

Pollutant	Emissions (annual tons/year)*
VOC	0.656
Nitrogen Oxides (NOx)	4.296
Carbon Monoxide (CO)	3.850
Sulfur Oxide (SOx)	0.008
PM_{10}	14.126
$PM_{2.5}$	0.209
CO_2e	812.7
NOTE: CO_2e = Carbon dioxide equivalent; a unit for greenhouse gas emissions	

* Reference Title V Chapter 3745-77 Permit for Wright-Patterson Air Force Base.

4.4 WATER RESOURCES

The WPAFB SWMP and the SWPPP (prepared to comply with the CWA and the Ohio Water Pollution Control Act) provides descriptions of storm drainage areas and their associated outfalls, potential storm water pollution sources, and material management approaches to reduce potential storm water contamination (WPAFB 2016a). The SWPPP was last updated in September 2016 while the SWMP was last updated in July 2016. An OEPA industrial permit (NPDES 1IO00001) and a municipal NPDES General Permit (OHQ000002) cover the WPAFB storm water program (WPAFB 2016b).

The SWPPP and SWMP provide specific BMPs to prevent surface water contamination from activities such as construction, storing and transferring of fuels, storage of coal, use of deicing fluids, storage and use of lubrication oils and maintenance fluids, solid and hazardous waste management, and use of deicing chemicals.

WPAFB includes in all construction and demolition projects comprehensive language to meet regulatory requirements and permit conditions for storm water management and erosion control. MCD was contacted because the proposed action is within the retarding basin.

The Proposed Action will be required to adhere to the Energy Independence and Security Act (EISA). EISA requires federal agencies to establish storm water design requirements for construction projects that disturb a footprint greater than 5,000 square feet of land in order to maintain or restore the property to its predevelopment hydrology state. Long-term impacts to surface water from the Proposed Action will be minimized due to incorporating storm water control.

4.4.1 Evaluation Criteria

Evaluation criteria for all water resources consists of the increased amount of contaminants in the water column. A NPDES Construction General Permit (CGP) is required for all construction where more than 1 acre is disturbed, as is the case with the Proposed Action.

4.4.2 Proposed Action

The WPAFB SWMP and SWPPP prepared to comply with the CWA and the Ohio Water Pollution Control Act provide descriptions of storm drainage areas and their associated outfalls, potential storm water pollution sources, and material management approaches to reduce potential storm water contamination. The SWPPP was last updated in September 2016 and the SWMP in July 2016. An OEPA industrial permit (NPDES 1IO00001) and a municipal NPDES General Permit (OHQ000002) cover the WPAFB storm water program. The SWPPP and SWMP provide specific BMPs to prevent surface water contamination from activities such as construction, storing and transferring of fuels, storage of coal, use of deicing fluids, storage and use of lubrication oils and maintenance fluids, solid and hazardous waste management, and use of deicing chemicals.

WPAFB includes all C&D projects comprehensive language to meet regulatory requirements and permit conditions for storm water management and erosion control. MCD was contacted because the proposed action is within the retarding basin. The Proposed Action will be required to adhere to the EISA. EISA requires federal agencies to establish storm water design requirements for construction projects that disturb a footprint greater than 5,000 ft2 of land in order to maintain or restore the property to its predevelopment hydrology state. Long-term impacts to surface water from the Proposed Action will be minimized due to incorporating storm water control features into design and adhering to permitted storm water limits.

Surface Water – Short-term, direct and indirect adverse impacts would result from the implementation of the Proposed Action due to potential surface water run-off. The implementation of proper storm water controls would reduce those impacts.

Groundwater – No short-term effects would occur to the groundwater because any spills or releases occurring during construction will immediately cleaned before the contamination can contact groundwater. Long-term direct, moderate and beneficial effects would be expected to the groundwater, particularly by removing USTs that have a tendency to corrode and leak jet fuel.

Floodplain – No short-term or long-term effects would be expected to floodplains during the construction activities impeding the functionality of the floodplain. Staging areas would be located outside of the 100 year floodplain. Sediment and erosion controls would be implemented to prevent disturbance to adjacent areas of the floodplain.

Wetlands – No short-term or long-term effects would be expected to wetlands because wetlands are not located within the Proposed Action Area.

Storm Water - Storm water will drain to an open drainage ditch located to the south of the project area. Storm water then flows to a storm drain which flows through a gravity main to a culvert which flows into Bass Lake. Water from Bass Lake flows out a tributary through a NPDES sampling location to the Mad River. Note: Erosion control measures will be implemented during construction activities.

4.4.3 No Action Alternative

The No Action would have no short- or long-term impacts over current conditions. There are 20 defined drainage or "Outfall Areas" and 23 NPDES discharge monitoring points on Base that are addressed under the NPDES permit. All storm water from WPAFB flows into the Mad River. Surface water in the WPAFB area includes the Mad River, Trout Creek, Hebble Creek, Twin Lakes, Gravel Lake, and wetland areas. These surface water features are recharged by both precipitation and groundwater. Trout Creek and Hebble Creek provide drainage of surface water runoff at WPAFB.

4.5 SAFETY AND OCCUPATIONAL HEALTH

4.5.1 Evaluation Criteria

Impacts on health and safety are evaluated for their potential to jeopardize the health and safety of workers, base personnel, and the surrounding public. The USAF regulations and procedures promote a safe work environment and guard against hazards to the public. The WPAFB programs and day to day operations are accomplished according to applicable USAF federal and state health and safety standards. During construction activities, construction industry standards for personal protective equipment (PPE) and exposure limits are followed closely.

4.5.2 Proposed Action

Short-term, negligible, adverse effects are expected on abatement workers; however, the development of a Health and Safety Plan for the Proposed Action, the implementation of a lockout/tag-out safety procedure when working around utilities, the use of PPE required of abatement workers, and the use of proper construction/demolition technique would mitigate the potential for exposure.

Long-term, minor to moderate, beneficial effects are brought to fuel system workers due to the advanced automation and safety redundancies in the upgrade to the Type III pressurized hydrant system.

4.5.3 No Action Alternative

The No Action Alternative is not expected to affect health and safety in the near future. Facility conditions are monitored by the Facility Manager. As the current system ages and if conditions deteriorate, work orders are submitted to correct any deficiencies. Furthermore, supervisors monitor work condition as well as periodic Safety and Occupational Health inspections are conducted by Bioenvironmental and the Safety Office.

4.6 HAZARDOUS MATERIALS/WASTE

There are five licensed landfills within a 35-mile radius of WPAFB. The 88 CEG recently contacted the Greene County Demolition Landfill in Xenia, Ohio who verified the facility has an estimated millions of cubic feet of remaining capacity at their facility. Additionally, WPAFB requires contractors to divert waste from landfills through reuse and recycling. Therefore, the amount of landfills in the area for construction and demolition waste, there should be minor impacts to the capacities of the landfills in the area.

4.6.1 Evaluation Criteria

Adverse effects would occur if the action resulted in noncompliance of applicable laws or regulations, if the generation of hazardous waste quantities increased and these materials were unable to be properly contained thereby resulting in an unauthorized release to the environment, or if increased exposure levels for workers or the general public result in a negative effect on human health or the environment.

4.6.2 Proposed Action

Short-term and long-term, direct, moderate, and beneficial impacts are expected to arise from the Proposed Action on the environment of the proposed site due to the abatement and disposal of the old fuel system demolition debris in a hazardous waste landfill. The following hazardous or contaminated material waste streams have been identified:

- ACM (valve, piping, and hatch gaskets)
- LBP (all painted surfaces)
- Surfaces coated with paint containing hexavalent chromium
- Petroleum impacted soil (possible historic releases in the UST area)

All waste generated during construction/demolition activities will be managed, transported and disposed of in accordance with applicable federal and state regulations.

4.6.3 No Action Alternative

Short-term and long-term, direct, moderate, adverse impacts are expected due to the presence and management of these hazardous materials. As the system ages, minor maintenance to the structure and fuel system increases that could disturb ACM/LBP and USTs are more likely to corrode the longer they are left underground.

4.7 BIOLOGICAL/NATURAL RESOURCES

Appendix A contains the February 28, 2019, USFWS letter from Patrice M. Ashfield, Field Office Supervisor stating, “There are no Federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area.”

4.7.1 Evaluation Criteria

Evaluation criteria for impacts on biological/natural resources are based on:

- Status (i.e., legal, commercial, recreational, ecological, or scientific) of the resource;
- Proportion of the resource that would be affected relative to its occurrence in the region;
- Sensitivity of the resource to the proposed activities; and
- Duration of ecological ramifications.

The impacts on biological/natural resources would be adverse if species or habitats of high concern are negatively affected over relatively large areas. Impacts are also considered adverse if disturbances cause reductions in population size or distribution of a species of high concern.

The Endangered Species Act of 1973 (ESA) mandates all Federal departments and agencies to conserve listed species and to utilize their authorities in furtherance of the purposes of the ESA. Section 7(a)(2) of the ESA requires that Federal Agencies ensure that, in consultation with USFWS, … any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in

the destruction or adverse modification of habitat of such species… unless such agency has been granted an exemption for such action by USFWS.

4.7.2 Proposed Action

Vegetation - The Proposed Action would result in the removal of an outdated pump house and 4 USTs with the construction of a modern pump house, 2 ASTs, tanker truck offload connection, and a HHT checkout station. Short-term adverse effects to vegetation are expected during construction and demolition. This area would be reseeded with a native grass seed, which is a long term beneficial impact to vegetation.

Wildlife - The Proposed Action area is not a viable habitat for wildlife because of the proximity to aircraft ground and flight operations. After construction/demolition activities, bare ground would be seeded and this grass habitat would be managed in accordance with WPAFB's BASH plan.

Threatened and Endangered Species - WPAFB consulted with USFWS regarding federally listed species. Due to the project type, size, and location, USFWS concurred with the USAF determination that no effects are anticipated to federally endangered, threatened, proposed, or candidate species.

4.7.3 No Action Alternative

The No Action Alternative is not expected to affect vegetation, wildlife, threatened or endangered species except for the possibility of petroleum products leaking from corroded USTs.

4.8 CULTURAL RESOURCES

Appendix B contains the March 13, 2019, Resource Protection and Review letter from Joy Williams, Project Review Manager.

