

DRAFT

Environmental Assessment
for
Construction and Demolition Projects
at
Selfridge Air National Guard Base
Michigan Air National Guard
Mount Clemens, MI

Contract Number W9133L-14-D-0009
Task Order Number 0005
PWS 0131

National Guard Bureau

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Guarding America - Defending Freedom

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m ³	micrograms per cubic meter
ac	acre
AFI	Air Force Instruction
AFMAN	Air Force Manual
AFPD	Air Force Policy Directive
ANG	Air National Guard
ANGB	Air National Guard Base
AQCR	air quality control region
AT/FP	antiterrorism/force protection
BMPs	best management practices
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CLUP	Comprehensive Land Use Plan
CO	carbon monoxide
CO ₂	carbon dioxide
CWA	Clean Water Act
<i>de minimis</i>	of minimal importance
DOD	Department of Defense
DODI	Department of Defense Instruction
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EO	Executive Order
ESQD	explosive safety quantity distances
FAA	Federal Aviation Administration
FC	Facilities Criteria
FONPA	Finding of No Practicable Alternative
FONSI	Finding of No Significant Impact
GHG	Greenhouse gases
ha	hectare
ICRMP	Integrated Cultural Resources Management Plan
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning
INRMP	Integrated Natural Resources Management Plan
IRP	Installation Restoration Program
km	kilometer
kWh	kilowatt hour
MDEQ	Michigan Department of Environmental Quality
mi	miles
MIANG	Michigan Air National Guard
MW	megawatt

NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO ₂	nitrogen dioxide
NO _x	oxides of nitrogen
NREPA	Natural Resources and Environmental Protection Act
NRHP	National Register of Historic Places
O ₃	ozone
PM ₁₀	particulate matter 10 microns
PM _{2.5}	particulate matter 2.5 microns
PMEL	Precision Measurement Equipment Laboratory
ppb	parts per billion
ppm	parts per million
PV	photovoltaic
RCRA	Resource Conservation and Recovery Act
sf	square feet
SGHAT	Solar Glare Hazard Analysis Tool
SHPO	State Historic Preservation Office
SO ₂	sulfur dioxide
tpy	tons per year
U.S.	United States
UFC	Unified Facilities Criteria
USACE	United States Army Corps of Engineers
USAF	United States Air Force
USC	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

DISCLOSURE STATEMENT

DATA REQUIRED BY THE PRIVACY ACT OF 1974

(5 U.S.C. 552A)

1. Authority

23 U.S.C. paragraphs 557a, 557b, 597, 709a

2. Principal Purpose

Your name, address and comments, if provided during the Environmental Impact Analysis Process are:

- Used to compile mailing lists for sending information concerning the Environmental Assessment to those individuals and groups who might be interested.
- Forwarded to federal, state and local agencies and elected officials.
- Used to compile mailing lists for other projects in which the person supplying the information might have an interest.
- Compiled in a Record of Public Comments and made available to the public.
- Published in project reports and made available to interested individuals and groups.

3. Effects of Individual Not Providing Information

Failure to provide the information requested would prevent delivery of documents and notification of further developments. However, documents would be available in local public areas, such as libraries, and their locations published in local newspapers.

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DRAFT FINDING OF NO SIGNIFICANT IMPACT AND FINDING OF NO PRACTICABLE ALTERNATIVE

Environmental Assessment for Construction and Demolition Projects at Selfridge Air National Guard Base Michigan Air National Guard Mount Clemens, Michigan

1.0 INTRODUCTION

The Air National Guard (ANG) has prepared an Environmental Assessment (EA) to consider the potential effects to the human and natural environment associated with construction and demolition projects at Selfridge Air National Guard Base (ANGB), Michigan ANG, Mount Clemens, Michigan. The ANG has prepared this EA pursuant to the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321–4347), Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA (40 Code of Federal Regulations [CFR] §§ 1500–1508) (CEQ 2005), and the Environmental Impact Analysis Process (EIAP) (32 CFR 989, formerly promulgated as Air Force Instruction 32-7061). The lead agency for this NEPA analysis is the ANG.

The determination of environmental resource areas to be analyzed versus those not carried forward for detailed analysis was part of the EA scoping process as described in 40 CFR 1501.7(a) (3), which states that issues addressed in prior environmental reviews, or that are not significant, may be eliminated from discussion in the EA. The Proposed Action and No Action Alternative would have negligible direct, indirect, or cumulative effects on several resource areas. These include airspace, aesthetics and visual resources, noise, socioeconomics, and geological resources. Therefore, these resource areas were not carried forward for detailed analysis in the EA.

A preliminary analysis on environmental effects determined that the Proposed Action may have greater than negligible effects on several resource areas, including air quality, land use, biological resources, water resources, transportation, cultural resources, hazardous materials and waste, and health and safety. Therefore, these resource areas were carried forward for detailed analysis in the EA.

2.0 PROPOSED ACTION

The Proposed Action is to complete selected construction, renovation, and demolition projects to ensure that future mission and facility requirements are met (Table ES-1). The proposed projects will provide Selfridge ANGB with properly sized and configured facilities, infrastructure, and services that are required to effectively accomplish its mission. The proposed construction projects would improve mission efficiency by improving base access and utilities, consolidating mission functions, and developing renewable solar photovoltaic (PV) energy. The proposed renovation projects would provide facility upgrades. The proposed demolition actions would

remove excess, obsolete, deteriorating, and underused facilities. The proposed facilities development would also include upgrading facilities to meet current safety standards.

Table ES-1. Proposed Projects

Project #	Project Name	Project Description
Construction Projects		
1	Main Gate	Antiterrorism/force protection (AT/FP) Compliant Gate and rerouting of perimeter road
2	South Gate	AT/FP Compliant Gate
3	Indoor Firing Range	New facility for small arms qualifications and closure of the outdoor firing range
4	Precision Measurement Equipment Laboratory (PMEL)	A new laboratory, properly sized and configured to calibrate and repair test and measurement equipment, would be constructed.
5	Operations and Training Alternative	As an alternative to Building 410 renovation (Project 13), a new building would be constructed for a consolidated Wing Headquarters.
6	Taxiway A Extension	Extending Taxiway A to the end of Runway 19.
7	Runway 19 Hammerhead Alternative	As an alternative to Taxiway A Extension (Project 6), an aircraft turn around would be constructed at the end of Runway 19.
8	Base Sewer Line Connection	Connecting the base sewer line to the county sewer system around wetland areas.
9	Base Sewer Line Alternative	As an alternative to the proposed base sewer line connection (Project 8), connecting to the county sewer system would be by drilling under wetland areas.
10	Solar PV Array	Develop 20 acres (ac) of solar PV array(s) in the airfield away from the primary runway and other compatible open area.
Demolition Projects		
11	Demolish Buildings 310, 699, 826, 835, and 951	Demolish excess/obsolete buildings and convert the areas to green space.
Renovation Projects		
12	PMEL Addition/Alteration Alternative	As an alternative to constructing a new PMEL facility (Project 4), alterations and additions would be made to the existing PMEL facility for proper size and configuration.
13	Building 410	Renovations for a consolidated Wing Headquarters for proper size and configuration.
14	Hangar 36 Repair	Door replacement.
15	Repair Buildings 154, 117, 120, 140, 3, 18, and 5	Renovation to provide properly sized and configured facilities.

3.0 ALTERNATIVES TO THE PROPOSED ACTION

Depending on the availability of funding, a subset of the highest priority projects could be implemented. However, Alternative 1 would be less desirable than the Proposed Action because it would only partially improve mission capabilities, unit readiness, and the operating environment of Selfridge ANGB. Existing deficiencies would be unresolved and require reprogramming for phased implementation at a later date. Alternative 1 would generally have the same potential effects, but spread out over a longer time period to implement the recommended projects. In addition, Alternative 1 would not meet all of the selection criteria for project implementation. For these reasons, this alternative is not carried forward for further analysis.

3.1 NO ACTION ALTERNATIVE

The CEQ regulation 40 CFR §1502.14(d) specifically requires analysis of the “No Action” alternative in all NEPA documents. Under the No Action Alternative, Michigan ANG’s 127 Wing would not implement the actions described above. Michigan ANG’s 127th Wing would continue to conduct their current mission using the existing facilities and current operational inefficiencies would remain in effect. Although the No Action alternative does not meet any of the selection criteria, or fulfill the purpose and need of the action, it has been carried forward for detailed analysis in this EA as required under NEPA.

4.0 ENVIRONMENTAL EFFECTS

Air Quality

The Proposed Action would have short- and long-term less than significant effects to air quality. There would be short-term minor adverse effects from fugitive dust and the use of heavy equipment during construction, demolition, and renovation activities. There would be long-term negligible adverse effects for the Proposed Action. The Proposed Action does not include any new major stationary sources of air emissions or appreciable changes in personnel, but may include some small stationary sources of air emissions such as stand-by generators, boilers, and the proposed indoor firing range. These would be reviewed on a case-by-case basis, and added to the installation's air operating permit as necessary. The direct and indirect emissions from the Proposed Action would be below the *de minimis* thresholds; therefore, the general conformity rules do not apply. No past, present, or reasonably foreseeable projects have been identified that when combined with the Proposed Action, would have significant cumulative effects to air quality. The No Action alternative would have no effects on air quality.

Land Use

The Proposed Action would have short- and long-term less than significant effects to land use. Short-term effects would be due to site-specific temporary disturbance during construction, renovation, and demolition activities. Long-term effects would be due to ongoing activities at the

base. Construction and renovation activities would occur on land that is currently open space or within existing buildings. The Proposed Action would be consistent with adjacent land uses designated in the Selfridge ANGB Comprehensive Land Use Plan. No past, present, or reasonably foreseeable projects have been identified that when combined with the Proposed Action, would have significant cumulative effects to land use. The No Action alternative would have no effects on land use.

Biological Resources

The Proposed Action would have short- and long-term less than significant effects to biological resources. Short-term effects would be due to site-specific temporary disturbance during construction. Long-term effects would be due to ongoing activities at the base. Effects to biological resources would not reduce the distribution or viability of species or habitats of concern, or violate biological resources laws or regulations. There would be less than significant effects regarding loss, degradation or fragmentation of wildlife habitat. No past, present, or reasonably foreseeable projects have been identified that when combined with the Proposed Action, would have significant cumulative effects to biological resources. The No Action alternative would have no effects on biological resources.

Water Resources

The Proposed Action would have short- and long-term less than significant adverse effects to water resources. Short-term effects would be due to site-specific temporary changes in surface hydrology, and the potential for soil erosion and transport during construction. Long-term effects would be due to an incremental increase in impervious surfaces at the base and loss of approximately 0.5 ac (0.2 hectares [ha]) of emergent wetlands for rerouting the perimeter road (Project 1). As required in the permitting process, compensatory wetland mitigation would be provided for the unavoidable loss of wetlands. Consequently, through the wetland permitting process, the potential impacts to wetlands would be less than significant. No past, present, or reasonably foreseeable projects have been identified that when combined with the Proposed Action, would have significant cumulative effects to water resources. The No Action alternative would have no effects on water resource.

Transportation

The Proposed Action would have short-term minor adverse and long-term minor beneficial effects to transportations resources. Short-term effects would be due to roadway work, worker commutes, and delivery of equipment and materials during construction and demolition activities. Long-term beneficial effects would be due to upgrades in transportation infrastructure, primarily the two newly configured gates. The Proposed Action would have no appreciable effect to air, rail, or public transportation. The Proposed Action would not create permanent road closures or widespread traffic congestion. No past, present, or reasonably foreseeable projects have been identified that when combined with the Proposed Action, would have significant

cumulative effects to transportation resources. The No Action alternative would have no effects on transportation.

Cultural Resources

The Proposed Action will have no effect on any known archaeological resources or traditional cultural properties. The Proposed Action includes demolition, renovation, and repair of buildings. Properties within the Proposed Action that have not yet received State Historic Preservation Office (SHPO) concurrence for demolition or renovation will be consulted upon in accordance with the NHPA, and the Programmatic Agreement. The No Action alternative would have no effects on cultural resources.

Hazardous Materials and Wastes

The Proposed Action would have short- and long-term less than significant adverse effects with regard to hazardous materials and wastes. Short-term effects would be due to use of hazardous materials and generation of wastes during construction, renovation, and demolition activities. Long-term effects would be due to use of hazardous materials and generation of wastes during mission support activities. The Proposed Action would not (1) substantially increase the quantity or toxicity of hazardous substances, (2) substantially increase risk to human health or the environment, or (3) generate solid waste in amounts that would appreciably decrease capacity or life span at receiving landfills. Implementation of the Selfridge ANGB Hazardous Waste Management Plan would ensure safe handling of hazardous materials and wastes. No past, present, or reasonably foreseeable projects have been identified that when combined with the Proposed Action, would have significant cumulative effects to hazardous materials and wastes. The No Action alternative would have no effects on hazardous materials and wastes.

Health and Safety

The Proposed Action would have short- and long-term less than significant effects to health and safety. Short-term effects would be due to potential worker injury during construction, renovation, and demolition activities. Long-term effects would be due to ongoing activities at the base. All construction, demolition, and renovation activities would be accomplished in accordance with applicable federal, state and local health and safety regulations, including Occupational Safety and Health Administration guidelines. Effects would not (1) substantially increase risks associated with ground safety during construction, or operations and maintenance activities, or (2) result in incompatible land use with regard to safety criteria. No past, present, or reasonably foreseeable projects have been identified that when combined with the Proposed Action, would have significant cumulative effects to health and safety. The No Action alternative would have no effects on health and safety.

5.0 PUBLIC NOTICE

NEPA, 40 CFR §§1500-1508, 36 CFR Part 800.2, and 32 CFR Part 989 require public review of the EA before approval of the Finding of No Significant Impact (FONSI), Finding of No Practicable Alternative (FONPA), and implementation of the Proposed Action. A Notice of Availability for public review of the Draft EA was published in the *Macomb Daily Newspaper* on 15 July and 29 July 2016. The Draft EA was made available for public review at the Mount Clemens Public Library, 150 Cass Avenue, Mount Clemens, MI 48043. Through the Interagency and Intergovernmental Coordination for Environmental Planning process, the ANG notified relevant federal, state, and local agencies and allowed them 30 days to make known their environmental concerns specific to the Proposed Action. Copies of all correspondence, public comments, and agency letters received are provided in Appendix A.

6.0 FINDING OF NO SIGNIFICANT IMPACT AND FINDING OF NO PRACTICABLE ALTERNATIVE

As guided by Executive Order (EO) 11990, *Protection of Wetlands*, and AFI 32-7064, *Integrated Natural Resources Management*, rerouting of the perimeter road as described in Project 1 to facilitate security requirements would impact wetlands and environmental protection measures would be required. The proposed rerouting is the only reasonable or practical alternative due to its proximity to the new gate entrance and its location is such that it will not interfere with existing missions at Selfridge ANGB. The proposed rerouting would impact up to 0.5 ac (0.2 ha) of wetlands; however, all practicable measures would be taken to avoid and minimize these impacts. Unavoidable impacts would be mitigated off-site as necessary to avoid mission conflicts as part of the Michigan Department of Environmental Quality (MDEQ) wetlands permitting process. Based on the facts and analyses contained in the attached EA and in accordance with EO 11990 authority incorporated into Air Force regulations, there is no practicable alternative to implementing the rerouting of the perimeter road within wetlands, and the Proposed Action includes all practicable measures to minimize and mitigate impacts to wetlands.

Most of the proposed projects would occur in the 100-year floodplain and require prior coordination and ANG approval in accordance with AFI 32-1021 and EO 11988. Prior to the proposed construction of new buildings (Projects 4 and 5) and renovation of existing buildings (Project 13), an ANG-approved FONPA and flood damage vulnerability assessments will be required. Certification of flood damage vulnerability assessments to the Office of Undersecretary of Defense that identifies each project's flood vulnerability, mission requirement despite flood vulnerability, and planned/incorporated flood mitigation measures or justification for why mitigation measures are not planned for the project shall be prepared. This prior certification will ensure adequate measures to plan and prepare for flooding and considerations for what mission critical infrastructure must be located in these highly vulnerable areas. Consequently, through the ANG coordination and floodplain permitting process, the potential impacts to floodplains would be less than significant. Based on the facts and analyses contained in the attached EA and in

accordance with AFI 32-1021 and EO 11988, there is no practicable alternative to implementing the proposed new construction and building renovation, and the Proposed Action includes all practicable measures to minimize and mitigate impacts to infrastructure in floodplains.

After careful review of the potential effects of this Proposed Action, I have concluded that the Proposed Action would not have a significant impact on the quality of the human or natural environment or generate significant controversy. Accordingly, the requirements of the NEPA, CEQ regulations, and 32 CFR Part 989, et seq. have been fulfilled, and an Environmental Impact Statement is not necessary and will not be prepared.

BENJAMIN W. LAWLESS, P.E., GS-15
Chief, Asset Management Division

Date

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1.0 INTRODUCTION

The Air National Guard (ANG) has prepared this Environmental Assessment (EA) to consider the potential consequences to the human and natural environment associated with required construction and demolition projects at Selfridge Air National Guard Base (ANGB), Michigan ANG, Mount Clemens, Michigan. This EA also identifies applicable management actions, mitigation measures, and best management practices (BMPs) that would avoid or minimize impacts relevant to the Proposed Action and alternatives.

The ANG has prepared this EA pursuant to the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321–4347), Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA (40 Code of Federal Regulations [CFR] §§ 1500–1508) (CEQ 2005), and the Environmental Impact Analysis Process (EIAP) (32 CFR 989, formerly promulgated as Air Force Instruction 32-7061). The lead agency for this NEPA analysis is the ANG.

The analysis in this EA evaluates the potential environmental consequences of several projects that include construction and demolition activities. Based on this information, the ANG will determine whether to issue a Finding of No Significant Impact (FONSI) and Finding of No Practicable Alternative (FONPA) or to prepare an Environmental Impact Statement (EIS). As required by NEPA and its implementing regulations, preparation of an environmental document must precede final decisions regarding the proposed project, and be available to inform decision-makers of the potential environmental impacts of selecting the Proposed Action, reasonable alternatives, or No Action Alternative.

1.1 LOCATION

Selfridge ANGB is in Harrison Township, Macomb County, Michigan, which is approximately 20 miles (mi) (32 kilometers [km]) north of Detroit, Michigan on the shore of Lake Saint Clair (Figure 1-1). Selfridge ANGB is a Joint Military Community whose major tenants include the Army, Air Force, Marines, Navy, Coast Guard, and Department of Homeland Security. Selfridge ANGB is hosted by the Michigan ANG's 127th Wing, a dual Mission Design Series unit, which operates and maintains the 9,000-foot long runway used for Department of Homeland Security operations and active/reserve Department of Defense (DOD) service components training. Selfridge ANGB is approximately 3,075 acres (ac) (1,244 hectares [ha]) of mostly cleared land (Figure 1-2).

