# Environmental Assessment for Construction and Demolition Projects at the 115th Fighter Wing Installation, Dane County Regional Airport, Madison, Wisconsin

**Draft – April 2019**



# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| $\mu g/m^3$ | Micrograms Per Cubic Meter |
| °F | Degree Fahrenheit |
| 115 FW | 115th Fighter Wing |
| ACC | Air Combat Command |
| ACHP | Advisory Council on Historic Preservation |
| ACM | Asbestos-Containing Material |
| AFI | Air Force Instruction |
| AIRFA | American Indian Religious Freedom Act |
| ANG | Air National Guard |
| AOC | Area of Concern |
| AQCR | Air Quality Control Region |
| ARPA | Archaeological Resources Protection Act |
| AST | Aboveground Storage Tank |
| AT/FP | Anti-terrorism/Force Protection |
| BMP | Best Management Practice |
| BSERV | Base Support Emergency Response Vehicle |
| CAA | Clean Air Act |
| CAP | Central Accumulation Point |
| CEQ | Council on Environmental Quality |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CFR | Code of Federal Regulations |
| $CH_4$ | Methane |
| CO | Carbon Monoxide |
| $CO_2$ | Carbon Dioxide |
| $CO_2e$ | Carbon Dioxide Equivalent |
| CWA | Clean Water Act |
| CY | Calendar Year |
| CZ | Clear Zone |
| DoD | Department of Defense |
| EA | Environmental Assessment |
| EIAP | Environmental Impact Analysis Process |
| EIS | Environmental Impact Statement |
| EISA | Energy Independence and Security Act |
| EO | Executive Order |
| EOD | Explosive Ordnance Disposal |
| ERP | Environmental Restoration Program |
| ESA | Endangered Species Act |
| FAA | Federal Aviation Administration |
| FEMA | Federal Emergency Management Agency |
| FPPA | Farmland Protection Policy Act |
| GHG | Greenhouse Gas |
| GWP | Global Warming Potential |
| HAP | Hazardous Air Pollutant |
| IICEP | Interagency and Intergovernmental Coordination for Environmental Planning |
| LBP | Lead-Based Paint |
| MSA | Munitions Storage Area |
| MSAT | Mobile Source Air Toxic |
| MSL | Mean Sea Level |
| $N_2O$ | Nitrous Oxide |
| NAAQS | National Ambient Air Quality Standards |
| NAGPRA | Native American Graves Protection and Repatriation Act |
| NEPA | National Environmental Policy Act |
| NFA | No Further Action |
| NGB | National Guard Bureau |
| NHPA | National Historic Preservation Act |
| $NO_2$ | Nitrogen Dioxide |
| $NO_x$ | Nitrogen Oxides |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| $O_3$ | Ozone |
| OWS | Oil/Water Separator |
| Pb | Lead |
| PCB | Polychlorinated Biphenyl |
| PM | Particulate Matter |
| $PM_{2.5}$ | Particulate Matter Less Than or Equal to 2.5 Microns in Diameter |
| $PM_{10}$ | Particulate Matter Less Than or Equal to 10 Microns in Diameter |
| POL | Petroleum, Oil, and Lubricant |
| ppm | Parts Per Million |
| PRL | potential release location |
| PSD | Prevention of Significant Deterioration |
| QD | Quantity-Distance |
| RCRA | Resource Conservation and Recovery Act |
| ROI | Region of Influence |
| RPZ | Runway Protection Zone |
| SAP | Satellite Accumulation Point |
| SF | Square Feet/Foot |
| SHPO | State Historic Preservation Office(r) |
| SIP | State Implementation Plan |
| $SO_2$ | Sulfur Dioxide |
| SQG | Small Quantity Generator |
| SWPPP | Stormwater Pollution Prevention Plan |
| 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 |
| UST | Underground Storage Tank |
| VOC | Volatile Organic Compound |
| WDNR | Wisconsin Department of Natural Resources |
| WIANG | Wisconsin Air National Guard |
| WOTUS | Waters of the United States |
| WPDES | Wisconsin Pollutant Discharge Elimination System |

## PRIVACY ADVISORY

Your comments on this Draft Environmental Assessment (EA) are requested. Letters or other written or oral comments provided to the National Guard Bureau (NGB) may be published in the Final EA. As required by law, comments will be addressed in the Final EA and made available to the public. Any personal information provided will be used only to identify your desire to make a comment or to fulfill requests for copies of the Final EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Final EA. However, only the names of the individuals making comments and their specific comments will be disclosed. Personal home addresses and phone numbers will not be published in the Final EA.

**DRAFT FINDING OF NO SIGNIFICANT IMPACT (FONSI)**

**CONSTRUCTION AND DEMOLITION PROJECTS AT THE 115TH FIGHTER WING INSTALLATION, DANE COUNTY REGIONAL AIRPORT, MADISON, WISCONSIN**

Department of Defense (DoD) Directive 5105.77 established the National Guard Bureau (NGB) as a joint activity of the DoD, and describes the organization and management of the NGB, which includes the Director of the Air National Guard (ANG). In accordance with National Environmental Policy Act (NEPA; 42 United States Code [USC] 4321 *et seq.*), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and the Air Force Instruction (AFI) 32-7061 Environmental Impact Analysis Process (32 CFR Part 989), the NGB, on behalf of the ANG, has prepared an Environmental Assessment (EA) to evaluate the potential consequences to the human and natural environment that may result from implementation of construction and demolition projects (Proposed Action) at the 115th Fighter Wing (115 FW) of the Wisconsin Air National Guard (WIANG).

NGB is the lead agency for this EA pursuant to 40 CFR Sections 1501.5 and 1508.5. It is not typical for the Federal Aviation Administration to be a cooperating agency for a construction EA, as it involves action within the ANG installation perimeter that do not require the Federal Aviation Administration's special expertise. Any necessary coordination with the Federal Aviation Administration will occur for each project as necessary.

**PURPOSE:** The purpose of the Proposed Action is to provide the facilities and training opportunities necessary to ensure that the 115 FW can accomplish their mission in a safe and efficient manner. For the 115 FW to continue to meet their mission goals, the NGB needs to provide facilities that are properly sized and configured to meet the demands of the continuously evolving mission of the 115 FW. The proposed construction and renovation projects would improve mission efficiency by improving base access and utilities, consolidating mission functions, and upgrading facilities to meet current safety and security standards. The proposed demolition actions would remove excess, obsolete, deteriorating, and underused facilities.

The new facilities would comply with ANG Instruction 32-1023, *Criteria and Standards for Air National Guard Construction*, and ANG Handbook 32-1084, *Facility Space Standards*. The construction is also necessary to replace outdated facilities and to secure assets. New facilities would adhere to *DoD Minimum Antiterrorism Standards for Buildings*, as presented in Unified Facilities Criteria (UFC) 4-010-01, effective 9 February 2012, Change 1, 01 October 2013.

**PROPOSED ACTION (Preferred Alternative):** The NGB is proposing to update facilities at the 115 FW installation. Many of these facilities do not adequately support current or future mission requirements and/or are not adequately sized. Under the Proposed Action, the 115 FW would implement 27 infrastructure improvement projects, including the demolition of 7 facilities, in order to support the current mission (Table 1). These improvement projects would provide adequate space needed to fulfill mission requirements and would consolidate job functions and improve workflow. Some of these construction projects also have options for different locations that could be implemented. All construction would be designed in accordance with the DoD UFC 1-200-01, *General Building Requirements* and UFC 1-200-02, *High Performance and Sustainable Building Requirements*. In addition, all construction would conform to DoD Anti-terrorism/Force Protection (AT/FP) Construction Standards.

**Table 1. Proposed Construction and Modifications for the 115 FW Installation**

| *Year* | *Action* | *Total Area of New Ground Disturbance (SF)* | *New Impervious Surface (SF)* |
|---|---|---|---|
| Project #1 – POL Fuel Truck Canopy | | | |
| 2026 | Construct one canopy covering up to seven R-11 fuel trucks in the POL area. This is needed in order to provide shelter during winter months. | 20,000 | 0 |
| Project #2.1 – Replace Diesel/MOGAS Tanks (Option 1) | | | |
| 2021 | Existing tanks are old and do not function properly. Project would demolish existing tanks (B1010) and add new tanks behind B1212. | 1,300 | 0 |
| Project #2.2 – Replace Diesel/MOGAS Tanks (Option 2) | | | |
| 2021 | Demolish existing tanks (B1010) and add new tanks in same area, but closer to fence line. | 1,300 | 0 |
| Project #3 – Construct Jet A Fuel Tanks | | | |
| 2026 or 2027 | Replace existing two 100,000-gallon tanks with five new 50,000-gallon Jet A fuel tanks in same area. This would include 4,500 SF of new concrete pads for the tanks. Remove existing containment dikes. There is a need to increase storage capacity of fuel due to a recent requirement to reduce the number of fuel deliveries. If fuel is delivered less frequently, then the installation would require more fuel storage capacity to maintain operations between fuel deliveries. New tanks would be double walled saddle tanks and would not need containment dikes. | 8,100 | -3,600 |
| Project #4 – Arm/Dearm Pad | | | |
| 2026 | Construct a new 12,700 SF arm/dearm near the intersection of Taxiways G and F. The pad would fit four aircraft (per CATCODE 116-661). In addition, a new approximately 3,200 SF earth-covered berm would be constructed north of Taxiway F. Existing arm/dearm pads are too small and existing location does not allow for a four-ship pad to be built due to size constraints. | 15,900 | 12,700 |

**Table 1. Proposed Construction and Modifications for the 115 FW Installation**

| *Year* | *Action* | *Total Area of New Ground Disturbance (SF)* | *New Impervious Surface (SF)* |
|---|---|---|---|
| Project #5 – Main Gate | | | |
| 2024 | A new gate house, two POV lanes, and one truck lane would be added to the main gate. Project would address AT/FP requirements. A new barrier system, swing arm gate, and lane widening is currently occurring at the main gate and is covered under a previous NEPA document. Approximately 24,400 SF of new impervious surfaces would be created and approximately 41,700 SF of new pervious surfaces would be created due to demolitions of impervious surfaces. Therefore, there is a net of -17,300 SF of new impervious surfaces. | 118,400 | -17,300 |
| Project #6 – Base Wide Pavements | | | |
| 2025 to 2026 | All installation roads are in need of repair. There would be no footprint expansion. All roads would be repaved, with the exception of Mitchell Street, which is covered under Project #7. | 322,000 | 0 |
| Project #7 – Mitchell Street | | | |
| 2024 | Additional parking is required for the installation and the four-lane width of Mitchell Street is not being utilized. As a result, Mitchell Street would be converted to a two-lane road and the parking areas to the south would be expanded to the north. Utilities would be moved to the north side of Mitchell Street. Approximately 10,030 SF of new impervious surfaces would be created and approximately 10,630 SF of new pervious surfaces would be created due to demolitions of impervious surfaces. Therefore, there is a net of -600 SF of new impervious surfaces. | 35,275 | -600 |
| Project #8 – MSA Berm | | | |
| 2023 | Addition of an earthen berm southeast of the MSA fence would be constructed to provide protection from aircraft artillery. The berm would have metal panel sides and be earth filled. | 11,240 | 0 |
| Project #9 – Segregated Storage | | | |
| 2025 | Five 1,000 SF concrete segregated storage munitions buildings would be added to existing segregated storage (B716). Project would provide adequate space needed to fulfill mission requirements. | 5,000 | 5,000 |
| Project #10 – MSA Igloos | | | |
| 2025 | Construct two new igloos to the northeast side of the existing igloos (B710 and B711). QD arcs for new buildings would stay within existing QD arcs. Project would provide adequate space needed to fulfill mission requirements. | 16,800 | 16,800 |
| Project #11 – Taxiway G | | | |
| 2026 | Convert the 50 foot wide asphalt taxiway to a 40 foot wide concrete road. Taxiway is no longer needed once the new arm/dearm pad is created. Two-lane road is needed in order for fire trucks to have sufficient turning radius. There would be no new impervious surfaces created; however, approximately 18,000 SF of new pervious surfaces would be created due to demolitions of impervious surfaces. | 84,100 | -18,000 |

**Table 1. Proposed Construction and Modifications for the 115 FW Installation**

| *Year* | *Action* | *Total Area of New Ground Disturbance (SF)* | *New Impervious Surface (SF)* |
|---|---|---|---|
| Project #12 – New Parking | | | |
| 2022 | Additional parking is needed for the installation. B311 (multi-use facility) and B307 (credit union) would be demolished and turned into parking areas. B311 functions would move to B500. | 32,000 | 23,000 |
| Project #13 – B500 Renovations | | | |
| 2023 | Internal renovations of B500 would occur in order to create room for a multi-use facility and potentially a new fitness center. Medical, Wing Commander, and JAG functions currently in B500 would move to Medical Readiness Facility (Project #14) and B503 (Project #16). Project would provide adequate space needed to fulfill mission requirements, and would consolidate job functions and improve workflow. | 0 | 0 |
| Project #14 – Medical Readiness Facility | | | |
| 2021 | A new facility would be constructed west of B505. This would include a 3,400 SF warehouse. Project would provide adequate space and function needed to fulfill mission requirements. | 18,650 | 18,650 |
| Project #15 – Boundary Fence | | | |
| 2024 | The existing boundary fence is not currently up to airport BASH standards. It would be replaced and the height would increase from 8 feet to 10 feet. New boundary fencing would be installed in two other areas in order to separate the ANG property from the airport and Army property as well as enclose the buildings related to the flying mission. | 8,000 LF | 0 |
| Project #16 – B503 Renovations | | | |
| 2023 | Internal renovations to B503 in order to move Wing Commander and JAG functions into this building (Project #13). | 0 | 0 |
| Project #17 – GOV Parking Shelters | | | |
| 2020 | Two 500 SF unheated enclosed shelters would be constructed for maintenance storage and operations vehicles. In addition, all existing asphalt would be repaved in the B402 complex and T2, T3, and grain bin would be demolished. Project would provide adequate space needed to fulfill mission requirements. | 30,000 | 0 |
| Project #18 – EOD BSERV Bay | | | |
| 2024 | A 15-by-100-foot wide bay would be added to the west side of B1210 for warm storage for the BSERV. Project would provide adequate space needed to fulfill mission requirements. | 1,500 | 600 |
| Project #19 – Fire Department Crash Truck Bay | | | |
| 2025 | Construct a 1,500 SF bay on the south side of B430 for a second crash truck. B1206 would be demolished and 665 SF would be converted to grass. Project would provide adequate space needed to fulfill mission requirements. | 2,165 | 50 |
| Project #20 – Security Forces | | | |
| 2020 | B1212 was originally constructed as a MSA and does not currently have any windows. This project would include internal Renovations of B1212, including adding windows. | 0 | 0 |

**Table 1. Proposed Construction and Modifications for the 115 FW Installation**

| *Year* | *Action* | *Total Area of New Ground Disturbance (SF)* | *New Impervious Surface (SF)* |
|---|---|---|---|
| Project #21.1 – Indoor Small Arms Range | | | |
| 2020 | Construction of a 10,500 SF indoor small arms range west of B1212. Project would provide adequate space needed to fulfill mission requirements. | 10,500 | 10,500 |
| Project #21.2 – Indoor Small Arms Range | | | |
| 2020 | Construction of a 10,500 SF indoor small arms range east of B901. | 10,500 | 10,500 |
| Project #22 – CATM | | | |
| 2020 | An 1,800 SF CATM facility would be added as an addition to B1212. | 1,800 | 1,800 |
| Project #23 – Off-Installation Road Pavements* | | | |
| 2023 to 2024 | Repair roads near the front gate of the installation, including Pierstorff Street to Highway 51 and Pearson Street down to Anderson Street. MCCA would provide the City of Madison funding to repair roads. | 300,000 | 0 |
| Project #24 – Vehicle Maintenance Storm Drainage* | | | |
| 2021 | Replace pavement and regrade area around B1000 and B1001 to proper grades. Current area is poorly graded and collects water during storms. | 53,000 | 0 |
| Project #25.1 – Communications | | | |
| 2026 | Secondary communications cable is needed for redundancy. Project would install underground fiber optic communications cable along Wright Street to Mitchell Street. | 4,000 | 0 |
| Project #25.2 – Communications | | | |
| 2026 | Install underground fiber optic communications cable along Wright Street to Mitchell Street, continuing down Sloan Street to B406. | 5,600 | 0 |
| Project #26 – Small Arms Storage | | | |
| 2020 | Construct a 1,000 SF small arms storage building near the new small arms range. Project would provide adequate space needed to fulfill mission requirements. | 1,000 | 1,000 |
| Project #27 – Base Street Lighting* | | | |
| 2026 | Add new street lighting on Benson and Becker Streets. Project would address safety concerns with inadequate lighting. | 0 | 0 |

*Notes:* *Project not depicted on map.

*Legend:* AT/FP = Anti-terrorism/Force Protection; BASH = Bird/Wildlife Aircraft Strike Hazard; BSERV = Base Support Emergency Response Vehicle; CATM = Combat Arms Training and Maintenance; EOD = Explosive Ordnance Disposal; FOD = Foreign Object Debris; GOV = Government Owned Vehicle; JAG = Judge Advocate General; LF = Linear Feet; MCCA = Master Cooperative Construction Agreement; MOGAS = Motor Gasoline; MSA = Munitions Storage Area; NEPA = National Environmental Policy Act; POL = Petroleum, Oil, and Lubricant; POV = Privately Owned Vehicle; QD = Quantity-Distance; SF = square feet/foot.