4.8.1 Evaluation Criteria

Adverse impacts on cultural resources might include:

- Physically altering, damaging, or destroying all or part of a resource;
- Altering characteristics of the surrounding environment that contribute to the resource's significance;
- Introducing visual or audible elements that are out of character with the property or alter its setting;
- Neglecting the resource to the extent that it deteriorates or is destroyed; or
- The selling, transfer, or leasing of the property out of agency ownership or control without adequate legally enforceable restrictions or conditions to ensure preservation of the property's historic significance.

4.8.2 Proposed Action

The Proposed Action is outside of any known eligible historic districts at WPAFB and there are no known historic properties located within the action's area of potential effect. There will be minor ground disturbance to remove the USTs, excavations for AST and pump house foundations, and tie ins to the fuel supply and hydrant loop lines.

4.8.3 No Action Alternative

The No Action Alternative is not expected to affect cultural resources.

4.9 EARTH RESOURCES

4.9.1 Evaluation Criteria

Considerations for earth resources include:

- Protection of any unique geological features;
- Protection of soils classified as prime and unique farmland;
- Consideration of project siting and the potential occurrence of natural hazards such as earthquakes; and
- Avoidance or minimization of soil erosion through the use of erosion control measures.

Generally, the criteria for earth resources would be met with proper planning, engineering design, and proper controls.

4.9.2 Proposed Action

Long-term, moderate, beneficial impacts would occur to earth resources due to the removal of the USTs because the possibility of leaking petroleum products from the USTs is nullified because of the remediation processes involved with contaminated waste. Short-term, minor, adverse impacts to earth resources would be realized should previously contaminated soil be encountered during the removal of the USTs. Any soil that is encountered during the project found to be impacted by petroleum would be properly disposed in accordance with the WPAFB Waste Management Plan. Impacts to soil during the construction phase would be minimized through the implementation of sediment and erosion controls.

4.9.3 No Action Alternative

No effects to earth resources would be expected except for the possibility of leaking petroleum product from a corroded UST.

4.10 SOCIOECONOMIC RESOURCES/ENVIRONMENTAL JUSTICE

4.10.1 Evaluation Criteria

This section evaluates environmental justice concerns to include disproportionate impacts on low-income or minority populations. The construction of the Type III Hydrant System at WPAFB would have an adverse impact with respect to environmental justice in the surrounding metropolitan area if it would disproportionately impact minority populations or low-income populations. Impacts on identified environmental justice (minority and low-income) communities and the protection of children would be considered significant if one or more of the following would occur:

- Activities or operations substantially altering lifestyles or quality of life of WPAFB employees and their families or civilian households living near WPAFB.
- Disproportionately high and adverse environmental or human health impacts on an identified minority or low-income population, which appreciably exceed those of the general population around the project area.
- Disproportionately high and adverse environmental health or safety risks to an identified population of children.

4.10.2 Proposed Action

To comply with EO 12898, ethnicity and poverty status in the study area have been examined and compared to state and national statistics to determine if minority or low-income groups could be disproportionately affected by the Proposed Action. It is noted that the Proposed Action would only involve construction of the Type III Hydrant System. Only on-Base properties would be affected; none of these properties would be used by the surrounding community.

Potential effects from construction activities for the Proposed Action could occur on Base, with no off- Base adverse effects. The environment around WPAFB is influenced by AF operations, land management practices, vehicle traffic, and emissions sources outside the Base. Site preparation and construction activities included as part of the Proposed Action would cause short-term increases in air emissions and noise, but effects would be less than significant and would not disproportionately affect a single population. Additionally, the Proposed Action would not disproportionately impact children.

There are no residential or recreational areas adjacent to the project area. The closest residential area is approximately 1.3 miles to the east. Access to the proposed site would be limited during construction and the facility would ultimately be secured by fencing once in operation.

Therefore, there would be no adverse effects on environmental justice communities, and no significant impacts would occur from the Proposed Action.

No short- or long-term impacts would be expected from the Proposed Action because the project site is located within WPAFB's secured perimeter boundary.

4.10.3 No Action Alternative

The No Action alternative would have no impact over current conditions with respect to environmental justice.

4.11 CUMULATIVE EFFECTS

CEQ regulations stipulate that the cumulative effects analysis of an Environmental Assessment should consider the potential environmental effects resulting from "the incremental impacts of the action when added to other past, present, and reasonably foreseeable future action regardless of what agency or person undertakes such other actions" (40 CFR 1508.7). CEQ guidance in considering cumulative effects affirms this requirement, stating that the first steps in assessing cumulative effects involve defining the scope other projects that coincide with the location and timetable of a proposed action and other action. Cumulative effects analyses must also evaluate the nature of interactions among these actions (CEQ 1997).

To identify cumulative effects, the analysis needs to address two questions:

- Does a relationship exist such that affected resource areas of the Proposed Action or alternatives might interact with the affected resource areas of past, present, or reasonably foreseeable actions?
- If such a relationship exists, does an Environmental Assessment or an Environmental Impact Statement reveal any potential significant impacts not identified when the Proposed Action is considered alone?

4.11.1 Projects Identified for Potential Cumulative Effects

Actions at WPAFB under consideration and in the planning stage are included in the cumulative effects analysis to the extent that details regarding such actions exist and the actions have a potential to interact with the Proposed Action. The West Ramp area of WPAFB is relatively small compared to the rest of the installation and few construction projects occur coincidentally. Recent projects in the area in the immediate area of the planned construction are provided in Figure 6.

Figure 6. Cumulative Effects Locations.

Another project with cumulative effects for the proposed project is the Deconstruction and Reconfiguration of the Aboveground Fuel Storage Tank Farm on the East Ramp of WPAFB (Figure 2). The proposed project includes the construction of two ASTs that will double the fuel storage capacity on the West Ramp. The second AST is required for the settling of impurities while fuel in the other AST is used for distribution to aircraft. The Tank Farm Deconstruction and Reconfiguration project decreases the fuel storage capacity on the East Ramp by 1.2 million gallons while the second storage tank at the proposed project on the West Ramp increases fuel storage capacity by 220,000 gallons which will result in a cumulative decrease of 980,000 gallons of fuel storage (WPAFB 2018c).

There are identified actions in the vicinity of the project area that are under consideration and in the planning stage. These actions are included in the cumulative effects analysis to the extent that details regarding such actions exist and the actions have a potential to interact with the Proposed Action or alternatives outlined in this EA. No applicable non-federal or off-Base

potential future projects were identified. Table 4-3 presents potential future projects that have been identified in the project area:

Table 4-3. DoD Past, Present, and Reasonably Foreseeable Actions

Project Name	Description	Planned Year of Implementation / Frequency	Resources Potentially Affected	Magnitude of Impact
Entry Control Reconfiguration and Base Perimeter Fence Relocation, EIS	Reconfigure/relocate nine Area A entry control facilities (gates) (WPAFB 2012).	2012 – 2020	Air Quality, Noise, Earth Resources, Water Resources, Biological Resources, Occupational Health and Safety, Infrastructure, Traffic/Transportation	Not Significant
Deconstruction and Reconfigur-ation of the Aboveground Fuel Storage Tank Farm	Demolish eight ASTs in the bulk fuel tank farm on the east ramp.	2020 – 2022	Earth Resources, Water Resources, Biological Resources	Potential impact to surface and ground water from cata-strophic failure from a natural disaster.
Housing Program, Draft EIS	Disposition of 100 government-owned homes, including 89 Brick Quarters housing units constructed between 1935 and 1937, which are eligible for listing on the NRHP both individually and as a Historic District. Eleven alternatives are currently being analyzed (WPAFB 2017c).	2019 – 2036	Noise, Cultural Resources, Socioeconomics, Infrastructure	Potential impact to overall air quality emissions if alternative selected includes demolition/renovati on; impacts to existing traffic/trans-portation during same programmed year.
Demolish Multiple Buildings, EA	Demolish 7 buildings programmed for 2018 through 2020 as part of an AF initiative to reduce the amount of physical plant that WPAFB spends money on by 20 percent by the year 2020 (WPAFB 2014c).	2018 – 2020 and possibly beyond	Air Quality, Noise, Earth Resources, Water Resources, Cultural Resources, Occupational Health and Safety	Not Significant

Project Name	Description	Planned Year of Implementation / Frequency	Resources Potentially Affected	Magnitude of Impact
Fire Structural / Rescue Station on the West Ramp, EA	Demolish existing Area A facility and re-using existing concrete foundation slab for new construction of a fire structural / rescue station on the West Ramp (WPAFB 2016).	2018 - 2021	Air Quality, Noise, Earth Resources, Cultural Resources, Occupational Health and Safety	Not Significant
Implement the Integrated Natural Resources Management Plan (INRMP), EA	Implement the 2015 INRMP and practices described in the 2015 INRMP; includes planting native tree species for Indiana bat wooded habitat in Area A (WPAFB 2016c).	2016 – 2020	Air Quality, Earth Resources, Water Resources, Biological Resources, Occupational Health and Safety, ERP	Not Significant
Primary Runway Pavement Replacement, EA	Provide long-term replacement of pavement for the existing primary runway and taxiways, enabling aircraft to continue to operate in a safe manner.	2018 – 2020	Air Quality, Noise, Water Resources, Occupational Health and Safety, ERP	Potential impact to overall air quality emissions.
Decentralizatio n of Line C – Area A Heating System	Repair degraded/failing heating distribution system by replacing it with localized natural gas-fired decentralized boilers (WPAFB 2017d).	2018 – 2019	Noise, Air Quality, Biological Resources (Vegetation), Earth Resources, Occupational Safety and Health	Potential impacts to overall air quality emissions and existing traffic/transportatio n in the project area.
Visiting Quarters/ Temporary Lodging Facilities, EA	Construction of a 398-room, five-story hotel as the new visiting quarters and 36 units to be used as temporary lodging facilities	2018 – 2020	Noise, Air Quality, Biological Resources, Earth Resources, Occupational Safety and Health, Utilities and /Infrastructure	Potential impacts to overall air quality emissions, traffic/ trans-portation in the project area, and increased demand for utilities.
F/10266	Repair/Renovate HQ AFMC Basement 1st Floor	2020	Noise, Air Quality, Occupational Safety and Health	Not Significant
F/10262	Repair/Renovate HQ AFMC Basement 1st & 2nd Floors	2020	Noise, Air Quality, Occupational Safety and Health	Not Significant
AFIT	Repair Chilled Water Systems	2020	Noise, Air Quality, Water Resources, Occupational Safety and Health	Not Significant