1.2 BACKGROUND

The action being proposed is to implement the projects reflected in the Selfridge ANGB Comprehensive Land Use Plan ([CLUP] Selfridge ANG 2012). The CLUP was prepared in 2012 and establishes a systematic framework for informing decision-making on the physical

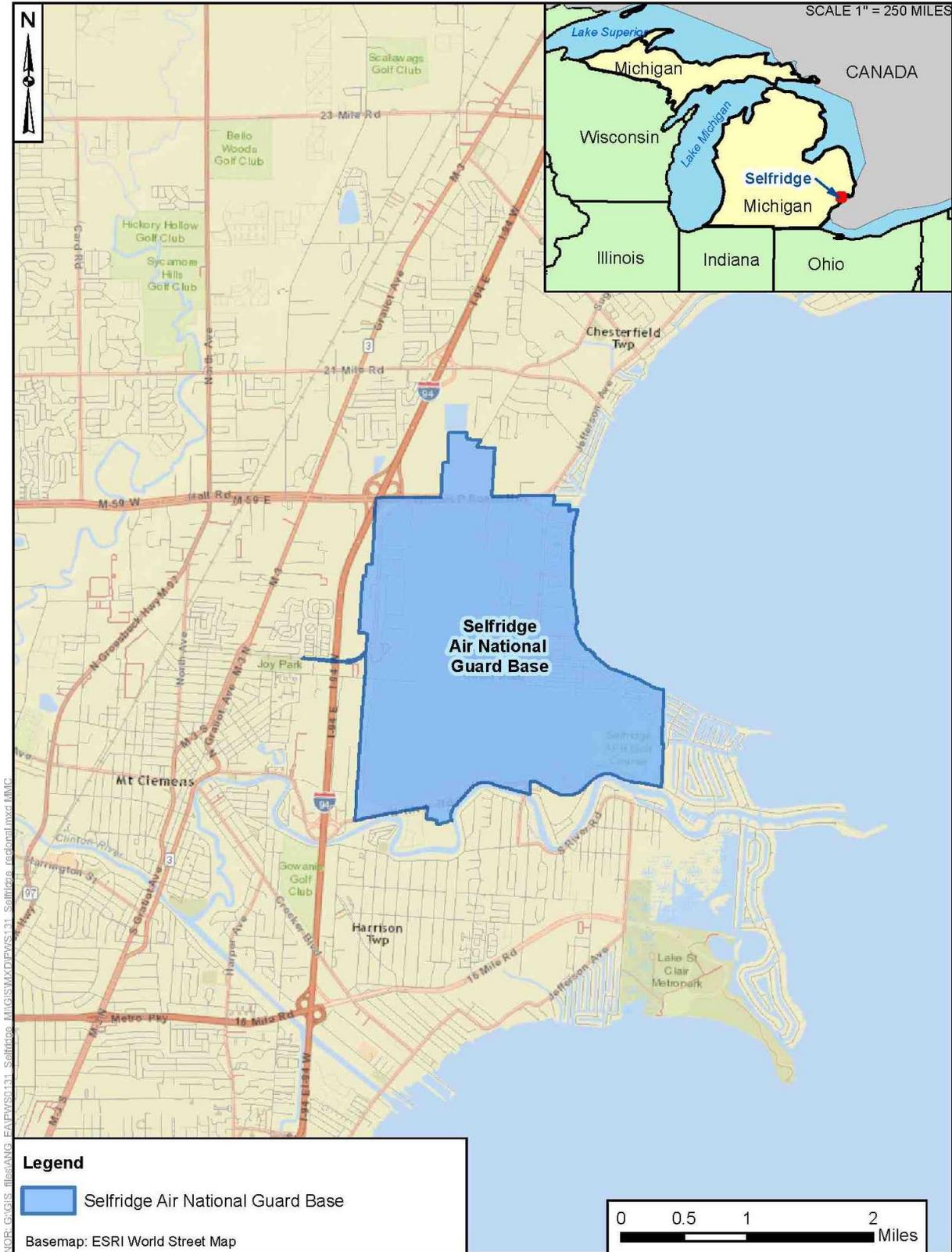


Figure 1-1. Regional Location of Selfridge ANGB

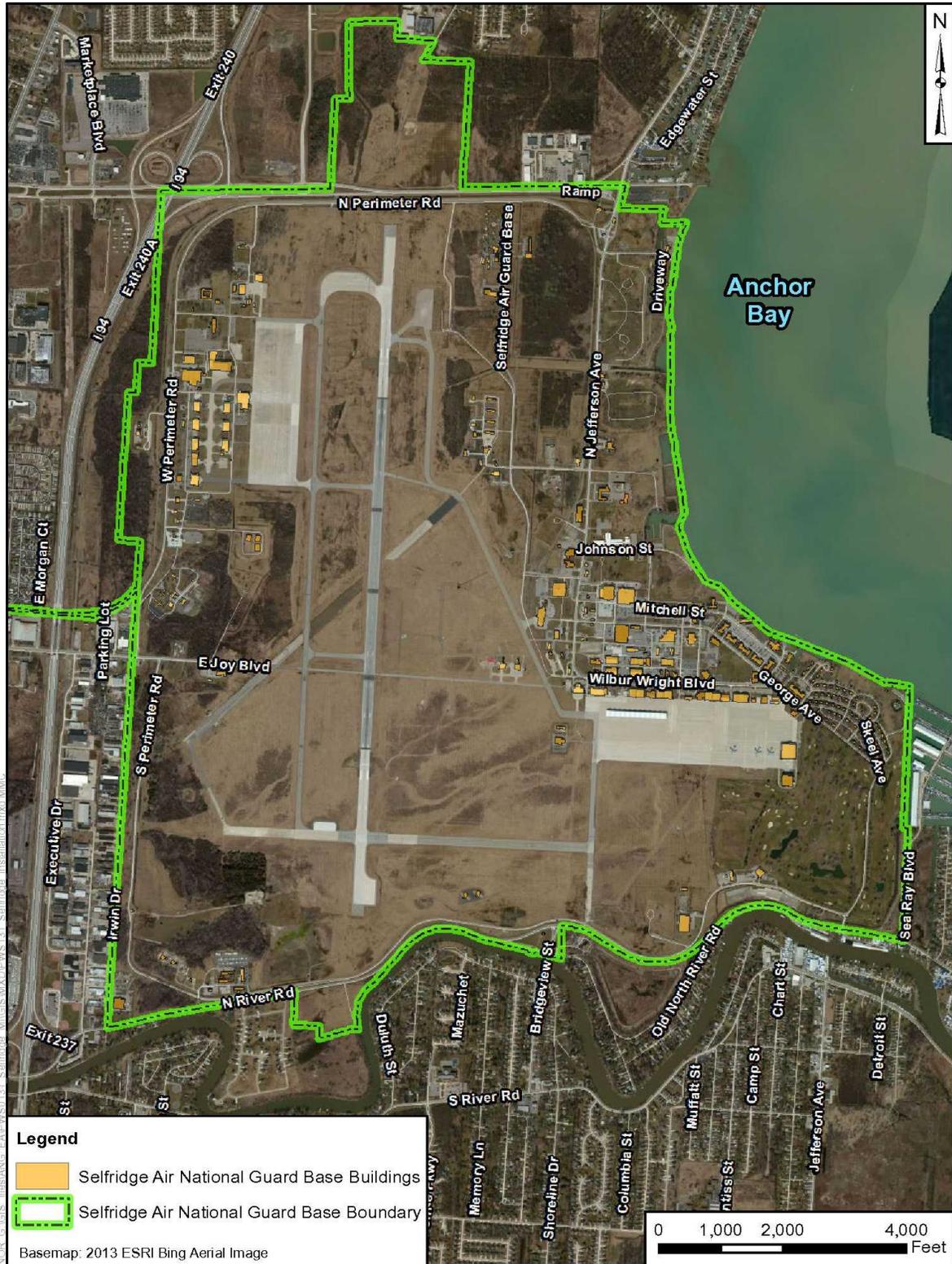


Figure 1-2. Map of Selfridge ANGB

development of the base. The 50-year plan for Selfridge ANGB envisions new missions, tenants, and districts within the base. The base is positioned to host both 5th Generation Fighter and 5th Generation Large Airframe missions. In addition, future missions requiring housing have been considered at Selfridge ANGB, and existing land is available for development through military/civilian partnership opportunities. Future plans also include the realignment of the base perimeter to allow some tenants to be located outside the fence line while still being sited on Federally-owned property.

1.3 PURPOSE AND NEED

The purpose of the Proposed Action is to complete selected construction, renovation, and demolition projects to ensure that future mission and facility requirements are met. The proposed projects will provide Selfridge ANGB with properly sized and configured facilities, infrastructure, and services that are required to effectively accomplish its mission. The proposed construction projects would improve mission efficiency by improving base access and utilities, consolidating mission functions, and developing renewable solar energy. The proposed renovation projects would provide facility upgrades. The proposed facilities development would also include upgrading facilities to meet current safety standards. The proposed demolition actions would remove excess, obsolete, deteriorating, and underused facilities.

The need for the Proposed Action is to meet current and future mission requirements and national security objectives for Selfridge ANGB. This includes upgrading and repairing installation utilities, pavements, and facilities; improving the efficiency and effectiveness of operations; replacing older, substandard facilities with new buildings; and enhancing the transportation system on Selfridge ANGB.

1.4 SUMMARY OF ENVIRONMENTAL STUDY REQUIREMENTS

1.4.1 National Environmental Policy Act

NEPA requires federal agencies to take into consideration the potential environmental consequences of proposed actions in their decision-making process. The intent of NEPA is to protect, restore, and enhance the environment through well-informed federal decisions. The CEQ was established under NEPA to implement and oversee federal policy in this process. The CEQ subsequently issued the Regulations for Implementing the Procedural Provisions of the NEPA (40 CFR §§ 1500–1508) (CEQ 2005). The activities addressed within this document constitute a federal action and therefore must be assessed in accordance with NEPA. The United States Air Force's (USAF) implementing procedures for NEPA are contained in 32 CFR 989 *et seq.*, *EIAP*.

1.4.2 Interagency and Intergovernmental Coordination for Environmental Planning (IICEP)

The ANG provides opportunities for the public to participate in the NEPA process to promote open communication and improve their decision-making process. All persons and organizations identified as having potential interest in the Proposed Action and Alternatives are encouraged to participate in the process.

Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, requires intergovernmental notifications prior to making any detailed statement of environmental impacts. Through the process of Interagency and Intergovernmental Coordination for Environmental Planning (IICEP), the proponent must notify concerned Federal, State, and local agencies and allow them sufficient time to evaluate potential environmental impacts of a Proposed Action. Comments from these agencies are subsequently incorporated into the EIAP. IICEP materials related to this action are included in Appendix A.

1.4.3 Water Resources

The Clean Water Act (CWA) of 1977 (33 USC § 1251 *et seq.*) regulates pollutant discharges that could affect aquatic life forms or human health and safety. Section 404 of the CWA, and EO 11990, *Protection of Wetlands*, regulate development activities in or near streams or wetlands. Section 404 also regulates development in streams and wetlands and requires a permit from the United States Army Corps of Engineers (USACE) for dredging and filling in wetlands. Michigan has delegation authority from the USACE to administer Section 404 of the federal CWA. EO 11988, *Floodplain Management*, requires federal agencies to take action to reduce the risk of flood damage; minimize the impacts of floods on human safety, health, and welfare; and to restore and preserve the natural and beneficial values served by floodplains. Federal agencies are directed to consider the proximity of their actions to or within floodplains.

1.4.4 Cultural Resources

The National Historic Preservation Act (NHPA) of 1966 (16 USC § 470) established the National Register of Historic Places (NRHP) and the Advisory Council on Historic Preservation outlining procedures for the management of cultural resources on federal property. Cultural resources can include archaeological remains, architectural structures, and traditional cultural properties such as ancestral settlements, historic trails, and places where significant historic events occurred. NHPA requires federal agencies to consider potential impacts to cultural resources that are listed, nominated to, or eligible for listing on the NRHP; designated as a National Historic Landmark; or valued by modern Native Americans for maintaining their traditional culture. Section 106 of NHPA requires federal agencies to consult with State Historic Preservation Officers if their undertakings might affect such resources.

The Archaeological Resources Protection Act of 1979 (16 USC §§ 470aa-mm) was created to protect archaeological resources and sites on public and Native American lands in addition to encouraging cooperation and exchange of information between governmental authorities, professionals, and private individuals. The act establishes civil and criminal penalties for destruction and alteration of cultural resources.

1.4.5 Air Resources

The Clean Air Act (CAA) (42 USC §§ 7401-7671q, as amended) provided the authority for the United States Environmental Protection Agency (USEPA) to establish nationwide air quality standards to protect public health and welfare. Federal agencies are required (40 CFR § 51, Subpart W) to determine a proposed action's conformity with the CAA and its 1990 and 2010 amendments, which require each state to prepare a State Implementation Plan for achievement of air quality standards.

1.4.6 Hazardous Materials and Waste

Hazardous materials are defined in 49 CFR 171.8. Transportation of hazardous materials is regulated by the United States (U.S.) Department of Transportation regulations in 49 CFR §§ 105–180. Hazardous wastes are defined by the Resource Conservation and Recovery Act (RCRA) at 42 USC 6903(5), as amended by the Hazardous and Solid Waste Amendments. Special hazards are those substances (i.e., asbestos-containing materials, lead-based paint, and polychlorinated biphenyls) that could pose a risk to human health and are addressed separately from other hazardous substances (Toxic Substances Control Act Title 15 USC Chapter 53). Information on the location, quantity, and condition of hazardous materials and waste assists in determining the significance of a proposed action.

1.4.7 Endangered Species Act

The Endangered Species Act of 1973 (16 USC §§ 1531-1544, as amended) established measures for the protection of plant and animal species that are federally listed as threatened and endangered, and for the conservation of habitats that are critical to the continued existence of those species. Federal agencies must evaluate the effects of their proposed actions through a set of defined procedures, which can include the preparation of a Biological Assessment and can require formal consultation with the United States Fish and Wildlife Service (USFWS) under Section 7 of the Act.

1.4.8 Other Executive Orders

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, provides that citizens in either of these categories are not disproportionately affected by a federal action. Additionally, potential health and safety impacts that could

disproportionately affect children are considered under the guidelines established by EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*.

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere. These emissions occur from natural processes as well as human activities. EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, and EO 13693, *Planning for Federal Sustainability into the Next Decade*, were enacted to address GHG in detail, including GHG emissions inventory, reduction, and reporting.

1.5 RESOURCES NOT CARRIED FORWARD FOR DETAILED ANALYSIS

The determination of issues to be analyzed versus those not carried forward for detailed analysis is part of the EA scoping process as described in 40 CFR 1501.7(a) (3), which states that issues addressed in prior environmental reviews, or that are not significant, may be eliminated from detailed analysis in the EA. The following environmental resource areas were found to have no or negligible potential for direct, indirect, or cumulative effects, as a result of implementing the Proposed Action or alternatives. These include airspace, aesthetics and visual resources, noise, socioeconomics, and geological resources. These environmental resource areas are not carried forward for detailed analysis in the EA.

Airspace. The Proposed Action and alternatives would have negligible effects (i.e., effects that are not measurably different when compared to existing conditions) to airspace management and use. The Proposed Action would not include the creation of any new Federal Aviation Administration (FAA)-designated controlled airspace or the redesignation of any existing airspace. All FAA-designated controlled airspace would remain unchanged when compared to existing conditions. All aircraft operations would continue to take place within existing FAA designated controlled airspace. There would be no changes in flight operations that would conflict with existing civilian, commercial, or military use of the regional airspace. These effects would be negligible; therefore, airspace was not carried forward for detailed analysis in this EA.

Aesthetics and Visual Resources. The Proposed Action and alternatives would have negligible effects to aesthetics or visual resources. Equipment used during the proposed construction projects could create a short-term visual effect; however, the visual environment of Selfridge ANGB is typical of an industrial setting and does not constitute a unique or sensitive viewshed of public interest. The existing view is an airfield with supporting infrastructure. The existing facilities are equipped with lighting throughout the parking areas, pedestrian walkways, and access points. During the construction and demolition activities at the installation, the visual and aesthetic characteristics of areas undergoing development would be temporarily altered by the use of construction equipment, and the delivery and stockpiling of construction materials. Following completion of construction, the proposed facilities and associated infrastructure would remain as permanent visual features within the viewshed; however, the principal visual features of the facility would remain consistent with existing conditions. These effects would be

negligible; therefore, aesthetics and visual resources were not carried forward for detailed analysis in this EA.

Noise. The Proposed Action and alternatives would have negligible effects on the noise environment at Selfridge ANGB. The construction and demolition activities would require use of heavy equipment that would generate short-term increases in noise near the project sites. All construction and demolition activities would be within the installation property boundary and collocated with other existing noise-compatible activities. There would be no new permanent sources of noise; therefore, no long-term changes in the noise environment would occur. Overall, these effects would be negligible; therefore, noise was not carried forward for detailed analysis in this EA.

Socioeconomics. The Proposed Action and alternatives would have negligible effects to the local or regional socioeconomic environment. In 2014, Macomb County had a total personal income of approximately \$34 billion, which ranked 3rd in Michigan and accounted for 8.5 percent of the state total personal income (U.S. Bureau of Economic Analysis 2014). The Proposed Action would include short-term economic benefits from construction activities; however, such fractional effects would be less than significant on a regional scale. There would be less than significant permanent change in sales volume, income, employment, or population due to the Proposed Action. Consideration of environmental justice and protection of children is to ensure that no groups of people should bear a disproportionate share of the negative environmental consequences resulting from federal actions. No minority populations or low-income populations are disproportionately near Selfridge ANGB (Selfridge ANGB 2014). In addition, no housing for children exist on the installation. No effects to environmental justice and protection of children would occur under the Proposed Action; therefore, socioeconomics was not carried forward for detailed analysis in this EA.

Geological Resources. The Proposed Action and alternatives would have negligible effects to geological resources. The dominant soil mapping unit on Selfridge ANGB is Made Land, which consists of soils that have been altered as a result of excavation, placement of fill material, and contouring associated with construction or other earthwork activities (Selfridge ANGB 2010). The construction projects would be sited in previously disturbed, graded, and level locations. In addition, BMPs would be implemented to minimize the potential effects on geological resources. Proposed activities would not alter the topography of the existing terrain nor would they be near identified geological hazards (Selfridge ANGB 2010). These effects would be negligible; therefore, geological resources were not carried forward for detailed analysis in this EA.

1.6 RESOURCES CARRIED FORWARD FOR DETAILED ANALYSIS

After preliminary analyses of potential environmental issues, the following resource areas will be carried forward for further analysis in the EA due to the potential for direct, indirect, or cumulative impacts:

- Air Quality
- Land Use
- Biological Resources
- Water Resources
- Transportation
- Cultural Resources
- Hazardous Materials and Waste
- Health and Safety

Detailed descriptions of the affected environment and analysis of the environmental consequences associated with the Proposed Action and alternatives are in Chapter 3 of this EA.

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2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

This chapter presents a detailed description of the Proposed Action to construct, demolish, and renovate facilities/infrastructure at Selfridge ANGB, Michigan ANG, Mount Clemens, Michigan. The details of the Proposed Action form the basis for the analyses of potential environmental impacts presented in Chapter 3. This chapter includes a discussion of considerations used to identify reasonable alternatives and also discusses the No Action Alternative.

2.1 PROPOSED ACTION (PREFERRED ALTERNATIVE)

Under the Proposed Action, ANG would implement construction, demolition, and renovation projects at Selfridge ANGB to improve mission capabilities, unit readiness, and the operating environment of the base (Table 2-1). The projects include new construction, demolition of excess/obsolete buildings, and renovation of existing buildings. The period of construction, demolition, and renovation activities would be no greater than five years.

2.1.1 Proposed Construction, Demolition, and Renovation Projects

The Proposed Action includes 15 projects some of which have multiple components to satisfy the program requirement, such as repair of buildings. Alternative implementations were identified for four of the projects listed below. The following project descriptions provide information relative to understanding the potential effects on the environment.

Project 1: Main Gate

The 127th Wing requires adequate facilities and space to provide secure entry to the base compliant with Unified Facilities Criteria (UFC) 4-022-01, Chapter 5, *Entry Control Facilities*, which requires sufficient reaction distances, traffic control, and protective barriers as well as adequate space to search and hold vehicles awaiting entry. The new Main Gate would be compliant with anti-terrorism/force protection (AT/FP) standards (UFC 4-010-01, *DoD Minimum Anti-terrorism Standards for Buildings*). The 127th Wing proposes to construct a vehicle inspection area approximately 1,000 feet



(305 meters) south (within the installation) of the existing entry control point on Jefferson Avenue, and reroute North Perimeter Road to avoid traffic congestion on Rosso Highway north of the entry control point. Perimeter Road would be rerouted south of the museum and commercial area to facilitate installation security. The re-routed perimeter road would connect to Jefferson Avenue. In order to avoid the explosive arc designation for the munitions storage area, the re-routed perimeter road would transverse approximately 0.5 ac (0.2 ha) of wetland. An ANG-approved Finding of No Practicable Alternative (FONPA) and Michigan Department of

Table 2-1. Proposed Projects

Project #	Project Name	Project Description
Construction Projects		
1	Main Gate	AT/FP Compliant Gate and rerouting of perimeter road
2	South Gate	AT/FP Compliant Gate
3	Indoor Firing Range	New facility for small arms qualifications and closure of the outdoor firing range
4	Precision Measurement Equipment Laboratory (PMEL)	A new laboratory, properly sized and configured to calibrate and repair test and measurement equipment, would be constructed.
5	Operations and Training Alternative	As an alternative to Building 410 renovation (Project 13), a new building would be constructed for a consolidated Wing Headquarters.
6	Taxiway A Extension	Extending Taxiway A to the end of Runway 19.
7	Runway 19 Hammerhead Alternative	As an alternative to Taxiway A Extension (Project 6), an aircraft turn around would be constructed at the end of Runway 19.
8	Base Sewer Line Connection	Connecting the base sewer line to the county sewer system around wetland areas.
9	Base Sewer Line Alternative	As an alternative to the proposed base sewer line connection (Project 8), connecting to the county sewer system would be by drilling under wetland areas.
10	Solar PV Array	Develop 20 ac of solar PV array(s) in the airfield away from the primary runway and other compatible open area.
Demolition Projects		
11	Demolish Buildings 310, 699, 826, 835, and 951	Demolish excess/obsolete buildings and convert the areas to green space.
Renovation Projects		
12	PMEL Addition/Alteration Alternative	As an alternative to constructing a new PMEL facility (Project 4), alterations and additions would be made to the existing PMEL facility for proper size and configuration.
13	Building 410	Renovations for a consolidated Wing Headquarters for proper size and configuration.
14	Hangar 36 Repair	Door replacement.
15	Repair Buildings 154, 117, 120, 140, 3, 18, and 5	Renovation to provide properly sized and configured facilities.

Environmental Quality (MDEQ) Wetland Permit in accordance with Part 303, *Wetlands Protection* of the Natural Resources and Environmental Protection Act (NREPA) would be required prior to implementation of the proposed perimeter road rerouting. Wetland mitigation (per Michigan Law Part 303) would be required at an off-site location in-lieu of mitigation on-site due to 2014 Selfridge ANGB bird/wildlife aircraft strike hazard plan. The proposed main gate construction area would be approximately one ac (0.4 ha) on existing developed area along Jefferson Avenue. If this element of the Proposed Action is not implemented, the current main entry control point would continue to not meet UFC, resulting in traffic and safety hazards.

Project 2: South Gate

The current facilities at the South Entry Gate, intersection of South Perimeter Road and General Andrews Drive, are inadequate and do not meet the standards set forth in UFC 4-022-01, Chapter 5, *Entry Control Facilities*. The new South Entry Gate would be relocated approximately 3,500 feet (1,067 meters) west of the existing gate on South Perimeter Road (also known as the existing South Entry Gate) and provide sufficient security distances and barriers in accordance with AT/FP. Due to the design and location of the existing South Entry Gate, it presents a traffic bottleneck during high traffic periods. The proposed construction area would be approximately one ac (0.4 ha) on existing developed area. The new South Entry Gate would be a compliant entry control point.