Under the Proposed Action, new construction would result in up to 1,094,330 SF (25.1 acres) of new construction footprint and up to 50,600 SF (1.2 acres) of new impervious surface. The total construction footprint analyzed represents the largest possible footprint of each of the options. Preliminary estimates of the construction required under the Proposed Action place the total cost of construction, demolition, and renovation between 40 and 60 million dollars.

**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 construction, renovation, and demolition projects would not occur. This would not meet the identified needs of the ANG, the United States (U.S.) Air Force (USAF), or the State of Wisconsin; however, this alternative is carried forward for analysis in this EA per CEQ regulations and as a baseline from which to compare the potential impacts of the Proposed Action.

**SUMMARY OF FINDINGS:**

**Safety.** Providing new and renovated facilities for the 115 FW installation that support the current mission, and are properly sited with adequate space and a modernized supporting infrastructure, will generally enhance ground safety during required operations, training, maintenance and support procedures, security functions, and other activities conducted by the 115 FW. New building construction is not proposed within Runway Protection Zones (RPZs); therefore, construction activity will not result in any greater safety risk or obstructions to navigation. While there are a few planned construction projects within the proposed quantity-distance (QD) arcs, per Air Force Manual 91-201, *Explosive Safety Standards*, all public transportation route distances and inhabited building distances meet specified net explosive weight QD criteria. The proposed construction projects meet all criteria specified in the ANG Handbook 32-1084, *Facility Space Standards*. Projects will use AT/FP site design standards for siting of facilities, parking, walkways, and other features.

**Air Quality.** Emissions associated with construction activities proposed at the 115 FW installation will not be significant. All of the criteria pollutant emissions are below the comparative indicator values. The operation of new facilities may result in a small increase in installation-related greenhouse gas (GHG) emissions, primarily through the consumption of electricity and possibly through the combustion of fossil fuel on site if any oil or natural gas boilers or other heating units are installed in the new facilities. While the GHG emissions generated from the construction activities and building operations alone will not be enough to cause global warming, in combination with past and future emissions from all other sources they will contribute incrementally to the global warming that produces the adverse effects of climate change.

**Land Use.** Proposed construction activities will be short-term and intermittent but may cause minor traffic and/or noise disruptions to local businesses as well as employees at the 115 FW installation. However, construction activities will be temporary and will occur during normal business hours (i.e., between 7 a.m. and 5 p.m., Monday through Friday). The proposed construction activities will improve efficiency in daily operations by providing more efficient and secure operations for the 115 FW. Land uses will be consistent with current functions on the

installation and the airport and all facilities will be designed and sited to be compatible with existing land uses and safety guidelines. Therefore, impacts to adjacent land use or land use on the 115 FW installation will be negligible.

**Earth Resources.** Impacts to earth resources will be minimal. Under the Proposed Action, new construction will consist of 27 separate projects resulting in up to 1,094,330 SF (25.1 acres) of new construction footprint, including up to 50,600 SF (1.2 acres) of new impervious surfaces. The 115 FW is a tenant of the Dane County Regional Airport and is therefore included as a co-permittee under their Wisconsin Pollutant Discharge Elimination System (WPDES) stormwater permit (WPDES Permit No. WI-0048747-04-0). The conditions of the permit are intended to comply with existing water quality standards contained in Chapters NR 102 and NR 105 of the Wisconsin Administrative Code. The installation's WPDES stormwater permit requires the 115 FW installation to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) to improve the quality of stormwater runoff and thereby improve the quality of receiving waters. A Notice of Intent would be filed with the State of Wisconsin to obtain coverage under the General Permit for Stormwater Runoff from Construction Activities prior to implementation of individual projects. To minimize potential impacts to soil associated with erosion, runoff, and sedimentation during construction activity, standard construction practices as described in the 115 FW installation SWPPP would be implemented during and following the construction periods. Any potential impacts resulting from erosion during construction/demolition activities will be controlled through the use of standard erosion control measures such as soil compaction, water, sandbags, silt fencing, earthen berms, or temporary sedimentation basins. Consequently, impacts from erosion will be minimal.

**Water Resources.** As a result of implementation of the Proposed Action, there will be an approximately 1.2 acre increase in impervious surface from the proposed construction. This could result in localized increases in surface runoff and total suspended particulates to nearby surface waters. To minimize potential impacts from demolition associated with erosion, runoff, and sedimentation, BMPs as described in the 115 FW SWPPP will be implemented during the construction period. There will be minimal impacts to groundwater or floodplains from the Proposed Action.

**Biological Resources.** No impacts to any federally or state threatened, endangered, or special status species are expected as a result of the Proposed Action at the 115 FW installation. No federally threatened and endangered species are currently known to reside on the 115 FW installation. One state listed threatened species, the big brown bat, is known to occur on the installation, but would not be impacted by the Proposed Action, as all project activities would occur during daylight hours, when bats are not active. Additionally, big brown bats roost and forage in and around human development and open fields. Construction-related impacts to the

vegetation at the installation will be minor due to the lack of sensitive vegetation in the project areas.

**Infrastructure.** The demand for energy (primarily electricity, gasoline, and diesel) could increase during the demolition and construction phases of the Proposed Action. The proposed demolition and construction will generate debris requiring landfill disposal. Construction and demolition waste contaminated with hazardous waste, asbestos-containing material (ACM), lead-based paint (LBP), or other undesirable components will be managed in accordance with AFI 32-7042, *Waste Management*. Following construction, average energy consumption would be expected to stay the same or decrease compared to energy consumption associated with existing facilities. Minimal impacts are expected from the Proposed Action.

**Cultural Resources.** The open areas of the 115 FW installation have been intensively surveyed for archaeological resources, and no National Register of Historic Places (NRHP)-eligible archaeological resources have been identified. It is not expected that undiscovered cultural resources would be found during implementation of the Proposed Action at the 115 FW installation; however, in the event of an inadvertent discovery during ground-disturbing operations, the following specific actions would occur. The Project Manager would cease work immediately and the discovery would be reported to the 115 FW Environmental Manager, who would secure the location with an adequate buffer and notify the Commander and the NGB Cultural Resources Manager. The Environmental Manager would then continue to follow ANG Inadvertent Discovery protocol. No traditional resources have been identified at the 115 FW installation and the highly developed nature of the installation makes it unlikely to contain any such resources. Because there are no architectural resources considered eligible for listing in the NRHP at the 115 FW installation, implementation of the Proposed Action would have no significant impacts.

**Socioeconomics.** Economic activity associated with proposed construction and demolition activities at the 115 FW installation, such as employment and materials purchasing, will provide short-term economic benefits to the local economy. However, short-term beneficial impacts resulting from construction payrolls and materials purchased will be negligible on a regional scale.

**Environmental Justice.** Analysis of each resource has concluded that populations, including minority populations and low-income populations outside the boundaries of the installation and airport, will not be significantly impacted by implementation of the Proposed Action. Therefore, implementation of the Proposed Action will not disproportionately impact minority or low-income populations. Implementation of the Proposed Action will not result in environmental health risks or safety risks to children as there are no such facilities located at the 115 FW installation or airport.

**Hazardous Materials and Wastes.** Under the Proposed Action, the quantities of hazardous materials and petroleum substances used throughout the installation would not change over the long term. Construction and demolition activities will cause short-term increases in the quantities of hazardous materials (e.g., paint) and petroleum products (e.g., vehicle fuel) used and stored on the installation. A pre-demolition inspection for universal wastes, hazardous and toxic wastes, LBP, and ACM will be completed prior to any building demolition. All ACM will be properly characterized, removed, and disposed of prior to or during demolition in accordance with 40 CFR 61.40 through 157. All LBP will be managed and disposed of in accordance with Toxic Substances Control Act, Occupational Safety and Health Administration regulations, Wisconsin requirements (regarding site work practices for buildings with LBP), and established ANG procedures.

Several Environmental Restoration Program (ERP) Sites and Areas of Concern (AOCs) overlap with the proposed construction projects. However, no impacts are expected as a result of the Proposed Action. If any contaminated media (e.g., soil, groundwater) were encountered during the course of site preparation (e.g., clearing, grading) or site development (e.g., excavation for installation of building footers) for any of the projects under the Proposed Action, samples will be collected to determine whether the media are contaminated, and contaminated media will be segregated for off-site disposal or for on-site reuse as appropriate. The 115 FW will take appropriate measures to ensure that personnel were not exposed to unacceptable levels of contaminated soil or groundwater. They will also establish an appropriate course of action to ensure that federal and state agency notification requirements were met and to arrange for agency consultation, as necessary.

**PUBLIC INVOLVEMENT:** NEPA, 40 CFR 1500-1508, and 32 CFR 989 require public review of the EA before approval of the Finding of No Significant Impact (FONSI) and implementation of the Proposed Action. A notice of availability for public review of the Draft EA was published in the *Wisconsin State Journal* on April 7, 2019. Comments received from agencies and the public have been addressed and incorporated, as appropriate, into the Final EA.

**FINDING OF NO SIGNIFICANT IMPACT:** Based on my review of the facts and analysis in this EA, I conclude that the Proposed Action will not have a significant impact on the quality of the human or natural environment or generate significant controversy either by itself or considering cumulative impacts. Accordingly, the requirements of NEPA, the CEQ, and 32 CFR 989 *et seq.* have been fulfilled, and an Environmental Impact Statement is not necessary and will not be prepared.

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MARC V. HEWETT, P.E., GS-15, DAF Date
Chief, Asset Management Division

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# 1.0 PURPOSE AND NEED FOR INDIVIDUAL PROPOSED ACTIONS

## 1.1 INTRODUCTION

The National Guard Bureau (NGB) proposes to implement construction, renovation, and demolition projects at the 115th Fighter Wing (115 FW) installation located at Dane County Regional Airport in Madison, Wisconsin. The 115 FW currently provides support for federal, state, and community interests by maintaining a highly trained, well-equipped military force that provides combat-ready support elements in response to wartime and peacetime tasking; protecting life and property; and preserving peace, order, and public safety.

In accordance with 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] Parts 1500-1508), and Air Force Instruction (AFI) 32-7061 as promulgated at 32 CFR Part 989 et seq., Environmental Impact Analysis Process (EIAP), the NGB is preparing this Draft Environmental Assessment (EA) that considers the potential consequences to the human and natural environment that may result from implementation of this action.

## 1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION

### 1.2.1 Purpose and Need

The purpose of the Proposed Action is to provide the facilities and training opportunities necessary to ensure that the 115 FW can accomplish their mission in a safe and efficient manner. For the 115 FW to continue to meet their mission goals, the NGB needs to provide facilities that are properly sized and configured to meet the demands of the continuously evolving mission of the 115 FW. The proposed construction and renovation projects would improve mission efficiency by improving base access and utilities, consolidating mission functions, and upgrading facilities to meet current safety and security standards. The proposed demolition actions would remove excess, obsolete, deteriorating, and underused facilities.

The new facilities would comply with Air National Guard (ANG) Instruction 32-1023, *Criteria and Standards for Air National Guard Construction*, and ANG Handbook 32-1084, *Facility Space Standards*. The construction is also necessary to replace outdated facilities and to secure assets. New facilities would adhere to *DoD Minimum Antiterrorism Standards for Buildings*, as presented in Unified Facilities Criteria (UFC) 4-010-01, effective 9 February 2012, Change 1, 01 October 2013.

### 1.2.2 Location and Mission of the 115th Fighter Wing

The 115 FW installation (also known as Truax Field) of the Wisconsin Air National Guard (WIANG) is located within the boundaries of Dane County Regional Airport, Wisconsin (Figure 1.2-1). The installation is approximately 5 miles northeast of the Madison central business district. The 115 FW installation is approximately 155 acres in size (comprised of federally fee-owned land and land leased from Dane County, both of which are licensed by the federal government to the state of Wisconsin for use by the WIANG) and has over 40 buildings/structures (WIANG 2017).

The 115 FW is tasked to carry out two distinct missions. The federal mission is to staff and train flying and support units to augment Air Combat Command's (ACC's) general-purpose fighter forces to effectively and rapidly deliver F-16 combat power anywhere in the world for wartime or peacetime missions. Additionally, the 115 FW provides an Aerospace Control Alert commitment for the region under the North American Aerospace Defense Command and in cooperation with civilian aviation and law enforcement agencies. The 115 FW maintains mobilization readiness and conducts training in support of Total Force capabilities as directed by gaining commands. The state mission is to provide trained and equipped units to protect life and property and to preserve peace, order, and public safety as directed by the Governor of Wisconsin. The 115 FW currently operates 18 F-16 C/D aircraft and 1 RC-26B aircraft.

## 1.3 SUMMARY OF KEY ENVIRONMENTAL REQUIREMENTS

### 1.3.1 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 NEPA (40 CFR Parts 1500-1508) (CEQ 1978).

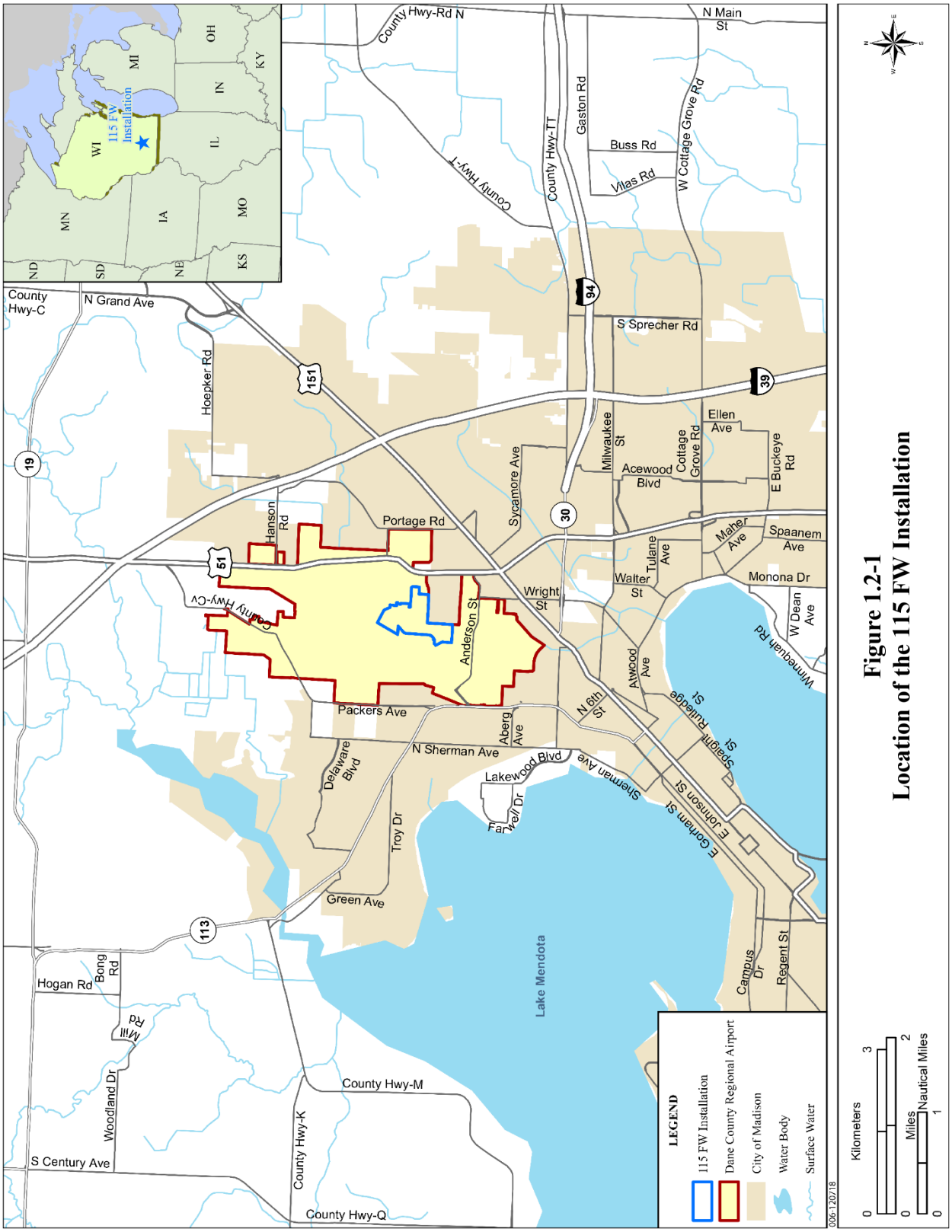


**Figure 1.2-1**
**Location of the 115 FW Installation**

The activities addressed within this document constitute a major federal action and therefore must be assessed in accordance with NEPA. To comply with NEPA, as well as other pertinent environmental requirements, the decision-making process for the Proposed Action includes the development of this EA to address the environmental issues related to the proposed activities.

### 1.3.2 Water Resources Regulatory Requirements

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 Executive Order (EO) 11990, *Protection of Wetlands*, regulate development activities in or near streams or wetlands. Section 404 also requires a permit from the U.S. Army Corps of Engineers (USACE) for dredging and filling in wetlands. 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.

In addition, federal projects with a footprint larger than 5,000 square feet (SF) must maintain pre-development hydrology and prevent any net increase in stormwater runoff as outlined in UFC 3-210-10, *Low Impact Development* (as amended, 2016), and consistent with the U.S. Environmental Protection Agency's (USEPA's) *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act* (EISA) (December 2009).

### 1.3.3 Cultural Resources Regulatory Requirements

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 (ACHP) 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 a National Historic Landmark; or valued by modern American Indians for maintaining their traditional culture. Section 106 of NHPA requires federal agencies to consult with State Historic Preservation Officers (SHPOs) if their undertakings might affect such resources. Protection of Historic and Cultural Properties (36 CFR Part 800 [2004]) provided an explicit set of procedures for federal agencies to meet their obligations under the NHPA, which includes inventory of resources and consultation with SHPO.