Project Name	Description	Planned Year of Implementation / Frequency	Resources Potentially Affected	Magnitude of Impact
Area B	Repair Road Retaining Wall Cooling Tower Foundation	2020	Noise, Air Quality, Earth Resources, Water Resources, Occupational Safety and Health	Not Significant
F/20045	Renovate/Consolidate/ Repair Basement & Penthouse	2020	Noise, Air Quality, Occupational Safety and Health	Not Significant
F/20019	Repair Exterior AFRL/RQ	2020	Noise, Air Quality, Biological Resources (Vegetation), Occupational Safety and Health	Not Significant
F/30093	Repair Building Structure RAC-3 LRS Age	2020	Noise, Air Quality, Earth Resources, Occupational Safety and Health	Not Significant
F/30110	Renovate/Consolidate Office Space	2020	Noise, Air Quality, Occupational Safety and Health	Not Significant
Building 262	Repair/Renovate – Phase 2	2020	Noise, Air Quality, Occupational Safety and Health	Not Significant
F/20064	Demo R&D Storage	2020	Noise, Air Quality, Earth Resources, Occupational Safety and Health	Not Significant
F/20062	Demo AFRL Propulsion Lab	2020	Noise, Air Quality, Earth Resources, Occupational Safety and Health	Not Significant
F/20196	Demo R&D Storage	2020	Noise, Air Quality, Earth Resources, Occupational Safety and Health	Not Significant
Base-wide	Repair Failed Roads	2020	Noise, Air Quality, Earth Resources, Occupational Safety and Health	Potential impacts to overall air quality emissions and existing traffic/trans-portation in the project area.
Base-wide	Repair Failed Roofs	2020	Noise, Air Quality, Occupational Safety and Health	Not Significant
F/20655	Replace AFRL Chilled Plant	2020	Noise, Air Quality, Earth Resources, Occupational Safety and Health	Not Significant

Project Name	Description	Planned Year of Implementation / Frequency	Resources Potentially Affected	Magnitude of Impact
F/30256	Engine Test Cell	2019 - 2020	Noise, Air Quality, Earth Resources, Occupational Safety and Health	Not Significant

4.11.2 Analysis of Cumulative Effects

The following analysis first considered whether the actions could affect, or be affected by those resulting from the Proposed Action. Second, an evaluation was made to determine whether such a relationship would result in potentially additive impacts not identified when the Proposed Action is considered alone.

The additive or interactive cumulative effects of the Proposed Action, when considered together with the effects of other past, present, and reasonably foreseeable future actions in the WPAFB region, are presented below by resource category. Please note that only those resources that were identified in Table 4-3 were carried forward for cumulative analysis. Other resource categories, analyzed for the Proposed Action, would not be cumulatively affected by these past, present, or reasonably foreseeable actions.

Cumulative Effects on Resources:

The following examines cumulative effects on the environment that would result from incremental impacts of implementation of the Proposed Action, in addition to other past, present, and reasonably foreseeable future actions. This analysis assesses potential for an overlap of impacts with respect to project schedules or affected areas. This section presents a qualitative analysis of the cumulative effects.

Projects proposed for the reasonably foreseeable future that are relevant to the proposed project area include the Area A Heating System Decentralization project due to the proximity. However, this project would be temporary in nature and would not be a recurring event.

In addition, the timeframes and budgets for each proposed project listed in Table 4-3 can only be estimated or are uncertain. Short-term adverse effects could be possible if this project were to occur in conjunction with the Proposed Action. Long-term cumulative impacts are not expected to result from this reasonably foreseeable future action; however, upgrades to the natural gas distribution system have not yet been identified. Once the facility has been designed, actual load calculations would be performed to determine whether existing capacity along the distribution main is sufficient.

Under the No Action alternative, there would be no change to baseline conditions for any resource areas and existing conditions would continue as described in Sections 3.2 through 3.12 for resources analyzed. No new cumulative impacts would be expected as a result of the No Action alternative.

Air Quality. The state of Ohio accounts for all significant stationary, area, and mobile emission sources under the CAA and USEPA in the development of a SIP. Because the SIP is a compilation of regulations, strategies, schedules, and enforcement actions designed for a state to achieve and maintain compliance with all NAAQS, no significant cumulative impacts on air quality are anticipated. Having the air permits in place prior to construction that are in conformance with the Ohio SIP is protective of public health and welfare and this mitigates cumulative impacts on air quality. For the fugitive emissions generated from the Proposed Action and other past and future projects would not contribute appreciably to adverse cumulative impacts to air quality.

Land Use. The replacement of the Type II hydrant system with the Type III hydrant system will occur within the same footprint. The west ramp area is well developed and has limited space for new construction. Any new construction would first require the demolition of current structure. Therefore, the Proposed Action when combined with past and future projects is not expected to adversely affect land use.

Noise. Demolition and construction activities associated with the Proposed Action and other cumulative projects would cause short- and long-term, minor and adverse, cumulative, impacts on WPAFB. No noise-producing activity or project has been identified that, when combined with the Proposed Action, would have greater than minor adverse impacts on sensitive noise receptors at WPAFB due to the proposed demolition and construction project. There is the potential for adverse impacts due to noise from the emergency generators; however, these generators would only operate in the event of a power failure. Such occurrences would be expected to be infrequent and of short duration (approximately 7 days).

Earth Resources. Past development in various locations of WPAFB have likely contributed to erosion and soil loss. However, the extent to which this has occurred is difficult to determine. The Proposed Action and other cumulative projects involving demolitions and construction would result in temporary disturbed ground surfaces and short-term, minor, adverse impacts on earth resources. Although soils would be disturbed by earthmoving and other construction activities, any effects would not be expected to exceed individual project boundaries and would not result in significant impacts on earth resources since BMPs, erosion and sediment controls and other management measures would be implemented.

Water Resources. Short-term, minor, cumulative adverse impacts on groundwater and surface water would be expected from implementation of the Proposed Action and other cumulative projects involving demolition or construction. The cumulative increase in impervious surfaces from the proposed cumulative projects in the area would be considered a minor contribution in the context of the whole watershed but could be noticeable on a more localized level. In accordance with federal and state stormwater regulations, the post-development hydrologic condition of the areas where the proposed natural gas conversion facilities and other cumulative project facilities would be developed must be maintained as it was pre-development. For these projects, preservation of pre-development hydrologic condition would be ensured through adherence to BMPs and appropriate low-impact development strategies that would be expected to attenuate potentially long-term, adverse impacts on water resources.

Cultural Resources. The Proposed Action would not likely have any effect on cultural resources. Due to the isolated area where the Proposed Action will take place and the isolated areas where past and future projects are located it is not anticipated cumulative impacts will effect cultural resources. In the event of an unanticipated discovery of archaeological resources during the Proposed Action, procedures detailed in the ICRMP and summarized in Section 3.8 would be initiated to minimize impacts.

Biological Resources. The Proposed Action is not expected to adversely affect biological resources. All of the past and planned projects are located within areas that have or would take place in developed areas; therefore, impacts to biological resources would not be expected. Any potential impacts to threatened, endangered, or sensitive species would require consultation with the USFWS and the ODNR and potential mitigation. Therefore, no significant cumulative impacts to biological resources would be anticipated.

Infrastructure/Utilities. While there is capacity for growth, the potential exists for cumulative impacts on utilities. However, as newly constructed infrastructure would replace older facilities, the newer, more energy-efficient construction methods would likely contribute to cumulative, long-term, minor, beneficial impacts on electrical consumption. Short- and long-term, negligible, cumulative impacts on the communications, sewer and wastewater, stormwater drainage, traffic/transportation, and solid waste generation systems would be expected from accommodation of the operations and personnel associated with the POL facility when combined with other actions.

Safety and Occupational Health. Short-term negligible cumulative adverse impacts on health and safety (e.g., slips, falls, heat exposure, exposure to mechanical, electrical, vision, or chemical hazards) would be expected as a result of construction activities associated with the Proposed Action and other cumulative projects. Implementation of appropriate safety methods during these activities would be expected to minimize the potential for such impacts. Workers at construction sites would be required to adhere to site specific health and safety plans; construction areas would be secured to prevent unauthorized personnel from entering the work sites; and in accordance with the Occupational Safety and Health Act, all workers would be provided with appropriate personal protective equipment. Therefore, no significant cumulative impacts to safety and occupational health would be anticipated.

Hazardous Materials/Waste. The Proposed Action could have a negligible effect on hazardous materials and waste associated with construction equipment and debris. In addition, the building demolition could have the potential for generation of ACM, LBP, or other hazardous waste, but effects would be minimized by following proper protocols for abatement and/or disposal. Therefore, no significant cumulative impacts to hazardous materials and waste would be anticipated.

Socioeconomic. The Proposed Action will have short-term positive impact on socioeconomic conditions due to the increase in employment and income generated from construction jobs. The Proposed Action and cumulative effects of past and future projects would have no long-term effects on employment, population, personal income, poverty levels, or other demographic or employment indicators in the Dayton area.

Environmental Justice. The Proposed Action and cumulative effects of past and future projects would not have an impact on environmental justice concerns. The Proposed Action is limited to the West Ramp of WPAFB and there are no past or future projects that will effect race, ethnicity, and the poverty status of populations in the vicinity of a proposed action.