The proposed construction area would be approximately one ac (0.4 ha) on existing developed area. The new South Entry Gate would be a compliant entry control point.

Project 3: Indoor Firing Range

The current outdoor pistol range would be replaced by a similarly sized indoor firing range (approximately 3,500 square feet [325 square meters) on the same location. The new range would increase safety by eliminating the range safety area (i.e. ricochet fan) currently extending beyond the range area. The proposed construction area would be approximately one ac (0.4 ha) on existing developed area and the new range would be constructed in accordance with applicable safety criteria and guidelines for evaluating, planning, programming, and designing indoor small arms firing ranges (Facilities Criteria (FC) 4-179-03F, 2015, *Air Force Indoor Small Arms Firing Range*).



Project 4: Precision Measurement Equipment Laboratory (PMEL)

The Michigan ANG's 127th Wing proposes to build a new adequately sized (approximately 12,400 square feet [1,151 square meters]), properly cited facility to support a regional equipment calibration/repair mission. The current PMEL building is inadequately sized and requires significant utility and structural upgrades. In addition, the current PMEL building is located too close to external vibration sources near the runway, impacting mission accomplishment. Construction of a new PMEL facility farther from the airfield would improve mission accomplishment.



Project 5: Operations and Training Alternative

As an alternative to renovation of Building 410 (Project 13), an adequately-sized Operations and Training facility (approximately 20,000 square feet [1,858 square meters]) would be designed and constructed in the East Cantonment area to serve as administrative space for Wing Headquarters, as well as various support offices. The proposed construction area would be approximately one ac (0.4 ha) on existing developed area.



Project 6: Taxiway A Extension

The 127th Wing proposes to extend Taxiway A at the north end of the runway with a 42,000 square yard (35,117 square meters) turning area (hammerhead). This action will allow greater maneuverability and runway access for larger aircraft preparing for takeoff. The taxiway would be extended approximately 2,000 feet to the end of the runway.



Project 7: Runway 19 Hammerhead Alternative

As an alternative to extending Taxiway A (Project 6), the 127th Wing proposes to construct a 14,000 square yard (11,705 square meters) hammerhead at the end of the runway. This action will allow greater maneuverability and runway access for larger aircraft preparing for takeoff. Aircraft would continue to access the north end of the runway via Taxiway A or Taxiway K. Similar to the hammerhead at the opposite end of the runway, the proposed



hammerhead would provide greater maneuverability for larger aircraft preparing for takeoff.

Project 8: Base Sewer Line Connection

The sanitary sewer servicing the facilities on the west side of the base would be re-routed under this project to a newly installed City of Detroit interceptor near Interstate 94. Re-routing of this sewage would eliminate the risk of airfield impact due to sewer line failure, and would reduce the capacity required by the remaining sewage system on the installation. The proposed route to the City of Detroit interceptor would be routed around existing wetlands to avoid potential impacts to wetlands.



Project 9: Base Sewer Line Alternative

As an alternative to the base sewer line connection (Project 8), the 127th Wing proposes to bore a maximum size 20-inch (51-centimeter) pipe at least 36 inches (91 centimeters) under the existing wetlands in the area to avoid potential impacts to wetlands. This project would require a wetland permit from the MDEQ, as a Minor Permit, Category 45 if the action is determined by MDEQ to be consistent with the associated stipulations. The sanitary sewer servicing the facilities on the west side of the base would be re-routed under this project to a newly installed City of Detroit interceptor near Interstate I-94. Re-routing of this sewage would eliminate the risk of airfield impact due to sewer line failure, and would reduce the capacity required by the remaining sewage system on the installation.

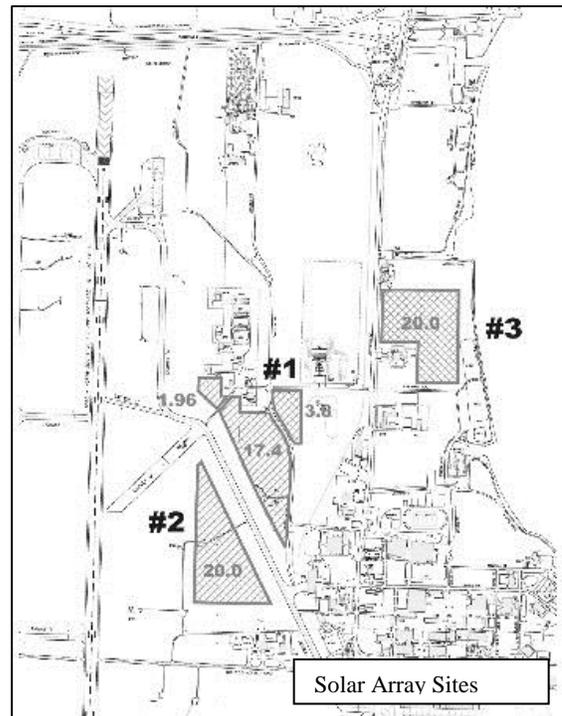


Project 10. Solar PV Array

The Michigan ANG would construct up to a 5MW (megawatt) solar PV array project in a compatible area of the installation. The purpose of the project is to increase energy security and sustainability at Selfridge ANG Base and increase the use of renewable energy. The project would provide a carbon neutral alternative power source for base operations. The project would provide energy resiliency and security to base-assigned missions as well as achieve the requirement for 25% of electricity to be from renewable energy sources by 2025 specified in EO 13693 and DoD Instruction (DODI) 4170.11. The project is anticipated to generate approximately 5,597,873 to 5,968,820 kWh (projections from the NREL PVWatts Calculator) per year based on southeast Michigan climate and sun exposure estimates. Power generated from the solar PV array project would be expected to replace approximately 25 percent of Selfridge ANGB's existing generation requirements. Approximately 20 ac (8 ha) of open land would be

used to construct the solar PV Array. Solar PV Panels will be installed over gravel approximately 3 feet (1 meter) above the ground at a 42 degree angle. Solar PV Panels will be sited in rows with approximately 15 feet (5 meters) between each row to allow for access. The area beneath the elevated solar PV panels would be covered with gravel to minimize vegetation maintenance and remain as pervious ground. Areas of the base with traditional land use constraints such as clear zones, areas of the airfield with strict height restrictions, and other cleared sites were target areas to provide alternative locations for siting the proposed solar PV arrays. A Solar Glare Hazard Analysis Tool (SGHAT) model was run by Air Force Civil Engineering Center and indicated low potential for aircraft glare hazard.

Three locations, approximately 20-ac (8-ha) each, are proposed for siting the solar project. The sites have no known environmental restrictions which would prohibit installation of a solar project. The sites are maintained currently maintained as turf grass. The locations are in the 100-year floodplain, but are outside any wetland or forested areas. The sites are located in direct proximity or near to the DTE Energy Company substation, transmission lines and access road. The DTE Energy substation has a vacant transformer and switch gear that used to service off base housing. This vacant infrastructure should be adequate to serve a 5 MW solar PV array. Site Number 1 (10-1) is within the munitions quality distance zone and is otherwise unbuildable. Site Number 2 (10-2) is within the airfield and is otherwise unbuildable. Site Number 3 (10-3) is east of the airfield and would be sited near the proposed new main security gate (Project 1). Sites 2 may require installation of service road access based on configuration.



Project 11: Demolish Buildings 310, 699, 826, 835, and 951

The 127th Wing proposes to demolish Building 310 (Hospital/Medical Clinic), 699 (Ammunition Storage), 826 (Bowling Center), 835 (Exchange Service Outlet), and 951 (Post Office). This proposed action continues Selfridge ANGB's initiative to achieve and maintain authorized square footage allotments as determined by the ANG. Due to the dilapidated condition of the buildings, it is not feasible to maintain or renovate these facilities for further use. Selfridge ANGB has no use for the buildings and the structures have potential health and safety hazards. The most plausible course of action is demolition, grading, and seeding the sites to accommodate future development opportunities. Selfridge ANGB consulted with the MI SHPO about the proposed demolition of these properties on 17 March 2016. Receiving no objection to the proposed undertaking, Selfridge ANGB assumed concurrence on 20 April 2016, in accordance with 36 C.F.R. Part 800.3(c)(4).



Project 12: PMEL Addition/Alteration

An alternative to constructing a new PMEL facility (Project 4), the 127th Wing proposes to renovate or construct an addition to the existing PMEL facility. This project would upgrade utilities and structural deficiencies, as well as provide adequate sizing to support the currently assigned regional PMEL mission. Alteration of the existing facility would include noise dampening measures to help eliminate the existing interference from external vibration sources near the runway.



Project 13: Building 410 Renovation

The 127th Wing proposes to renovate Building 410 from its former use as the closed Base Hotel to reutilization as administrative space for the 127th Wing Headquarters, as well as various support offices. The proposed action would realize extensive renovation of the guest room areas, while attempting to retain the character of much of the lobby and common areas. The proposed renovation would not extend beyond the existing building footprint. Any proposed action involving this property will be consulted upon with the



MI SHPO prior to project commencement, in accordance with the NHPA and the Programmatic Agreement.

Project 14: Hangar 36 Repair

Due to structural issues rendering the current north hangar doors inadequate, the proposed project would replace the existing doors with a new, similarly looking door system. The proposed repair would not extend beyond the existing building footprint on the aircraft ramp. In accordance with Selfridge ANGB's Programmatic Agreement, consultation with the SHPO is not required for this action because it involves the in-kind replacement of doors. However, if the scope changes to anything other than in-kind replacement, Selfridge ANGB will consult with the MI SHPO prior to commencing project, in accordance with the NHPA and the Programmatic Agreement.



Project 15: Repair Buildings 154, 117, 120, 140, 3, 18, and 5

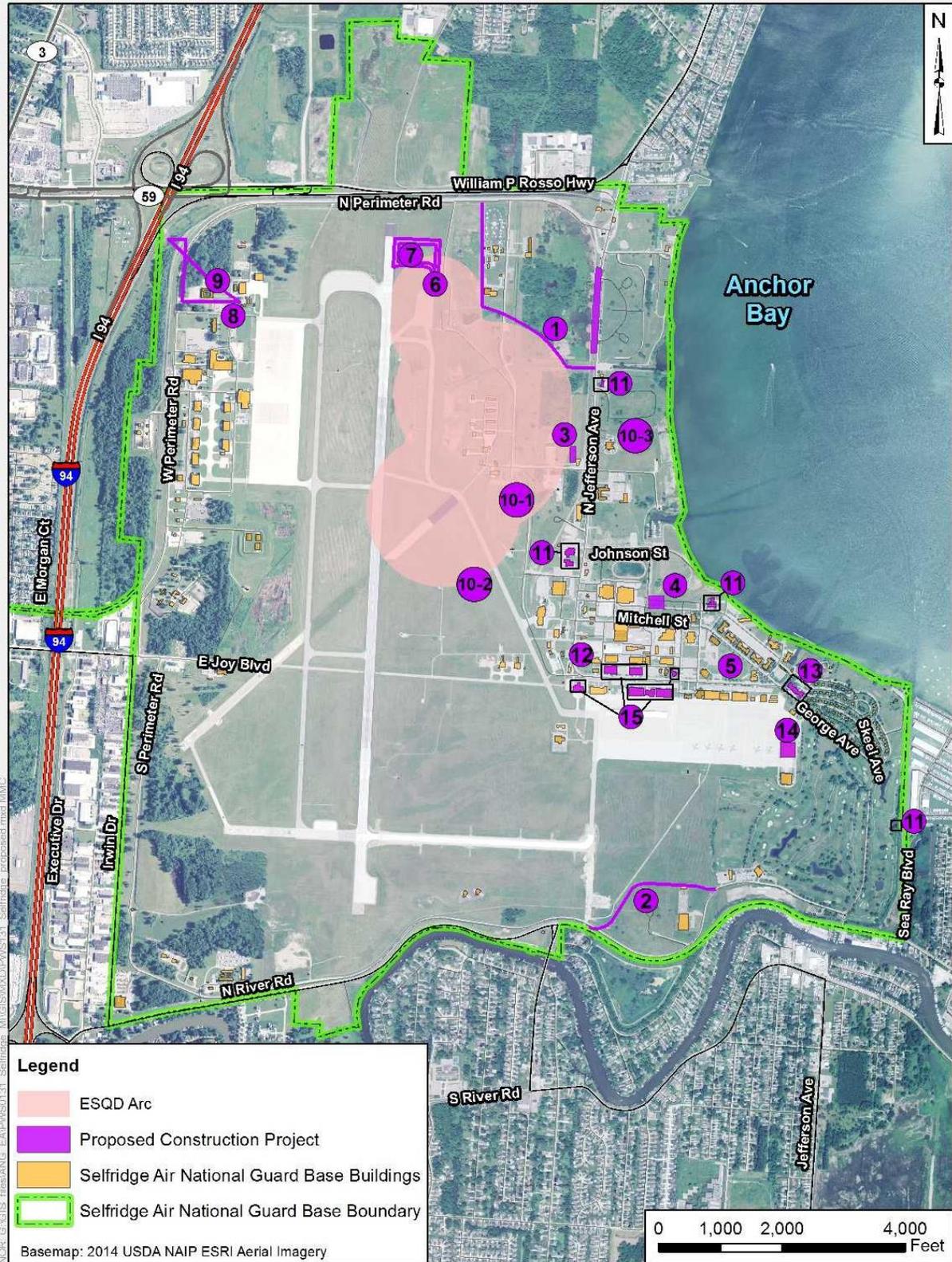
The 127th Wing proposes to repair Building 154 (Fuel System Maintenance Dock), 117 (Jet Engine Maintenance Shop), 120 (Aircraft Shop), 140 (Reserve Forces Training-Communications), 3 (Maintenance Hangar), 18 (Avionics Shop/Maintenance), and 5 (Maintenance Hangar). Many of the 127th Maintenance Group and Squadron's facilities are in need of repair, renovation and realignment. These facilities, some dating back to 1930's construction, require upgrading to meet the requirements and working conditions of a modern Air Force fighter squadron. There would be both interior and exterior changes to these structures. The proposed renovation would not extend beyond the existing building footprint on the aircraft ramp and adjacent areas. Any proposed actions involving these properties will be consulted upon individually with the MI SHPO prior to project commencement, in accordance with the NHPA and the Programmatic Agreement.



The proposed activities would be sited as shown in Figure 2-1.

2.1.2 Sustainable Strategies and Energy Reduction

Sustainable strategies and energy reduction practices for military construction projects will be incorporated into the Proposed Action as part of Air Force sustainability policy and Leadership in Energy and Environmental Design requirements. Guidance for these strategies is presented in Engineering Technical Letter 08-13: *Incorporating Sustainable Design and Development and*



Note: ESQD is explosive safety quantity distance.

Figure 2-1. Proposed Project Locations

Facility Energy Attributes in the Air Force Construction Program, which explains that sustainable strategies are driven by the following regulations:

- EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, 24 January 2007
- EO 13327, *Federal Real Property Asset Management*, 4 February 2004
- EO 13693, *Planning for Federal Sustainability in the Next Decade*
- Energy Policy Act of 2005, 8 August 2005
- Energy Independence and Security Act of 2007, 19 December 2007
- USEPA's *Federal Leadership in High Performance and Sustainable Buildings* Memorandum of Understanding, 17 January 2006
- 10 CFR 433, *Energy Efficiency Standards for the Design and Construction of New Federal Commercial and Multi-family High-rise Residential Buildings*
- 10 CFR 434, *Energy Code for New Federal Commercial and Multi-family High-rise Residential Buildings*
- 10 CFR 436, *Federal Energy Management and Planning Programs, Life Cycle Cost Analysis, Subpart A—Methodology and Procedures*
- Annual Supplement to Handbook 135, *Energy Price Indices and Discount Factors for Life-Cycle Cost Analysis* – April 2008 (or current version)

2.1.3 Selection Criteria

During development of the projects, alternatives to the Proposed Action were evaluated against numerous screening criteria. Specifically, the Proposed Action:

- Meets the purpose and need of replacing outdated, undersized, or inadequate facilities in a way that improves safety and morale of personnel and security of assets.
- Provides for construction without significant environmental impacts or development constraints that would result in excessive costs or schedule delays.
- Provides for minimum DOD security standards, including AT/FP requirements specified by UFC 4-010-01.

The Proposed Action meets all of the selection criteria outlined above and has been carried forward for detailed analysis in this EA. For an alternative to the Proposed Action to be considered viable, it must meet all of these selection criteria as well.

2.2 ALTERNATIVES TO THE PROPOSED ACTION

The ANG considered reasonable alternatives to the Proposed Action to formulate alternatives for analysis. Some projects might not have any reasonable alternatives because they are site-specific, mission-supportive, sustainable, and economical. The Selfridge ANGB CLUP provides for planning, programming and development strategies that address current and programmed

mission opportunities and deficiencies. Multidisciplinary planning of installation, regional, and DOD stakeholders is conducted to identify projects specified in the CLUP. This collaborative effort consolidates functions and efficiencies, while providing the flexibility for future mission requirements, environmental protection, and installation security.

2.2.1 Alternative 1 – Subset Implementation of the Proposed Projects

Depending on the availability of funding, a subset of the highest priority projects could be implemented. However, Alternative 1 would be less desirable than the Proposed Action because it would partially improve mission capabilities, unit readiness, and the operating environment of Selfridge ANGB. Existing deficiencies would be unresolved and require reprogramming for phased implementation at a later date. Alternative 1 would generally have the same potential effects, but spread out over a longer time period to implement the recommended projects. In addition, Alternative 1 would not meet all of the selection criteria outlined above. For these reasons, this alternative is not carried forward for further analysis.

2.2.2 No Action Alternative

The CEQ regulation 40 CFR §1502.14(d) specifically requires analysis of the “No Action” alternative in all NEPA documents. Under the No Action Alternative, the 127th Wing would not implement the actions described above. The 127th Wing would continue to conduct their current mission using the existing facilities and current operational inefficiencies would remain in effect. Although the No Action alternative does not meet any of the selection criteria, or fulfill the purpose and need of the action, it has been carried forward for detailed analysis in this EA as required under NEPA.

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3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes relevant and existing environmental conditions for resources potentially affected by the Proposed Action. In compliance with the NEPA, CEQ regulations, Air Force instruction (AFI) 32-7061, and UFC 3-260-01, the description of the affected environment focuses on only those aspects of the environment potentially subject to effects. In general, the description of the affected environment and assessment of environmental consequences focuses on the Selfridge ANGB, and Macomb County, Michigan.

The resources carried forward for detailed analysis include air quality, land use, biological resources, water resources, transportation, cultural resources, hazardous materials and wastes, and health and safety. A description of the affected environment and the detailed evaluation of environmental consequences on these resource areas are provided in the following sections.

3.1 AIR QUALITY

3.1.1 Definition of Resource

Air pollution is the presence in the outdoor atmosphere of one or more contaminants (e.g., dust, fumes, gas, mist, odor, smoke, or vapor) in quantities and of characteristics and duration such as to be injurious to human, plant, or animal life. Air quality as a resource incorporates components that describe air pollution within a region, sources of air emissions, and regulations governing those emissions. The following sections include a discussion of the existing conditions, a regulatory overview, and a summary of greenhouse gases and global warming.

3.1.2 Affected Environment

The USEPA and state environmental agencies regulate air quality nationwide. The CAA (42 USC 7401-7671q), as amended, assigns the USEPA responsibility to establish the primary and secondary National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) that specify acceptable concentration levels of six criteria pollutants: particulate matter (measured as both particulate matter less than 10 microns in diameter [PM_{10}] and particulate matter less than 2.5 microns in diameter [$PM_{2.5}$]), sulfur dioxide (SO_2), carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), and lead. Short-term NAAQS (1-, 8-, and 24-hour periods) have been established for pollutants contributing to acute health effects, while long-term NAAQS (annual averages) have been established for pollutants contributing to chronic health effects.

3.1.2.1 Local Air Quality

Federal regulations designate Air Quality Control Regions (AQCRs) in violation of the NAAQS as *nonattainment* areas. Federal regulations designate AQCRs with levels below the NAAQS as *attainment* areas. *Maintenance* areas are AQCRs that have previously been designated as

nonattainment and have been redesignated to attainment for a probationary period through implementation of maintenance plans. Macomb County (and therefore all areas associated with the action) is within the Metropolitan Detroit-Port Huron Interstate AQCR (40 CFR 81.37). The USEPA has designated the areas within Macomb County associated with the Proposed Action as attainment for all criteria pollutants, and a maintenance area for the PM_{2.5} and the 8-hour O₃ NAAQS (USEPA 2016a). The USEPA monitors levels of criteria pollutants at representative sites in each region. For reference purposes, Table 3-1 shows the concentrations of O₃ and PM_{2.5}, the only pollutants observed at the monitoring location in Macomb County, and all other criteria pollutants from the monitoring location in Wayne County.