The American Indian Religious Freedom Act (AIRFA) (42 USC § 1996) established federal policy to protect and preserve the rights of American Indians to believe, express, and exercise their traditional religions, including providing access to sacred sites.

The Native American Graves Protection and Repatriation Act (NAGPRA) (25 USC §§ 3001-3013) requires consultation with American Indian Tribes prior to excavation or removal of human remains and certain objects of cultural importance.

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

On November 27, 1999, the Department of Defense (DoD) promulgated its Annotated American Indian and Alaska Native Policy, which emphasizes the importance of respecting and consulting with tribal governments on a government-to-government basis. This Policy requires an assessment, through consultation, of the effect of proposed DoD actions that may have the potential to significantly affect protected tribal resources, tribal rights, and American Indian lands before decisions are made by the respective services (DoD American Indian/Alaska Native Policy), as does DoD Instruction 4710.02, *Interaction with Federally Recognized Tribes* (September 14, 2006). In addition, coordination with federally recognized American Indian Tribes must occur in accordance with EO 13175, *Consultation and Coordination with Indian Tribal Governments*. Section 106 (NHPA) consultation and government-to-government consultation for this project is ongoing (see Appendix A).

### 1.3.4 Clean Air Act

The Clean Air Act (CAA) (42 USC §§ 7401-7671q, as amended) provided the authority for the USEPA to establish nationwide air quality standards to protect public health and welfare. Federal standards, known as the National Ambient Air Quality Standards (NAAQS), were developed for six criteria pollutants: ozone ($O_3$), nitrogen dioxide ($NO_2$), carbon monoxide (CO), sulfur dioxide ($SO_2$), both coarse and fine inhalable particulate matter (less than or equal to 10 microns in diameter [$PM_{10}$], and particulate matter less than or equal to 2.5 microns in diameter [$PM_{2.5}$]), and lead (Pb). The Act also requires that each state prepare a State Implementation Plan (SIP) for maintaining and improving air quality and eliminating violations of the NAAQS. In nonattainment and maintenance areas, the CAA requires federal agencies to determine whether their proposed actions conform with the applicable SIP and demonstrate that their actions will not (1) cause or contribute to a new violation of the NAAQS, (2) increase the frequency or severity of any existing

violation, or (3) delay timely attainment of any standard, emission reduction, or milestone contained in the SIP. The EA will present the project conformity applicability analysis and document the conformity-related emission calculation estimates. Conformity with the SIP must be demonstrated prior to implementation of the action.

### 1.3.5 Greenhouse Gas Emissions

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere. These emissions occur from natural processes as well as human activities. The accumulation of GHGs in the atmosphere regulates, in part, the earth's temperature. Scientific evidence indicates a trend of increasing global temperature over the past century due to an increase in GHG emissions from human activities. Climate change associated with GHGs is producing negative economic and social consequences across the globe.

On a national scale, federal agencies are addressing emissions of GHGs by reductions mandated in federal laws and EOs. Most recently, EO 13834, *Efficient Federal Operations*, was enacted to ensure federal agencies prioritize actions that reduce waste, cut cost, enhance the resilience of federal infrastructure and operations, and enable more effective accomplishment of their mission.

### 1.3.6 Endangered Species Act

The Endangered Species Act (ESA) 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 U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Act.

### 1.3.7 Other Environmental Requirements

Other environmental requirements that potentially apply to the implementation of this proposal include guidelines promulgated by EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, to ensure that disproportionately high and adverse human health or environmental effects on citizens in these categories are identified and addressed, as appropriate. 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*.

## 1.4 RESOURCES NOT CARRIED FORWARD FOR DETAILED ANALYSIS

As directed by 40 CFR 1501.7(a)(3), issues that are not significant or have been covered by prior environmental review may be eliminated from detailed discussion. The following resources are not expected to be affected or may be negligibly affected by implementation of the alternatives.

*Noise* – Noise associated with the proposed construction would be intermittent and temporary and considered minor when compared to noise from the airport operations. No changes to aircraft types or operations would occur under the Proposed Action. No sensitive noise receptors, such as residential areas, are located within one-half mile of the 115 FW installation.

*Airspace* – No changes to aircraft types or operations would occur under the Proposed Action.

## 1.5 PUBLIC AND AGENCY REVIEW OF THE ENVIRONMENTAL ASSESSMENT

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. A list of relevant federal, state, and local agencies that have received this EA for review and comment is provided in Appendix A.

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# 2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

## 2.1 INTRODUCTION

The NGB is proposing to update facilities at the 115 FW installation. Many of these facilities do not adequately support current or future mission requirements and/or are not adequately sized. As detailed in Section 2.2, the Proposed Action includes construction, renovation, and demolition projects that would accommodate the continuously evolving mission of the 115 FW. This EA analyzes two alternatives, the Proposed Action and a No Action Alternative. The Proposed Action is the 115 FW's preferred alternative. Section 2.4 discusses other alternatives that were considered but dismissed from detailed analysis and the reasons these alternatives were not carried forward.

## 2.2 PROPOSED ACTION

Under the Proposed Action, the 115 FW would implement construction, renovation, and demolition projects as summarized in Table 2.2-1. These facilities would be sited as shown in Figure 2.2-1. Twenty-seven infrastructure improvement projects would be needed, including the demolition of seven facilities, in order to support the current mission. These improvement projects would provide adequate space needed to fulfill mission requirements and would consolidate job functions and improve workflow. Some of these construction projects also have several options for different locations that could be implemented. All construction would be designed in accordance with the DoD UFC 1-200-01, *General Building Requirements* and UFC 1-200-02, *High Performance and Sustainable Building Requirements*. In addition, all construction would conform to DoD Anti-terrorism/Force Protection (AT/FP) Construction Standards.

Under the Proposed Action, new construction would result in up to 1,094,330 SF (25.1 acres) of new construction footprint and up to 50,600 SF (1.2 acres) of new impervious surface. The total construction footprint analyzed represents the largest possible footprint of each of the options. Preliminary estimates of the construction required under the Proposed Action place the total cost of construction, demolition, and renovation between 40 and 60 million dollars.

**Table 2.2-1. Proposed Construction and Modifications for the 115 FW Installation**

| *Year* | *Action* | *Total Area of New Ground Disturbance (SF)* | *New Impervious Surface (SF)* |
|---|---|---|---|
| Project #1 – POL Fuel Truck Canopy | | | |
| 2026 | Construct one canopy covering up to seven R-11 fuel trucks in the POL area. This is needed in order to provide shelter during winter months. | 20,000 | 0 |
| Project #2.1 – Replace Diesel/MOGAS Tanks (Option 1) | | | |
| 2021 | Existing tanks are old and do not function properly. Project would demolish existing tanks (B1010) and add new tanks behind B1212. | 1,300 | 0 |
| Project #2.2 – Replace Diesel/MOGAS Tanks (Option 2) | | | |
| 2021 | Demolish existing tanks (B1010) and add new tanks in same area, but closer to fence line. | 1,300 | 0 |
| Project #3 – Construct Jet A Fuel Tanks | | | |
| 2026 or 2027 | Replace existing two 100,000-gallon tanks with five new 50,000-gallon Jet A fuel tanks in same area. This would include 4,500 SF of new concrete pads for the tanks. Remove existing containment dikes. There is a need to increase storage capacity of fuel due to a recent requirement to reduce the number of fuel deliveries. If fuel is delivered less frequently, then the installation would require more fuel storage capacity to maintain operations between fuel deliveries. New tanks would be double walled saddle tanks and would not need containment dikes. | 8,100 | -3,600 |
| Project #4 – Arm/Dearm Pad | | | |
| 2026 | Construct a new 12,700 SF arm/dearm near the intersection of Taxiways G and F. The pad would fit four aircraft (per CATCODE 116-661). In addition, a new approximately 3,200 SF earth-covered berm would be constructed north of Taxiway F. Existing arm/dearm pads are too small and existing location does not allow for a four-ship pad to be built due to size constraints. | 15,900 | 12,700 |
| Project #5 – Main Gate | | | |
| 2024 | A new gate house, two POV lanes, and one truck lane would be added to the main gate. Project would address AT/FP requirements. A new barrier system, swing arm gate, and lane widening is currently occurring at the main gate and is covered under a previous NEPA document. Approximately 24,400 SF of new impervious surfaces would be created and approximately 41,700 SF of new pervious surfaces would be created due to demolitions of impervious surfaces. Therefore, there is a net of -17,300 SF of new impervious surfaces. | 118,400 | -17,300 |
| Project #6 – Base Wide Pavements | | | |
| 2025 to 2026 | All installation roads are in need of repair. There would be no footprint expansion. All roads would be repaved, with the exception of Mitchell Street, which is covered under Project #7. | 322,000 | 0 |

**Table 2.2-1. Proposed Construction and Modifications for the 115 FW Installation**

| *Year* | *Action* | *Total Area of New Ground Disturbance (SF)* | *New Impervious Surface (SF)* |
|---|---|---|---|
| Project #7 – Mitchell Street | | | |
| 2024 | Additional parking is required for the installation and the four-lane width of Mitchell Street is not being utilized. As a result, Mitchell Street would be converted to a two-lane road and the parking areas to the south would be expanded to the north. Utilities would be moved to the north side of Mitchell Street. Approximately 10,030 SF of new impervious surfaces would be created and approximately 10,630 SF of new pervious surfaces would be created due to demolitions of impervious surfaces. Therefore, there is a net of -600 SF of new impervious surfaces. | 35,275 | -600 |
| Project #8 – MSA Berm | | | |
| 2023 | Addition of an earthen berm southeast of the MSA fence would be constructed to provide protection from aircraft artillery. The berm would have metal panel sides and be earth filled. | 11,240 | 0 |
| Project #9 – Segregated Storage | | | |
| 2025 | Five 1,000 SF concrete segregated storage munitions buildings would be added to existing segregated storage (B716). Project would provide adequate space needed to fulfill mission requirements. | 5,000 | 5,000 |
| Project #10 – MSA Igloos | | | |
| 2025 | Construct two new igloos to the northeast side of the existing igloos (B710 and B711). QD arcs for new buildings would stay within existing QD arcs. Project would provide adequate space needed to fulfill mission requirements. | 16,800 | 16,800 |
| Project #11 – Taxiway G | | | |
| 2026 | Convert the 50 foot wide asphalt taxiway to a 40-foot wide concrete road. Taxiway is no longer needed once the new arm/dearm pad is created. Two-lane road is needed in order for fire trucks to have sufficient turning radius. There would be no new impervious surfaces created; however, approximately 18,000 SF of new pervious surfaces would be created due to demolitions of impervious surfaces. | 84,100 | -18,000 |
| Project #12 – New Parking | | | |
| 2022 | Additional parking is needed for the installation. B311 (multi-use facility) and B307 (credit union) would be demolished and turned into parking areas. B311 functions would move to B500. | 32,000 | 23,000 |
| Project #13 – B500 Renovations | | | |
| 2023 | Internal renovations of B500 would occur in order to create room for a multi-use facility and potentially a new fitness center. Medical, Wing Commander, and JAG functions currently in B500 would move to Medical Readiness Facility (Project #14) and B503 (Project #16). Project would provide adequate space needed to fulfill mission requirements, and would consolidate job functions and improve workflow. | 0 | 0 |

**Table 2.2-1. Proposed Construction and Modifications for the 115 FW Installation**

| *Year* | *Action* | *Total Area of New Ground Disturbance (SF)* | *New Impervious Surface (SF)* |
|---|---|---|---|
| Project #14 – Medical Readiness Facility | | | |
| 2021 | A new facility would be constructed west of B505. This would include a 3,400 SF warehouse. Project would provide adequate space and function needed to fulfill mission requirements. | 18,650 | 18,650 |
| Project #15 – Boundary Fence | | | |
| 2024 | The existing boundary fence is not currently up to airport BASH standards. It would be replaced and the height would increase from 8 feet to 10 feet. New boundary fencing would be installed in two other areas in order to separate the ANG property from the airport and Army property as well as enclose the buildings related to the flying mission. | 8,000 LF | 0 |
| Project #16 – B503 Renovations | | | |
| 2023 | Internal renovations to B503 in order to move Wing Commander and JAG functions into this building (Project #13). | 0 | 0 |
| Project #17 – GOV Parking Shelters | | | |
| 2020 | Two 500 SF unheated enclosed shelters would be constructed for maintenance storage and operations vehicles. In addition, all existing asphalt would be repaved in the B402 complex and T2, T3, and Grain Bin would be demolished. Project would provide adequate space needed to fulfill mission requirements. | 30,000 | 0 |
| Project #18 – EOD BSERV Bay | | | |
| 2024 | A 15-by-100-foot wide bay would be added to the west side of B1210 for warm storage for the BSERV. Project would provide adequate space needed to fulfill mission requirements. | 1,500 | 600 |
| Project #19 – Fire Department Crash Truck Bay | | | |
| 2025 | Construct a 1,500 SF bay on the south side of B430 for a second crash truck. B1206 would be demolished and 665 SF would be converted to grass. Project would provide adequate space needed to fulfill mission requirements. | 2,165 | 50 |
| Project #20 – Security Forces | | | |
| 2020 | B1212 was originally constructed as a MSA and does not currently have any windows. This project would include internal Renovations of B1212, including adding windows. | 0 | 0 |
| Project #21.1 – Indoor Small Arms Range | | | |
| 2020 | Construction of a 10,500 SF indoor small arms range west of B1212. Project would provide adequate space needed to fulfill mission requirements. | 10,500 | 10,500 |
| Project #21.2 – Indoor Small Arms Range | | | |
| 2020 | Construction of a 10,500 SF indoor small arms range east of B901. | 10,500 | 10,500 |
| Project #22 – CATM | | | |
| 2020 | An 1,800 SF CATM facility would be added as an addition to B1212. | 1,800 | 1,800 |
| Project #23 – Off-Installation Road Pavements* | | | |
| 2023 to 2024 | Repair roads near the front gate of the installation, including Pierstorff Street to Highway 51 and Pearson Street down to Anderson Street. MCCA would provide the city of Madison funding to repair roads. | 300,000 | 0 |

**Table 2.2-1. Proposed Construction and Modifications for the 115 FW Installation**

| *Year* | *Action* | *Total Area of New Ground Disturbance (SF)* | *New Impervious Surface (SF)* |
|---|---|---|---|
| Project #24 – Vehicle Maintenance Storm Drainage* | | | |
| 2021 | Replace pavement and regrade area around B1000 and B1001 to proper grades. Current area is poorly graded and collects water during storms. | 53,000 | 0 |
| Project #25.1 – Communications | | | |
| 2026 | Secondary communications cable is needed for redundancy. Project would install underground fiber optic communications cable along Wright Street to Mitchell Street. | 4,000 | 0 |
| Project #25.2 – Communications | | | |
| 2026 | Install underground fiber optic communications cable along Wright Street to Mitchell Street, continuing down Sloan Street to B406. | 5,600 | 0 |
| Project #26 – Small Arms Storage | | | |
| 2020 | Construct a 1,000 SF small arms storage building near the new small arms range. Project would provide adequate space needed to fulfill mission requirements. | 1,000 | 1,000 |
| Project #27 – Base Street Lighting* | | | |
| 2026 | Add new street lighting on Benson and Becker Streets. Project would address safety concerns with inadequate lighting. | 0 | 0 |

*Notes:* *Project not depicted on map.

*Legend:* AT/FP = Anti-terrorism/Force Protection; BASH = Bird/Wildlife Aircraft Strike Hazard; BSERV = Base Support Emergency Response Vehicle; CATM = Combat Arms Training and Maintenance; EOD = Explosive Ordnance Disposal; FOD = Foreign Object Debris; GOV = Government Owned Vehicle; JAG = Judge Advocate General; LF = Linear Feet; MCCA = Master Cooperative Construction Agreement; MOGAS = Motor Gasoline; MSA = Munitions Storage Area; NEPA = National Environmental Policy Act; POL = Petroleum, Oil, and Lubricant; POV = Privately Owned Vehicle; QD = Quantity-Distance; SF = square feet/foot.