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SECTION 5 – LIST OF PERSONS CONTACTED

Name	Role	Affiliation
Jo Anderson	AICUZ Program Manager	88 CEG/CENPL
John Banford	EIAP Program Manager	88 CEG/CEIEA
Treva Bashore	Installation Restoration Program	AFCEC
Karen Beason	Storage Tanks and Water Quality Program Manager	88 CEG/CEIEA
Dale Fox	Project Manager	88 CEG/CENPL
Katherine Goeppner	Floodplain Issues	Ohio Department of Natural Resources, Division of Water Resources
John Kessler	Natural Resources, Office of Real Estate	Ohio Department of Natural Resources; Ohio Natural Heritage Program; Columbus, Ohio
Michael Vaughn	Hazardous Materials Program Manager	88 CEG/CEIEA
Laura Wade	Base Community Program Manager	88 CEG/CENPL
Darryn Warner	Natural Resources Program Manager	88 CEG/CEIEA
Paul Woodruff	Cultural Resources Program Manager	88 CEG/CEIEA
Joy Williams	Resource Protection and Review	Miami Conservancy District, State Historic Preservation Office
Patrice M. Ashfield	Threatened and Endangered Species	U.S. Fish and Wildlife Service; Columbus, Ohio

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APPENDICES

Appendix A – USFWS Letter

Appendix B – SHPO Letter

Appendix C – Tribal Notification Letters

Appendix D – Interagency and Intergovernmental Coordination

Appendix E – Notice of Availability

Appendix F – Air Conformity Applicability Model Report

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APPENDIX A

United States Fish and Wildlife Service Letter

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

12 February 2019

88 CEG/CEIEA
1450 Littrell Road, Building 22
Wright-Patterson AFB OH 45433-5209

Ms. Patrice M. Ashfield
U.S. Fish and Wildlife Service
Field Office Supervisor
Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230

Dear Ms. Ashfield:

The Defense Logistics Agency (DLA) is proposing to upgrade the existing Type II Fuel Hydrant System at the West Ramp of WPAFB with a Type III system that will provide an automatic pumphouse, two 5,000 barrel aboveground storage tanks, a tanker truck offload station, and a hydrant hose truck checkout station. Demolition of the existing system will occur when the Type III system is connected to the hydrants and in service. The analysis in the EA considers Alternative A (Proposed Action) and Alternative B (No Action) and will aid in determining whether a Finding of No Significant Impact can be prepared or whether an Environmental Impact Statement is needed.

The purpose of the proposed project would provide a safer, more reliable and automated system to deliver jet fuel to the aircraft parking ramp. The current Type II hydrant fuel system is from the early 1960s that services the West Ramp at WPAFB. A system is needed to upgrade and provide greater safety, decrease potential environmental consequence along with improved fuel receipt, storage, and issue capabilities to enhance the system's capability to support its mission.

The existing system consists of a pumphouse and four 50,000 gallon underground storage tanks (UST) that receives its fuel from the bulk fuel storage area on the east side of the airfield. In case of an emergency where the fuel line is rendered unusable, the fuel hydrant system on the west ramp would be useless and the aircraft would require refueling by refueler trucks which is very time consuming because the current system does not permit tanker truck filling of the USTs. Also, the fuel pressure from the existing pumphouse provides 200 gallons per minute (gpm) when refueling two C-17 aircraft simultaneously which can take over 2 hours.

The Type III system replaces the USTs with two 5,000 barrel (210,000 gallon) aboveground storage tanks (AST), provides an updated automatic pumphouse which reduces required manpower for fueling activities, installs a tanker truck off-load station for emergency filling of the ASTs should the primary means (pipeline) fail, and a hydrant hose truck (HHT) checkout stand. The new pumphouse provides increased pressure for refueling and can provide 600 gpm

for up to four C-17 aircraft simultaneously, greatly reducing the time for fuel servicing procedures.

Description of Proposed Action, Alternative A

The Proposed Action would construct a new Type III Hydrant System 1 with two 5,000 barrel ASTs with secondary containment and a 2,400 gpm pumphouse at the existing West Ramp site. The action will also construct a single position emergency/secondary truck offload stand, HHT checkout stand, and product recovery tank. The existing Type II pumphouse and four USTs would be demolished after completion of the construction and the new Type III system is operational.

No Action, Alternative B

Under the No Action Alternative, the current facilities would be left in place and existing conditions would persist. WPAFB would continue to spend unnecessary man-hours refueling the mission aircraft because of the manually controlled pumphouse and low fuel flow rates. The current system uses single walled USTs that are susceptible to corrosion and leakage.

Identification of Preferred Alternative

The U.S. Army Corps of Engineers (USACE) has identified the Proposed Action (Alternative A) as the preferred alternative. The Proposed Action involves constructing a Type III pressurized fueling system and demolishing the existing Type II system.

Agency Consultation

In accordance with NEPA, 42 U.S.C. §4321 et seq. (1969), informal consultation is being solicited with applicable agencies to seek input on the likelihood of environmental or other impacts resulting from the development of the Proposed Action.

WPAFB actively manages for four federally-listed endangered species (Indiana bat, Clubshell mussel, Rayed bean mussel, Snuffbox mussel) and two federally-listed threatened species (Northern long-eared bat, eastern massasauga rattlesnake [EMR). Because there are no impacts to trees and/or wetlands or other native habitat that supports the above listed species and due to the fact the proposed project area is extensively managed by mowing in order to meet FAA guidelines in relation to vegetation heighth, WPAFB has determined the proposed project will have no effect on listed species and further consultation with your office is not necessary. Your written concurrence with this determination of no effect is, however, requested.

Thank you for your assistance. If there are any questions or additional detail is needed, please contact me by telephone at 937-257-4857 or by e-mail at darryn.warner@us.af.mil.

Sincerely,

Darryn Warner
Natural Resources Program Manager
Environmental Assets Section
Environmental Branch

cc: John Banford (88 CEG/CEIEA, WPAFB)
Melanie Pershing (88 CEG/CEIEA, WPAFB)

Attachments:
1. WPAFB Map
2. Project Location Map
3. WPAFB T&E Species Map

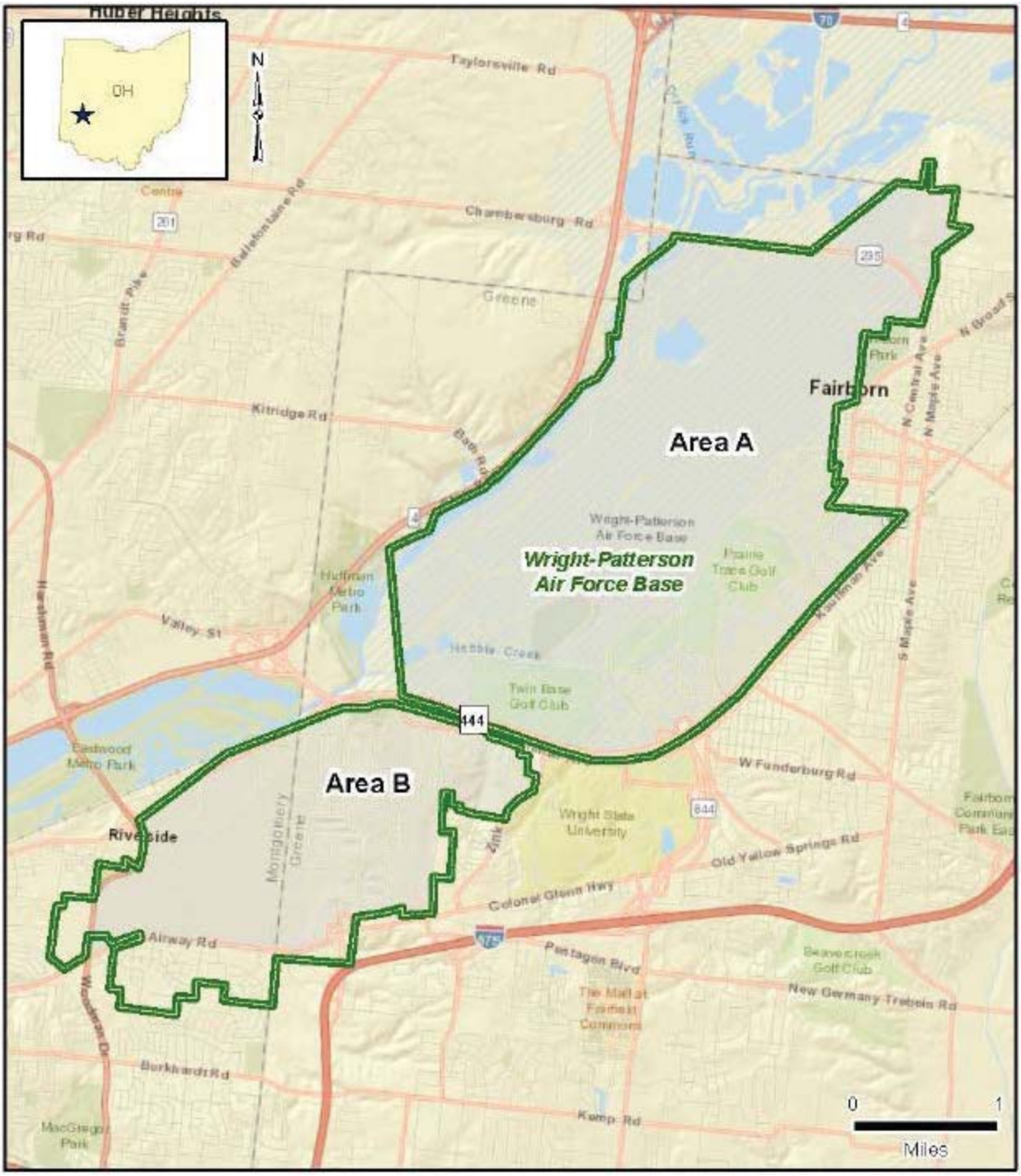

Figure 1. Wright-Patterson AFB.