Table 3-1. Air Quality Standards and Monitored Data

Pollutant	Air Quality Standard		Monitored Concentrations		
	Level	Averaging Period	2013	2014	2015
CO					
1-hour (ppm)	35	Not to be exceeded more than once per year	4.8	2	2.4
8-hour (ppm)	9		1.6	1.5	1.7
Nitrogen Dioxide (NO₂)					
1-hour (ppb)	100	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years	18	52	50
O₃					
8-hour (ppm)	0.070	3-year average of the fourth highest daily maximum	0.072	0.071	0.064
SO₂					
1-hour (ppm)	75	98th percentile, averaged over 3 years	74	66	76
3-hour (ppb)	0.5	Not to be exceeded more than once per year	No Data	No Data	No Data
PM_{2.5}					
24-hour (µg/m ³)	35	98th percentile, averaged over 3 years	18	27	26
Annual mean (µg/m ³)	12	Averaged over 3 years	8	9.2	9.6
PM₁₀					
24-hour (µg/m ³)	150	Not to be exceeded more than once per year over 3 years	81	150	139

Source: 40 CFR 50.1-50.12, USEPA 2016b.

ppm = parts per million; ppb = parts per billion; µg/m³ = micrograms per cubic meter

The base has the potential to emit greater than 100 tons per year (tpy) of NO_x and SO₂; therefore, it is classified as a major source for Title V permitting purposes. However, Selfridge ANGB limits its actual annual emissions to levels beneath the major source thresholds by including federally enforceable limitations in its synthetic minor air operating permit. These limitations are implemented via specific practices according to fuel type and process. If emissions were to

increase and operational limitations could not keep the emissions below the major source thresholds, a Title V Operating Permit would be required.

3.1.2.2 Climate and Greenhouse Gases (GHG)

Mount Clemens' average high temperature is 81.8 degrees Fahrenheit (°F) (27.7 degrees Celsius (°C)) in the hottest month of July, and an average low temperature of 18.0°F (-7.8°C) in the coldest month of January. Mount Clemens has average annual precipitation of 32.2 inches (81.8 centimeters) per year. The wettest month of the year is July with an average rainfall of 3.5 inches (8.9 centimeters) (Idcide 2016).

GHGs are components of the atmosphere that trap heat relatively near the surface of the earth, and therefore, contribute to the greenhouse effect and climate change. Most GHGs occur naturally in the atmosphere, but increases in their concentration result from human activities such as the burning of fossil fuels. Global temperatures are expected to continue to rise as human activities continue to add CO₂, methane, nitrous oxide, and other greenhouse (or heat-trapping) gases to the atmosphere. Whether or not rainfall will increase or decrease remains difficult to project for specific regions (USEPA 2016c and IPCC 2014).

EO 13693, *Planning for Federal Sustainability in the Next Decade* outlines policies intended to ensure that Federal agencies evaluate climate-change risks and vulnerabilities, and to manage the short- and long-term effects of climate change on their operations and mission. The EO specifically requires agencies within the DOD to measure, report, and reduce their GHG emissions from both their direct and indirect activities. The DOD has committed to reduce GHG emissions from non-combat activities 34 percent by 2020 (DOD 2014). In addition, the CEQ recently released draft guidance on when and how federal agencies should consider GHG emissions and climate change in NEPA analyses. The draft guidance includes a presumptive effects threshold of 27,563 tons per year (25,000 metric tons per year) of CO₂ equivalent emissions from a federal action (CEQ 2014).

3.1.3 Environmental Consequences

3.1.3.1 Significance Criteria

Effects to air quality would be considered significant if the total emissions would exceed the general conformity rule *de minimis* (of minimal importance) threshold values, would exceed the GHG threshold in the draft CEQ guidance, or the Proposed Action would contribute to a violation of any federal, state, or local air regulation.

3.1.3.2 Proposed Action

There would be short- and long-term less-than-significant adverse effects to air quality. Short-term effects would be from fugitive dust and the use of heavy equipment during construction, demolition, and renovation activities. There would be no appreciable net change in heated area,

number of personnel, or the overall mission at the base; therefore, there would be negligible long-term adverse effects for the Proposed Action. Emissions would not exceed the general conformity rule *de minimis* threshold values, would not exceed the GHG threshold in the draft CEQ guidance, and the Proposed Action would not contribute to a violation of any federal, state, or local air regulation.

Construction Effects

The Proposed Action is within a region USEPA has designated as a nonattainment or maintenance area for the NAAQS. The Air Force's Air Conformity Applicability Model was used to estimate the total direct and indirect emission from the Proposed Action, which have been compared to the *de minimis* thresholds to determine if the general conformity rule applies (USAF 2013). Construction, demolition, and renovation emissions were estimated for fugitive dust, on- and off-road diesel equipment and vehicles, worker trips, architectural coatings, and paving off-gasses (Table 3-2). The estimated emissions from the Proposed Action would be below the *de minimis* thresholds; therefore, the general conformity rules would not apply and level of effects would be minor. A Record of Non-Applicability is in Appendix B.

Table 3-2. Estimated Air Emissions Compared to *De Minimis* Thresholds

Activity/Source	Emissions (tpy)						<i>De minimis</i> Threshold [tpy]	Exceeds <i>De Minimis</i> Thresholds? [Yes/No]
	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}		
Construction, Demolition and Renovation	8.6	9.7	4.6	<0.1	8.6	0.5	100	No
Operations	<net decrease>						100	No

Source: USAF 2013.

For purposes of analysis, it was assumed that all construction and demolition activities would be compressed into one 12-month period. Therefore, regardless of the ultimate implementation schedule, annual emissions would be less than those specified herein. Small changes in facilities site and ultimate design, and moderate changes in quantity and types of equipment used would not substantially change these emission estimates, and would not change the determination under the General Conformity Rule or level of effects under NEPA.

The state's administrative code outlines requirements with which the ANG must comply when constructing the new facilities, such as controlling fugitive dust and open burning. All persons responsible for any operation, process, handling, transportation, or storage facility that could result in fugitive dust would take reasonable precautions to prevent such dust from becoming airborne. Reasonable precautions might include using water to control dust from building construction, road grading, or land clearing. These precautions are not all-inclusive; the ANG and any contractors would comply with all applicable air pollution control regulations.

Greenhouse Gases and Climate Change. All construction and demolition activities combined would generate approximately 859 tons (779 metric tons) of CO₂, which would be below the CEQ presumptive effects threshold. By upgrading and consolidating facilities, using new and more efficient heating and cooling systems, and implementing strategies as outlined in Section 2.1.2, there would be a net decrease in GHG emissions from these sources. Long-term beneficial effects would be from indirect reductions in the use of fossil fuel-based electricity at the installation due to the installation of the 5-MW solar PV array. The Proposed Action would reduce GHG emissions by approximately 27,663 tpy of CO₂ equivalent (NREL 2016 and USEPA 2012). These reductions would assist ANG in reaching their GHG reduction goals in accordance with EO 13693. These effects would be less than significant.

Operational Effects

There would be no appreciable net change in heated area, number of personnel, or the overall mission at the base. There would be no changes in aircraft training or operations, and no changes in vehicle emissions from commuting. The reduction in congestion near the gates would have an incremental beneficial effect to localized air emissions.

The Proposed Action does not include any new major stationary sources of air emissions, but may include some small stationary sources such as stand-by generators, boilers, and the proposed indoor firing range. Any new stationary sources of air emissions could be subject to federal and state air permitting regulations. Any new stationary sources of air emissions would be reviewed on a case-by-case basis, and added to the installation's air operating permit as necessary. Both a new source construction permit and a modification to the existing operating permit could be required. All older boilers and back-up generators removed during reconfiguring or demolition existing buildings would be decommissioned, and removed from the base's air operating permit. By upgrading and consolidating facilities, and using new and more efficient heating and cooling systems and back-up generators, there would be a net decrease in emissions from these sources.

Long-term minor beneficial effects on air quality would be expected. Although there are no appreciable change in operational emissions associated with the Proposed Action, long-term beneficial effects would be from indirect reductions in the use of fossil fuel-based electricity at the installation due to the installation of a 5-MW solar PV array (Table 3-3).

Table 3-3. Potential Indirect Emissions Reductions from Solar PV Arrays

PV Power Output		Net Emissions Savings from Displaced Electricity (tpy)					
MW	MW/hr/year	NO _x	SO ₂	CO ₂	CH ₄	N ₂ O	CO ₂ e
5	25,550	4.1	10.7	4,555.2	76.7	69.4	27,663.4

Source: NREL 2012 and USEPA 2012.

Note: MW = megawatt; MW/hr = megawatt hour; NO_x = nitrogen oxides; SO₂ = sulfur dioxide; CO₂ = carbon dioxide; CH₄ = methane; N₂O = nitrous oxide; CO₂e = carbon dioxide equivalent.

PV Power output (MW/hr) estimated based on four full hours of sun per day on average.

3.1.3.3 No Action Alternative

Under the No Action Alternative, the construction, demolition, and renovation projects proposed to improve mission capabilities, unit readiness, and the operating environment of the base would not occur. The need to meet current and future mission requirements and national security objectives would be unmet. Existing conditions would remain unchanged and there would be no effects to air quality, and no net benefit from the installation of the 5-MW solar PV array.

3.2 LAND USE

3.2.1 Definition of Resource

Land use classifications reflect either natural or human activities. Natural land uses include open grassland, forest, open water, and other undeveloped areas. Developed land uses include residential, commercial, industrial, airfield, and other developed areas. Management plans, policies, and regulations regulate the type and extent of land uses allowable in specific areas and often protect environmentally sensitive land uses. Land use planning ensures orderly growth and compatible uses among adjacent property parcels or areas. According to Air Force Pamphlet 32-1010, *Land Use Planning*, land use planning is the arrangement of compatible activities in the most functionally effective and efficient manner.

3.2.2 Affected Environment

There are eight designated land use categories in the 2012 CLUP for Selfridge ANGB. The airfield consists of the runway, taxiways, and ramps and make up the largest land use on the base. Industrial land uses include the assembly and maintenance of equipment. The administration land use includes administrative offices. Community Commercial land use includes commercial buildings such as the commissary. Community Service includes buildings such as the Post office. Two Munitions Storage Areas are used for ammunition storage. Open Space Constrained land use areas include areas that are in the natural condition due to operational or environmental constraints. Recreation land use includes family morale, welfare, and recreation facilities such as the golf course, parks and picnic areas (Selfridge ANGB 2012).

3.2.3 Environmental Consequences

3.2.3.1 Significance Criteria

Land use effects would be considered significant if construction or operation activities would (1) violate or otherwise be inconsistent with the CLUP; (2) create threats to public health, safety, and welfare of adjacent or nearby land users; or (3) conflict with Selfridge's fundamental mission.

3.2.3.2 Proposed Action

The Proposed Action would have short- and long-term less than significant effects to land use. Short-term effects would be due to site-specific temporary disturbance during construction, renovation, and demolition activities. Long-term effects would be consistent with ongoing activities at the base.

Construction Effects

Construction, renovation, and demolition activities would have less than significant effects on land use. Construction and renovation activities would occur on land that is currently open space or within existing buildings. Construction effects for Project 1 would have permanent impacts on the current undeveloped land-use (wetlands) with the re-routing of North Perimeter Road. Approximately 0.5 ac (0.2 ha) of wetland would be permanently removed, and mitigation to an offsite location would be required under the current rules and regulations. The Proposed Action would be consistent with adjacent land uses designated in the CLUP. Installation of solar PV arrays (Project 10) on Open Space Constrained land use areas as identified in the CLUP would provide long-term beneficial effects from passive collection and production of renewable energy from the sun. The main natural gas, water and sanitary sewer utility infrastructure for the base runs through the proposed Site 10-3. The site also contains fire hydrants. Installation of a solar PV array project at Site 10-3 could be more complicated than installation at Sites 10-1 or 10-2 due to utility infrastructure repairs that may be needed in the future and the installation of electrical infrastructure for the solar PV project around the existing utilities. The buildings proposed for demolition are vacant, excess buildings in areas that would be converted to green space and available for future reuse if needed. Demolition activities would be conducted in accordance with the CLUP. These effects would be less than significant.

Operational Effects

There would be less than significant effects to land use due to the maintenance and operations associated with the Proposed Action. All project components would be designed and sited to be compatible with existing safety guidelines, including AT/FP standards. Proposed activities would not alter the current land use classifications. Vegetation in the proposed solar PV project area would be maintained in accordance with Selfridge's grounds maintenance plan. The efficiencies gained from the proposed construction, renovation, and demolition activities would reduce the maintenance and operational requirements of facilities; therefore, the operational effects on land use would be negligible.

3.2.3.3 No Action Alternative

Under the No Action Alternative, the construction, demolition, and renovation projects proposed to improve mission capabilities, unit readiness, and the operating environment of the base would not occur. The need to meet current and future mission requirements and national security

objectives would be unmet. Existing conditions would remain unchanged and there would be no effects to land use.

3.3 BIOLOGICAL RESOURCES

3.3.1 Definition of Resource

Biological resources include native or naturalized plants and animals and the habitats in which they occur. These include vegetation; wildlife; and threatened, endangered or sensitive species in a given area. Biological resources are integral to ecosystem integrity. The existence and preservation of biological resources are intrinsically valuable to society for aesthetic, recreational, and socioeconomic purposes.

3.3.2 Affected Environment

Selfridge ANGB is approximately 3,075 ac (1,244 ha) of Federal Fee Land, which is managed by the ANG for the Air Force. Selfridge ANGB is predominantly managed as improved and semi-improved space. A brief overview from the Integrated Natural Resources Management Plan (INRMP) (Selfridge ANGB 2010) of the vegetation; wildlife; and threatened, endangered or sensitive species in Macomb County is provided below, followed by a description of existing conditions at Selfridge ANGB.

Vegetation. Selfridge ANGB is in the Eastern Broadleaf Forest (Continental) Province, which stretches approximately 270,000 square mi (699,298 square km) from Arkansas into Canada. The province favors the oak-hickory (*Quercus* spp. – *Carya* spp.) association (Bailey 1995).

Wildlife. The land in the Great Lakes region was once dominated by forests and grasslands interspersed with wetlands. Common species include gray tree frog (*Hyla versicolor*), Common crow (*Corvus brachyrhynchos*), Mourning Dove (*Zenaida macroura*), white-tailed deer (*Odocoileus virginiana*), flying squirrel (*Glaucomys volans*) and little brown bat (*Myotis lucifigus*) (MDNR 2016).

Threatened, Endangered, or Sensitive Species. The USFWS lists four species (Table 3-4) as endangered, threatened, or proposed threatened in Macomb County. Summer habitat for the Indiana Bat includes small to medium river and stream corridors with well-developed riparian woods; woodlots within 1 to 3 mi (2 to 5 km) of small to medium rivers and streams; and upland forests. Caves and mines as hibernacula. The Northern Long-eared Bat roosts and forages in upland forests during spring and summer. Habitat for the Rufa Red Knot includes coastal areas during the migratory window of May 1 - September 30 each year. Eastern Massasaugas are usually associated with damp lowlands, including river bottom woodlands, shrub swamps, bogs and fens, marsh borders, sedge meadows, and moist prairie but also include well-drained uplands in the summer months (USFWS 2016).

Existing Conditions at Selfridge ANGB. Vegetative communities, potential rare plant habitat, and invasive plant species were mapped on Selfridge ANGB in 2014. Six natural vegetative communities (301 ac, 122 ha), two semi-natural vegetative communities (53 ac, 21 ha) and four developed vegetation (human-maintained) communities (2,016 ac, 814 ha) were documented on Selfridge ANGB. Impervious surfaces cover 663 ac (268 ha), open water covers 20 ac (8 ha), and bare ground covers 36 ac (14 ha). The vast majority of Selfridge ANGB is either developed vegetation or impervious cover. No rare plants were documented during the 2014 field surveys (Selfridge ANGB 2016b).

Table 3-4. Protected Species in Macomb County

Common Name	Scientific Name	Federal Status
Birds		
Rufa Red Knot	<i>Calidris canutus rufa</i>	T
Mammals		
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	T
Indiana Bat	<i>Myotis sodalis</i>	E
Reptiles		
Eastern Massasauga	<i>Sistrurus catenatus</i>	PT

E: endangered; T: threatened; PT: proposed threatened.

Lists of wildlife documented on Selfridge ANGB were included in the 2010 INRMP. Common mammals include the meadow vole (*Microtus pennsylvanicus*), raccoon (*Procyon lotor*) and Virginia opossum (*Dedelphis marsupialis*). Common reptiles and amphibians include blue racer (*Coluber constrictor foxi*), and wood frog (*Rana sylvatica*). Common birds include American Goldfinch (*Carduelis tristis*), Canada Goose (*Branta canadensis*), and Red-tailed Hawk (*Buteo jamaicensis*).

In 2007, the USFWS was contacted for the purposes of obtaining information regarding the presence of listed species or critical habitat on or near the installation for incorporation into Selfridge's 2010 INRMP; none were identified by the USFWS. To annually update the INRMP, meetings are held between Selfridge and the local USFWS office to discuss implementation of the INRMP, natural resource issues pertaining to the installation, and proposed projects identified in the INRMP (Selfridge ANGB 2010).

Surveys were conducted in 2015 for targeting various species including the Indiana Bat, Northern Long Eared Bat, Red Knott, and Eastern Massasaugas. None of these species were observed. Three State listed species are present on the installation to include the short-eared owl (*Asio flammeus*); peregrine falcon (*Falco peregrinus*); and common loon (*Gavia immer*). There have been several reports of bald eagle sightings on and near Selfridge ANGB by base personnel in September and October 2015. Most of the reports were from the eastern side of the Selfridge ANGB, along Lake St. Clair. In addition, historic bald eagle perching spots have been identified along the Lake St. Clair shoreline for approximately four years, and a nesting pair has been

documented approximately 2 mi (3.2 km) north and east of the installation (Selfridge ANGB 2016a).

3.3.3 Environmental Consequences

3.3.3.1 Significance Criteria

Biological resources effects would be considered significant if construction or operation activities would reduce the distribution or viability of species or habitats of concern.

3.3.3.2 Proposed Action

The Proposed Action would have short- and long-term less than significant effects to biological resources. Short-term effects would be due to site-specific temporary disturbance during construction. Long-term effects would be due to ongoing activities at the base. Construction effects for Project 1 would have permanent impacts on the current undeveloped land-use (wetlands) with the re-routing of North Perimeter Road. Approximately 0.5 acres of wetland would be permanently removed, and mitigation to an offsite location would be required under the current rules and regulations. None of the listed species would be expected to occur due to prior development precluding the habitat required for these species. Proposed activities would not adversely affect native vegetation or aquatic and terrestrial wildlife resources, including threatened and endangered species. Effects to biological resources would not reduce the distribution or viability of species or habitats of concern, or violate biological resources laws or regulations. There would be less than significant effects regarding loss, degradation or fragmentation of wildlife habitat.

Construction Effects

Construction, renovation, and demolition activities would have site-specific temporary effects on biological resources. Construction activities would displace local common wildlife species adapted to high levels of human activity and disturbance; however, as there are no records of rare species, significant natural heritage areas, or conservation/managed areas within Selfridge ANGB there would be no effects on these resources. The construction projects would be wholly or partially on previously developed areas that would require minimal (mostly grasses only) or no vegetation removal. Construction of the new main gate (Project 1) would require removal of several street trees along Jefferson Avenue; however, the sparse landscape trees are not considered suitable wildlife habitat. The area beneath the elevated solar PV panels for Project 10 would be covered with gravel to minimize vegetation maintenance and remain as previous ground. These effects would be less than significant.

Operational Effects

There would also be less than significant effects to biological resources due to the maintenance and operations associated with the Proposed Action. The proposed activities would include

sustainable strategies and energy reduction practices as part of Air Force sustainability policy and Leadership in Energy and Environmental Design requirements. The efficiencies gained from construction, renovation, and demolition would reduce the maintenance and operational requirements of facilities and project areas; therefore, the operational effects on biological resources would be negligible.

3.3.3.3 No Action Alternative

Under the No Action Alternative, the construction, demolition, and renovation projects proposed to improve mission capabilities, unit readiness, and the operating environment of the base would not occur. The need to meet current and future mission requirements and national security objectives would be unmet. Existing conditions would remain unchanged and there would be no effects to biological resources.

3.4 WATER RESOURCES

3.4.1 Definition of Resource

Water resources include groundwater, surface water, wetlands, and waters of the U.S. Hydrology concerns the distribution of water through the processes of evapotranspiration, atmospheric transport, precipitation, surface runoff and flow, and subsurface flow.

Groundwater. Groundwater is water that exists in the saturated zone beneath the earth's surface and includes underground streams and aquifers. It is an essential resource that functions to recharge surface water and is used for drinking, irrigation, and industrial processes. Groundwater features include depth from the surface, aquifer or well capacity, quality, recharge rate, and surrounding geologic formations.

Surface Water. Surface water generally consists of lakes, rivers, and streams. Surface water is important for its contributions to the economic, ecological, recreational, and human health of a community or locale. Waters of the U.S. are defined within the CWA, as amended, and jurisdiction is addressed by the USEPA and the USACE (33 CFR Part 328). Section 401 of the CWA requires that any applicant for a federal license or permit to conduct an activity that could result in a discharge into waters of the U.S. provide the permitting agency a certification from the state in which the discharge originates certifying that the license or permit complies with CWA requirements, including applicable state water quality standards.

Wetlands. Wetlands are identified as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Under Part 303, Wetland Protection, of Public Act 451 of 1994, the NREPA, as amended, MDEQ has authority to administer the federal wetland program for wetlands on Selfridge ANGB, with the exception of several wetlands adjacent to Lake St. Clair, which are

within USACE jurisdiction (Section 10 of the Rivers and Harbors Act and Section 404 of the CWA). Notably, Section 401 of the CWA also applies to wetlands.

Floodplains. Floodplains are areas of low-level ground present along rivers, stream channels, or coastal waters subject to periodic or infrequent inundation due to rain or melting snow. Risk of flooding typically depends on local topography, the frequency of precipitation events, and the size of the watershed above the floodplain. Flood potential is evaluated by the Federal Emergency Management Agency, which defines the 100-year floodplain as an area that has a one percent chance of inundation by a flood event in any given year. Federal, state, and local regulations often limit floodplain development to passive uses such as recreational and preservation activities to reduce the risks to human health and safety. Floodplain ecosystem functions include natural moderation of floods, flood storage and conveyance, groundwater recharge, nutrient cycling, water quality maintenance, and diversification of plants and animals.