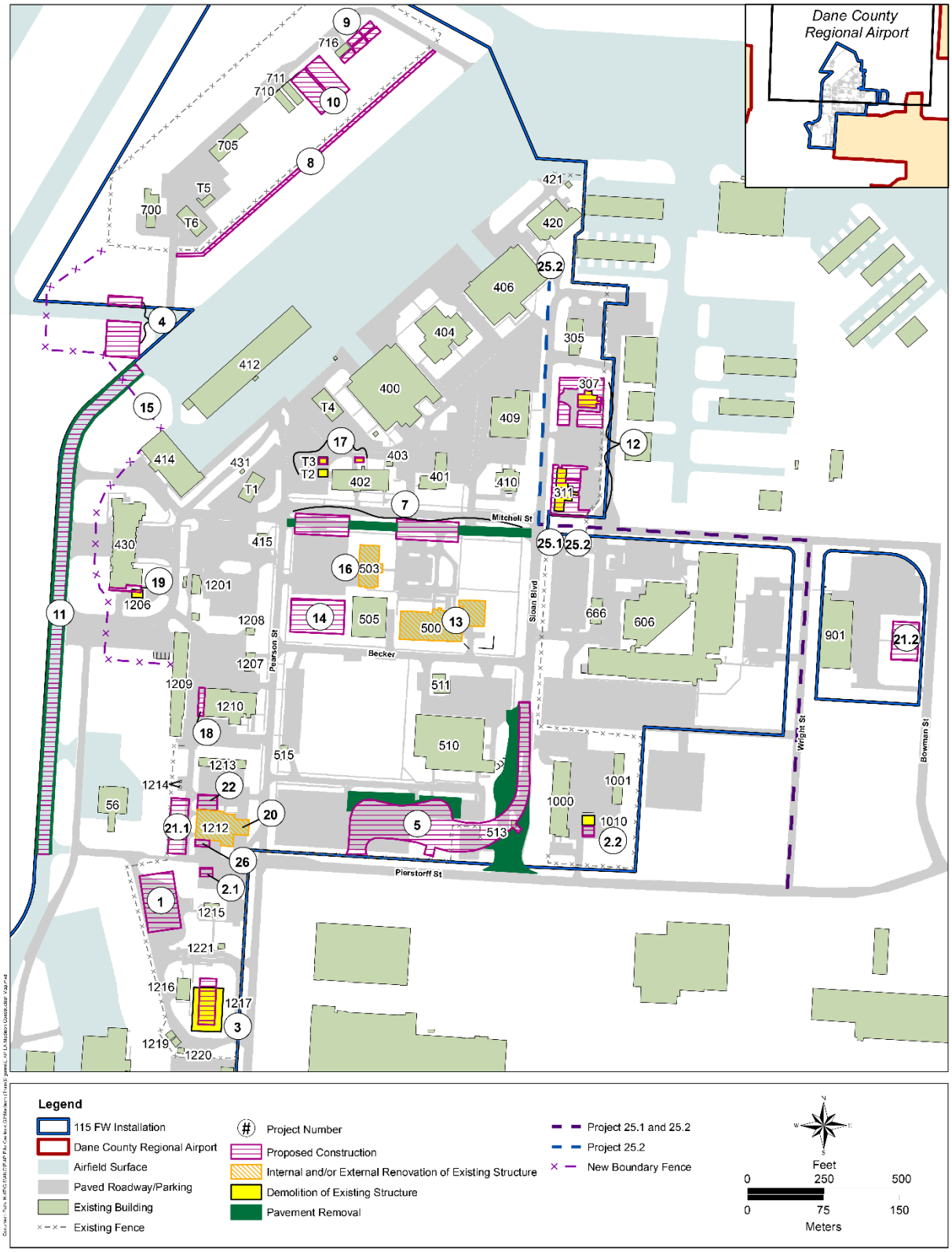


**Figure 2.2-1**
**Proposed 115 FW Construction and Modifications**

## 2.3 NO ACTION ALTERNATIVE

Analysis of the No Action Alternative provides a benchmark, enabling decision-makers to compare the magnitude of the environmental effects of the Proposed Action or alternatives. Section 1502.14(d) of CEQ regulations implementing NEPA requires an EA to analyze the No Action Alternative. No action means that an action would not take place, and the resulting environmental effects from taking no action are compared with the effects of allowing the proposed activity to go forward. Under the No Action Alternative, the construction projects and demolitions would not occur. This would not meet the identified needs of the ANG, the U.S. Air Force (USAF), or the state of Wisconsin; however, this alternative is carried forward for analysis in this EA per CEQ regulations and as a baseline from which to compare the potential impacts of the Proposed Action.

## 2.4 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER CONSIDERATION

During the project siting phase, alternative locations for each construction project were evaluated based on the mission needs of each unit and other selection criteria such as the ability to collocate like services, site availability, and facility condition. Based on this evaluation, with the exception of those projects that have alternative locations and those alternatives listed below, the proposed location for each of the construction projects was determined to be the only feasible alternative that met the purpose and need of this Proposed Action. Each of the facilities proposed for demolition were also evaluated for potential re-use and none were considered suitable.

- *Medical Readiness Facility* – Placing the new facility in the location of the existing running track was considered instead of the location discussed under Project #14. This was eliminated because the track/physical fitness was considered to be a priority and there are limited utilities in that location.
- *Explosive Ordnance Disposal (EOD) Base Support Emergency Response Vehicle (BSERV) Bay* – Placing the new facility in the location of the existing running track was considered instead of the location discussed under Project #18. This was eliminated because the track/physical fitness was considered to be a priority and there are limited utilities in that location. In addition, locating it near the fire department was considered; however, this is considered incompatible development because it is near the flightline.
- *Arm/Dearm Pad* – Expanding one of the existing arm/dearm pads located on airport property was considered instead of the location discussed under Project #4. However, the ANG does not own this land and this option would involve substantial operational traffic and taxi issues.

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# 3.0 AFFECTED ENVIRONMENT

This section describes the natural and human environment that would be affected by implementation of the various alternatives described in Chapter 2. In describing the affected environment, a framework for understanding the potential direct, indirect, and cumulative effects of each alternative, including the No Action Alternative, is provided.

As directed by guidelines contained in NEPA, CEQ regulations, and 32 CFR 989, *Environmental Impact Analysis Process*, the description of the affected environment focuses only on those resource areas potentially subject to impacts and should be commensurate with the anticipated level of environmental impact. The affected environment is described for 11 resource topics: Safety, Air Quality, Land Use, Earth Resources, Water Resources, Biological Resources, Infrastructure, Cultural Resources, Socioeconomics, Environmental Justice, and Hazardous Materials and Wastes. The sections for each resource topic begin with an introduction that defines the resources addressed in the section, summarizes applicable laws and regulations, defines key terms as necessary, and describes the region of influence (ROI) within which the effects from implementation of the various alternatives are anticipated to occur. The ROI varies from resource to resource, but in general, effects from the proposed activities are expected to be concentrated in Dane County.

## 3.1 SAFETY

### 3.1.1 Definition of Resource

This section addresses ground safety associated with activities conducted by the 115 FW. Ground safety considers issues associated with human activities and operations and maintenance activities that support 115 FW operations. A specific aspect of ground safety addresses AT/FP considerations. Explosive safety discusses the management and use of ordnance or munitions associated with installation operations and training activities. The Proposed Action would not impact flight safety on the installation; therefore, it is not discussed in this EA.

The ROI for safety includes the 115 FW installation and its immediate vicinity.

### 3.1.2 Existing Conditions

#### 3.1.2.1 Ground Safety

Day-to-day operations and maintenance activities conducted by the 115 FW are performed in accordance with applicable USAF safety regulations, published USAF Technical Orders, and standards prescribed by Air Force Occupational Safety and Health requirements. The 115 FW

Fire Department has a response agreement as part of the Airfield Joint Use Agreement with Dane County Regional Airport to provide fire protection and first responder services for the installation and its aircraft. The 115 FW has a cooperative response agreement with the local Dane County Regional Airport Fire Department for mutual aid in fire protection, first responder and lifesaving services, and hazardous materials incident response. Under current operations, the unit is fully capable of meeting its requirements; there are no identified equipment shortfalls or limiting factors.

#### 3.1.2.2 Explosive Safety

The 115 FW stores, maintains, and uses a small range of munitions required for performance of their mission. The Munitions Storage Area (MSA) at the 115 FW installation currently has five facilities, including an Administration and Trailer Maintenance facility, a Maintenance and Inspection facility, two earth-covered magazines, and an aboveground magazine with an open inert training pad and a 50-foot by 100-foot tent for inert storage. In addition, there is an EOD storage site between Building 1210 and Building 1213. Figure 3.1-1 shows the quantity-distance (QD) arcs associated with these facilities.

#### 3.1.2.3 Accident Potential Zone/Runway Protection Zone

Runway Protection Zones (RPZs) are trapezoidal zones extending outward from the ends of active runways at commercial airports. RPZs delineate those areas recognized as having the greatest risk of aircraft mishaps, most of which occur during take-off or landing (Figure 3.1-2). Development restrictions associated with RPZs are intended to preclude incompatible land use activities from being established in these areas. The RPZs lie completely within airport property and are free of development that would be incompatible with airport operations.

Facilities within the 115 FW installation are sited in DoD Clear Zones (CZs), contrary to UFC 3-260-01 guidelines, but comply with the less stringent Federal Aviation Administration (FAA) Approach Obstacle Free Zone. As such, the 115 FW operates with an airfield waiver.

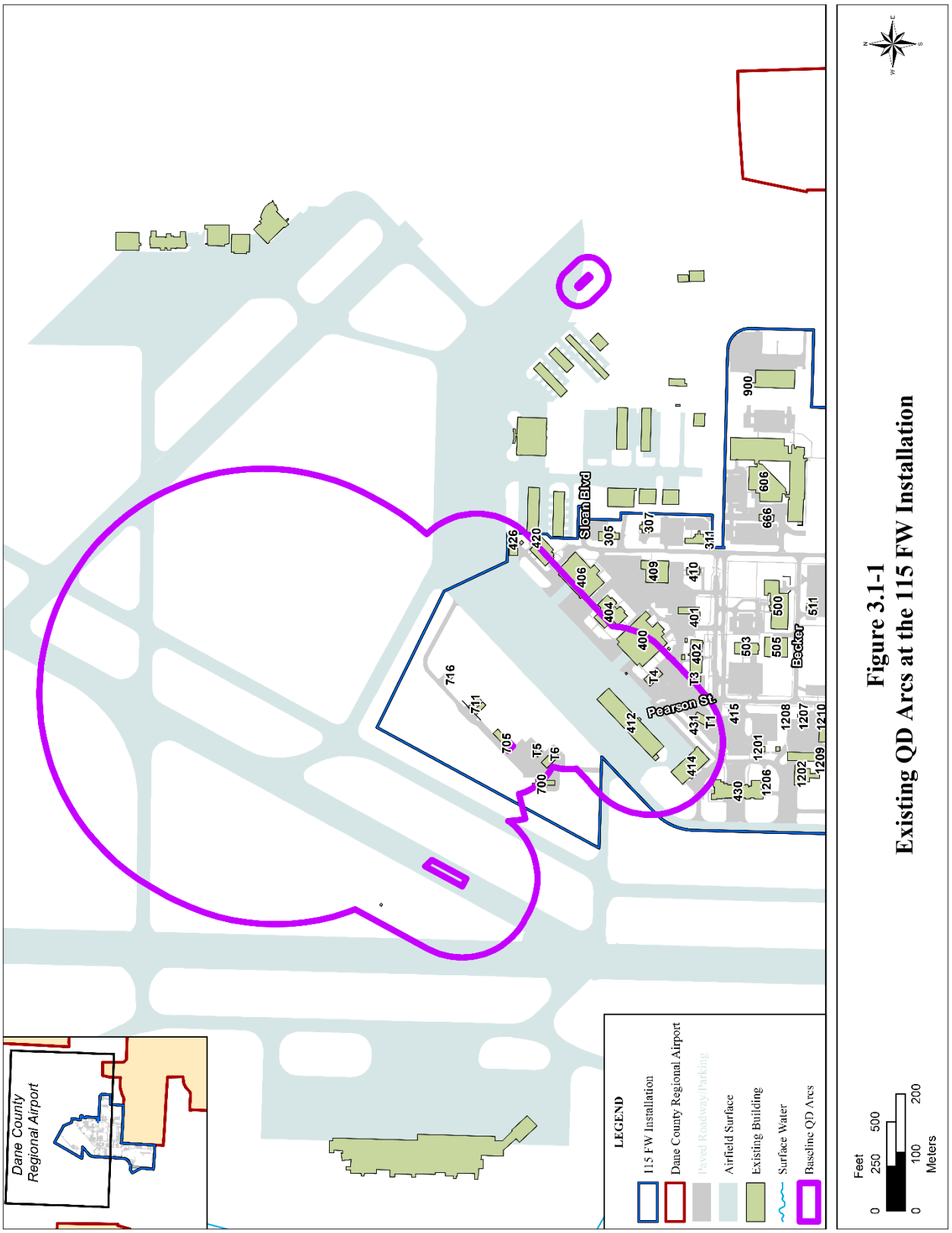


**Figure 3.1-1**
**Existing QD Arcs at the 115 FW Installation**

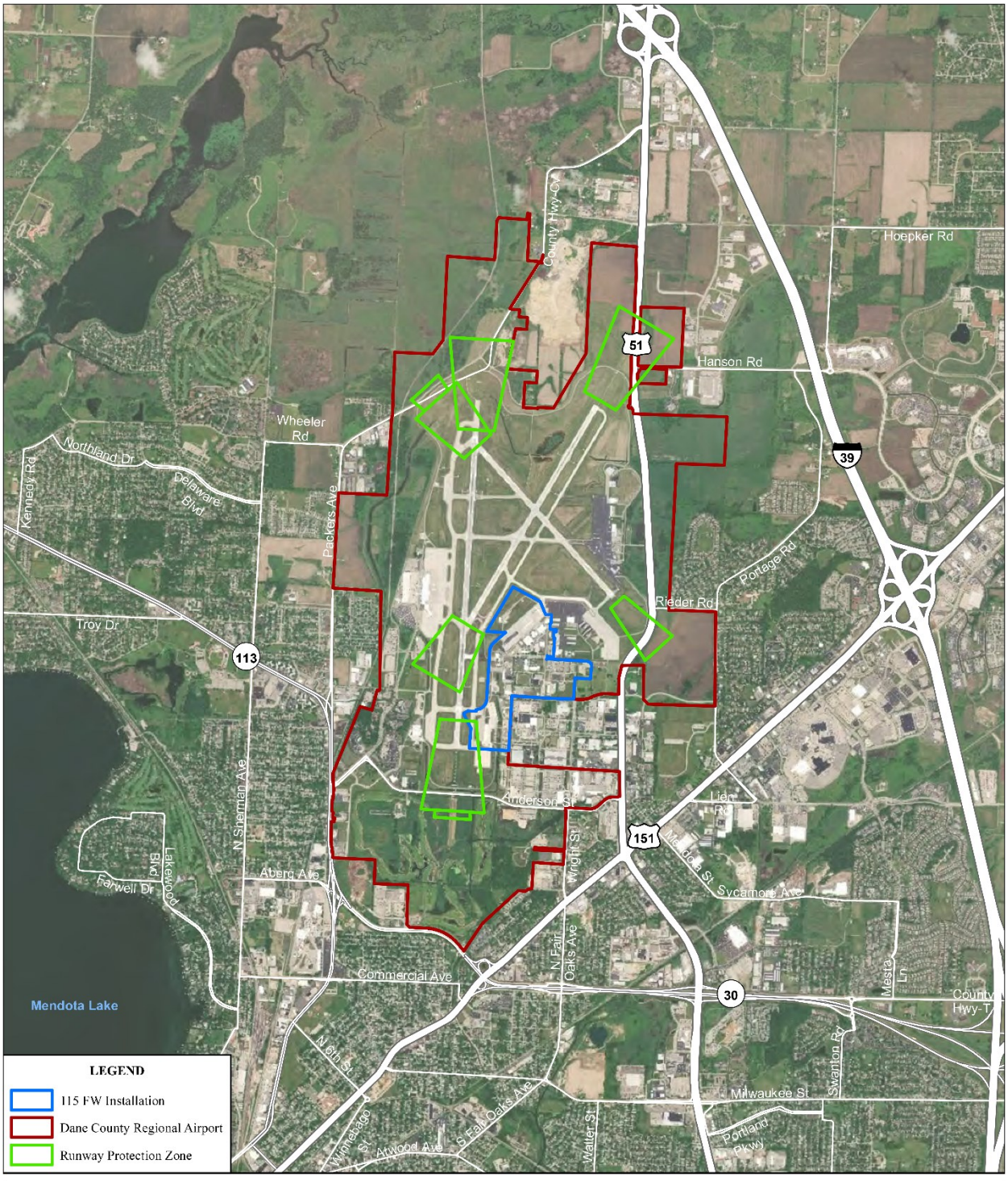


**Figure 3.1-2**
**Existing Runway Protection Zones at**
**Dane County Regional Airport**

#### 3.1.2.4 Anti-Terrorism/Force Protection

As a result of terrorist activities, the DoD and the USAF have developed a series of AT/FP guidelines for military installations: UFC 4-010-01 2007, *DoD Minimum Antiterrorism Standards for Buildings*; AFI 31-210 1999*, The Air Force Antiterrorism/Force Protection (AT/FP) Program*; and DoD O-2000.12-H 1993, *Protection of DoD Personnel and Activities Against Acts of Terrorism and Political Turbulence.* These guidelines 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. The intent of this siting and design guidance is to improve security, minimize fatalities, protect personnel, and limit damage to facilities in the event of a terrorist attack.

Many of the military facilities at the 115 FW installation were constructed before AT/FP considerations became a critical concern. Thus, under current conditions, many facilities do not comply with all current AT/FP standards. However, as new construction occurs and as facilities are modified, the 115 FW would incorporate these standards to the maximum extent practicable.

## 3.2 AIR QUALITY

### 3.2.1 Definition of Resource

Air quality is defined by ambient air concentrations of specific pollutants determined by the USEPA to be of concern with respect to the health and welfare of the general public. The ambient air quality levels measured at a particular location are determined by the interactions of emissions, meteorology, and chemistry. When discussing air quality, it is important to consider the types, amounts, and locations of pollutants emitted into the atmosphere. Meteorological factors that affect air quality include wind and precipitation patterns that can affect the distribution, dilution, and removal of pollutant emissions from the atmosphere. Furthermore, chemical reactions in the atmosphere can transform pollutant emissions into other chemical substances. Ambient air quality data are generally reported as a mass per unit volume (e.g., micrograms per cubic meter [$\mu g/m^3$] of air) or as a volume fraction (e.g., parts per million [ppm] by volume).