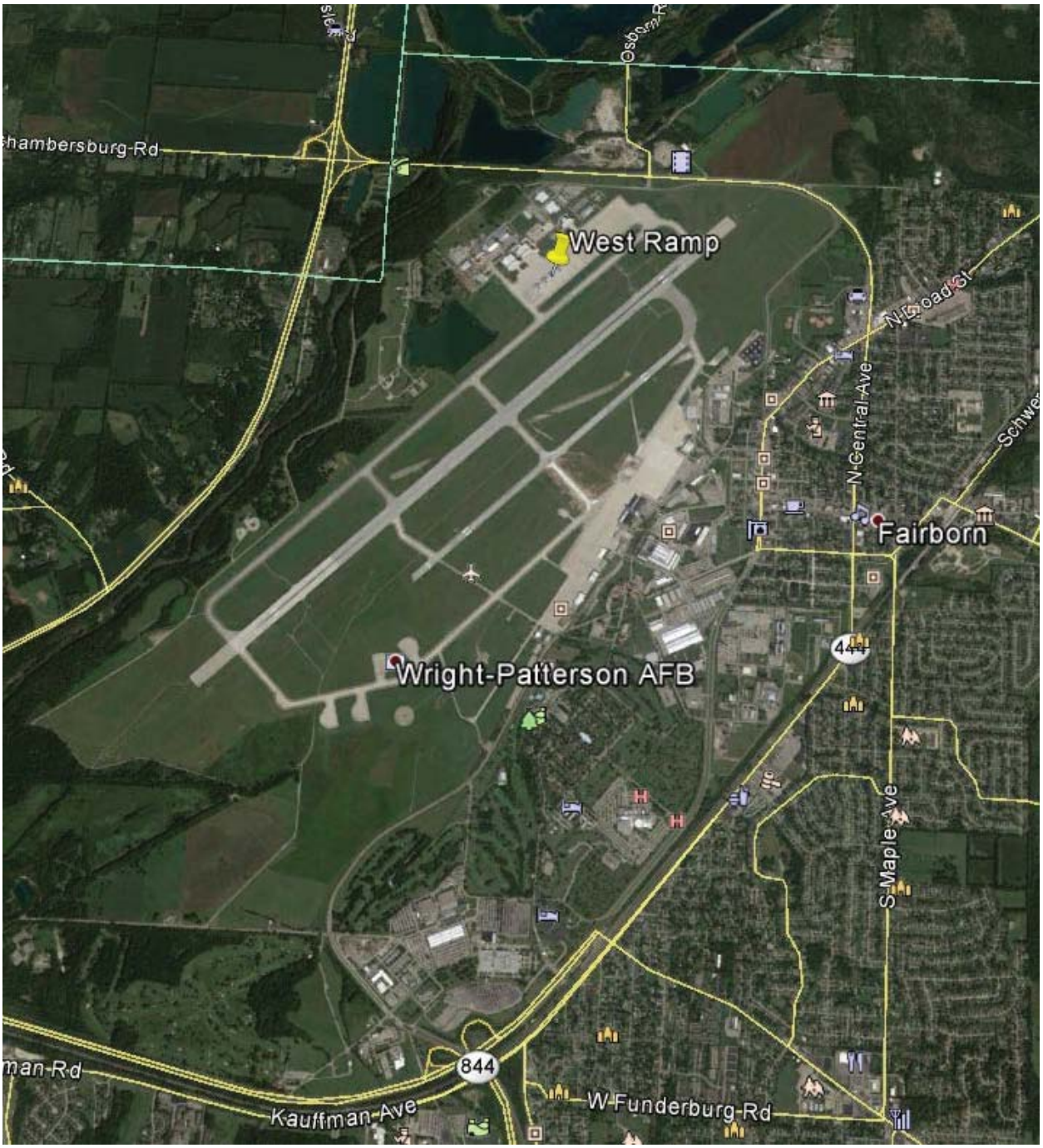

Figure 2. Project Location.

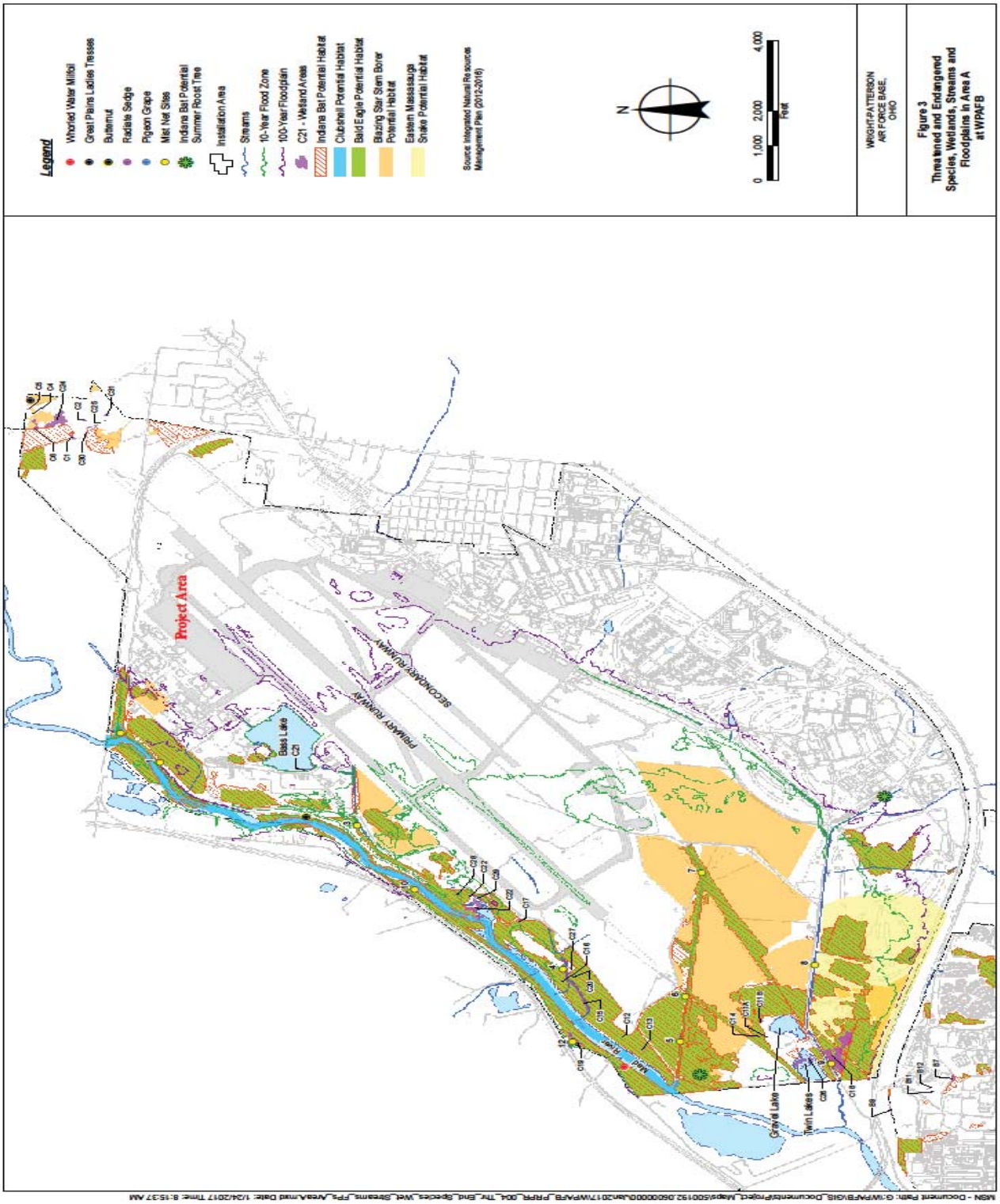

Figure 3. WPAFB T&E Species Map.

BANFORD, JOHN R CIV USAF AFMC 88 CEG/CEIEA

From: BANFORD, JOHN R CIV USAF AFMC 88 CEG/CEIEA
Sent: Thursday, February 28, 2019 1:38 PM
To: 'Weirauch, Thomas A CIV USARMY CENWO (US)'
Subject: FW: [Non-DoD Source] WPAFB (DLA) Upgrade from Type II Hydrant System to Type III at the West Ramp
Signed By: john.banford@us.af.mil

Tom,

Please find below agency letter from USFWS.

John

From: susan_zimmermann@fws.gov <susan_zimmermann@fws.gov> **On Behalf Of** Ohio, FW3
Sent: Thursday, February 28, 2019 9:56 AM
To: WARNER, DARRYN M NH-03 USAF AFMC 88 CEG/CEIEA <darryn.warner@us.af.mil>; Megan Seymour <megan_seymour@fws.gov>
Cc: BANFORD, JOHN R CIV USAF AFMC 88 CEG/CEIEA <john.banford@us.af.mil>; PERSHING, MELANIE A NH-03 USAF AFMC 88 CEG/CEIEA <melanie.pershing@us.af.mil>
Subject: [Non-DoD Source] WPAFB (DLA) Upgrade from Type II Hydrant System to Type III at the West Ramp

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. Fish and Wildlife Service
Ecological Services Office
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / Fax (614) 416-8994

TAILS# 03E15000-2019-TA-0795

Dear Mr. Warner,

We have received your recent correspondence requesting information about the subject proposal. There are no Federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area.

FEDERALLY LISTED, PROPOSED, AND CANDIDATE SPECIES COMMENTS: Due to the project, type, size, and location, we do not anticipate adverse effects to federally endangered, threatened, proposed, or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the U.S. Fish and Wildlife Service should be initiated to assess any potential impacts.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,

Patrice M. Ashfield
Field Office Supervisor

APPENDIX B

State Historic Preservation Office Letter

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March 13, 2019

In reply, please refer to:
2019-GRE-44047

Paul F. Woodruff, CRM
88 CEG/CEIEA
1450 Littrell Road
Wright-Patterson Air Force Base, Ohio 45433-5209

RE: Upgrade Fuel Hydrant System at West Ramp
Wright-Patterson Air Force Base Area A, Greene County, Ohio

Dear Mr. Woodruff:

This letter is in response to correspondence received February 15, 2019. Our comments are made pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, and the associated regulations at 36 CFR Part 800.

Wright-Patterson Air Force Base (WPAFB) is proposing to upgrade the existing Type II Fuel Hydrant System at the West Ramp in Area A. The undertaking includes the construction of a new Type III Hydrant System with two 5,000 barrel (210,000 gallon) aboveground storage tanks (ASTs), a 2,400 gallons-per-minute pumphouse at the existing West Ramp site, and connection to the existing 12" hydrant loop. A connection to the 14" pipeline from bulk fuel storage, installation of a tanker truck offload station, and hydrant hose truck checkout station is also included in the scope of work. The existing Type II pumphouse and four single-walled underground storage tanks (USTs) will be demolished. The proposed undertaking is located outside of any known eligible historic districts at WPAFB.