AFI 32-1021, *Planning and Programming Military Construction Projects* and EO 11988 *Floodplain Management* provides policy and requirements to avoid construction of new facilities within the 100-year floodplain, where practicable. In accordance with EO 11988, a FONPA must be prepared and approved by ANG for all projects affecting floodplain areas. Under the Natural Resources and Environmental Protection Act (Act 451 of 1994, Part 31), *Water Resources Protection*, the MDEQ has authority over construction, fill or alteration of a floodplain of a river, stream, or drain.

3.4.2 Affected Environment

Groundwater beneath Selfridge ANGB generally occurs within 15 feet (5 meters) below the land surface. There are no streams and seven surface water features on Selfridge ANGB (six ponds on the golf course and one in the northeast corner of the base). The area of wetlands on Selfridge ANGB is 387 ac (156 ha). The 100-year floodplain covers the eastern portion of Selfridge ANGB. A series of catch basins, storm sewers, and pump/lift stations are used to channel stormwater runoff into Lake St. Clair and the Clinton River (Selfridge ANGB 2010).

Groundwater. The groundwater table at Selfridge ANGB experiences minimal seasonal fluctuations and closely corresponds to water level fluctuations in Lake St. Clair and the Clinton River. The hydrogeology at Selfridge ANGB generally consists of water producing sand and gravel lenses within the clay unit as shallow as 2-6 feet (0.6-1.8 meters) below ground surface. The permeability of the clay at the base is traditionally very low. Groundwater was observed at various depths throughout the installation and ranged from 2 feet (0.6 meters) below ground surface to greater than 10 feet below ground surface (Selfridge ANGB 2015).

Groundwater also occurs in underlying Antrim Shale, and the Traverse Group bedrock formations; however, yields are less than 10 gallons per minute (38 liters per minute) and withdrawn water is highly mineralized. Selfridge ANGB has institutional controls that prohibit the Base of drinking water wells and crock wells on the Base. Institutional controls were enacted

to demonstrate compliance with MDEQ-approved decision document agreement conditions to maintain protection of human health and the environment.

Surface Water. Selfridge ANGB, which is characterized by flat topography, poorly drained soils, and poor surface drainage, is built upon filled wetlands. The most notable surface water features in the vicinity of Selfridge are Lake St. Clair to the east and the Clinton River to the south. The original elevation of the area occupied by the Base was below the elevation of Lake St. Clair and the Clinton River (Selfridge ANGB 2010).

Shoring and filling have raised the elevation throughout most of the Base. The water table remains below the surface year round as a result of continuous pumping (Selfridge ANGB 2010).



Due to the terrain characteristics of Selfridge ANGB, natural runoff flows toward Lake St. Clair and the Clinton River, both of which are located in proximity to the Base. A series of catch basins, storm water sewers, and pump/ lift stations have also been installed to remove storm water runoff, channeling storm water to collection points throughout the Base. All runoff from the northern and eastern portions of the Base is channeled into Lake St. Clair through three storm water pump/lift stations. The rest of the Base is drained to the south into the Clinton River by two storm water pump/lift stations (Selfridge ANGB 2010).

Wetlands. Field investigations were conducted in 2011 to determine the extent of wetlands and other waters of the U. S. on Selfridge ANGB (Selfridge ANGB 2013). Twenty-eight wetlands or other waters of the U.S. covering 387 ac (156 ha) were delineated. In November 2013, the USACE provided an approved jurisdictional determination of wetlands under their regulatory jurisdiction. In February 2014, the Michigan DEQ confirmed final wetland boundaries on Selfridge ANGB (Figure 3-1).

Floodplains. The floodplains located on Selfridge (Figure 3-1) are constraints on design with limited impact on land use decisions. Floodplains are low-lying areas along creeks and rivers that are prone to flooding during seasonal snowmelt and spring or other high rainfall events. The principal concern with flooding is the potential loss of or damage to property. The frequency and duration of flood events depends on the natural features of a watershed as well as regional weather patterns. Floodplain management is a policy intended to minimize or avoid flood damage by monitoring development in areas subject to flooding (Selfridge ANGB 2010).

Fluctuation of water levels and periodic flooding along the shoreline of Lake St. Clair are a concern at Selfridge. Additionally, flood hazard areas and 100-year floodplains occur on and in the vicinity of Selfridge. Much of the eastern section of the Base is within the 100-year floodplain. The 500-year floodplain extends to the west of the 100-year floodplain on the Base

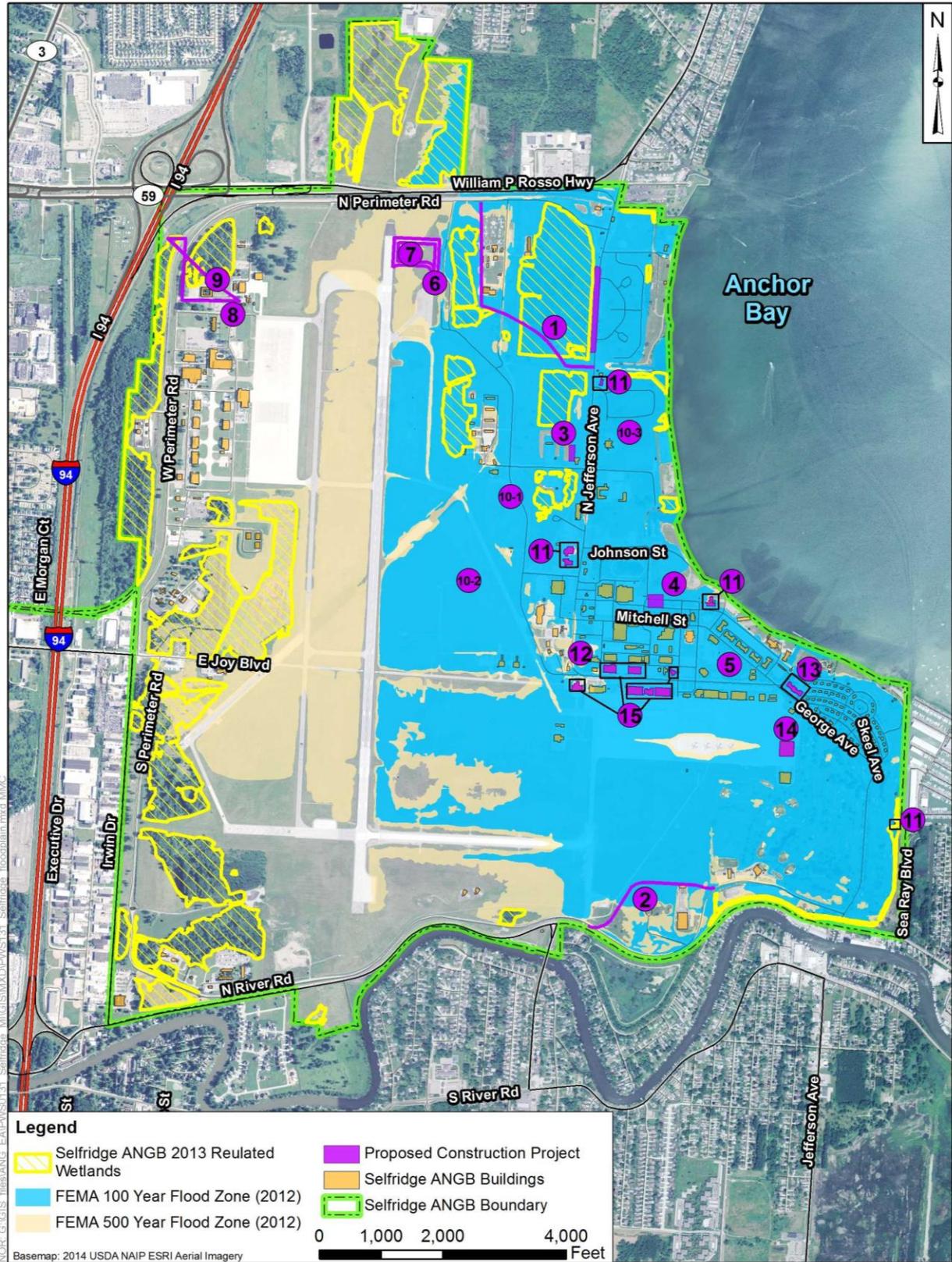


Figure 3-1. Wetlands and Floodplain on Selfridge ANGB

and also encompasses much of the southern section of the Base. Flooding could impact the mission through costly delays, cleanup, and repairs. The area to the north of the Base, the Clinton River, and the Lake St. Clair shoreline are recognized flood hazards (Selfridge ANGB 2010). The FEMA Flood Insurance Study Number for Macomb County (FEMA 2013) in conjunction with current FEMP flood panels should be used to determine base floodplain elevation regarding any planned construction on the installation.

3.4.3 Environmental Consequences

3.4.3.1 Significance Criteria

Water resources effects would be considered significant if the proposed activities would reduce water availability or supply, exceed safe annual yield of water supplies, adversely affect water quality, threaten or damage hydrology, or violate water resources laws or regulations.

3.4.3.2 Proposed Action

The Proposed Action would have short- and long-term less than significant adverse effects to water resources. Short-term effects would be due to site-specific temporary changes in surface hydrology, and the potential for soil erosion and transport during construction. Long-term effects would be due to an incremental increase in impervious surfaces at the base and loss of wetlands for rerouting the perimeter road (Project 1). Effects to water resources would not reduce water availability or supply, exceed safe annual yield of water supplies, adversely affect water quality, threaten or damage hydrology, or violate water resources laws or regulations. The Proposed Action would be implemented in accordance with Section 438 of the Energy Independence and Security Act to restore/preserve the predevelopment hydrology of a site.

Construction Effects

Construction, renovation, and demolition activities would have site-specific temporary effects on water resources. Construction activities, including grading and clearing would result in ground surface disturbance and could cause soil erosion and subsequent transport of sediment via stormwater. The proposed activities would be conducted in accordance with Selfridge's Stormwater Management Plan. A Macomb County soil erosion and sediment control plan and permit would be obtained prior to the commencement of construction activities since soil disturbance areas would be greater than 250 square feet and less than 500 feet from a storm water conveyance pathway. For construction projects, with soil disturbance areas greater than 1 acre, a state-certified operator would be required at a minimum to perform weekly site inspections. For construction projects with soil disturbance areas greater than 5 acres, a Notice of Coverage would be obtained from the MDEQ prior to the commencement of construction activities. Soil erosion and sediment control activities are required to minimize soil transport to reduce possible adverse water quality impacts. The depth of excavation during construction could contact groundwater, and appropriate controls and measures would be followed. As

groundwater could be encountered as shallow as 2 feet below ground surface, dewatering could occur at multiple construction projects. These effects would be less than significant.

Although the effects would be less than significant, BMPs would be incorporated into all construction and demolition activities to minimize erosion, runoff, and sedimentation. The area beneath the elevated solar PV panels for Project 10 would be covered with gravel to minimize vegetation maintenance and remain as pervious ground. Implementing erosion and sediment control BMPs and other environmental protection measures during construction, renovation, and demolition activities would avoid or minimize any adverse effects on water resources. BMPs could include silt fencing, sediment traps, applying water sprays for dust control, and revegetating disturbed areas. There would be negligible effects to surface waters because there are no surface waters in the proposed project locations.

As indicated in Figure 3-1, the proposed projects would occur in the 100-year floodplain and require prior coordination and ANG approval in accordance with AFI 32-1021 and EO 11988. Prior to the proposed construction of new buildings (Projects 3, 4, and 5) and renovation of an existing building (Project 13), an ANG-approved FONPA and flood damage vulnerability assessments may be required depending on the cost threshold specified in DOD guidance. Certification of flood damage vulnerability assessments to the Office of Undersecretary of Defense that identifies each project's flood vulnerability, mission requirement despite flood vulnerability, and planned/incorporated flood mitigation measures or justification for why mitigation measures are not planned for the project shall be prepared. This prior certification will ensure adequate measures to plan and prepare for flooding and considerations for what mission critical infrastructure must be located in these highly vulnerable areas. A floodplain permit from MDEQ under Part 31, *Water Resources Protection* of the NREPA would not be required for the proposed activities because, except for small section of the floodplain on the installation, a rise in lake level is the governing factor with respect to the majority of the 100-year floodplain impacting the installation. Part 31 activities that require a permit only include any occupation, construction, filling, or grade change within the floodplain of a river, stream, or drain, including bridge and culvert construction. Selfridge ANGB flood level is only applicable with respect to a rise in lake level associated with Lake St. Clair or Anchor Bay. Consequently, through the ANG coordination and floodplain permitting process, the potential impacts to floodplains would be less than significant.

As guided by EO11990, *Protection of Wetlands*, and AFI 32-7064, *Integrated Natural Resources Management*, rerouting of the perimeter road as described in Project 1 to facilitate installation security would impact wetlands and environmental protection measures would be required. Rerouting of the perimeter road (Project 1) through wetlands would result in the loss of approximately 0.5 acres (0.2 hectares) of emergent wetlands (Figure 3-2). The proposed route for

the perimeter road that results in traversing wetlands is a result of the safety requirement for public traffic to avoid the munitions storage area explosive safety arc (see Section 3.8, Health and Safety). The proposed rerouting is the only reasonable or practical alternative due to its proximity to the new gate entrance and its location is such that it will not interfere with existing missions at Selfridge ANGB. A FONPA and MDEQ Wetland Permit in accordance with Part 303, *Wetlands Protection* of the NREPA would be required prior to rerouting the perimeter road. As required in the permitting process, compensatory wetland mitigation would be provided for the unavoidable loss of wetlands. In accordance with AFI 32-7064 and bird/wildlife aircraft strike hazard management considerations (Selfridge ANGB 2010), offsite mitigation would be provided. Consequently, through the MDEQ wetland permitting process, the potential impacts to wetlands would be less than significant.

Project 9 would be an alternative to the base sewer line connection project (Project 8) to connect the base sewer line to the municipal sewer system. Project 8 would route the sewer line connection around the existing wetlands to connect with the municipal sewer system. Under the alternative project design, the 127th Wing would bore in a straight line under the existing wetlands in the area to avoid potential impacts to wetlands and connect to the municipal sewer line. This project would require a wetland permit from the MDEQ. The project would qualify as a Minor Permit, Category 45 if the action is determined by MDEQ to be consistent with the associated stipulations. The Category 45 stipulations for utility line activities relative to Project 9 include no change in the post construction grade, outside diameter of the pipe shall not exceed 20 inches (51 centimeters), and a minimum of 36 inches (91 centimeters) of cover between the pipe and soil surface. The project description for Project 9 provided in Section 2.1.1 would meet the stipulations for Minor Permit, Category 45. Consequently, through the wetland permitting process, the potential impacts to wetlands would be less than significant.

Operational Effects

There would also be less than significant effects to water resources due to the maintenance and operations associated with the Proposed Action. The proposed activities would include sustainable strategies and energy reduction practices as part of Air Force sustainability policy and Leadership in Energy and Environmental Design requirements. The efficiencies gained from construction, renovation, and demolition would reduce the maintenance and operational requirements of facilities and project areas; therefore, the operational effects on water resources would be negligible.

3.4.3.3 No Action Alternative

Under the No Action Alternative, the construction, demolition, and renovation projects proposed to improve mission capabilities, unit readiness, and the operating environment of the base would not occur. The need to meet current and future mission requirements and national security

objectives would be unmet. Existing conditions would remain unchanged and there would be no effects to water resources.

3.5 TRANSPORTATION

3.5.1 Definition of Resource

Transportation is defined as the system of roadways, highways, and all other transportation networks that are in the vicinity of a Proposed Action and could reasonably be expected to be affected by the Proposed Action. Traffic relates to changes in the number of vehicles on roadways and highways as a result of the Proposed Action.

3.5.2 Affected Environment

Transportation near Selfridge ANGB is achieved mainly via road and street networks, pedestrian walkways and waterway access. Regional access is provided by I-94. Access to the Base is provided from the north by M-59/Hall Road/Rosso Highway, which has an interchange with I-94 approximately 1.5 mi (2.4 km) west of the Base. On the south side, access is provided from North River Road. North River Road has an interchange with I-94 just west of the Base. It also provides access to the City of Mount Clemens west of the Base.

Primary vehicle circulation on base is accomplished by a few major roads. Jefferson Avenue, George Avenue, and Wilber Wright Boulevard are the three major roads on the east side of the Base. Access to and throughout the west side is provided by North, West, and South Perimeter Roads. In general, on-base roadways are free flowing and adequately maintained. The existing road network is satisfactory for current employment levels at the Base. No major deficiencies have been identified, with the exception of poor traffic flow and circulation from the off-Base traffic network leading onto Selfridge ANGB at the Main Gate.

Gates. Selfridge ANGB currently has four entrances. The primary entrance (Gate 1 or the Main Gate) is located on the north side of the Base and is accessed from M-59 (also known as Hall Road) and Rosso Highway at Jefferson Avenue. This gate has large vehicle inspection capabilities and accepts commercial deliveries. The second entry is located on the south side of the Base with access off North River Road. This gate is known as the existing South Entry Gate. Due to the design and location of the access, it creates a traffic bottleneck during high traffic periods. The Joy Road Gate is located on the west side and is the extension of Henry B. Joy Boulevard. This gate is normally closed due to the gate's non-compliance with AT/FP construction standards, and insufficient Security Forces manning. The existing Base access is adequate for current employment levels. None of the existing gates, including the main gate, meet AT/FP requirements.

Air, Rail, and Public Transportation. The closest airport is Selfridge ANG Airport (MTC) which has 102 operations per day. Coleman A. Young Municipal Airport (DET) which is 14 mi

(23 km) away and has 207 operations per day (AirNav 2016). The closest Amtrak station is in Royal Oak approximately 20 mi (32 km) away. Public transportation is provided by Regional Transit Authority of South Michigan, which operates a fixed route service throughout Mount Clemens and Macomb County. The closest stop to Selfridge ANGB is on Route 560/565 at Henry B. Joy Boulevard approximately one mi (2 km) from the Base (SMART 2015). Selfridge ANGB contains several miles of railroad which has been disconnected from the main line and does not provide any mass transit opportunities.

3.5.3 Environmental Consequences

3.5.3.1 Significance Criteria

Effects to traffic and transportation would potentially be significant if the Proposed Action would create permanent road closures or widespread traffic congestion.

3.5.3.2 Proposed Action

The Proposed Action would have short-term minor adverse and long-term minor beneficial effects to transportation resources. Short-term effects would be due to roadway work, worker commutes, and delivery of equipment and materials during construction and demolition activities. Long-term beneficial effects would be due to upgrades in transportation infrastructure, primarily the two newly configured gates. The Proposed Action would not create permanent road closures or widespread traffic congestion. The Proposed Action would have no appreciable effect to air, rail, or public transportation.

Construction Effects

Construction, demolition, and renovation activities would have short-term minor adverse effects on transportation and traffic. These effects would be primarily due to worker commutes and delivery of equipment and materials to and from the proposed construction and demolition sites. Congestion may increase in the immediate areas due to additional vehicles and traffic delays near the sites. In addition, road closures or detours to accommodate utility system work may be expected. These effects would be temporary in nature and would end with each of the construction or demolition projects. The existing transportation infrastructure would be sufficient to support the increase in vehicle traffic. Although the effects would be minor, contractors would route and schedule construction vehicles to minimize conflicts with other traffic, and strategically locate staging areas to minimize traffic impacts. All construction vehicles would be equipped with backing alarms, two-way radios, and Slow Moving Vehicle signs when appropriate. These effects would be less than significant.

During the construction and reconfiguring of the proposed gates. The old gates would remain operational while the new gates were built in place. Once the proposed gates and associated roadwork were completed, the old gates would be closed, and components removed as necessary.

Temporary changes in traffic patterns to accommodate gate construction may at times cause queuing at the gates and adjacent roadways. These effects would be temporary in nature and would end with the construction phases. These effects would be less than significant.

Operational Effects

The Proposed Action would have long-term minor beneficial effects to transportation resources. Long-term beneficial effects would be due to upgrades in transportation infrastructure, primarily the two newly configured gates. There would be no change in the number of personnel, or the overall mission at the base. There would be no changes in aircraft training or operations, and no changes in vehicle trips to and from the base from commuting. The reduction in congestion near the gates would have an incremental beneficial effect to traffic.

Operation.

The new Main Gate would be within the installation approximately 1,000 feet (305 meters) south of the existing entry control point on Jefferson Avenue. North Perimeter Road would be rerouted to avoid traffic congestion on Rosso Highway north of the entry control point. Perimeter Road would be rerouted south of the museum and commercial area and terminate at Jefferson Avenue. This new gate configuration would increase security-processing efficiency, allow for additional queuing, and reduce traffic at the intersection of Jefferson Avenue and William P. Rosso Highway. It would increase traffic flow and improve circulation from the off-Base traffic network leading onto Selfridge ANGB at the Main Gate, which would then be compliant with AT/FP standards. These effects would be beneficial.

The new South Entry Gate would be relocated approximately 3,500 feet (1,067 meters) west of the existing gate on South Perimeter Road (also known as the existing South Entry Gate) and provide sufficient security distances and barriers in accordance with AT/FP. Due to the design and location of the existing South Entry Gate, it presents a traffic bottleneck during high traffic periods. The proposed gate upgrade and roadway configuration would increase traffic flow and improve circulation from the off-Base traffic network leading onto Selfridge ANGB. These effects would be beneficial.