Pollutant emissions typically refer to the amount of pollutants or pollutant precursors introduced into the atmosphere by a source or group of sources. Pollutant emissions contribute to the ambient air concentrations of criteria pollutants, either by directly affecting the pollutant concentrations measured in the ambient air or by interacting in the atmosphere to form criteria pollutants. Primary pollutants, such as CO, $SO_2$, Pb, and some particulate matter (PM), are emitted directly into the atmosphere from emission sources.

Secondary pollutants, such as $O_3$, $NO_2$, and some PM, are formed through atmospheric chemical reactions that are influenced by meteorology, ultraviolet light, and other atmospheric processes. Suspended $PM_{10}$ (coarse PM) and $PM_{2.5}$ (fine PM) are generated as primary pollutants by various processes. $PM_{10}$ sources include crushing or grinding operations and dust stirred up by vehicles on roads. $PM_{2.5}$ emissions are produced from all types of combustion, including motor vehicles, power plants, residential wood burning, forest fires, agricultural burning, and some industrial processes. However, $PM_{10}$ and $PM_{2.5}$ can also form as secondary pollutants through chemical reactions or by gaseous pollutants that condense into fine aerosols. Some air pollutants are considered "precursors" to the formation of criteria pollutants. Volatile organic compounds (VOCs) and nitrogen oxides ($NO_x$) aid in the formation of ground-level $O_3$ through atmospheric chemical reactions that occur in the presence of sunlight and are considered to be $O_3$ precursors. For this reason, VOC and $NO_x$ emissions are evaluated to assess impacts on $O_3$ concentrations in the ambient air.

The ROI for this discussion can vary according to pollutant. For pollutants that do not undergo a chemical reaction after being emitted from a source (i.e., direct emissions), the ROI is generally restricted to a region in the immediate vicinity of the installation. These pollutants include CO, $SO_2$, and directly-emitted $PM_{10}$ and $PM_{2.5}$. For pollutants that undergo chemical reactions and interact within the atmosphere to form secondary pollutants, such as $O_3$ and its precursors $NO_x$ and VOCs, and precursors of $PM_{10}$ and $PM_{2.5}$, the ROI is a larger regional area. The chemical transformations and interactions that create $O_3$ and secondary $PM_{10}$ and $PM_{2.5}$ can take hours to occur; therefore, the precursor pollutants may be emitted some distance from the impact area depending on weather conditions.

The Proposed Action occurs at the 115 FW located at the Dane County Regional Airport in Madison, Wisconsin. Therefore, the ROI is part of the Southern Wisconsin Intrastate Air Quality Control Region (AQCR) (40 CFR 81.158).

### 3.2.2 Existing Conditions

#### 3.2.2.1 Regulatory Setting

As part of the CAA, the USEPA has established NAAQS for major pollutants of concern, called "criteria pollutants." These criteria pollutants include CO, $SO_2$, $NO_2$, $O_3$, $PM_{10}$, $PM_{2.5}$, and Pb. The NAAQS represent maximum levels of background pollution that are considered safe, with an adequate margin of safety to protect the public health and welfare. Based on measured ambient criteria pollutant data, the USEPA designates areas in the U.S. as having air quality better than (attainment) or worse than (nonattainment) the NAAQS.

The CAA also established a national goal of preventing degradation or impairment in federally designated Class I areas. Class I areas are defined as those areas where any appreciable degradation in air quality or associated visibility impairment is considered significant. As part of the Prevention of Significant Deterioration (PSD) Program, Congress assigned mandatory Class I status to all national parks, national wilderness areas (excluding wilderness study areas or wild and scenic rivers), and memorial parks greater than 5,000 acres. There are no Class I areas in the state of Wisconsin. Major stationary sources in attainment areas are regulated under the PSD Program. Mobile sources, including aircraft and associated operations such as those occurring at ANG installations, are not subject to the requirements of PSD.

In addition to criteria pollutants, the USEPA has defined 187 substances as hazardous air pollutants (HAPs). HAPs emitted from mobile sources are called Mobile Source Air Toxics (MSATs). MSATs are compounds emitted from highway vehicles and non-road equipment that are known or suspected to cause cancer or other serious health and environmental effects. The primary control methodologies for these pollutants for mobile sources involves reducing their content in fuel and altering the engine operating characteristics to reduce the volume of pollutant generated during combustion. MSATs would be the primary HAPs emitted by mobile sources during construction. The equipment used during construction would likely vary in age and have a range of pollution reduction effectiveness. Construction equipment, however, would be operated intermittently, for the duration of construction (approximately 6 years), and would produce negligible ambient HAPs in a localized area. Therefore, MSAT emissions are not considered further in this analysis.

GHGs are also regulated under the federal CAA. The USEPA defines the following compounds as the main GHGs emitted into our atmosphere: carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), and fluorinated gases such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHGs have varying global warming potential (GWP). The reference gas for GWP is $CO_2$; therefore, $CO_2$ has a GWP of 1. Other GHGs that have GWPs include $CH_4$, which has a GWP of 25, and $N_2O$, which has a GWP of 298. Carbon dioxide equivalent ($CO_2e$) emissions are defined as the amount of $CO_2$ that would have the same GWP, when measured over a specified timescale (generally, 100 years). $CO_2e$ emissions are calculated by multiplying the mass emissions by the GWP and are reported in metric tons.

The potential effects of proposed GHG emissions are by nature global and result in cumulative impacts because most individual sources of GHG emissions are not large enough to have any noticeable effect on climate change. Therefore, the impact of proposed GHG emissions to climate change is discussed in the context of cumulative impacts.

#### 3.2.2.2 Climate and Meteorology

In the Dane County, Wisconsin region, the summers are warm and wet; the winters are cold, dry, and windy; and it is partly cloudy much of the year. Over the course of the year, the temperature typically varies from 13 degrees Fahrenheit (°F) to 82°F and is rarely below -7°F or above 90°F. Rain falls throughout the year in Dane County. The rainy period of the year lasts for 11 months, from February 8 to January 3, with a sliding 31-day rainfall of at least 0.5 inch. The most rain falls during the 31 days centered around June 15, with an average total accumulation of 4.2 inches during this period. The snowy period of the year lasts for 5 months, from November 9 to April 8. The most snow falls during the 31 days centered around December 21, with an average accumulation of 5 inches during this period (Weather Spark 2018).

Over the last half century, average annual precipitation in most of the Midwest has increased by 5 to 10 percent. Rainfall during the four wettest days of the year has increased about 35 percent. Most of the state of Wisconsin has warmed 2 to 3°F in the last century (USEPA 2016).

#### 3.2.2.3 Regional and Local Air Pollutant Sources

The affected environment for the air quality analysis is Dane County, Wisconsin, which is part of the Southern Wisconsin Intrastate AQCR (40 CFR 81.158). Dane County is in attainment for all criteria pollutants and has no designated maintenance areas, so the General Conformity Rule does not apply to the air quality analysis performed for this location.

Table 3.2-1 presents the 2014 emission inventory for Dane County, which includes the city of Madison and Dane County Regional Airport.

**Table 3.2-1. 2014 Criteria Pollutant Emissions for Dane County, Wisconsin**

| *Location* | EMISSIONS (TONS/YEAR) | | | | | |
|---|---|---|---|---|---|---|
| | *VOCs* | *CO* | *$NO_x$* | *$SO_2$* | *$PM_{2.5}$* | *$PM_{10}$* |
| Dane County, Wisconsin | 19,941 | 98,671 | 16,444 | 295 | 2,651 | 5,354 |

*Legend:* CO = carbon monoxide; $NO_x$ = nitrogen oxides; $SO_2$ = sulfur dioxide; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; $PM_{10}$ = particulate matter less than or equal to 10 microns in diameter; VOC = Volatile Organic Compound.

*Source*: USEPA 2018a.

## 3.3 LAND USE

### 3.3.1 Definition of Resource

Land use comprises the natural conditions and/or human-modified activities occurring at a particular location. Human-modified land use categories include residential, commercial, industrial, transportation, communications and utilities, agricultural, institutional, recreational, and other developed use areas. Management plans and zoning regulations determine the type and extent of land use allowable in specific areas and are often intended to protect specially designated or environmentally sensitive areas and sensitive noise receptors.

Several siting criteria have been established specific to land development and use at commercial and military airfields. For example, RPZs, which address height restrictions, development density, and land use in and around civilian airports, are enforced to reduce the potential for aircraft-related hazards.

The ROI for land use is the area including and immediately surrounding the 115 FW installation at Dane County Regional Airport.

### 3.3.2 Existing Conditions

The 115 FW of the WIANG is located within the boundaries of Dane County Regional Airport, Wisconsin (see Figure 1.2-1). The installation is approximately 5 miles northeast of the Madison central business district. The 115 FW installation is approximately 155 acres in size (comprising fee-owned U.S. government land and land leased from Dane County) and has over 40 buildings/structures (WIANG 2017).

The Planning Division within the City of Madison Department of Planning, Community and Economic Development is responsible for the implementation of land use development plans. The City's Zoning Ordinance establishes the permitted land uses, as well as design and development standards such as height and density. Wisconsin state law requires that zoning must be consistent with adopted plans. The city of Madison also has various boards that inform and advise the Common Council (Madison's City Council). New developments or proposals such as subdivisions, rezonings, changes in land use, or conditional uses require approvals by the City boards (i.e., Plan Commission, Urban Design Commission, Landmarks Commission) and later the Common Council.

The City of Madison has zoned the areas encompassing the 115 FW installation and the Dane County Regional Airport as AP: Airport District, which the City has identified as one of its "special [zoning] districts" (City of Madison 2018a). Land directly north of the airport is zoned

for agriculture with sections of land zoned commercial and industrial to the northeast, and commercial to the northwest. The land south of the airport includes areas zoned for parks/open space, residential, commercial, and another special district zoned for educational use, Campus Institutional (CI) (shown as "School" on Figure 3.3-1). The land to the east of Dane County Regional Airport is zoned for residential, commercial, and parks/open space. The land directly to the west of Dane County Regional Airport is zoned for agricultural, commercial, industrial, as well as a planned/current mobile home park. Land further west is zoned for residential purposes.

## 3.4 EARTH RESOURCES

### 3.4.1 Definition of Resource

Earth resources include the topography, geology, and soils of a given area. Topography incorporates the physiographic or surface features of an area and is usually described with respect to elevation, slope, aspect, and landforms. Long-term geological, erosional, and depositional processes typically influence the topographic relief of an area. Geology is the study of the origin, history, and structure of the earth and the materials of which it is made. Geological resources of an area typically consist of bedrock materials, mineral deposits, and fossil remains. The principal geologic factors influencing stability of structures are soils stability and seismic properties. Soil refers to the unconsolidated earthen organic or mineral materials overlying bedrock or other parent material. Soil structure, elasticity, strength, shrink-swell potential, and erodibility all determine the suitability of the ground to support man-made structures and facilities. Relative to development, soils typically are described in terms of their type, slope, physical characteristics, and relative compatibility or limitations with regard to particular construction activities and types of land use.

The Farmland Protection Policy Act (FPPA), part of the Agriculture and Food Act of 1981 (Public Law 97-98), was passed in an effort to protect farmland and combat urban sprawl. Additionally, the FPPA is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that, to the extent possible, federal programs are administered to be compatible with state, local, and private programs and policies to protect farmland. However, construction for national defense purposes as well as construction on land already in urban development is not subject to FPPA. Therefore, the FPPA does not apply to this Proposed Action.

The ROI for earth resources includes the 115 FW installation and the area immediately surrounding the 115 FW installation at Dane County Regional Airport. The geologic description for the project site is general to the 115 FW installation, while the soils and topographic discussions are site-specific, where applicable.

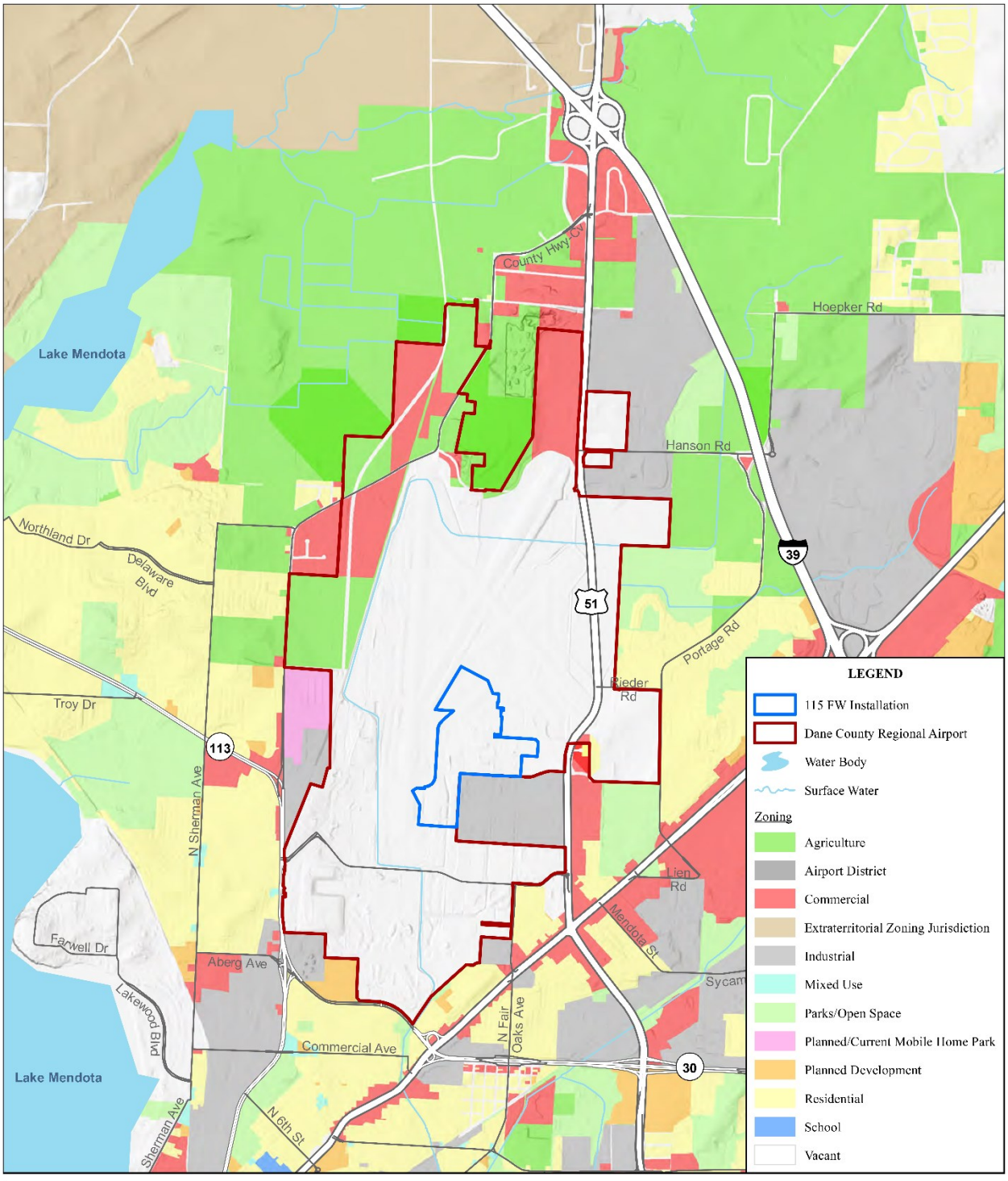


**Figure 3.3-1**
**Land Use within the Vicinity of**
**Dane County Regional Airport**

### 3.4.2 Existing Conditions

#### 3.4.2.1 Topography

The topography at the 115 FW installation is flat and has an elevation of approximately 855 to 860 feet above mean sea level (MSL) (ANG 2013) and is located near the western margin of the Great Lakes Section of the Central Lowlands Physiographic Province. In the areas around the 115 FW installation, the topography is characterized by numerous lakes with associated lacustrine plains, prominent end moraines, and poorly integrated drainage (PEER Consultants, P.C. 1988). The 115 FW installation lies on the flat lacustrine plain of a former glacial lake (ANG 2013).

#### 3.4.2.2 Geology

The 115 FW installation is located in the Central Lowlands Physiographic Province characterized by Paleozoic bedrock with some Cretaceous rocks underlying the western boundary. Much of the area exhibits widespread topographic effects of glaciation, including flat to gently inclined rock strata and regional dips controlled by domes and uplifts (PEER Consultants, P.C. 1988).

The 115 FW installation is located approximately 15 miles east and northeast of the terminal moraines marking the southwestern limits of the Wisconsin stage glacial advance. The installation is located in the pre-glacial Yahara River Valley on a thick deposit of Quaternary-age glacial drift and lacustrine deposits overlying Ordovician-age dolomites. In the vicinity of the installation, the glacial drift may be up to 300 feet thick. The Cambrian-age Mount Simon Sandstone underlies the glacial drift deposits in the vicinity of the 115 FW installation. The Mount Simon Sandstone unit is approximately 500 feet thick and is a regionally significant aquifer. Precambrian crystalline rocks underlie the Mount Simon Sandstone (ANG 2013).

#### 3.4.2.3 Soils

The 115 FW installation is located on an approximately 300-foot deposit of glacial drift that is predominantly composed of sand and silt with some clay and gravel. The uppermost glacial deposits underlying the 115 FW installation are mostly lacustrine silt and clay deposits. During recent Environmental Restoration Program (ERP) investigations, soil borings were advanced to 20 to 40 feet below ground surface. These soil borings indicated that surficial soil is comprised of a thin layer of fill material underlain by several feet of silt and clay beneath which is predominantly fine to course sand 40 feet below ground surface (ANG 2013).