Based on the information provided, the upgrades to the fuel hydrant system should not alter the integrity of the Strategic Air Command (SAC) compound in a way that would impact its potential for National Register-eligibility in the future. Therefore, we agree that the work as proposed will have no adverse effect on historic properties. No further coordination with this office is necessary, unless there is a change in the project.

If you have any questions, please contact me at jwilliams@ohiohistory.org or (614) 298-2000. Thank you for your cooperation.

Sincerely,

Joy Williams

Joy Williams, Project Reviews Manager
Resource Protection and Review

"Please be advised that this is a Section 106 decision. This review decision may not extend to other SHPO programs."

RPR Serial No: 1077598

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APPENDIX C

Tribal Notification Letters

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DEPARTMENT OF THE AIR FORCE
88TH CIVIL ENGINEER GROUP (AFMC)
WRIGHT-PATTERSON AIR FORCE BASE OHIO

March 18, 2019

Mr. Paul F. Woodruff, CRM
88 CEG/CEIEA
1450 Littrell Road
Wright-Patterson AFB OH 45433-5209

Distribution

Dear Tribal Representative

Wright-Patterson Air Force Base (WPAFB) is proposing to upgrade the existing Type II Fuel Hydrant System at the West Ramp of WPAFB, Ohio (see Attachment 1). It is our opinion that this proposed action will have no adverse effects on historic properties. In accordance with Section 306108 of the National Historic Preservation Act (NHPA) and its implementing regulations at 36 CFR Part 800, the Air Force, WPAFB, is advising you of a proposed undertaking that has the potential to affect historic properties, and we are submitting the following documentation.

Description of the undertaking. WPAFB proposes to construct a new Petroleum, Oil and Lubricant (POL) pumphouse and aboveground storage tanks (AST) with associated equipment at Area A of Wright-Patterson AFB, Ohio (WPAFB). Also, the demolition of the old pumphouse Facility 34032 and underground storage tanks (UST) at the same location are included in the proposal. The proposed project would replace the current and antiquated Type II hydrant fuel system installed in 1965 that services the West Ramp at WPAFB with a Type III hydrant system. This system would provide greater safety, decrease potential environmental consequence and improve fuel receipt, storage, and issue capabilities to enhance the system's capability to support its mission.

Description of steps taken to identify historic properties. In accordance with 36 CFR 800.4(c) WPAFB has evaluated the historic significance of base facilities applying the National Register criteria. WPAFB has assessed all buildings on the installation that are 50 years old or older, and has additionally assessed buildings for exceptional significance relating to the Cold War. The Area of Potential Effects (APE) for this undertaking is defined as Facility 34032 itself as well as the adjacent area and other facilities within the West Ramp area. Ground disturbing activities would be a part of this undertaking, however this area was entirely disturbed from construction of the Strategic Air Command (SAC) bomber base in the early 1960s and therefore no archaeological resources would be affected.

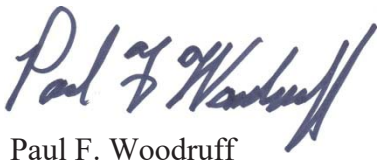
Description of the potentially affected property. Facility 34032 was constructed in 1965 in relation to the Cold War criteria context of the development of the SAC compound at Wright-Patterson. It was considered for eligibility in relation to other properties associated with a

compound constructed for the SAC 4043rd Strategic Wing (Heavy). Facility 34032 would fit into the thematic grouping of these associated properties. However, WPAFB finds that the building has lost its historic integrity, since all windows and doors have been replaced along with the original pumping equipment. The alterations that have occurred have altered the look and feel of the original building, and it now has the feel of a newly constructed building. The building would not be eligible individually, and although it can be associated with the thematic group, its inclusion in that group is not recommended. The facility and its use are of a low level of significance to the 4043rd Strategic Wing's Cold War mission. This building should not be considered eligible for the NR due to a lack of integrity and a low level of historical significance. Also see Attachment 2 for more information.

Description of the undertaking's effects on historic properties. WPAFB has reviewed the Criteria of Adverse Effects and has determined that none apply to the activities that would be carried out in this undertaking. It is our opinion that the undertaking as proposed will not adversely affect the historic properties. This determination was made for the following reasons. The proposed project would construct a new Type III Hydrant System with two 5,000 barrel (210,000 gallon) ASTs, a 2,400 gallons per minute (gpm) pumphouse at the existing West Ramp site, and connection to the existing 12-inch hydrant loop. Also included is the connection to the 14 inch pipeline from bulk fuel storage, installation of a tanker truck offload station and a hydrant hose truck (HHT) checkout station. Finally, the project includes demolishing the current Type II pumphouse and removing the 4 single walled USTs. The demolition of the current pump house would not affect historic properties since the building is not considered to be eligible for the NR. Constructing two new large ASTs would not affect the area significantly since this area is currently used as a POL pumphouse and storage tank area with connections for the fuel supply pipeline and the hydrant loop system nearby as well as connections for utilities, communication, and sewers. There are existing above ground storage tanks in this area already and the addition of two new ones would not be out of the ordinary, and this is what one would normally expect to see in this type of industrial support area. This would be the same consideration for the new pumphouse building which is small and utilitarian. Construction of the ASTs and new pump house and accoutrements would have little effect on the area visually. The West Ramp area is not eligible as a historic district due to a wide ranging lack of integrity. The majority of the buildings in this area have been altered significantly and the area has lost its visual connection with the SAC bomber base significance.

It is our opinion that the replacement of the fuel hydrant system project would have no effects on historic properties. We believe that the demolition of Facility 34032 would not be an adverse effect since the building is not eligible for the NR. Also installation of the new system would not significantly alter the area visually. Pursuant to 36 CFR §800.5(b), the Air Force has determined that there would be no adverse effect to historic properties by the project. Attached for your review are copies of relevant supporting documents supporting the Air Force's findings and determinations. Please review the information and inform us of your concurrence with our determination that there would be no adverse effect to the historic property. Should you have questions, I can be reached at 937-257-1374 or via email at paul.woodruff@us.af.mil.

Sincerely



Paul F. Woodruff
Cultural Resources Manager
Environmental Branch

3 Attachments:
1. Area A Mapping
2. Facility 34032 Eligibility Analysis
3. Proposed New Hydrant System Plans

Distribution:
Keweenaw Bay Indian Community, Gary Loonsfoot Jr., THPO
Sac and Fox of the Mississippi in Iowa, Johnathan Buffalo, Director/NAGPRA Rep
Seneca Cayuga Tribe of Oklahoma, William Tarrant, THPO
Seneca Nation of Indians, Jay Toth, Tribal Archaeologist
The Saginaw Chippewa Indian Tribe, William Johnson, THPO

From: Jay Toth
To: WOODRUFF, PAUL F CIV USAF AFMC 88 CEG/CEIEA
Subject: [Non-DoD Source] RE: WPAFB Replace Hydrant Fueling System at West Ramp
Date: Monday, March 18, 2019 10:32:07 AM

SNI-THPO concurs with the findings of no effect for this project.

JAY toth, MA, MS, DrPH

Seneca Nation
THPO- Tribal archeologist
90 Ohi:Yo Way
Salamanca, NY 14779

Phone: 716-945-1790

https://sni.org/

From: WOODRUFF, PAUL F CIV USAF AFMC 88 CEG/CEIEA [mailto:paul.woodruff@us.af.mil]
Sent: Monday, March 18, 2019 10:25 AM
To: Gary Loonsfoot Jr <gloonsfoot@kbic-nsn.gov>; Jay Toth <jay.toth@sni.org>; Johnathan Buffalo <director.historic@meskwaki-nsn.gov>; William Johson <WJohnson@sagchip.org>; William Tarrant <wtarrant@sctribe.com>
Subject: WPAFB Replace Hydrant Fueling System at West Ramp

Attached is a standard Section 106 consultation letter for the subject proposed project here at Wright-Patterson Air Force Base. Please review the information and provide any comments or concurrence with our finding in the letter. Your time is very much appreciated.

Thanks,
Paul

Paul F. Woodruff, Architect
Cultural Resources Manager
88 CEG/CEIEA
1450 Littrell Road
WPAFB, Ohio 45433
937-257-1374

History is that certainty produced at the point where the imperfections of memory meet the inadequacies of documentation. — Julian Barnes

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solely those of the author and do not necessarily represent those of the company. Finally, the recipient should check this email and any attachments for the presence of viruses. The company accepts no liability for any damage caused by any virus transmitted by this email.
www.sni.org

WPAFB held a government to government Tribal consultation meeting on May 16, 2016 during which each Tribe was asked specifically regarding the types of actions they would like to receive notification of and opportunities to consult or comment. Each Tribe expressed an interest only in projects that require disturbance of land of which we have no record of any past disturbances, and any projects which may affect the seven existing mounds on WPAFB. During 2016-2017 WPAFB developed an Installation Tribal Relations Plan (ITRP) which set forth the way that Wright-Patterson would notify/consult with the five Tribes. This plan includes the preferences noted in the consultation meeting, and additionally these Tribes expressed an interest in any unanticipated discoveries of remains or artifacts. Lastly the Tribes requested only email notices are to be sent to them. The five Tribes are; the Keweenaw Bay Indian Community, the Sac and Fox of the Mississippi in Iowa, the Saginaw Chippewa Indian Tribe of Michigan, the Seneca Nation of Indians, and the Seneca Cayuga Tribe of Oklahoma. Therefore; since there is no new ground disturbance required for this project, and the project area is not near the mounds, no further consultation with the five Tribes is planned.

The proposed project work area contains no inventoried archeological sites of significance (corroborated with 2018 ICRMP). If, however during the execution of this project any artifacts or other historic properties should be discovered, the contractor shall stop work in the immediate area of discovery and contact the WPAFB CRM within 24 hours. 36CFR§800.13 will be followed should the project reveal "archeological deposits." Discovery of human remains shall be treated in a manner that fully complies with applicable laws including, if applicable, the Native American Graves Protection and Repatriation Act (NAGPRA) procedures per 43 CFR Part 10.