Other proposed facilities would introduce small changes in on-base traffic patterns. Individuals accessing the proposed facilities would use similar gates as currently used to access the existing facilities. There would be a one-to-one decrease in traffic and vehicles near the existing sites, once the functions were relocated to the proposed facilities; however, traffic would not be focused at any one location or intersection. It is not expected that traffic at any gate would change substantially from implementation of the Proposed Action. The projects are currently in the preliminary design stage, and in the final design stages adequate parking would be provided. These effects would be less than significant.

3.5.3.3 No Action Alternative

Under the No Action Alternative, the construction, demolition, and renovation projects proposed to improve mission capabilities, unit readiness, and the operating environment of the base would not occur. Existing conditions would remain unchanged and there would be no effects to traffic or transportation resources. The need to meet current and future mission requirements and national security objectives would be unmet. The Main Gate and existing South Entry Gate would continue not to meet AT/FP standards, and would continue to have traffic queuing and safety hazards.

3.6 CULTURAL RESOURCES

3.6.1 Definition of Resource

Cultural resources are defined as prehistoric or historic districts, sites, buildings, structures, or objects considered important to a culture, subculture, or community for scientific, traditional, religious, or other purposes. They include archaeological, architectural, and traditional resources. Archaeological resources contain artifacts, features, or other archaeological indications of past human life or activities from which archaeologists interpret information about history or prehistory. Architectural resources include buildings, structures, landscapes, and objects that document the history of an area and possibly the history that predates the area. The Department of Defense Instruction 4710.02, *Department of Defense Interactions with Federally Recognized Tribes* governs the interactions with federally recognized tribes regarding traditional cultural resources. The policy requires consultation with federally recognized tribes for proposed activities that could significantly affect tribal resources or interests.

Sections 106 and 110 of the NHPA of 1966, as amended, require federal agencies to identify whether any historic or architectural resources that are listed, or eligible for listing, on the NRHP could potentially be affected by the Proposed Action. Generally historic properties must be more than 50 years old to be considered for inclusion in the NRHP, but may also include Cold War era (resources constructed prior to 1990), and Native American cultural properties.

3.6.2 Affected Environment

Selfridge ANGB, Michigan SHPO, and Advisory Council on Historic Preservation signed a programmatic agreement in 2002 to formalize the process for project-related cultural resource reviews (Selfridge ANGB 2002). The programmatic agreement identifies historic properties at Selfridge ANGB and offers guidance relating to the standards for the treatment of historic buildings at Selfridge ANGB, defining excluded activities that may be completed without contacting the SHPO, as well as other activities that will require SHPO review. The programmatic agreement also defines mitigation measures to take to avoid impacting a historic property.

The Integrated Cultural Resources Management Plan (ICRMP) was updated in 2011 and provides guidance in accordance with all applicable federal laws and regulations pertaining to cultural resource management (Selfridge ANGB 2011). The ICRMP identifies archaeological, architectural, and traditional resources that occur or may occur on Selfridge ANGB. Selfridge ANGB consults with the MI SHPO in accordance with the NHPA to resolve effect and determine significance.

3.6.3 Environmental Consequences

3.6.3.1 Significance Criteria

Effects would be considered significant if the ANG did not conduct and complete proper coordination with the Michigan SHPO before physically altering, damaging, or destroying all or part of a cultural resource; or introducing visual or audible elements that are out of character with a historically sensitive property.

3.6.3.2 Proposed Action

The Proposed Action would have short- and long-term less than significant effects to cultural resources. Effects would be due to demolition of aging buildings and structures on Selfridge ANGB. Selfridge ANGB and ANG would coordinate with the Michigan SHPO prior to demolition activities. Subsequent to completing coordination and recordation requirements, the potential effects would be less than significant. The Proposed Action would not affect known archaeological resources or traditional cultural resources.

Archaeological Resources

The Proposed Action would not affect any known archaeological resources (Selfridge ANGB 2011), which makes the effects less than significant.

Architectural Resources

The Proposed Action includes demolition of Buildings 310, 699, 826, 835, and 951; renovation of Building 410 and 36; and repair to Buildings 154, 117, 120, 140, 3, 18, and 5. Properties within the Proposed Action that have not yet received SHPO concurrence for demolition or renovation will be consulted upon in accordance with the NHPA, and the Programmatic Agreement. Once that consultation occurs and Selfridge ANGB receives appropriate concurrence, the effects will be less than significant.

Traditional Cultural Resources

The Proposed Action would not affect any known traditional cultural resources (Selfridge ANGB 2011). Appendix A contains the IICEP distribution to the federally-recognized tribes in Michigan.

3.6.3.3 No Action Alternative

Under the No Action Alternative, the construction, demolition, and renovation projects proposed to improve mission capabilities, unit readiness, and the operating environment of the base would not occur. Existing conditions would remain unchanged and there would be no effects to cultural resources. The need to meet current and future mission requirements and national security objectives would be unmet.

3.7 HAZARDOUS MATERIALS AND WASTES

3.7.1 Definition of Resource

Hazardous materials are defined by 49 CFR 171.8 as *hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Material (49 CFR 172.101)*, and materials that meet the defining criteria for hazard classes and divisions in 49 CFR Part 173. Transportation of hazardous materials is regulated by the U.S. Department of Transportation regulations within 49 CFR Parts 105 to 108.

Hazardous wastes are defined by the RCRA at 42 U.S.C. §6903(5), as amended by the Hazardous and Solid Waste Amendments, as *a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.*

Air Force Policy Directive (AFPD 32-70), *Environmental Quality*, and the AFI 32-7000 series incorporate the requirements of all federal regulations, and other AFIs and DOD Directives for the management of hazardous materials, hazardous wastes, and special hazards. Evaluation extends to generation, storage, transportation, and disposal of hazardous wastes when such activity occurs at or near the project site of a proposed action.

3.7.2 Affected Environment

In accordance with the Hazardous Waste Management Plan, Selfridge ANGB follows all federal, state and local regulations pertaining to handling, storage, and disposal of hazardous waste generated at the installation. Selfridge ANGB is regulated as a large quantity generator of hazardous waste. On-base hazardous waste generators are responsible for identifying and accounting for hazardous wastes in proper containers and depositing the waste at an approved hazardous waste collection sites. Selfridge ANGB implements a Solid Waste Management Plan. Solid waste generated is disposed off-base via contract services at commercially operated treatment or disposal facilities. Solid waste materials are sent to the Defense Reutilization and Marketing Service whenever possible for recycling, reuse, or resale. In accordance with Part 111,

Hazardous Waste Management of Act, ANG must provide notification to MDEQ of any pending real estate transaction or change in land use that would affect Installation Restoration Program (IRP) sites.

Selfridge ANGB implements an asbestos management program for accomplishing asbestos-related projects. The program requires asbestos surveys prior to any demolition or renovation activities for buildings constructed prior to 1981. Due to the age of many of the facilities at Selfridge ANGB, many buildings likely contain lead-based paint. These materials would be removed and disposed of in accordance with applicable federal, state, local, and ANG regulations.

Selfridge ANGB implements a Solid Waste Management Plan. Solid waste generated at on Base is disposed of via contract services at off-Base commercially operated treatment or disposal facilities. In general, solid waste consists of paper products, glass, plastic, wood, aluminum, other metals, and wood and other plant materials. Procedures for waste and volume reduction also are included in the plan. Waste, such as metals and tires, is sent to the Defense Realization and Marketing Office for recycling, reuse, or resale.

3.7.3 Environmental Consequences

3.7.3.1 Significance Criteria

Effects would be considered significant if the Proposed Action would substantially increase the quantity or toxicity of hazardous substances, substantially increase risk to human health or the environment, or generate solid waste in amounts that would appreciably decreased in capacity or life span at receiving landfills.

3.7.3.2 Proposed Action

The Proposed Action would have short- and long-term less than significant adverse effects with regard to hazardous materials and wastes. Short-term effects would be due to use of hazardous materials and generation of wastes during construction, renovation, and demolition activities. Long-term effects would be due to use of hazardous materials and generation of wastes during mission support activities. The proposed activities would not require subsurface soil excavation to depths that could impact groundwater. The Proposed Action would not substantially increase the quantity or toxicity of hazardous substances, substantially increase risk to human health or the environment, or generate solid waste in amounts that would appreciably decrease capacity or life span at receiving landfills. Implementation of Selfridge ANGB's Hazardous Waste Management Plan would ensure safe handling of hazardous materials and wastes.

Construction Effects

The use of hazardous materials and generation of wastes at the construction, renovation, and demolition areas would occur; however, the increase in hazardous materials and wastes would be

both limited and temporary. The safe handling, storage, and use procedures managed under the Hazardous Waste Management Plan, in accordance with all federal, state, and local regulations, would be implemented. Solid wastes generated over the course of the construction period would be collected and transported offsite to a permitted landfill, or handled in accordance with the Integrated Solid Waste Management Plan. Construction debris would be recycled or reused as much as possible in accordance with the USAF Qualified Recycling Program (DOD Manual 4160.28), or would be managed in accordance with AFI 32-7042, *Waste Management*. These effects would be less than significant.

Activities in IRP sites (also known as environmental restoration program sites) would include planning and provisioning for appropriate protective equipment and other safety measures. Most of the IRP sites have been closed to industrial or non-residential standards (Selfridge ANGB 2012). The depth of excavation during construction could contact groundwater, and appropriate controls and measures would be followed. As groundwater could be encountered as shallow as 2 feet below ground surface, dewatering could occur at multiple construction projects. Contaminated media (soil and/or groundwater), if encountered, would be managed and disposed of in accordance with all appropriate state and federal regulations and guidelines. With completion of due diligence, and implementation of BMPs, effects associated with IRP sites would be less than significant.

Selfridge ANGB's asbestos management program, BMPs, and applicable federal, state, local, and ANG regulations would be followed during all demolition activities; therefore, effects associated with asbestos and lead-based paint would be less than significant.

Operational Effects

The use, generation, or disposal of hazardous materials and wastes after implementation of the Proposed Action would be similar to the levels under the existing conditions. For example, minimal operational activities would be required after installation of the solar PV arrays for the passive collection and production of renewable energy from the sun. The proposed activities would not result in substantially different operational activities; therefore, the Proposed Action would result in less than significant adverse effects with respect to hazardous materials and wastes.

3.7.3.3 No Action Alternative

Under the No Action Alternative, the construction, demolition, and renovation projects proposed to improve mission capabilities, unit readiness, and the operating environment of the base would not occur. Existing conditions would remain unchanged and there would be no effects to hazardous material and waste. The need to meet current and future mission requirements and national security objectives would be unmet.

3.8 HEALTH AND SAFETY

3.8.1 Definition of Resource

Ground safety considers issues associated with human activities, operations, and maintenance activities that support mission operations. Construction site safety is largely a matter of adherence to regulatory requirements imposed for the benefit of employees and of operational practices that reduce risks of illness, injury, death, and property damage. Safety and accident hazards can often be identified and reduced or eliminated. A specific aspect of ground safety addresses AT/FP considerations.

AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program*, implements AFD 91-3, Occupational Safety and Health, by outlining the AFOSH Program. The purpose of the AFOSH Program is to minimize loss of USAF resources and to protect USAF personnel from occupational deaths, injuries, or illnesses by managing risks. In conjunction with the USAF Mishap Prevention Program, these standards ensure all USAF workplaces meet federal safety and health requirements.

3.8.2 Affected Environment

Daily operations and maintenance activities conducted Selfridge ANGB are performed in accordance with applicable USAF safety regulations, published Air Force Technical Orders, and standards prescribed by Air Force Occupational Safety and Health requirements (AFPD 90-8). Emergency response activities including fire safety, spill response, and evacuation procedures are covered in Selfridge's Facility Response Plan and Spill Prevention, Control, and Countermeasures Plan.

AT/FP guidelines for military installations are intended to reduce the risk of terrorism and address a range of considerations that include access to the installation, access to facilities on the installation, facility siting, exterior design, interior infrastructure design, and landscaping as specified in Unified Facilities Criteria 4-010-01 (DOD 2012). The intent of this siting and design guidance is to improve security, minimize fatalities, and limit damage to facilities in the event of a terrorist attack.

Selfridge ANGB stores, maintains, and uses munitions to perform its mission. Two areas, one east and one west of the runway, are used for munitions storage. Critical to munitions operations is maintaining the explosive safety quantity distances (ESQD) required for the stored munitions. The ESQD safety zones are generated to minimize risk to facilities and personnel from explosives, explosive operations, and explosive storage areas. All munitions are handled and stored in accordance with USAF explosive safety manual (Air Force Manual [AFMAN] 91-201). All munitions maintenance is carried out by trained, qualified personnel using USAF-approved technical procedures.

3.8.3 Environmental Consequences

3.8.3.1 Significance Criteria

Health and safety effects would be considered significant if the Proposed Action would substantially increase risks associated with ground safety considers during construction, or operations and maintenance activities, or result in incompatible land use with regard to safety criteria.

3.8.3.2 Proposed Action

The Proposed Action would have short- and long-term less than significant effects to health and safety. Short-term effects would be due to potential worker injury during construction, renovation, and demolition activities. These effects would be due to the potential for injury associated with the use of heavy equipment, bending and lifting actions, and normal construction related activities. The Proposed Action would not substantially increase risks associated with ground safety considers during construction, or operations and maintenance activities, or result in incompatible land use with regard to safety criteria.

Construction Effects

All construction, demolition, and renovation activities would be accomplished in accordance with applicable federal, state, and local health and safety regulations, including Occupational Safety and Health Administration guidelines. These guidelines include the exclusion of unauthorized personnel within construction areas, and the use of personal protective equipment and appropriate safety training. If necessary, sampling for asbestos and lead-based paint would occur prior to demolition activities and materials would be handled in accordance with ANG policy. Long-term beneficial effects would be due to elimination of potential health and safety hazards after demolition of the proposed, dilapidated buildings. For these reasons, the effects to health and safety from the construction, demolition, and renovation activities would be less than significant.

Operational Effects

There would be less than significant effects to health and safety due to the maintenance and operations associated with the Proposed Action. The proposed activities would include sustainable strategies and energy reduction practices as part of Air Force sustainability policy and Leadership in Energy and Environmental Design requirements. The efficiencies gained from construction, renovation, and demolition would reduce the maintenance and operational requirements of facilities and project areas; therefore, the operational effects on health and safety would be negligible.

All ESQD criteria are developed from AFMAN 91-201, *Explosives Safety Standards* and establishes safe separation distances from potential explosive sites. There are no proposed

building construction sites within the ESQD arcs (Figure 2-1). The proposed rerouting of the perimeter road (Project 1) would provide the safety requirement for public traffic to be routed outside the ESQD arc. These effects would be less than significant.

The SGHAT model developed at Sandia National Laboratories was run by Air Force Civil Engineering Center for the proposed installation of a solar PV array (Project 10) and indicated low potential for aircraft glare hazard from the solar PV panels. Therefore, the proposed solar PV project would be consistent with the air installation compatible use zones. These effects would be less than significant.

3.8.3.3 No Action Alternative

Under the No Action Alternative, the construction, demolition, and renovation projects proposed to improve mission capabilities, unit readiness, and the operating environment of the base would not occur. The need to meet current and future mission requirements and national security objectives would be unmet. Existing conditions would remain unchanged and there would be no effects to health and safety.

3.9 COMPARISON OF ENVIRONMENTAL EFFECTS

Table 3-5 provides a comparison of environmental effects of the Proposed Action and alternatives on the environmental resources. Implementation of the Proposed Action would result in short- and long-term less than significant effects. The No Action Alternative represents a continuation of the current mission at Selfridge ANGB using the existing facilities and would have no effects.

Table 3-5. Comparison of Environmental Effects

Resource Area	Proposed Action (Preferred Alternative)	No Action Alternative
Air Quality	Short- term less than significant effects Long-term beneficial effects	No effects
Land Use	Short- and long-term less than significant effects	No effects
Biological Resources	Short- and long-term less than significant effects	No effects
Water Resources	Short- and long-term less than significant effects	No effects
Transportation	Short-term less than significant effects Long-term beneficial effects	No effects
Cultural Resources	Short- and long-term less than significant effects	No effects
Hazardous Materials and Wastes	Short- and long-term less than significant effects	No effects
Health and Safety	Short- and long-term less than significant effects	No effects

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4.0 CUMULATIVE EFFECTS

Cumulative effects on environmental resources result from the incremental effects of an action when combined with other past, present, and reasonably foreseeable future projects in the area (40 CFR § 1508.7). Cumulative effects can result from individually minor but collectively substantial, actions taken over a period of time. In accordance with NEPA, a discussion of cumulative effects that could result from projects that are proposed in the foreseeable future is required (CEQ 1997). This section provides a description of past, present and reasonably foreseeable actions in the area, and evaluation of potentials cumulative effects.

4.1 PLANNED DEVELOPMENT AT SELRIDGE

Selfridge's CLUP provides a 50-year planning horizon. Selfridge is first and foremost a flying installation with fighter and refueling aircraft. Capital intensive investments in runways, taxiways, and aircraft hangars require protection from encroachment. A key point is that airfield uses anticipated for Selfridge does not include commercial aviation operations, including passenger and cargo operations. Light industrial uses are an approved category; however, the Selfridge CLUP does not include a heavy industrial use category and these uses are not anticipated in the future. Housing is not considered a separate land use in the CLUP. Areas are set aside for 15 tenant zones, including existing tenants such as U.S. Coast Guard and future federal or federal-friendly users. Tenants not currently operating at Selfridge, who fall into the "Federal-Friendly" category, and who have an Area Development Plan approved by the 127th Wing, will be able to locate in these areas (Selfridge ANGB 2012).

In order to accommodate additional development on the west side of Selfridge, the west munitions storage area would be consolidated with the east munitions storage area. The co-location would result in one ESQD arc and reduce mission constraints on development. In the long-term planning horizon, new missions, such as 5th Generation Fighter and 5th Generation Large Airframe, west and east ramp expansions would be required.

4.2 CUMULATIVE EFFECTS ANALYSIS

Air Quality

The State of Michigan takes into account the effects of all past, present, and reasonably foreseeable emissions during the development of the State Implementation Plan. The state accounts for all significant stationary, area, and mobile emission sources in the development of this plan. Estimated emissions generated by the Proposed Action would be *de minimis* and it is understood that activities of this limited size and nature would not contribute significantly to adverse cumulative effects to air quality. No past, present, or reasonably foreseeable projects have been identified that, when combined with the Proposed Action, would have substantial cumulative effects to air quality. Therefore, cumulative effects to air quality would be less than significant.

Land Use

As designed in the CLUP, the proposed construction, renovation, and demolition projects would enhance overall installation planning and compatibility of functions on Selfridge ANGB. No past, present, or reasonably foreseeable projects have been identified that, when combined with the Proposed Action, would have substantial cumulative effects to land use. Therefore, cumulative effects to land use would be less than significant.

Biological Resources

Construction, renovation, and demolition activities would have site-specific temporary effects on the limited biological resources at Selfridge ANGB. There are no records of rare species, significant natural heritage areas, or conservation/managed areas within Selfridge ANGB because much of the natural vegetation has been removed to accommodate the development of runways and other facilities in support of the military mission. No past, present, or reasonably foreseeable projects have been identified that, when combined with the Proposed Action, would have substantial cumulative effects to biological resources. Therefore, cumulative effects to biological resources would be less than significant.

Water Resources

Minor cumulative effects to water resources could occur at Selfridge ANGB from the incremental increase in impermeable surfaces. However, all projects planned in the CLUP would be required to obtain permits, develop and implement project specific plans (e.g., Stormwater Pollution Prevention Plan), and adhere to all applicable permitting regulations, EOs, and BMPs to minimize potential effects to water resources. No past, present, or reasonably foreseeable projects have been identified that, when combined with the Proposed Action, would have substantial cumulative effects to water resources. Therefore, cumulative effects to water resources would be less than significant.

Transportation

The Proposed Action would have short-term minor adverse and long-term minor beneficial effects to transportation resources. The size and scope of the changes in the transportation systems would be extremely small when compared to other planned projects in the area. As a result, the traffic impacts during construction would not contribute appreciably to cumulative effects. By upgrading the existing transportation infrastructure, and reconfiguring both gates to be more efficient, the Proposed Action would have long-term beneficial cumulative effects to transportation resources both on and off-base. No past, present, or reasonably foreseeable projects have been identified that, when combined with the Proposed Action, would have substantial cumulative adverse effects to transportation. Therefore, cumulative effects to transportation would be less than significant.

Cultural Resources

Minor cumulative effects to cultural resources could occur from the proposed activities at Selfridge ANGB. In accordance with the CLUP, coordination with the Michigan SHPO would be conducted prior to ground-disturbing activities or projects that could change character-defining features of historic structures to avoid effects to cultural resources. Therefore, cumulative effects to cultural resources would be less than significant.

Hazardous Materials and Wastes

Minor cumulative effects to hazardous materials and wastes could occur at Selfridge ANGB as a result of temporary increase in the storage, use, or generation of hazardous materials and wastes from the potential for overlapping construction projects identified in the CLUP. For all cumulative construction activities, the use and disposal of hazardous materials and wastes would be handled in accordance with appropriate federal, state and local regulations. In addition, cumulative projects would not affect IRP sites as directed in the CLUP. Land use controls are in place at the installation, so that all projects will be evaluated during design. As necessary, construction activities planned on IRP and/or known sites would be coordinated with the NGB Restoration Program Manager for the installation and MDEQ, as appropriate for approval. Project requirements would be incorporated into the project specifications to adequately protect human health and the environment for construction activities anticipated within contaminated sites at the installation where media relocations restriction under, Michigan Part 201 are applicable. No past, present, or reasonably foreseeable projects have been identified that, when combined with the Proposed Action, would have substantial cumulative effects to hazardous materials and wastes. Therefore, cumulative effects to hazardous materials and wastes would be less than significant.