The Natural Resources Conservation Service (NRCS) Soil Survey for Dane County, Wisconsin identifies the following five soil types at the 115 FW installation:

- Batavia silt loam, gravelly substratum, 2-6 percent grade,
- Virgil silt loam, gravelly substratum, 1-3 percent slopes,
- Wacousta silty clay loam,
- Hayfield silt loam, 0-3 percent slopes, and
- Sable silty clay loam, 0-3 percent slopes (U.S. Department of Agriculture 1978).

## 3.5 WATER RESOURCES

### 3.5.1 Definition of Resource

Water resources analyzed in this EA include both surface and groundwater quantity and quality, floodplains, and wetlands. Surface water includes all lakes, ponds, rivers, and streams and is important for a variety of reasons including irrigation, power generation, recreation, flood control, and human health. The nation's waters are protected under the CWA. The goal of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water." Pollutants regulated under the CWA include "priority" pollutants, including various toxic pollutants; "conventional" pollutants, such as biochemical oxygen demand, total suspended solids, fecal coliform, oil and grease, and pH; and "non-conventional" pollutants, including any pollutant not identified as either conventional or priority. Under the CWA Section 402, it is illegal to discharge any point and/or nonpoint pollution sources into any surface water without a National Pollutant Discharge Elimination System (NPDES) permit.

Groundwater includes the subsurface hydrologic resources of the physical environment and is generally a safe and reliable source of fresh water for the general population, especially those in areas of limited precipitation and is commonly used for potable water consumption, agricultural irrigation, and industrial applications. Groundwater also plays an important part in the overall hydrologic cycle and its properties are described in terms of depth to aquifer or water table, water quality, and surrounding geologic composition.

Floodplains are defined by EO 11988, *Floodplain Management*, as "the lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, the area subject to a one percent or greater chance of flooding in any given year" (that area inundated by a 100-year flood). Floodplains and riparian habitat are biologically unique and highly diverse ecosystems providing a rich diversity of aquatic and terrestrial species, as well as promoting stream bank stability and regulating water temperatures. EO 11988 requires federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development whenever there is a practicable alternative.

Wetlands are considered sensitive habitats and are subject to federal regulatory authority under Sections 401 and 404 of the CWA and EO 11990, Protection of Wetlands. Wetlands are defined by the USACE 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 (Environmental Laboratory 1987). Wetlands generally include swamps, marshes, bogs, and similar areas. Like vegetation, the affected environment for wetlands includes only those areas potentially subject to ground disturbance.

The ROI for water resources includes the 115 FW installation situated within the boundaries of the Dane County Regional Airport, as well as nearby surface waters that receive runoff generated within the project area.

### 3.5.2 Existing Conditions

#### 3.5.2.1 Surface Water

The 115 FW installation is located within Dane County Regional Airport and is approximately 3 miles north of Lake Monona and 2 miles northeast of Lake Mendota. A waters of the U.S. (WOTUS) survey completed on the installation in 2018 identified seven WOTUS (surface waters and ditches) (Figure 3.5-1) (115 FW 2018a). A man-made drainage network was constructed at the periphery of the installation's property boundary to divert the west branch of Starkweather Creek at the time of airport development. Surface water runoff at the 115 FW installation is generally absorbed by the soil. Water not absorbed by the soil (in paved administrative and industrial areas) flows to stormwater inlets and drainage basins which are connected by underground pipes. All stormwater drainage from 115 FW installation enters Starkweather Creek from this system and eventually discharges to Lake Monona to the south. The drainage is under jurisdiction of the USACE and serves to collect and transport surface water runoff from the airfield.

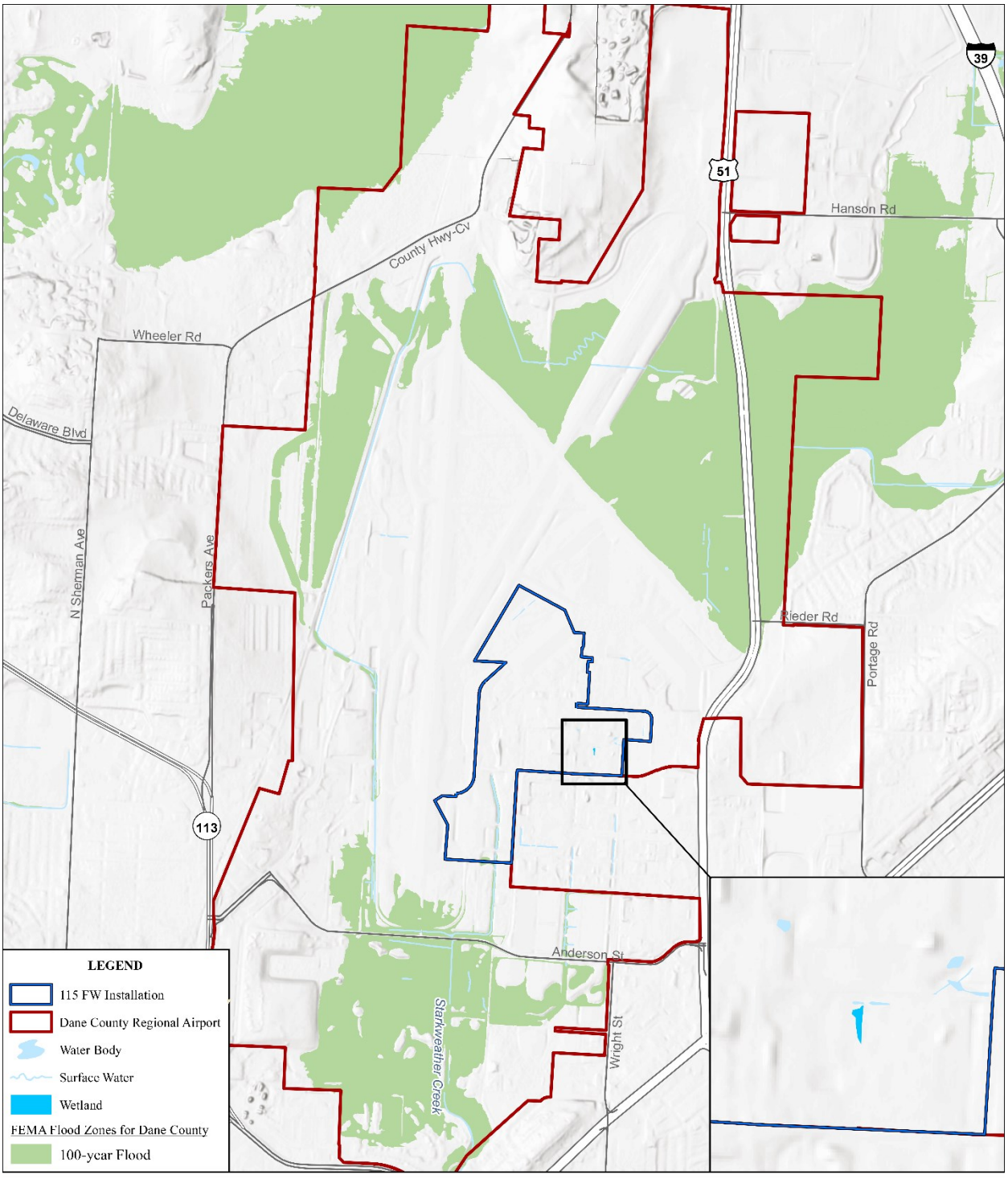


**Figure 3.5-1**
**Water Resources and Wetlands within the Vicinity of the 115 FW Installation**

The west branch of Starkweather Creek drains the area around the Dane County Regional Airport and other urbanized portions of Madison. This area of Starkweather Creek received intensive point source discharges of many different toxic substances up to the 1960s and early 1970s. Some of these discharges remain in the sediment of the creek and continue to pose problems for fish and aquatic life (Wisconsin Department of Natural Resources [WDNR] 2018). These point source discharges have been managed through various programs. Both Starkweather Creek and Lake Monona are listed on the 2018 Wisconsin Impaired Waters List for multiple pollutants (WDNR 2018).

The NPDES program provides a framework for regulating municipal and industrial discharges to ensure compliance with the CWA. Because the 115 FW installation has industrial activities as defined in 40 CFR 122, a Wisconsin Pollutant Discharge Elimination System (WPDES) stormwater permit has been issued. The 115 FW is a tenant of the Dane County Regional Airport and is therefore included as a co-permittee under their WPDES permit (WPDES Permit No. WI-0048747-04-0) (WIANG 2016). The conditions of the permit are intended to comply with existing water quality standards contained in Chapters NR 102 and NR 105 of the Wisconsin Administrative Code. The permit also regulates stormwater point discharges to the Airport's separate storm sewer system and requires periodic reporting by the Dane County Regional Airport. The installation's WPDES stormwater discharge permit requires the 115 FW installation to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) (WIANG 2016) to improve the quality of stormwater runoff and thereby improve the quality of receiving waters.

#### 3.5.2.2 Groundwater

Two aquifers supply water to Dane County. The upper aquifer is located within unconsolidated glacial material and is reached at a depth of about 8 feet. The lower aquifer is a sandstone aquifer. Impermeable shale separates the two aquifers (115 FW 2004). Flow in the upper aquifer is westward in the Starkweather Creek area toward Lake Monona. Wells reaching 800 feet below the ground surface supply water to the city of Madison, which in turn provides drinking water to the 115 FW installation (115 FW 2004). Groundwater monitoring wells within the 115 FW installation indicate that the water table is between 7 and 9 feet below the ground (115 FW 2004).

#### 3.5.2.3 Floodplains

Per the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for Dane County, Wisconsin, Panel 264H (Map Number 55025C0264H, Effective on September 17, 2014), a portion of the drainage ditch connected to Starkweather Creek has been identified as being located within an area subject to inundation by 1 percent annual chance of flooding (i.e., 100-year

floodplain of Starkweather Creek designated as Zone AE) (FEMA 2014). The extent of the 100-year floodplain on the 115 FW installation is shown in Figure 3.5-1.

#### 3.5.2.4 Wetlands

A wetland delineation conducted in May 2018 found one emergent, herbaceous jurisdictional wetland within the 115 FW installation east of Building 1001 (see Figure 3.5-1) (115 FW 2018a).

## 3.6 BIOLOGICAL RESOURCES

### 3.6.1 Definition of Resource

Biological resources include plant and animal species, and the habitats within which they occur. Plant associations are referred to as *vegetation* and animal species are referred to as *wildlife*. Although the existence and preservation of biological resources are intrinsically valuable, these resources also provide aesthetic, recreational, and socioeconomic values to society. This analysis focuses on species or vegetation types that are important to the function of ecosystems, are of special societal importance, or are protected under federal or state law. For purposes of this analysis, these resources are divided into three categories: vegetation, wildlife, and special status species.

*Vegetation* includes all existing terrestrial plant communities as well as their individual component species. Special status plant species are discussed in more detail below.

*Wildlife* includes the characteristic animal species that occur in the project area. Special consideration is given to bird species protected under the Migratory Bird Treaty Act and EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*. Special status wildlife species are discussed in more detail below.

*Special status species* are those plant and animal species that are listed, have been proposed for listing, or are candidates for listing as threatened or endangered under the federal ESA, species protected by the WDNR, and other species of concern as recognized by state or federal agencies.

The ROI for biological resources consists only of lands that could be directly affected by the proposed construction footprint at the 115 FW installation at Dane County Regional Airport and those lands in the immediate vicinity that could be indirectly affected by the Proposed Action.

### 3.6.2 Existing Conditions

#### 3.6.2.1 Vegetation

The majority of the 115 FW installation is composed of landscaped areas such as lawns, ornamental trees, or maintained open fields of grass (115 FW 2018a).

#### 3.6.2.2 Wildlife

The majority of the wildlife present at the airport and the 115 FW installation consists of species that are highly adapted to developed and disturbed areas. Examples of common bird species observed during a 2018 wildlife survey conducted on the installation include the mourning dove (*Zenaida macroura*), red-tailed hawk (*Buteo jamaicensis*), killdeer (*Charadrius vociferous*), barn swallow (*Hirundo rustic*a), American robin (*Turdus migratorius*), European starling (*Sturnus vulgaris*), Canada goose (*Branta canadensis*), and red-winged blackbird (*Agelaius phoeniceus*) (115 FW 2018a). Common mammals observed during this survey include the gray squirrel (*Sciurus carolinensis*), groundhog (*Marmota monax*), and red fox (*Vulpes vulpes*) (115 FW 2018b, 2018c). Common reptiles and amphibians observed during this survey include the snapping turtle (*Chelydra serpentina*) and the northern leopard frog (*Lithobates pipiens*) (115 FW 2018b). Other common bird species observed on the installation in the past include the turkey vulture (*Cathartes aura*), American crow (*Corvus brachyrhynchos*), rough-legged hawk (*Buteo lagopus*), dunlin (*Calidris alpina*), rock pigeon (*Columba livia*), cliff swallow (*Petrochelidon pyrrhonota*), eastern meadowlark (*Sturnella magna*), chimney swift (*Chaetura pelagica*), and vesper sparrow (*Pooecetes gramineus*) (115 FW 2017b). During a 2018 bat survey conducted on the installation, four bat species were acoustically observed, including the big brown bat (*Eptesicus fuscus*), eastern red bat (*Lasiurus borealis*), hoary bat (*Lasiurus cinereus*), and the silver-haired bat (*Lasionycteris noctivagans*) (115 FW 2018c). Other common mammals observed on the installation include the white-tailed deer (*Odocoileus virginianus*), coyote (*Canis latrans*), eastern cottontail (*Sylvilagus floridanus*), and thirteen-lined squirrel (*Ictidomys tridecemlineatus*) (115 FW 2004, 2017b).

#### 3.6.2.3 Special Status Species

Table 3.6-1 lists federally threatened, endangered, candidate, and state listed species potentially occurring in the vicinity of the 115 FW installation. No federally listed species have been observed at the 115 FW installation and there is little to no habitat for these species within the airport or the installation boundaries. A flora and fauna survey and a bat survey were conducted in the spring of 2018 on the installation, and no federally listed species were observed at the 115 FW installation (115 FW 2018b, 2018c). However, 7 federally listed species (1 bird, 1 mammal, 1 reptile, and 4 plants) and an additional 41 state listed species (11 birds, 2 mammals, 5 reptiles/amphibians, and 23 plants) have the potential to occur within the vicinity of the 115 FW installation. There is no

critical habitat located on the 115 FW installation. In addition, 31 migratory birds that occur on the USFWS Birds of Conservation Concern list have the potential to occur on the 115 FW installation (Table 3.6-2).

One state listed species, the big brown bat, was acoustically observed on the installation during 2018 surveys. Big brown bats are common in cities, towns, and rural areas, and are one of the most widespread mammals in North America. Big brown bats can live in many human dwellings, and can also roost in tree hollows and caves. Big brown bats forage over a variety of habitats including rivers and streams, forested areas, open fields, and along city streets (Bat Conservation International 2019).

**Table 3.6-1. Federally and State Listed Species Potentially Occurring in the Vicinity of the 115 FW Installation**

| *Common Name* | *Scientific Name* | *Status* | *Potential Occurrence on the 115 FW Installation* |
|---|---|---|---|
| **Birds** | | | |
| Acadian flycatcher | *Empidonax virescens* | ST | P |
| Bell's vireo | *Vireo bellii* | ST | P |
| Black tern | *Chlidonias niger* | SE | P |
| Cerulean warbler | *Setophaga cerulea* | ST | P |
| Henslow's sparrow | *Ammodramus henslowii* | ST | P |
| Hooded warbler | *Setophaga citrina* | ST | P |
| Kentucky warbler | *Geothlypis formosa* | ST | P |
| Kirtland's warbler | *Setophaga kirtlandii* | E | - |
| Loggerhead shrike | *Lanius ludovicianus* | SE | P |
| Peregrine falcon | *Falco peregrinus* | SE | P |
| Red-shouldered hawk | *Buteo lineatus* | ST | P |
| Upland sandpiper | *Bartramia longicauda* | SE | P |
| Whooping crane | *Grus Americana* | EXPN | P |
| **Mammals** | | | |
| Big brown bat | *Eptesicus fuscus* | ST | O |
| Eastern pipistrelle | *Perimyotis subflavus* | ST | P |
| Gray wolf | *Canis lupus* | E | - |
| Little brown bat | *Myotis lucifugus* | ST | P |
| Northern long-eared bat | *Myotis septentrionalis* | T, ST | P |
| **Reptiles and Amphibians** | | | |
| Blanchard's cricket frog | *Acris blanchardi* | SE | P |
| Eastern massasauga | *Sistrurus catenatus* | T, SE | P |
| Ornate box turtle | *Terrapene ornata* | SE | P |
| Slender glass lizard | *Ophisaurus attenuatus* | SE | P |
| Western ribbon snake | *Thamnophis proximus* | SE | P |
| Blanchard's cricket frog | *Acris blanchardi* | SE | P |
| **Plants** | | | |
| Eastern prairie fringed orchid | *Platanthera leucophaea* | T, SE | P |
| False asphodel | *Triantha glutinosa* | ST | P |
| Hairy wild petunia | *Ruellia humilis* | SE | P |
| Hall's bulrush | *Schoenoplectus hallii* | SE | P |

**Table 3.6-1. Federally and State Listed Species Potentially Occurring in the Vicinity of the 115 FW Installation**

| *Common Name* | *Scientific Name* | *Status* | *Potential Occurrence on the 115 FW Installation* |
|---|---|---|---|
| Hill's thistle | *Cirsium hillii* | ST | P |
| Prairie bush clover | *Lespedeza leptostachya* | T, SE | P |
| Large water-starwort | *Callitriche heterophylla* | ST | P |
| Kitten tails | *Besseya bullii* | ST | P |
| Mead's milkweed | *Asclepias meadii* | T | P |
| Nodding rattlesnake-root | *Prenanthes crepidinea* | SE | P |
| Prairie bush clover | *Lespedeza leptostachya* | T | P |
| Roundstem foxglove | *Agalinis gattingeri* | ST | P |
| Pale false foxglove | *Agalinis skinneriana* | SE | P |
| Pale green orchid | *Platanthera flava var. herbiola* | ST | P |
| Pale purple coneflower | *Echinacea pallida* | ST | P |
| Pink milkwort | *Polygala incarnata* | SE | P |
| Prairie milkweed | *Asclepias sullivantii* | SE | P |
| Prairie dunewort | *Botrychium campestre* | SE | P |
| Prairie parsley | *Polytaenia nuttallii* | ST | P |
| Purple milkweed | *Asclepias purpurascens* | SE | P |
| Rough rattlesnake-root | *Prenanthes aspera* | SE | P |
| Sheathed pondweed | *Stuckenia vaginata* | ST | P |
| Small skullcap | *Scutellaria parvula var. parvula* | SE | P |
| Smooth-sheathed sedge | *Carex laevivaginata* | SE | P |
| Tufted bulrush | *Trichophorum cespitosum* | ST | P |
| Wild hyacinth | *Camassia scilloides* | SE | P |
| Woolly milkweed | *Asclepias lanuginosa* | SE | P |

*Legend*: 115 FW = 115th Fighter Wing; E = Federally Endangered; EXPN = Experimental Population, Non-essential; O = Observed; P = Potential; SE = State Endangered; ST = State Threatened; T= Federally Threatened; U = Unlikely; - = Does not occur.
*Source*: USFWS 2017; WDNR 2017.