APPENDIX D

Interagency and Intergovernmental Coordination

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

12 February 2019

88 CEG/CEIEA
1450 Littrell Road, Building 22
Wright-Patterson AFB OH 45433-5209

Mr. Kurt Rinehart
Miami Conservancy District
38 E. Monument Avenue
Dayton, OH 45402

Dear Mr. Rinehart:

The Defense Logistics Agency (DLA) is proposing to upgrade the existing Type II Fuel Hydrant System at the West Ramp of WPAFB with a Type III system that will provide an automatic pumphouse, two 5,000 barrel aboveground storage tanks, a tanker truck offload station, and a hydrant hose truck checkout station. Demolition of the existing system will occur when the Type III system is connected to the hydrants and in service. The analysis in the EA considers Alternative A (Proposed Action) and Alternative B (No Action) and will aid in determining whether a Finding of No Significant Impact can be prepared or whether an Environmental Impact Statement is needed.

The purpose of the proposed project would provide a safer, more reliable and automated system to deliver jet fuel to the aircraft parking ramp. The current Type II hydrant fuel system is from the early 1960s that services the West Ramp at WPAFB. A system is needed to upgrade and provide greater safety, decrease potential environmental consequence along with improved fuel receipt, storage, and issue capabilities to enhance the system's capability to support its mission.

The existing system consists of a pumphouse and four 50,000 gallon underground storage tanks (UST) that receives its fuel from the bulk fuel storage area on the east side of the airfield. In case of an emergency where the fuel line is rendered unusable, the fuel hydrant system on the west ramp would be useless and the aircraft would require refueling by refueler trucks which is very time consuming because the current system does not permit tanker truck filling of the USTs. Also, the fuel pressure from the existing pumphouse provides 200 gallons per minute (gpm) when refueling two C-17 aircraft simultaneously which can take over 2 hours.

The Type III system replaces the USTs with two 5,000 barrel (210,000 gallon) aboveground storage tanks (AST), provides an updated automatic pumphouse which reduces required manpower for fueling activities, installs a tanker truck off-load station for emergency filling of the ASTs should the primary means (pipeline) fail, and a hydrant hose truck (HHT) checkout stand. The new pumphouse provides increased pressure for refueling and can provide 600 gpm for up to four C-17 aircraft simultaneously, greatly reducing the time for fuel servicing procedures.

Description of Proposed Action, Alternative A

The Proposed Action would construct a new Type III Hydrant System 1 with two 5,000 barrel ASTs with secondary containment and a 2,400 gpm pumphouse at the existing West Ramp site. The action will also construct a single position emergency/secondary truck offload stand, HHT checkout stand, and product recovery tank. The existing Type II pumphouse and four USTs would be demolished after completion of the construction and the new Type III system is operational.

No Action, Alternative B

Under the No Action Alternative, the current facilities would be left in place and existing conditions would persist. WPAFB would continue to spend unnecessary man-hours refueling the mission aircraft because of the manually controlled pumphouse and low fuel flow rates. The current system uses single walled USTs that are susceptible to corrosion and leakage.

Identification of Preferred Alternative

The U.S. Army Corps of Engineers (USACE) has identified the Proposed Action (Alternative A) as the preferred alternative. The Proposed Action involves constructing a Type III pressurized fueling system and demolishing the existing Type II system.

Agency Consultation

In accordance with NEPA, 42 U.S.C. §4321 et seq. (1969), informal consultation is being solicited with applicable agencies to seek input on the likelihood of environmental or other impacts resulting from the development of the Proposed Action.

The project site is located at an elevation of approximately 815 ft mean sea level (MSL), which is above the 100-year floodplain elevation of 813.4 MSL. The project site is below the Huffman Dam spillway elevation of 835 ft MSL; however, no impacts to the Huffman Retarding Basin are expected from implementation of the Proposed Action or Alternative B due to project design taking into account 'zero net loss/gain' requirements for the retarding basin.

Please review the information and provide us your comments concerning potential impacts to the retarding basin. WPAFB recognizes that if the scope of any of the projects listed above should change significantly in scope, we would submit additional consultation letter(s) at that time. Should you have questions, I can be reached at 937-257-4857 or via email at darryn.warner@us.af.mil.

Sincerely,

Darryn Warner
Natural Resources Program Manager
Environmental Assets Section
Environmental Branch

cc: John Banford (88 CEG/CEIEA, WPAFB)
Melanie Pershing (88 CEG/CEIEA, WPAFB)

Attachments:
1. WPAFB Map
2. Project Location Map
3. Project Concept Design

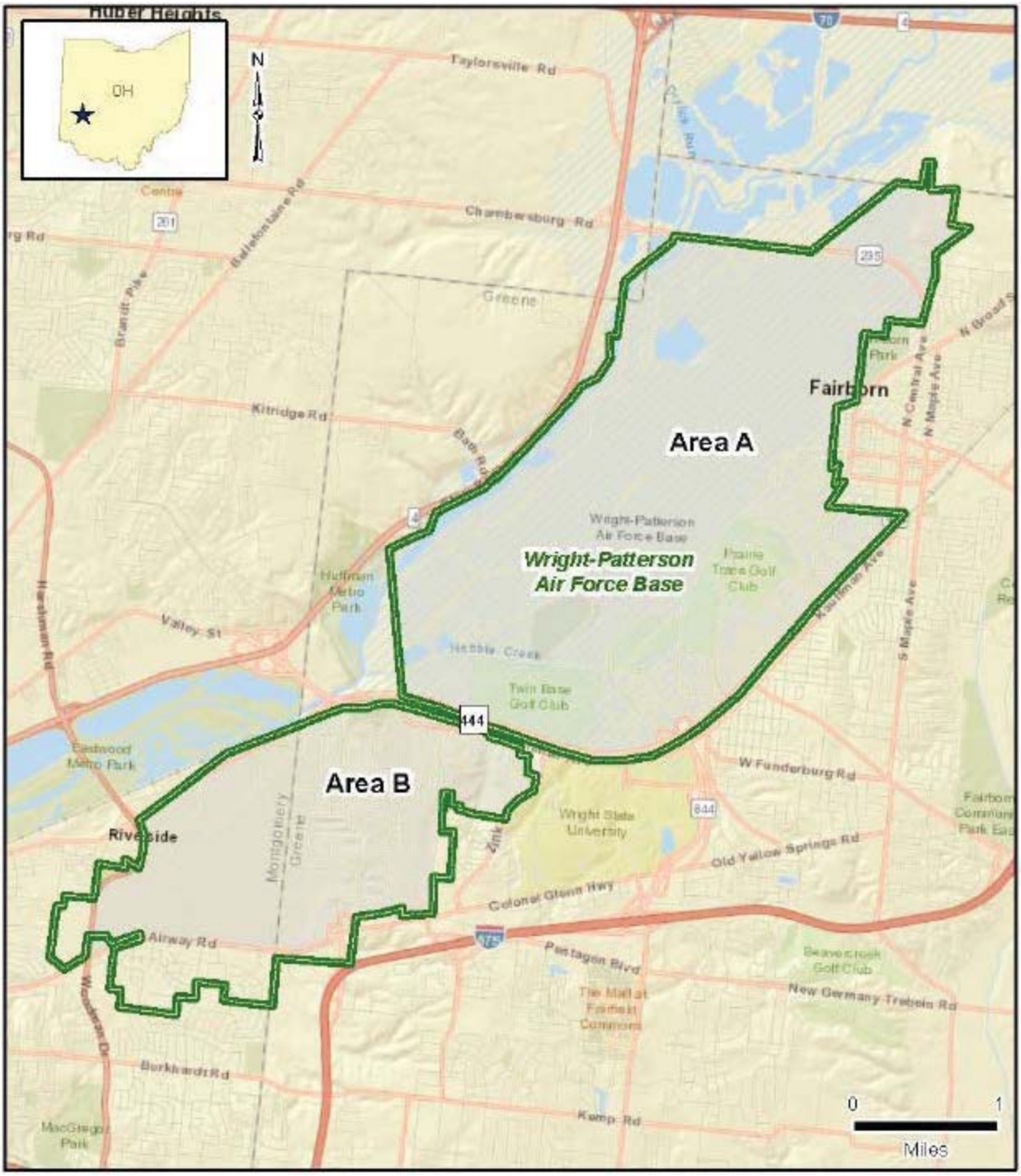

Figure 1. Wright-Patterson AFB.