Health and Safety

Minor cumulative effects to health and safety could occur at Selfridge ANGB as a result of overlapping construction projects identified in the CLUP. Strict adherence to all applicable occupational safety requirements would minimize the risk associated with construction activities. There would be no incompatible land uses with regard to safety criteria such as ESQD arcs or AT/FP setbacks with any of the projects identified in the CLUP. No past, present, or reasonably foreseeable projects have been identified that, when combined with the Proposed Action, would have substantial cumulative effects to health and safety. Therefore, cumulative effects to health and safety would be less than significant.

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5.0 MANAGEMENT ACTIONS / SPECIAL PROCEDURES

This section summarizes special operating procedures associated with this EA. Evaluations contained in this EA have determined that no significant environmental effects would result from implementation of the Proposed Action at Selfridge ANGB; therefore, no mitigation is required. This determination is based on thorough review and analysis of existing resource information, coordination with installation personnel, and relevant agency coordination.

Special operating procedures are defined as measures that would be implemented to address minor potential environmental effects associated with implementation of the Proposed Action. In addition to the environmental protection measures described in this EA and standard BMPs such as implementation of control measures for reducing fugitive dust emissions, engineering and site development to account for soil constraints, conforming to all federal, state, and local requirements related to stormwater pollution prevention during construction activities, and safe removal of any potentially hazardous materials prior to initiating demolition activities, the following special procedures would be implemented as part of the Proposed Action.

Cultural Resources

In accordance with mitigation stipulated in Section III(D)(3) of the Programmatic Agreement (Selfridge ANGB 2002) for adverse effects to historic properties listed In Appendix C, and due to demolition of or new construction/additions to historic properties listed in Appendix C, the ANG will implement the appropriate actions prior to any construction, or demolition activity.

In the event that an inadvertent discovery of cultural artifacts occurs from ground disturbance, activity in the immediate vicinity would cease until an assessment of the materials can be made. The ground disturbance operator would notify the ANG unit commander/supervisor immediately to contact the ANG environmental manager for specific actions to protect and properly treat any materials that are discovered.

Water Resources

In accordance with MDEQ permit requirements for wetland impacts, Selfridge ANGB will coordinate with Land and Water Management Division for a determination of State permit requirements regarding the proposed rerouting of the perimeter road (Project 1). As a measure to reduce or eliminate the need for traditional stormwater management infrastructure, permeable pavement and bioretention will be used when practicable.

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6.0 REFERENCES

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7.0 LIST OF PREPARERS

Joseph J. Campo, Senior Environmental Scientist, Tetra Tech Inc.

Project Manager

PhD, Wildlife Ecology

M.S., Wildlife Ecology

B.S., Forestry

Years of Experience: 24

James Cook, Biologist II, Tetra Tech, Inc.

Land Use and Biological Resources

M.S., Environmental Science

B.S., Biology

Years of Experience: 5

Melissa Cushing, Environmental Scientist III, Tetra Tech, Inc.

GIS/Geologic and Socioeconomic Resources

M.S., Environmental Health

B.S., Geology

Years of Experience: 13

Emily Foster, Biologist II, Tetra Tech, Inc.

Water Resources and Biological Resources

M.S., Environmental Science

B.S., Biology

Years of Experience: 5

Beverly Keys, Administrative Assistant, Tetra Tech Inc.

Administrative Record

B.A.S, Business Administration

Years of Experience: 17

Tim Lavalley, P.E., Senior Engineer, LPES, Inc.

Air Quality and Transportation

M.S., Civil and Environmental Engineering

B.S., Mechanical Engineering

Years of Experience: 25

Kristin Shields, Director-DOD NEPA, Tetra Tech, Inc.

NEPA Peer Review

B.A., Environmental Science

Years of Experience: 25

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APPENDIX A
II CEP CORRESPONDENCE



NATIONAL GUARD BUREAU
3501 FETCHET AVENUE
JOINT BASE ANDREWS 20762-5157

Date

<recipient>
<recipient address>
<recipient address>
<recipient address>

Dear <recipient>,

The National Guard Bureau (NGB) is preparing an Environmental Assessment (EA) for Construction, Demolition, and Renovation Projects at Selfridge Air National Guard Base Michigan Air National Guard Mount Clemens, MI. Pursuant to the National Environmental Policy Act (NEPA) of 1969 (42 *United States Code* [USC] 4321–4347), Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 *Code of Federal Regulations* [CFR] Sections 1500–1508), and 32 CFR Part 989, *et seq.*, the NGB will prepare an EA that considers the potential consequences to human health and the natural environment.

The EA will examine the effects of the proposed projects and will include analysis of the required no-action alternative. In accordance with Executive Order 12372, *Intergovernmental Review of Federal Programs*, we are writing this letter to advise you of this effort and request your assistance in identifying any potential issues related to the proposal.

An attachment to this letter describes each project being analyzed in the EA Also enclosed is a copy of the distribution list for those agencies and organizations to be contacted regarding this EA. If you consider any additional agencies should review and comment on this proposal, please feel free to include them in a re-distribution of this letter and the attached materials.

In 2007 the U.S. Fish and Wildlife Service (USFWS) was contacted for the purposes of obtaining information regards the presence of listed species or critical habitat on or near the installation for incorporation into Selfridge's 2010 Integrated Natural Resources Management Plan (INRMP); none were identified by the USFWS. The 2010 INRMP identifies the vegetative cover on the installation as maintained lawn and landscaped areas with fragmented wetlands. The vegetative cover includes forested areas that are limited in size to maintain safe airspace and flight lines. The INRMP also identifies the areas of suitable wildlife habitat as restricted in size and location to patches of forest, open grassland, and wetlands. Threatened and endangered species specific to Selfridge are not identified however those found in Macomb County are. Please note a contract is currently in place to complete the 5-year update/revision of the Selfridge INRMP. As part of the update/revision a supplemental Environmental Assessment will be completed to address the use of prescribed burns as a method of vegetation control on

the installation. In addition yearly meetings are held between Selfridge and the local USFWS office to discuss implementation of the INRMP, natural resource issues pertaining to the installation and proposed projects identified in the INRMP.

A Programmatic Agreement (PA) among the installation, the Michigan State Historic Preservation Office, and the Advisory Council on Historic Preservation was negotiated in 2002 to guide the operation and maintenance activities of the Selfridge ANGB to satisfy the Michigan ANG's responsibilities for compliance with Section 106 of the National Historic Preservation Act. The installation's Integrated Cultural Resources Management Plan was updated in 2011. The NGB would coordinate under the PA with the Michigan State Historic Preservation Office to avoid potential impacts to cultural resources.

NGB intends to maximize the use of electronic transmittals during subsequent coordination phases of this project. If you would prefer to receive a hard copy of the Draft and Final EA documents, please indicate this in your response. If not, the Draft EA will be provided in an electronic format when it becomes available. Please provide any comments you may have within 30 days of receipt of this letter.

If you have any questions concerning the proposal, please contact me at (240) 612-8855. Please forward your written comments to National Guard Bureau, Asset Management Division, Attn: Kevin Marek, NGB/A7AM, Shepperd Hall, 3501 Fetchet Ave., Joint Base Andrews, MD, 20762-5157, or email to Kevin.Marek@ang.af.mil. Thank you for your assistance.

Sincerely,

KEVIN MAREK, REM
Environmental Specialist
Requirements Branch

Attachment: Description of Proposed Action
IICEP Distribution List

DISTRIBUTION – Selfridge Air National Guard Base

Kevin Lokar, Director Macomb County Health Dept. 43525 Elizabeth Road Mt. Clemens, MI 48043	Director Dept. of Environmental Quality Cadillac Place 3058 W. Grand Boulevard, Suite 2-300 Detroit, MI 48202-6058
Mr. Kenneth Verkest, Supervisor 38151 Lanse Creuse St. Harrison Twp., Michigan 48045	Mr. Wally Gauthier, Chief Permit Evaluation Branch B U.S. Army Corps of Engineers, Detroit District 477 Michigan Ave., 6th Floor Detroit MI 48226
Jason D. Olberle, Superintendent Michigan Agency, BIA 2845 Ashmun Street Sault Ste. Marie, MI 49783	Governor Rick Snyder P.O. Box 30013 Lansing, Michigan 48909
Mr. Dan Kennedy Michigan Department of Natural Resources PO Box 30444 Lansing MI 48909-7944	The Honorable Gary Peters United States Senate 124 West Allegan Street, Suite 1810 Lansing, MI 48933
Mr. John Paul Rea, Executive Director Macomb County Department of Planning and Economic Development Macomb County Administration Building One South Main Street, 7th Floor Mount Clemens, Michigan 48043	Mr. Michael Lovelock 47275 Sugarbush Rd. Chesterfield Twp., Michigan 48047
Mr. Carl Reed Federal Aviation Administration 8800 Beck Road Eastside Belleville, Michigan 48111	State Historic Preservation Office Michigan State Housing Development Authority 702 W. Kalamazoo Street P.O. Box 30740 Lansing, Michigan 48909-8240
Mr. Peter Quackenbush Michigan Department of Environmental Quality Hazardous Waste Section Office of Waste Management and Radiological Protection Constitution Hall, 4th Floor South 525 West Allegan Street, P.O. Box 30241 Lansing, MI 48909-7741	Ms. Jerri-Anne Garl U.S. Environmental Protection Agency, Region 5 77 West Jackson Boulevard (B-19J) Chicago, Illinois 60604
Mr. Andrew J. Hartz District Supervisor Water Resource Unit Water Resources Division MDEQ Southeast Michigan District Office 27700 Donald Court Warren, MI 48092-6058	Mr. Scott Hicks U.S. Fish and Wildlife Service Region 3 – Midwest East Lansing – Ecological Field Office 2651 Coolidge Road East Lansing, Michigan 48823
Ms. Lori Sargent Michigan Department of Natural Resources Wildlife Division P.O. Box 30180	The Honorable Candice Miller United States House of Representatives, 10th District 48653 Van Dyke Avenue

Lansing, MI 48909	Shelby Township, Michigan 48317
Mr. Timothy Payne Michigan Department of Natural Resources 26000 West Eight Mile Road Southfield, Michigan 48034	The Honorable Debbie Stabenow United States Senate 221 W. Lake Lansing Road, Suite 100 East Lansing, MI 48823
Charlie Bristol, Manager City of Mount Clemens Water Quality Management 1750 Clara Mt. Clemens, MI 48043	Ms. Isabel Scollon The Burt Lake Band of Ottawa and Chippewa Indians, Inc. 6461 East Brutus Road P.O. Box 206 Brutus, Michigan 49716
The Grand River Bands of Ottawa Indians P.O. Box 2937 Grand Rapids, Michigan 49501	Grand Traverse Band of Ottawa and Chippewa Indians 2605 N.W. Bayshore Drive Suttons Bay, Michigan 49682
Hannahville Potawatomi Indian Community N-14911 Hannahville B-1 Road Wilson, Michigan 49896-9728	Ms. Laura Spurr The Huron Potawatomi-Nottawaseppi Huron Band of Potawatomi 2221 1 ½ Mile Road Fulton, Michigan 49052
Ms. Susan LaFerner The Keewenaw Bay Indian Community 107 Beartown Road Baraga, Michigan 49908	Ms. Summer Sky Cohen, THPO Keweenaw Bay Indian Community 16429 Beartown Road Baraga, Michigan 49908
Ms. Martin, THPO Lac Vieux Desert Band of Lake Superior Chippewa Indians 23968 East Pow Wow Trail P.O. Box 249 Watersmeet, Michigan 49969	Mr. Aaron Payment The Sault Ste. Marie Tribe of Chippewa Indians 523 Ashmun Street Sault Ste. Marie, Michigan 49783
Mr. Patrick Wilson The Little River Band of Ottawa Indians 375 River Street Manistee, Michigan 49660	Mr. David K. Sprague Match-e-be-nash-she-wish Band of Potawatomi Indians of Michigan 1743 142nd Avenue, P.O. Box 218 Dorr, Michigan 49323
Mr. John Miller The Pokagon Band of Potawatomi Indians 58620 Sink Road P.O. Box 180 Dowagiac, Michigan 49047	Mr. Mark Parrish, THPO The Pokagon Band of Potawatomi Indians 58620 Sink Road P.O. Box 180 Dowagiac, Michigan 49047
Saginaw Chippewa Indian Tribe 7070 E. Broadway Mt. Pleasant, Michigan 48858	Levi Carrick, Sr., President Bay Mills Chippewa Indian Community 12140 W. Lakeshore Drive Brimley, Michigan 49715



DEPARTMENT OF THE ARMY
DETROIT DISTRICT, CORPS OF ENGINEERS
477 MICHIGAN AVENUE
DETROIT MI 48226-2550

May 3, 2016

REPLY TO
ATTENTION OF:

Engineering & Technical Services
Regulatory Office
File No. LRE-2006-01185-250-A16

Kevin Marek
National Guard Bureau, Asset Management Division
NGB/A7AM, Shepperd Hall,
3501 Fetchet Ave
Joint Base Andrews, Maryland 20762-5157

Dear Mr. Marek:

This is in response to your March 2, 2016 letter requesting the Corps of Engineers' (Corps) input regarding proposed Construction, Demolition, and Renovation Projects at Selfridge Air National Guard Base / Michigan Air National Guard Base located at 28900 Selfridge Avenue in Harrison Township, Macomb County, Michigan (Sections 5-18, Township 2N, Range 14E and Sections 31-32, Township 3N, Range 14E). Specifically, the project involves preparing an Environmental Assessment to support the proposed action of upgrading current facilities on the base to meet current safety standards.

In a letter dated November 27, 2013 (copy enclosed), we advised representatives of the Selfridge Air National Guard Base that the areas identified as Areas J, R, and U (shown in the attached drawings) contain wetlands adjacent to Lake St. Clair, which is a navigable water of the United States. Lake St. Clair and its adjacent wetlands are under the regulatory jurisdiction of the Corps of Engineers. The Corps of Engineers' authority to regulate certain activities on and adjacent to the property in question is found in Section 10 of the Rivers and Harbors Act (Section 10), and Section 404 of the Clean Water Act (Section 404).

Under Section 10, a Corps permit is required for any structures or work in navigable waters of the United States, such as Lake St. Clair, to what is called the Ordinary High Water Mark (OHWM). In Lake St. Clair, the OHWM extends to the elevation contour of 576.3' International Great Lakes Datum 1985. Additionally, a Section 10 permit is required for structures or work outside this limit if they affect the course, location, or condition of the waterbody as to its navigable capacity. Some typical examples of structures or work requiring Section 10 permits within this jurisdictional area include beach nourishment, boat ramps, breakwaters, bulkheads, dredging, filling or discharging material such as sand, gravel or stones, groins and jetties, mooring buoys, piers (seasonal or permanent), placement of riprap for wave protection or streambank stabilization, boat hoists, pilings and construction of marina facilities.

Section 404 requires a Corps permit for the discharge of dredged or fill material into navigable waters of the United States and in wetlands adjacent to those waters. The area of Corps jurisdiction under Section 404 extends to the OHWM, and to the upland boundary of any adjacent wetlands. Projects involving discharges typically include placement of fill material for homes and landscaping, impoundments, causeways, road fills, dams and dikes, riprap, groins, breakwaters, revetments, and beach nourishment. Section 404 also regulates discharges of dredged material incidental to certain activities such as grading, mechanized landclearing, ditching or other excavation activity, and the installation of certain pile-supported structures.

If you anticipate discharging any dredged or fill material in Lake St. Clair or in wetlands adjacent to Lake St. Clair, you will need to apply for and receive authorization from the Corps prior to starting such work. Likewise, any construction or other work waterward of the OHWM will require prior Corps authorization. The necessary permit application can be found on our website at <http://www.lre.usace.army.mil/Missions/RegulatoryProgramandPermits.aspx>. Please complete and return the application following the procedures set forth in the application. Plan view and cross-sectional view drawings, in 8½" x 11" format, should accompany the application. Drawings and a narrative on the form should specifically identify and describe all of the structures, work, and discharges which we regulate as described above, including temporary or construction measures.

Please be advised that in 1984 a portion of the Corps' regulatory responsibilities was assumed by the Michigan Department of Environmental Quality (MDEQ). Portions of the proposed project site identified in your March 2, 2016 letter are within an area of State assumed jurisdiction. Unless otherwise notified, a separate authorization from the Corps is not required; however, a permit must be obtained from the MDEQ. Therefore, we recommend that you contact Ms. Karyn Green of the Michigan Department of Environmental Quality, Land and Water Management Division, 27700 Donald Court, Warren, Michigan, 48092, (586) 256-7274 for a determination of State permit requirements

Should you have any questions, please contact me at the above address, by E-Mail at Laura.A.Garrett@usace.army.mil, or by telephone at 313-226-1327. In all communications, please refer to File Number LRE-2006-01185-250-A16.

We are interested in your thoughts and opinions concerning your experience with the Detroit District, Corps of Engineers Regulatory Program. If you are interested in letting us know how we are doing, you can complete an electronic Customer Service Survey from our web site at: http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0.

Alternatively, you may contact us and request a paper copy of the survey that you may complete and return to us by mail or fax. Thank you for taking the time to complete the survey, we appreciate your feedback.

Sincerely,

A handwritten signature in black ink that reads "Laura A. Garrett". The signature is written in a cursive style with a long horizontal flourish extending to the right.

Laura A. Garrett
Regulatory Project Manager
Compliance & Enforcement Branch

Enclosures

Copy Furnished
MDEQ, Southeast Michigan District Office

DEPARTMENT OF THE ARMY
DETROIT DISTRICT, CORPS OF ENGINEERS
REGULATORY OFFICE
477 MICHIGAN AVENUE
DETROIT MI 48226-2550

Copy

REPLY TO
ATTENTION OF:

November 27, 2013

Engineering & Technical Services
Regulatory Office
File No. LRE-2006-01185-250-J13

Kenneth Baker
Selfridge Air National guard Base
28900 Selfridge Avenue
Harrison Township, Michigan 48045

Dear Mr. Baker:

This is in response to your recent request regarding the Corps of Engineers' jurisdiction on property adjacent to Lake St. Clair at 28900 Selfridge Avenue (otherwise known as Selfridge Air National Guard Base) in Harrison Twp., Michigan (Sections 5-18, Township 2N, Range 14E and Sections 31-32, Township 3N, Range 14E). Specifically, your request included approximately 387 acres of wetlands on approximately 3075 acres of property, which were designated by your consultant as Areas A, B, C, D, E, F, G, H, J, K, L, M, N, P, Q, R, T, and U.

We recently inspected the property and determined that Areas J, R, and U contain wetlands adjacent to Lake St. Clair, which is a navigable water of the United States. Lake St. Clair and its adjacent wetlands are under the regulatory jurisdiction of the Corps of Engineers. The wetlands in Areas J, R, and U are under the Corps' jurisdiction are depicted on the enclosed drawings. We also concur with the delineations of the wetlands within Areas J, R, and U that you submitted contained in the document "Final Wetland Delineation Report and Associated Mapping, Selfridge Air National Guard Base, Michigan," prepared by your consultant, HDR, Inc.

The Corps of Engineers' authority to regulate certain activities on and adjacent to the property in question is found in Section 10 of the Rivers and Harbors Act (Section 10), and Section 404 of the Clean Water Act (Section 404).

Under Section 10, a Corps permit is required for any structures or work in navigable waters of the United States, such as Lake St. Clair, to what is called the Ordinary High Water Mark (OHWM). In Lake St. Clair, the OHWM extends to the elevation contour of 576.3 International Great Lakes Datum 1985. Additionally, a Section 10 permit is required for structures or work outside this limit if they affect the course, location, or condition of the waterbody as to its navigable capacity. Some typical examples of structures or work requiring Section 10 permits within this jurisdictional area include beach nourishment, boat ramps, breakwaters, bulkheads, dredging, filling or discharging material such as sand, gravel or stones, groins and jetties, mooring buoys, piers (seasonal or permanent), placement of riprap for wave protection or streambank stabilization, boat hoists, pilings and construction of marina facilities.

Section 404 requires a Corps permit for the discharge of dredged or fill material into navigable waters of the United States and in wetlands adjacent to those waters. The area of Corps jurisdiction under Section 404 extends to the OHWM, and to the upland boundary of any adjacent wetlands. Projects involving discharges typically include placement of fill material for homes and landscaping, impoundments, causeways, road fills, dams and dikes, riprap, groins, breakwaters, revetments, and beach nourishment. Section 404 also regulates discharges of dredged material incidental to certain activities such as grading, mechanized landclearing, ditching or other excavation activity, and the installation of certain pile-supported structures.

If you anticipate discharging any dredged or fill material in Lake St. Clair or in wetlands adjacent to Lake St. Clair, you will need to apply for and receive authorization from the Corps prior to starting such work. Likewise, any construction or other work waterward of the OHWM will require prior Corps authorization. The necessary permit application can be found on our website at <http://www.lre.usace.army.mil/Missions/RegulatoryProgramandPermits.aspx>. Please complete and return the application following the procedures set forth in the application. Plan view and cross-sectional view drawings, in 8½" x 11" format, should accompany the application. Drawings and a narrative on the form should specifically identify and describe all of the structures, work, and discharges which we regulate as described above, including temporary or construction measures.