**Table 3.6-2. Migratory Birds that Potentially Occur within the 115 FW Installation**

| *Common Name* | *Scientific Name* | *Season* | *Potential Occurrence on the 115 FW Installation* |
|---|---|---|---|
| American bittern | *Botaurus lentiginosus* | Breeding | P |
| American golden-plover | *Pluvialis dominica* | Spring/Fall | P |
| American goldfinch | *Spinus tristis* | Year Round | O |
| American robin | *Turdus migratorius* | Year Round | O |
| Bald eagle | *Haliaeetus leucocephalus* | Year Round | P |
| Barn swallow | *Hirundo rustica* | Breeding | O |
| Black tern | *Chlidonias niger* | Breeding | P |
| Black-billed cuckoo | *Coccyzus erythropthalmus* | Breeding | P |
| Bobolink | *Dolichonyx oryzivorus* | Breeding | P |
| Canada goose | *Branta canadensis* | Year Round | O |
| Eastern meadowlark | *Sturnella magna* | Year Round | O |
| Eastern whip-poor-will | *Antrostomus vociferous* | Breeding | P |
| Golden eagle | *Aquila chrysaetos* | Winter | P |
| Golden-winged warbler | *Vermivora chrysoptera* | Breeding | P |

**Table 3.6-2. Migratory Birds that Potentially Occur within the 115 FW Installation**

| *Common Name* | *Scientific Name* | *Season* | *Potential Occurrence on the 115 FW Installation* |
|---|---|---|---|
| Henslow's sparrow | *Ammodramus henslowii* | Breeding | P |
| Killdeer | *Charadrius vociferus* | Breeding | O |
| King rail | *Rallus elegans* | Breeding | P |
| Least Bittern | *Ixobrychus exilis* | Breeding | P |
| Lesser yellowlegs | *Tringa flavipes* | Winter | P |
| Long-eared owl | *Asio otus* | Breeding | P |
| Mourning dove | *Zenaida macroura* | Year Round | O |
| Red-headed woodpecker | *Melanerpes erythrocephalus* | Year Round | P |
| Red-tailed hawk | *Buteo jamaicensis* | Year Round | O |
| Red-winged blackbird | *Agelaius phoeniceus* | Year Round | O |
| Rusty blackbird | *Euphagus carolinus* | Winter | P |
| Semipalmated sandpiper | *Calidris pusilla* | Winter | P |
| Short-billed dowitcher | *Limnodromus griseus* | Winter | P |
| Song sparrow | *Melospiza melo* | Year Round | O |
| Veery thrush | *Catharus fuscescens* | Breeding | O |
| Willow flycatcher | *Empidonax traillii* | Breeding | P |
| Wood thrush | *Hylocichla mustelina* | Breeding | P |
| Yellow rail | *Coturnicops noveboracensis* | Breeding | U |

*Notes*: O = Observed; P = Potential; U = Unlikely.
*Source*: USFWS 2017; 115 FW 2018a.

## 3.7 INFRASTRUCTURE

### 3.7.1 Definition of Resource

Infrastructure refers to the system of public works, such as utilities and transportation, which provide the underlying framework for a community. Utilities include such amenities as water, power supply, and waste management. Transportation and circulation refer to roadway and street systems, the movement of vehicles on roadway networks, pedestrian and bicycle traffic, and mass transit. The infrastructure components to be discussed in this section include the electrical system, natural gas system, sanitary sewer system, solid waste management, potable water system, and transportation.

The ROI for infrastructure primarily consists of the 115 FW installation, with additional information presented for the surrounding vicinity, where relevant.

### 3.7.2 Existing Conditions

#### 3.7.2.1 Electrical and Natural Gas Systems

Madison Gas and Electric supplies electricity and gas to the 115 FW installation. Electricity consumption for Calendar Year (CY) 2017 at the 115 FW installation was 3,595,503 kilowatt-

hours. Natural gas consumption for CY 2017 at the 115 FW installation was 193,368 hundred cubic feet (115 FW 2017a).

#### 3.7.2.2 Wastewater

The 115 FW installation generates wastewater from sanitary, and industrial processes. This includes oil/water separator (OWS) discharge, wash rack discharge, floor wash-down, latrines, sinks, and showers. Wastewater generated within the 115 FW installation is conveyed into the municipal sewage system to the Madison Metropolitan Sewage District Nine Springs Wastewater Treatment Plant, which has an average flow capacity of 57 million gallons (Madison Metropolitan Sewerage District n.d.).

#### 3.7.2.3 Stormwater

A high percentage of the active administrative and industrial areas of the installation are paved or roofed, resulting in high runoff rates during precipitation events. As described in the 115 FW SWPPP (115 FW 2016), the 115 FW installation has a stormwater drainage conveyance system typified by over land flow to catch basins, inlets, surface drains, underground pipes, culverts, ditches, and swales that discharge to receiving waters (see Section 3.5, *Water Resources*) or other municipal separate storm sewer systems. The stormwater drainage system has been designed to safely collect and transport surface water runoff from storm events to prevent flooding within the installation and is a separate system from the wastewater (sewage) system.

#### 3.7.2.4 Solid Waste Management

Municipal solid waste at the 115 FW installation is managed in accordance with the 115 FW Integrated Solid Waste Management Plan (115 FW 2015) and guidelines specified in AFI 32-7042, *Waste Management* (2017). In general, AFI 32-7042 establishes the requirement for installations to have a solid waste management program that incorporates the following: a solid waste management plan; procedures for recycling, diversion, handling, storage, collection, and disposal of solid waste; recordkeeping and reporting; and pollution prevention.

The 115 FW installation generates solid waste in the form of office trash, nonhazardous industrial wastes, normal municipal waste, and construction debris. These nonhazardous solid wastes are collected in dumpsters located throughout the 115 FW installation and transported by contractor to the Dane County Landfill.

#### 3.7.2.5 Potable Water System

Potable water for the 115 FW installation is provided by the City of Madison. Potable water in the area is supplied primarily from 22 groundwater wells and 30 reservoirs (City of Madison 2018b). The City of Madison Water Utility Division pumps an average of approximately 27 million gallons of water per year to its customers (City of Madison 2018c). In CY 2017, 1,830,187 gallons of potable water were supplied to the115 FW installation (115 FW 2017b).

#### 3.7.2.6 Transportation

Regional access to the 115 FW installation is provided by several highways to the east, including Interstate 94, which runs north to south, Highway 151, which runs northeast to southwest, and Highway 51/Stoughton Road, which runs north to south. The installation's main gate is accessed from Pierstorff Street and Hoffman Street.

## 3.8 CULTURAL RESOURCES

### 3.8.1 Definition of Resource

Cultural resources consist of prehistoric and historic buildings, districts, sites, structures, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Cultural resources can be divided into three major categories: archaeological resources (prehistoric and historic), architectural resources, and traditional cultural resources.

*Archaeological resources* are locations where human activity measurably altered the earth or left deposits of physical remains (e.g., tools, arrowheads, or bottles). "Prehistoric" refers to resources that predate the advent of written records in a region. These resources can range from a scatter composed of a few artifacts to village sites and rock art. "Historic" refers to resources that postdate the advent of written records in a region. Archaeological resources can include campsites, roads, fences, trails, dumps, battlegrounds, mines, and a variety of other features.

*Architectural resources* include standing buildings, dams, canals, bridges, and other structures of historic or aesthetic significance. Architectural resources generally must be more than 50 years old to be considered for protection under existing cultural resource laws. However, more recent buildings and structures, such as Cold War-era military buildings, may warrant protection if they have exceptional characteristics and the potential to be historically significant or if they are integral parts of a district that is eligible. These properties are evaluated under NRHP Criteria Consideration G, which includes properties that have achieved significance within the past 50

years. Architectural resources must also possess integrity (i.e., important historic features must be present and recognizable in order to convey its significance).

*Traditional cultural resources* can include archaeological resources, buildings, neighborhoods, prominent topographic features, habitats, plants, animals, and minerals that American Indians or other groups consider essential for the continuance of traditional cultures.

Only cultural resources considered to be significant, known or unknown, warrant consideration with regard to adverse impacts resulting from a proposed action. To be considered significant, archaeological or architectural resources must meet one or more criteria as defined in 36 CFR 60.4 for inclusion in the NRHP. The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
(b) that are associated with the lives of persons significant in our past; or
(c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
(d) that have yielded, or may be likely to yield, information important in prehistory or history.

Several federal laws and regulations have been established to manage cultural resources, including the NHPA (1966), the Archaeological and Historic Preservation Act (1974), AIRFA (1978), the ARPA (1979), and NAGPRA (1990). In addition, coordination with federally recognized American Indian Tribes must occur in accordance with EO 13175, *Consultation and Coordination with Indian Tribal Governments*.

On November 27, 1999, the DoD promulgated its Annotated American Indian and Alaska Native Policy, which emphasizes the importance of respecting and consulting with tribal governments on a government-to-government basis. This Policy requires an assessment, through consultation, of proposed DoD actions that may have the potential to significantly affect protected tribal resources, tribal rights, and Indian lands before decisions are made by the respective services (DoD American Indian/Alaska Native Policy), as does DoD Instruction 4710.02, *Interaction with Federally Recognized Tribes* (September 14, 2006).

The ROI for cultural resources includes only those locations on the 115 FW installation where facility renovation or construction and its staging would occur and potential ground disturbance

would result. The 115 FW is consulting with the Wisconsin SHPO on its finding of effect for the Proposed Action.

### 3.8.2 Existing Conditions

#### 3.8.2.1 Archaeological Resources

The 115 FW installation covers approximately 155 acres and approximately 37 of those acres have been previously surveyed for archaeological resources. The 37 acres were surveyed in 2004, prior to the construction of a new Alert Complex and a new munitions maintenance storage complex (ANG 2005). Fragments of terra cotta drainage pipes, modern green glass, and a pair of modern pliers were found in disturbed areas. None of these resources met the Wisconsin State Guidelines for recording archaeological sites (ANG 2005). The remaining 118 acres that have not been surveyed are primarily part of the built environment (ANG 2005).

#### 3.8.2.2 Architectural Resources

The 115 FW installation includes over 40 buildings and structures (WIANG 2017). An architectural survey was conducted in 2007 of eight architectural resources (Buildings 311, 400, 401, 402, 406, 1000, 1210, 1212) at the 115 FW that were more than 50 years of age to evaluate their NRHP eligibility. In addition, preliminary evaluations of the former Hush House structure (Building 1202, constructed ca. 1959) were made. Based on the results of this survey, all nine architectural resources were determined to be not eligible for listing in the NRHP (ANG 2007).

In 2009, the National Historic Context for the Hush Houses and Test Cells on DoD Installations (Aaron 2009) was completed for the DoD Legacy Resource Management Program. The Hush House (Building 1202) at the 115 FW installation was included as one of several case studies for evaluation within the national historic context. The case study evaluation concluded that Building 1202 does not meet the eligibility criteria for listing in the NRHP. The Wisconsin SHPO concurred with this finding on June 30, 2009 (Aaron 2009).

An architectural inventory and evaluation of six Cold War-era buildings (Buildings 305, 307, 404, 410, 412, and 500) was completed in 2014 for proposed 115 FW installation development plan projects. The 115 FW determined the buildings were not eligible for listing in the NRHP. The Wisconsin SHPO concurred that the development projects would have no effect on historic properties (NGB 2015).

An inventory and evaluation of post-1990 buildings and structures at the 115 FW installation was recently undertaken (115 FW 2018d). Seventeen post-1990 buildings and structures at the installation were documented. Five of the surveyed resources were munitions storage and shops

(Buildings 700, 705, 710, 711, 716). The other surveyed resources include administration buildings (Buildings 423, 430, 513), storage facilities (Buildings 421, 422, 431), an avionics shop (Building 420), a communications facility (Building 505), a medical training facility (Building 503), a petroleum operations building (Building 1215), a vehicle parking shed (Building 1001), and a recreation pavilion (Building 515). The inventory and evaluation recommended that the surveyed architectural resources, either individually or collectively as a historic district, are not eligible for inclusion in the NRHP (115 FW 2018d).

#### 3.8.2.3 Traditional Resources

The 115 FW contains no known traditional resources; however, 11 federally recognized American Indian Tribes that are historically, culturally, and linguistically affiliated with the area have been identified. These Tribes include Bad River Band of Lake Superior Chippewa; Forest County Potawatomi Community; Ho-Chunk Nation; Lac Courte Oreilles Band of Lake Superior Chippewa; Lac du Flambeau Band of Lake Superior Chippewa; Menominee Indian Tribe of Wisconsin; Stockbridge-Munsee Community Band of Mohican Indians; Oneida Nation of Wisconsin; Red Cliff Band of Lake Superior Chippewa; St. Croix of Lake Superior Chippewa Community; and the Sokaogon Chippewa Community (Mole Lake Band of Lake Superior Chippewa Indians).

## 3.9 SOCIOECONOMICS

### 3.9.1 Definition of Resource

Socioeconomics comprises the basic attributes and resources associated with the human environment, particularly population and economic activity. A socioeconomic analysis evaluates how elements of the human environment such as population, housing, employment, economic growth, and public services might be affected by the Proposed Action and alternatives. Economic activity also typically encompasses employment, personal income, and economic growth. Impacts to these fundamental socioeconomic components also influence other issues such as housing availability and the provision of public services.

The ROI for socioeconomics associated with the 115 FW is Dane County and the city of Madison.

### 3.9.2 Existing Conditions

#### 3.9.2.1 Population

Population information for the state of Wisconsin, Dane County, and the city of Madison is presented in Table 3.9-1. The population of Madison increased by 25,155 people between 2000

and 2010 and then increased by an additional 15,647 between 2010 and 2017. This represents a 19.6 percent increase in the population since 2000. Dane County showed a slightly higher growth rate with a 22.6 percent increase and Wisconsin as a whole showed a slower growth rate and increased by about 7.4 percent (U.S. Census Bureau 2017).

**Table 3.9-1. Population, 2000, 2010, and 2017**

| *Area* | *2000* | *2010* | *2017* | *Percent Change 2000-2017* | *Percent Change 2010-2017* |
|---|---|---|---|---|---|
| Wisconsin | 5,363,675 | 5,686,986 | 5,763,217 | 7.4 | 1.3 |
| Dane County | 426,526 | 488,073 | 522,837 | 22.6 | 7.1 |
| City of Madison | 208,054 | 233,209 | 248,856 | 19.6 | 6.7 |

*Source:* U.S. Census Bureau 2000, 2010, and 2017.

### 3.9.2.2 Employment and Income

Table 3.9-2 provides employment and income data for the state of Wisconsin, Dane County, and the city of Madison. Median household income and per capita income in Madison in 2017 were slightly lower than in Dane County and are slightly higher than the state of Wisconsin overall. The unemployment rate as of early 2018 at the state and county level were both low, and Dane County's rate of 2.3 percent was lower than the rate for the state as a whole, which was 3.3 percent.

**Table 3.9-2. Employment and Income Statistics**

| *Area* | *Median Household Income (2017)* | *Per Capita Income (2017)* | *Labor Force (2017)* | *Employed (2018)* | *Unemployed (2018)* | *Unemployment Rate (2018)* |
|---|---|---|---|---|---|---|
| Wisconsin | $56,759 | $30,557 | 3,087,719 | 3,060,156 | 105,747 | 3.3% |
| Dane County | $67,631 | $37,193 | 309,067 | 318,681 | 7,458 | 2.3% |
| City of Madison | $59,387 | $34,740 | N/A | N/A | N/A | N/A |

*Note:* Employment data for the city of Madison is not available from the Bureau of Labor Statistics.
*Legend:* N/A = not applicable.
*Source:* U.S. Census Bureau 2017; Bureau of Labor Statistics 2018a, 2018b.