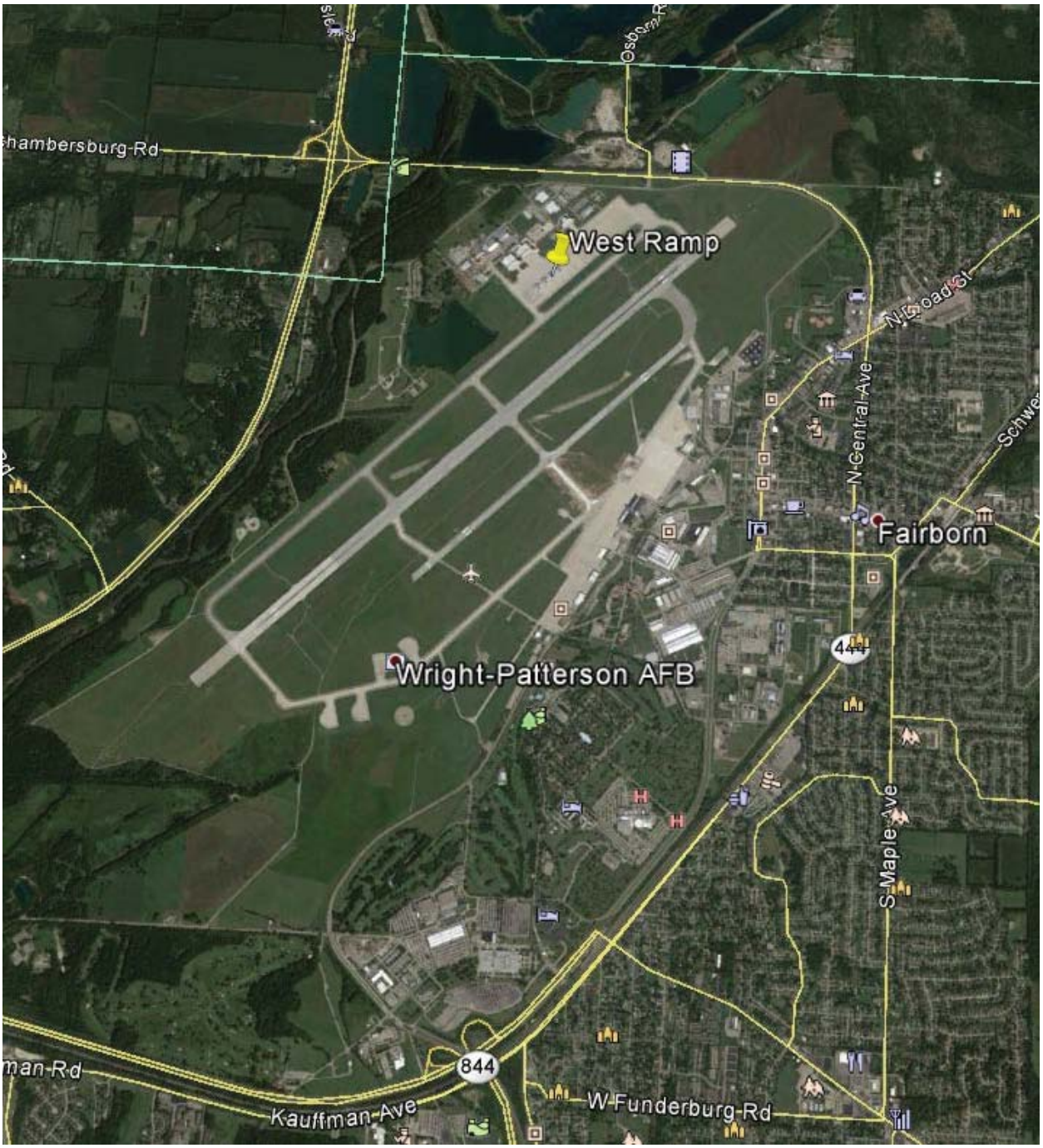

Figure 2. Project Location.

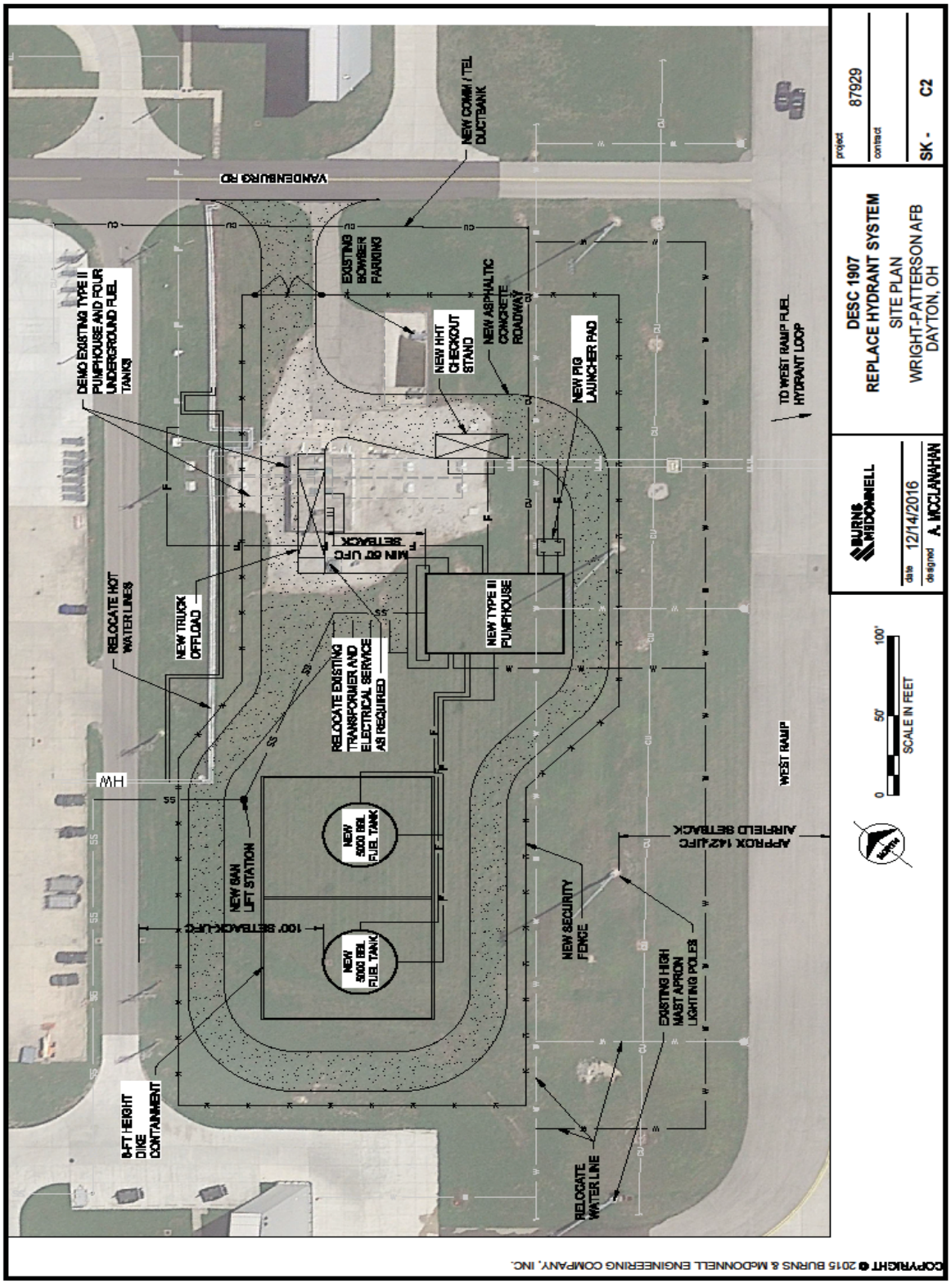

Figure 3. Project Concept Design.

MCD
MIAMI CONSERVANCY DISTRICT

38 E. Monument Ave.
Dayton, OH 45402
(937) 223-1271

BOARD OF DIRECTORS
William E. Lukens
Mark G. Rentschler
Beth Whelley

GENERAL MANAGER
Janet M. Bly

February 28, 2019

Mr. Darryn Warner
88 CEG/CEIEA
1450 Littrell Road, Building 22
Wright-Patterson AFB, OH 45433-5209

Re: Huffman Retarding Basin, EA to upgrade Type II Fuel Hydrant System

Dear Mr. Warner:

We have reviewed the Environmental Assessment (EA) to evaluate impacts associated with upgrade to the existing Type II Fuel Hydrant System at the West Ramp located in Area A at WPAFB.

As part of the proposed project is located within the Huffman Retarding Basin, it is subject to those restrictions as set forth by the Miami Conservancy District (MCD) in Greene County Deed Book 129, Page 146 on December 16, 1922.

Based on our review it appears the proposed project would not adversely affect the retarding basin.

Thank you for the opportunity to review and provide comments. If you have any further questions please contact me at (937) 223-1278, ext. 3230 or by email at rfarrier@mcdwater.org.

Sincerely,

Roxanne H. Farrier
Property Administrator

cc: Kurt Rinehart

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APPENDIX E

Notice of Availability

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APPENDIX F

Air Conformity Applicability Model Report

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AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Instruction 32-7040, Air Quality Compliance And Resource Management; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: WRIGHT-PATTERSON AFB
State: Ohio
County(s): Greene
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Type III Pressurized Fueling System, West Ramp WPAFB

c. Project Number/s (if applicable):

d. Projected Action Start Date: 4 / 2020

e. Action Description:

Proposed Alternative A

The Proposed Action would construct a new Type III Hydrant System 1 with two 5,000 barrel ASTs with secondary containment and a 2,400 gpm pumphouse at the existing West Ramp site. The action will also construct a single position emergency/secondary truck offload stand, HHT checkout stand, and product recovery tank. The existing Type II pumphouse and four USTs would be demolished after completion of the construction and the new Type III system is operational.

No Action Alternative B

Under the No Action Alternative, the current facilities would be left in place and existing conditions would persist. WPAFB would continue to spend unnecessary man-hours refueling the mission aircraft because of the manually controlled pumphouse and low fuel flow rates. The current system uses single walled USTs that are susceptible to corrosion and leakage.

f. Point of Contact:

Name: Chris Tumbusch
Title: NH-03 / Air Quality Program Manager
Organization: 88 CEG/CEIEA
Email: christopher.tumbusch@us.af.mil
Phone Number: 937-257-2455

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the General Conformity Rule are:

_____ applicable
__X__ not applicable

Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions.

"Air Quality Indicators" were used to provide an indication of the significance of potential impacts to air quality. These air quality indicators are EPA General Conformity Rule (GCR) thresholds (de minimis levels) that are applied

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF AIR ANALYSIS (ROAA)

out of context to their intended use. Therefore, these indicators do not trigger a regulatory requirement; however, they provide a warning that the action is potentially significant. It is important to note that these indicators only provide a clue to the potential impacts to air quality.

Given the GCR de minimis threshold values are the maximum net change an action can acceptably emit in non-attainment and maintenance areas, these threshold values would also conservatively indicate an actions emissions within an attainment would also be acceptable. An air quality indicator value of 100 tons/yr is used based on the GCR de minimis threshold for the least severe non-attainment classification for all criteria pollutants (see 40 CFR 93.153). Therefore, the worst-case year emissions were compared against the GCR Indicator and are summarized below.

Analysis Summary:

2020

Pollutant	Action Emissions (ton/yr)	AIR QUALITY INDICATOR	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.767	100	No
NOx	2.042	100	No
CO	1.817	100	No
SOx	0.005	100	No
PM 10	0.898	100	No
PM 2.5	0.089	100	No
Pb	0.000	25	No
NH3	0.001	100	No
CO2e	446.3		

2021 - (Steady State)

Pollutant	Action Emissions (ton/yr)	AIR QUALITY INDICATOR	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000	100	No
SOx	0.000	100	No
PM 10	0.000	100	No
PM 2.5	0.000	100	No
Pb	0.000	25	No
NH3	0.000	100	No
CO2e	0.0		

None of estimated emissions associated with this action are above the GCR indicators, indicating no significant impact to air quality; therefore, no further air assessment is needed.

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Date: 2019.06.11 15:56:56 -04'00'

Chris Tumbusch, NH-03 / Air Quality Program Manager

DATE