Our assertion of jurisdiction is based on the following criteria: (1) our documentation that the wetlands within areas identified as Areas J, R, and U meet our technical definition of a wetland per the criteria in the *1987 Corps of Engineers Wetlands Delineation Manual* and the appropriate Regional Supplement.

Furthermore, in 1984 a portion of the Corps' regulatory responsibilities was assumed by the Michigan Department of Environmental Quality (MDEQ). Areas A-H, K-Q, and T are within the assumed area. Unless otherwise notified, a separate authorization from the Corps is not required; however, a permit must be obtained from the MDEQ. Therefore, we recommend that you contact Mr. Luke Golden of the Michigan Department of Environmental Quality, Land and Water Management Division, 27700 Donald Court, Warren, Michigan, 48092, (586) 753-3761 for a determination of State permit requirements

This letter contains an approved jurisdictional determination for the property in question. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 Code of Federal Regulations (CFR) Part 331. We have enclosed a Notification of Appeal Process (NAP) fact sheet and a Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the Corps' Great Lakes and Ohio River Division office at following address:

Appeals Review Officer
U.S. Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street
Rm 10-524
Cincinnati, Ohio 45202-3222

In order for an RFA to be accepted by the Corps, the Corps must determine that the RFA is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division office within 60 days of the date of the NAP sheet. If you decide to submit an RFA form, it must be received at the above address by January 27, 2013. It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter. You may contact the Appeals Review Officer at (513) 684-6212 and send a facsimile at (513) 684-2460.

This jurisdiction determination is valid for a period of five years from the date of this letter unless new information warrants revision of the delineation before the expiration date. Should you have any questions, please contact me at the above address, by E-Mail at Eric.J.Warda@usace.army.mil, or by telephone at 313-226-5382. In all communications, please refer to File Number LRE-2006-01185-250-J13.

We are interested in your thoughts and opinions concerning your experience with the Detroit District, Corps of Engineers Regulatory Program. If you are interested in letting us know how we are doing, you can complete an electronic Customer Service Survey from our web site at: <http://per2.nwp.usace.army.mil/survey.html>. Alternatively, you may contact us and request a paper copy of the survey that you may complete and return to us by mail or fax. Thank you for taking the time to complete the survey, we appreciate your feedback.

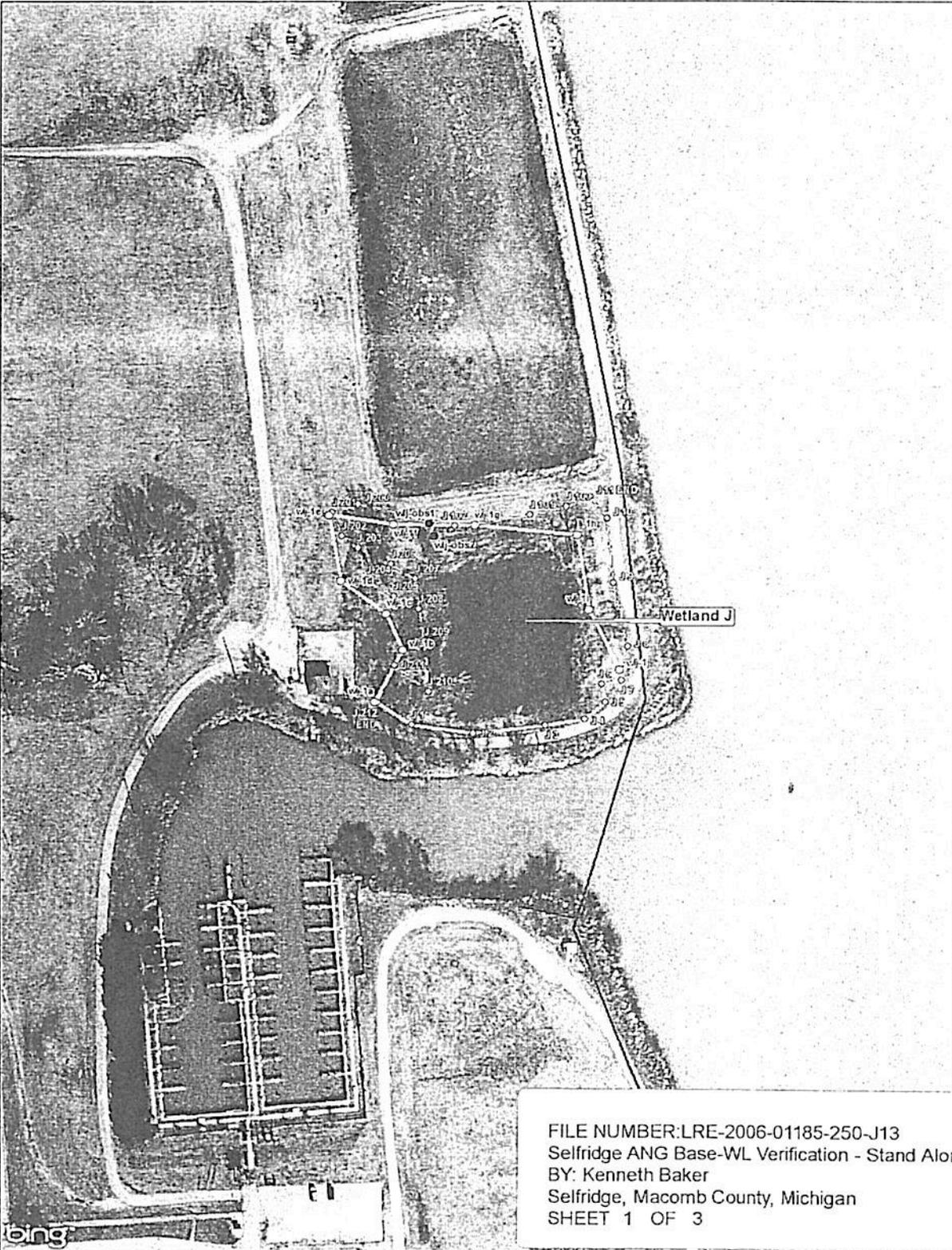
Sincerely,



Eric J. Warda
Regulatory Project Manager
Compliance & Enforcement Branch
Regulatory Office

Enclosure

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MDEQ, Southeast Michigan Office



FILE NUMBER: LRE-2006-01185-250-J13
 Selfridge ANGB Base-WL Verification - Stand Alone JD
 BY: Kenneth Baker
 Selfridge, Macomb County, Michigan
 SHEET 1 OF 3

Page 38 of 50	
Wetlands and Waters of the U.S. Delineation Map Selfridge ANGB, Michigan	
Prepared By: HDR, Inc.	
Drawn By: SG Checked By: MG	Scale: 1" = 100'
Date: December 2012	

Selfridge ANGB Boundary
 Observation Points
 Field Delineated GPS Point
 Wetland
 Drainage

2006 Wetland Flags
 2006 Wetlands

0 25 50 100 Feet
 0 20 40 Meters

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 Map Projection: Lambert Conformal Conic
 State Plane, Michigan South, FIPS 2113, Feet (ft)
 North American Datum of 1983





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 Selfridge ANG Base-WL Verification - Stand Alone JD
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 Selfridge, Macomb County, Michigan
 SHEET 2 OF 3



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**Wetlands and Waters
 of the U.S. Delineation Map
 Selfridge ANGB, Michigan**

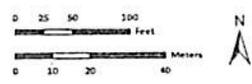
Prepared By:
 HDR, Inc.

Drawn By: SG
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Scale: 1" = 100'

Date: December 2012

- Selfridge ANGB Boundary
- Observation Points
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- 2006 Wetlands



Map Projection: Universal Transverse Mercator
 State Plane, Michigan South, FIPS 2113, Feet, NAD83
 North American Datum of 1983





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 SHEET 3 OF 3

Page 39 of 50

**Wetlands and Waters
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Map Projection: Lambert Conformal Conic
 State Plane, Michigan South, FIPS 2113, Feet East
 North American Datum of 1983



APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 25 November 2013

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Selfridge ANG Base, LRE-2006-01185-250-J13

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: MICH County/parish/borough: Macomb City: Harrison Twp
Center coordinates of site (lat/long in degree decimal format): Lat. 42.61654° N, Long. -82.83319° W.
Universal Transverse Mercator:

Name of nearest waterbody: Lake St. Clair

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:

Name of watershed or Hydrologic Unit Code (HUC):

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date: 25 November 2013

Field Determination. Date(s): 6 August 2013

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

TNWs, including territorial seas

Wetlands adjacent to TNWs

Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs

Non-RPWs that flow directly or indirectly into TNWs

Wetlands directly abutting RPWs that flow directly or indirectly into TNWs

Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs

Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs

Impoundments of jurisdictional waters

Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: 3 wetlands for a total of 3.4 acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

Elevation of established OHWM (if known): 576.3 IGLD 1985.

2. Non-regulated waters/wetlands (check if applicable):³

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

Tributary stream order, if known:

(b) General Tributary Characteristics (check all that apply):

Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):

Average width: feet
Average depth: feet
Average side slopes: Pick List

Primary tributary substrate composition (check all that apply):

Silts Sands Concrete
 Cobbles Gravel Muck
 Bedrock Vegetation. Type/% cover:
 Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: Pick List

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: Pick List

Estimate average number of flow events in review area/year: Pick List

Describe flow regime:

Other information on duration and volume:

Surface flow is: Pick List. Characteristics:

Subsurface flow: Pick List. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks
 OHWM⁶ (check all indicators that apply):
 clear, natural line impressed on the bank the presence of litter and debris
 changes in the character of soil destruction of terrestrial vegetation
 shelving the presence of wrack line
 vegetation matted down, bent, or absent sediment sorting
 leaf litter disturbed or washed away scour
 sediment deposition multiple observed or predicted flow events
 water staining abrupt change in plant community
 other (list):
 Discontinuous OHWM.⁷ Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by: Mean High Water Mark indicated by:
 oil or scum line along shore objects survey to available datum;
 fine shell or debris deposits (foreshore) physical markings;
 physical markings/characteristics vegetation lines/changes in vegetation types.
 tidal gauges
 other (list):

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

Identify specific pollutants, if known:

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.
 Wetlands adjacent to TNWs: 3 wetlands ("J," "R," and "U") comprising of a total of 3.4 acres.
2. **RPWs that flow directly or indirectly into TNWs.**
 Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
 Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
- Identify type(s) of waters: .
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Dated April 2013.
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: .
- Corps navigable waters' study: .
- U.S. Geological Survey Hydrologic Atlas: .
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: 1:24K MI-New Haven.
- USDA Natural Resources Conservation Service Soil Survey. Citation: .
- National wetlands inventory map(s). Cite name: ORM2.
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): ORM2 Maps.
 - or Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: Each of the wetlands ("J," "R," and "U" are adjacent to Lake St. Clair as they are only separated by berms, thuly making them Waters of the US (33CFR 328.3(c)).



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590
MAR 31 2016

REPLY TO THE ATTENTION OF:
E-19J

Kevin Marek
National Guard Bureau
Asset Management Division
3501 Fetchet Avenue
Joint Base Andrews, Maryland 20762-5157

Re: Project Scoping for Construction, Demolition, and Renovation at Selfridge Air National Guard Base, Mount Clemens, Macomb County, Michigan

Dear Mr. Marek:

EPA has reviewed the referenced project scoping document, dated March 2, 2016, which was prepared by the National Guard Bureau (NGB), pursuant to our authorities under the National Environmental Policy Act (NEPA), Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

The proposed project involves multiple construction, demolition, and renovation projects at Selfridge Air National Guard Base. A total of 18 potential projects were briefly described in your letter.

We have some general recommendations that we believe will assist the development of the draft environmental assessment (EA), including comments on water quality, green infrastructure, climate change and greenhouse gas emissions, demolition of buildings, erosion control, and consultation records, as stated below.

Water Quality

The EA should describe how the proposed action may affect Clean Water Act (CWA) Section 303(d) listed water bodies and their listing status as impaired. We recommend that this section of the document discuss current impairments, and how the proposed action may affect, either positively or detrimentally, the impairment. A list of nearby impaired streams can be found at EPA's website.¹

¹ A list of Michigan impaired waterbodies can be found at:
https://iaspub.epa.gov/tmdl/attains_state.control?p_state=MI&p_cycle=&p_report_type=T

Green Infrastructure

In compliance with Section 438 of the Energy Independence and Security Act, and also guidelines from Leadership in Energy and Environmental Design (LEED), we are pleased to see NGB include green infrastructure and solar power features within many of the 18 individual projects. In addition to those proposed features, we highly recommend NGB consider using energy-efficient building materials, when constructing new structures. As a measure to reduce or eliminate the need for traditional stormwater management infrastructure, we strongly encourage use of “green” stormwater management features, such as permeable pavement and bioretention, which are listed in the attachment *NEPA Stormwater Green Sheet*.

Climate Change and Greenhouse Gas Emissions

In December 2014, CEQ issued revised draft guidance² with recommendations of how to consider the effects of greenhouse gas (GHG) emissions and climate change in NEPA documentation. EPA recommends the following be completed and information added to the EA:

- Include a summary discussion of climate change and reasonably foreseeable climate change impacts relevant to the project, based on U.S. Global Change Research Program² assessments, to assist with identification of potential project impacts that may be exacerbated by climate change and to inform consideration of measures to adapt to climate change impacts. This will assist in identifying resilience-related changes to the tentatively selected plan that should be evaluated and considered as part of the proposed project.
- Estimate the GHG emissions associated with all project alternatives. Example tools for estimating and quantifying GHG emissions can be found on CEQ’s NEPA.gov website⁴. For actions that are likely to have less than 25,000 metric tons of carbon dioxide (CO₂) emissions/year, providing a qualitative estimate is acceptable, unless quantification is easily accomplished. The estimated GHG emissions can serve as a reasonable proxy for climate change impacts when comparing the proposal and alternatives. In disclosing the potential impacts of the proposal and reasonable alternatives, consideration should be given to whether and to what extent the impacts may be exacerbated by expected climate change in the project area, as discussed in the “affected environment” sections.
- Describe measures to reduce GHG emissions associated with the proposed project, including reasonable alternatives or other practicable mitigation opportunities, and disclose the estimated GHG reductions associated with such measures. Any commitments to implement reasonable mitigation measures that will reduce or eliminate project-related GHG emissions should be committed to in the project Finding of No Significant Impact (FONSI).
- Include a discussion on adaptation and, as appropriate, consider practicable changes to the alternatives to make them more resilient to anticipated climate change. A list of practicable mitigation options is included in the attachment *Diesel Emission Reduction Checklist*.

Demolition of Buildings

For demolition projects, we recommend pavement (asphalt, concrete, or cement) and other structural materials be reclaimed for reuse, or recycled to the maximum extent possible.

² <https://ceq.doe.gov/initiatives/nepa/ghg-guidance>

³ <http://www.globalchange.gov/>

⁴ https://ceq.doe.gov/current_developments/GHG_accounting_methods_7Jan2015.html

Erosion Control

We encourage recycling felled trees by chipping and reusing wood chips, either on-site, or by donating to a local school, park, etc. Reseeding of exposed soils with native grasses and/or plants should be performed as soon as possible in accordance with best management practices.

Consultation Records

EPA recommends attaching consultation documents with the EA regarding historic resources (Michigan Historic Preservation Office), and Federal and state threatened and endangered species (U.S. Fish and Wildlife Service and the Michigan Department of Natural Resources).

We are available to discuss these comments on the scoping document at your convenience. Please feel free to contact Mike Sedlacek of my staff at 312-886-1765, or by email at sedlacek.michael@epa.gov.

Sincerely,



Kenneth A. Westlake, Chief
NEPA Implementation Section
Office of Enforcement and Compliance Assurance

Encl: NEPA Stormwater Green Sheet
Diesel Emission Reduction Checklist

NEPA Stormwater Green Sheet

The Stormwater/Wastewater section of NEPA documents should (at a minimum) address the following:

- ✓ How will wastewater from the facility be managed? Is there a new or increased discharge of pollutants to a sensitive water body (e.g., a high quality water body, or a water body that is already impaired)?
- ✓ How will stormwater runoff from the building, parking lot, and other impervious surfaces be managed?
 - ✓ In most cases if more than one acre of land will be disturbed the project owner/operator will need to obtain NPDES permit coverage for stormwater runoff during the construction phase.
 - ✓ Most Region 5 States have general permits for stormwater runoff from construction sites, and most sites qualify for coverage under the general permit.
 - ✓ The permit will require minimizing erosion and minimizing releases of sediment. If the site is immediately adjacent to a water body there should be a buffer area between the construction activity and the water body.
 - ✓ Post-construction requirements vary by jurisdiction. At this time there is no quantified Federal performance standard for runoff from the new impervious areas that will be created. Some States, e.g., WI, have a performance standard. Also, many municipalities have release rate requirements for stormwater. These rate restrictions are intended to keep the sewer systems from being overloaded from too much flow coming in all at once. Local release rate are the reason detention basins are put in place at new development sites.
 - ✓ If the project involves construction of a Federal building/structure, the provisions of the Energy Independence and Security Act of 2007 likely will be applicable. Title IV of the Act ("Energy Savings in Building and Industry"), Subtitle C "(High Performance Federal Buildings)" establishes this requirement:

SEC. 438. STORMWATER RUNOFF REQUIREMENTS FOR FEDERAL DEVELOPMENT PROJECTS

The sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow.

This provision for many projects can be quite significant. This language requires Federal sites to achieve/maintain the predevelopment hydrology to the "maximum extent technically feasible". For many sites what this will mean is practices must be put in place to store/soak in the first 1 to 1.5 inches of rain that falls in a large rain event (rather than having that water run off). Sites will need to include practices such as rain gardens and permeable pavement in order to do this.

U.S. Environmental Protection Agency

Diesel Emission Reduction Checklist

- Use low-sulfur diesel fuel (15 ppm sulfur maximum) in construction vehicles and equipment.
- Retrofit engines with an exhaust filtration device to capture diesel particulate matter before it enters the construction site.
- Position the exhaust pipe so that diesel fumes are directed away from the operator and nearby workers, reducing the fume concentration to which personnel are exposed.
- Use catalytic converters to reduce carbon monoxide, aldehydes, and hydrocarbons in diesel fumes. These devices must be used with low sulfur fuels.
- Use enclosed, climate-controlled cabs pressurized and equipped with high efficiency particulate air (HEPA) filters to reduce the operators' exposure to diesel fumes. Pressurization ensures that air moves from inside to outside. HEPA filters ensure that any incoming air is filtered first.
- Regularly maintain diesel engines, which is essential to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance. For example, blue/black smoke indicates that an engine requires servicing or tuning.
- Reduce exposure through work practices and training, such as turning off engines when vehicles are stopped for more than a few minutes, training diesel-equipment operators to perform routine inspection, and maintaining filtration devices.
- Repower older vehicles and/or equipment with diesel- or alternatively-fueled engines certified to meet newer, more stringent emissions standards. Purchase new vehicles that are equipped with the most advanced emission control systems available.
- Use electric starting aids such as block heaters with older vehicles to warm the engine reduces diesel emissions.
- Use respirators, which are only an interim measure to control exposure to diesel emissions. In most cases, an N95 respirator is adequate. Workers must be trained and fit-tested before they wear respirators. Depending on work being conducted, and if oil is present, concentrations of particulates present will determine the efficiency and type of mask and respirator. Personnel familiar with the selection, care, and use of respirators must perform the fit testing. Respirators must bear a NIOSH approval number.
- Per Executive Order 13045 on Children's Health³, EPA recommends operators and workers pay particular attention to worksite proximity to places where children live, learn, and play, such as

³ Children may be more highly exposed to contaminants because they generally eat more food, drink more water, and have higher inhalation rates relative to their size. Also, children's normal activities, such as putting their hands in their mouths or playing on the ground, can result in higher exposures to contaminants as compared with adults. Children may be more vulnerable to the toxic effects of contaminants because their bodies and systems are not fully developed and their growing organs are more easily harmed. EPA views childhood as a sequence of lifestyles, from conception through fetal development, infancy, and adolescence.

homes, schools, daycare centers, and playgrounds. Diesel emission reduction measures should be strictly implemented near these locations in order to be protective of children's health.

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APPENDIX B

GENERAL CONFORMITY APPLICABILITY ANALYSIS

RECORD OF NON-APPLICABILITY

**In Accordance with the Clean Air Act - General Conformity Rule for
the Proposed Construction and Demolition at Selfridge ANG, Michigan**

July 13, 2016

The ANG proposes construction and demolition of facilities at Selfridge ANG. As a result of the action, the proposed construction and demolition would generate new direct and indirect emissions from the construction of the proposed facility. Macomb County has been designated by USEPA as a maintenance area for the PM_{2.5} and 8-hour O₃ NAAQS.

General Conformity under the Clean Air Act, Section 176 has been evaluated according to the requirements of Title 40 of the Code of Federal Regulations (CFR) Part 93, Subpart B. The requirements of this rule are not applicable to the action because:

The highest total annual direct and indirect emissions from Proposed Action have been estimated at 9.7 tons of nitrous oxides NO_x, 4.6 tons of VOCs, 0.5 tons of PM_{2.5}, and <0.1 tons of SO₂ which is below the applicability threshold values 100 tons for NO_x, VOCs, PM_{2.5}, and SO₂.

Macomb County is in full attainment and not a maintenance area for all other criteria pollutants, and therefore not subject to further General Conformity analysis. Supported documentation and emission estimates:

- (X) Are within the administrative record
- () Appear in the National Environmental Policy Act documentation
- () Other (not necessary)

National Guard Bureau