### 3.9.2.3 Housing

As shown in Table 3.9-3, in 2017 there were an estimated 4,791 vacant housing units in the city of Madison and an estimated 9,259 vacant housing units in Dane County. The overall vacancy rate for housing was 4.3 percent in Madison and 4.1 percent in Dane County. Both rates were lower than the vacancy rate for Wisconsin, which was 12.7 percent.

**Table 3.9-3. Housing Characteristics, 2017**

| *Area* | *Housing Units* | *Vacant Housing Units* | *Housing Vacancy Rate* |
|---|---|---|---|
| Wisconsin | 2,668,692 | 339,938 | 12.7% |
| Dane County | 226,189 | 9,259 | 4.1% |
| City of Madison | 112,681 | 4,791 | 4.3% |

*Source:* U.S. Census Bureau 2017.

## 3.10 ENVIRONMENTAL JUSTICE

### 3.10.1 Definition of Resource

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations* (1994), addresses potential disproportionate human health and environmental impacts that a project may have on minority or low-income communities. USEPA defines environmental justice as, "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies" (USEPA 2018b). It goes on to clarify that "no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies."

CEQ guidance states that "minority populations should be identified where either: (1) the minority population of the affected areas exceeds 50 percent, or (2) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis" (CEQ 1997). Minority populations include those that report their ethnicity as something other than non-Hispanic White alone; minority populations include Black or African American, Hispanic or Latin, American Indian, Native Hawaiian or other Pacific Islander, Asian, or Alaska Native (U.S. Census Bureau 2011). According to 15 USC § 689(3), Department of Housing and Urban Development defines a low-income community as a census block or tract having greater than 20 percent of its population living below the federal poverty line, among other possible indicators.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (1997), requires federal agencies to, "identify and assess environmental health risks and safety risks that may disproportionately affect children," and "ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks." Additionally, children and the elderly are identified in the USAF *Guide for Environmental Justice Analysis under the Environmental Impact Analysis Process* as sensitive receptors (Air Force Civil Engineer Center 2014). Children are defined as those individuals under the age of 18 years and the elderly are defined as those who are aged 65 years and older.

### 3.10.2 Existing Conditions

#### 3.10.2.1 Minority and Low-Income Populations

Approximately 16.0 percent of the population of Dane County is composed of minorities (i.e., an ethnic, racial, or religious group with a distinctive presence in a community) (Table 3.10-1), compared to 14.1 percent for the state of Wisconsin (U.S. Census Bureau 2017). The city of

Madison has a higher proportion of minorities (21.2 percent) than the County or the state (U.S. Census Bureau 2017).

The percentage of population living below the poverty level for the state of Wisconsin (12.3 percent) is approximately the same as Dane County (12.4 percent) (U.S. Census Bureau 2017). The city of Madison has the highest proportion of its population living below poverty level at 18.3 percent (U.S. Census Bureau 2017).

**Table 3.10-1. Population within the Vicinity of the 115 FW Installation**

| *Geographic Area* | *Total Population* | *Minority Population* | *Percent Minority* | *Low-Income Population* | *Percent Low-Income* | *Children Under Age 18* | *Percent Children* |
|---|---|---|---|---|---|---|---|
| Wisconsin | 5,763,217 | 812,640 | 14.1 | 339,876 | 12.3 | 1,293,950 | 22.5 |
| Dane County | 522,837 | 83,907 | 16.0 | 64,309 | 12.4 | 109,628 | 21.0 |
| City of Madison | 248,856 | 52,682 | 21.2 | 45,541 | 18.3 | 41,499 | 16.7 |

*Source:* U.S. Census Bureau 2017.

#### 3.10.2.2 Protection of Children

The city of Madison has an estimated 41,499 children under the age of 18, which is approximately 16.7 percent of the population. This rate is lower than the rate for both Dane County (21.0 percent) and the state of Wisconsin (22.5 percent), which have 109,628 and 1,293,950 children under the age of 18 respectively (U.S. Census Bureau 2017). According to the National Center for Education Statistics (2018), there are a total of 161 schools in Dane County with a total of 76,330 students.

## 3.11 HAZARDOUS MATERIALS AND WASTES

### 3.11.1 Definition of Resource

"Hazardous materials," "toxic substances," and "hazardous waste," broadly defined, can all be classified as "hazardous substances" as defined by the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 because they may present a threat to human health and/or the environment. The phrase "hazardous substance" is used in this document to describe any item or agent (i.e., biological, chemical, or physical) that has the potential to cause harm to humans, animals, or the environment. Definitions of these terms are summarized below.

The ROI for hazardous materials and waste includes areas that could be exposed to an accidental release of a hazardous substance from construction activities, other specific areas affected by past and current hazardous waste operations, and areas where hazardous materials would be utilized or stored. Therefore, the ROI for this action is defined as the 115 FW installation.

#### 3.11.1.1 Hazardous Materials

The term "hazardous materials" is defined under Section 1802 of the Hazardous Materials Transportation Act as "a substance or material in a quantity and form which may pose an unreasonable risk to health and safety or property when transported in commerce" (49 USC §§ 5101-5127). When discussed in this document, hazardous materials include petroleum, oils, and lubricants (POLs); cleaning agents; adhesives; paints; pesticides; and other products necessary to perform essential functions. Hazardous materials are frequently stored in bulk quantities (e.g., fuels; POLs) in aboveground storage tanks (ASTs) and underground storage tanks (USTs) and distributed with pumps and pipelines. Fueling operations to support aircraft, watercraft, vehicle operations, and power generation require the storage of bulk quantities of these POLs. The storage areas for POLs represent potential sources of leaks, releases, or spills. Other types of hazardous materials (e.g., paints, pesticides, adhesives, cleaning agents) are frequently stored and distributed in smaller quantities such as totes, drums, buckets, and bottles.

#### 3.11.1.2 Hazardous Waste

Hazardous wastes are defined and regulated under the federal Resource Conservation and Recovery Act (RCRA) (USEPA 2014). Hazardous wastes may take the form of a solid, liquid, contained gas, or semi-solid. In general, any combination of wastes that poses a substantial present or potential hazard to human health or the environment that has been discarded or abandoned may be a hazardous waste. The USEPA defines several hazardous waste types: (1) listed wastes (wastes that the agency has determined are hazardous); (2) characteristic wastes (e.g., corrosive, ignitable, reactive, toxic wastes); (3) universal wastes (e.g., lamps, batteries, pesticides, mercury-containing equipment); and (4) mixed wastes (contains both radioactive and hazardous wastes) (USEPA 2014).

#### 3.11.1.3 Toxic Substances

Toxic substances are specific substances whose manufacture, processing, distribution, use, or disposal are restricted by the Toxic Substances Control Act (40 CFR §§ 700-766) because they may present unreasonable risk of personal injury or health of the environment. They include asbestos-containing materials (ACMs), lead-based paint (LBP), polychlorinated biphenyls (PCBs), and radon.

#### 3.11.1.4 Contaminated Sites

In 1986, Congress created the Defense Environmental Restoration Program. The Defense Environmental Restoration Program addresses the identification and cleanup of hazardous substances and military munitions remaining from past activities at U.S. military installations and

formerly used defense sites. Within the Defense Environmental Restoration Program of the DoD there are several program categories: the ERP, Formerly Used Defense Sites, Military Munitions Response Program, and Base Realignment and Closure.

### 3.11.2 Existing Conditions

#### 3.11.2.1 Hazardous Materials

Hazardous materials are used at the 115 FW installation for aircraft operations support and maintenance, including Aerospace Ground Equipment maintenance; ground vehicle maintenance; POL management and distribution; training operations; and maintenance and cleaning of facilities. Types of hazardous substances found on the 115 FW installation include paints, oils, lubricants, hydrazine, sealants, solvents, batteries, and fuels (i.e., gasoline, diesel, and jet). Most of these materials are kept in small quantities in flammables cabinets with secondary containment (115 FW 2014).

There are currently 10 ASTs on the 115 FW installation in eight buildings, including Buildings 401, 414, 430, 1000, 1201, 1217, 1218, and 1219.

- Building 401 (Aerospace Ground Equipment Maintenance) has a 1,500-gallon double-wall steel AST used for Jet A storage.
- Building 414 (Fuel Cell) has a 600-gallon single-walled AST used for Jet A storage.
- Building 430 (Fire Station) has a 500-gallon single-walled AST used for aqueous film-forming foam storage.
- Building 1000 (Vehicle Maintenance Government Fuel Station) has a 6,000-gallon double-wall steel AST used for motor gasoline storage and a 6,000-gallon double-wall steel AST used for diesel storage (also known as Building 1010).
- Building 1201 (Civil Engineering Squadron Storage and Deicer Tank) has a 12,000-gallon double-wall steel AST used for Potassium Acetate storage.
- Buildings 1217 and 1218 (POL) both have a 105,000-gallon double-wall steel AST used for Jet A storage with a containment basin.
- Building 1219 (Liquid Oxygen Storage) has a 400-gallon and a 3,000-gallon steel AST used for Liquid Oxygen storage. It is unknown whether the tank is single or double walled (115 FW 2019).

There have been 32 USTs removed from across the 115 FW installation, so there are currently no active or remaining USTs at the 115 FW installation (115 FW 2019).

#### 3.11.2.2 Toxic Substances

Regulated toxic substances typically associated with buildings and facilities include asbestos, LBP, and PCBs. ACM is known to occur in 7 buildings, including Buildings 305, 307, 311, 402, 404, 406, and 500. All known friable asbestos has been removed from the installation (115 FW 2014).

A LBP survey has not been conducted at the 115 FW installation, so any buildings on the installation constructed prior to 1978 are presumed to contain LBP and would be tested for LBP prior to demolition or renovation (115 FW 2014).

The installation is considered to be PCB-free. Madison Gas and Electric own the transformers on the installation and they have tested negative for PCB content. Other potential PCB-contaminated equipment within the installation includes ballasts for light fixtures, and small transformers and capacitors. All known PCBs and PCB-containing ballasts, capacitors, and transformers not specifically labeled as PCB-free have been removed from the installation by a licensed contractor (115 FW 2014).

#### 3.11.2.3 Hazardous Waste Management

The 115 FW Oil and Hazardous Substances Spill Prevention and Response Plan contains the governing regulations for spill prevention and describes specific protocols for preventing and responding to releases, accidents, and spills involving oils and hazardous materials (115 FW 2011). The 115 FW Hazardous Waste Management Plan outlines procedures for controlling and managing hazardous wastes from the point of generation until final disposition. In addition, it includes guidance for compliance with all federal, state, and local regulations pertaining to hazardous waste. The Hazardous Waste Management Plan also has a section detailing pollution prevention at the installation with the goal of reducing or eliminating the use of toxic or hazardous substances and the generation of hazardous waste wherever possible through source reduction and environmentally sound recycling (115 FW 2017b).

The 115 FW is regulated as a Small Quantity Generator (SQG) of hazardous waste and maintains USEPA Identification Number WI3570024247. A hazardous waste generator point is where the waste is initially created or generated. A satellite accumulation point (SAP) is an area where hazardous waste is initially gathered after the point of generation that is under the control of the SAP manager. Hazardous wastes initially accumulated at a SAP are accumulated in appropriate containers before being transferred to the installation central accumulation point (CAP). A generator may accumulate as much as 55 gallons of hazardous waste or one quart of acute hazardous waste at each SAP without a permit. There are 30 SAPs (where a waste is initially accumulated) identified at the installation in Buildings 400, 401, 406, 409, 414, 500, 705, 1209, and 1210. The installation CAP is located in Building 512 where hazardous waste can accumulate

in containers for up to 180 days or 270 days if the receiving Treatment, Storage, and Disposal Facility is at a distance greater than 200 miles (115 FW 2017b).

OWSs are used to separate oils, fuels, sand, and grease from wastewater and to prevent contaminants from entering the sanitary sewer system. Currently, there are two OWSs and nine Garage Catch Basins on the 115 FW. The OWSs are maintained by the 115th Civil Engineering Squadron and are serviced annually (115 FW 2014).

#### 3.11.2.4 Environmental Restoration Program

Nine potentially contaminated ERP sites have been identified at the 115 FW installation. The installation has been investigated under the ERP from 1988 to the present.

All nine sites have been recommended for no further action (NFA) with site closure. The WDNR concurred with all recommendations of NFA with site closure. Five of the nine ERP sites (Site 4, Site 5, Site 6, Site 8 Area 1, and Site 8 Area 2) are located in areas of planned construction, which has the likelihood to disturb the soil. Installation-wide pavement repairs may occur within areas of additional ERP sites, but no soil disturbance is expected. The projects required to support the 115 FW operations are discussed in Section 2.2. Table 3.11-1 provides details for the nine ERP sites and Figure 3.11-1 shows the locations of all ERP sites located in the installation boundary (ANG 2013).

Under the Compliance Restoration Site Program, 10 Areas of Concern (AOCs) were investigated in a Preliminary Assessment/Site Investigation in 2015. No further investigation or remedial action was recommended for all 10 AOCs. One AOC (OW017) is located in an area of planned construction. Figure 3.11-2 shows the locations of the AOC sites located on the installation. The 10 AOCs were as follows:

- Former Building 403 OWS (OW010),
- Building 400 OWS (OW011),
- Building 401 OWS (OW013),
- Building 409 OWS (OW014),
- Building 414 OWS 1 (OW015),
- Building 414 OWS 2 (OW016),
- Building 1216 OWS (OW017),
- Building 1000 OWS 1 (OW018),
- Building 1000 OWS 2 (OW019), and
- Former World War II Era Fuel Pipe (TU012) (WIANG 2015a).

A Preliminary Assessment site visit was conducted in 2015 to identify possible perfluorinated compound contaminated potential release locations (PRLs). Figure 3.11-2 shows the locations of the PRL sites located on the installation. Based on preliminary findings, there are nine PRLs that were recommended for further investigation via a Site Investigation, including:

- Building 430 (Current Fire Station),
- Building 430 Nozzle Test Area 1,
- Building 430 Nozzle Test Area 2,
- Former Building 403 (Former Fire Station),
- Hangar 400,
- Hangar 406,
- Hangar 414,
- Fuel Spill Ditch, and
- Building 503 Parking Lot (WIANG 2015b).

A Site Investigation was conducted at the 115 FW at the nine perfluorinated compound PRLs in 2018. The results of the Site Investigation Report have not been finalized as the report is still a draft. Three perfluorinated compound PRLs (Building 430 Current Fire Station, Nozzle Test Area 1, and Nozzle Test Area 2) are located in areas of planned construction.

**Table 3.11-1. ERP Sites within the 115 FW Installation**

| *ERP Site* | *Materials of Concern* | *Status* |
|---|---|---|
| 1 | This site is a jet fuel spill near the POL Facility - Building 405 that occurred in March 1981. Spill cleanup activities occurred in 1981 and 1982 with a recommendation for NFA. WDNR concurred with NFA in 2005. | NFA |
| 2 | This site is a jet fuel spill associated with UST 1201-1 that occurred in August 1985. Spill cleanup activities occurred in 1985 with a recommendation for NFA. WDNR concurred with NFA in 2005. | NFA |
| 3 | This site is adjacent to Building 1201, where a PCB spill occurred in October 1983 associated with a leaking electrical transformer. Spill cleanup activities occurred in 1983 with a recommendation for NFA. WDNR concurred with NFA in 2005. | NFA |
| 4 | This site is the Former POL Storage and Distribution Facility, which includes former pump house Building 405; existing Building 415; four 50,000-gallon USTs used to store aviation fuel; a bulk fuel intake system and refueling station (part of Building 405); pipeline connectivity to a refueling hydrant system; and five smaller USTs (up to 2,000-gallons) that were next to Buildings 414 and 415 and used for storing waste oils, solvents, and detergents. The four 50,000-gallon aviation fuel USTs were installed in 1952 and removed in 1999. Site delineation occurred from 1989 through 1997. Remediation activities occurred from 1998 through 2010. WDNR concurred with NFA in 2012 with the caveat that contaminated soil and groundwater would need to be managed if soil is excavated or removed and if dewatering was going to take place in the area. This site remains on the WDNR's Redevelopment Program GIS due to residual groundwater and soil contamination. | NFA, Residual groundwater and soil contamination |
| 5 | This site is a 3,000-gallon used oil UST (1201-1) located south of Building 1201 where a 100-gallon release occurred. UST 1201-1 was removed in October 1991. Site characterization occurred from 1989 through 1994 and groundwater sampling occurred from 1997 through 2006. WDNR concurred with NFA in July 2007. | NFA |
| 6 | This site is associated with five former USTs and corresponding piping and dispensers located adjacent to the Vehicle Maintenance Building, Building 1000. All five USTs have been removed. Site characterization occurred from 1989 through 1994. Groundwater sampling occurred in 1997 and approximately 15 cubic yards of contaminated soil was removed in 2001. WDNR concurred with NFA in May 2006. | NFA |
| 7 | This site is associated with three former USTs located near Buildings 401 and 409. All three USTs have been removed. Site characterization occurred from 1989 through 1994. Groundwater sampling occurred from 1997 through 2006 and soil sampling occurred in March 1999. WDNR concurred with the NFA in July 2007. | NFA |
| 8 Area 1 | This site is associated with a refueling hydrant system consisting of two fuel lines, a 12,000-gallon UST, and a fuel meter located along the north side of the installation adjacent to Building 412. Impacts at Site 8, Area 1 were comingled with impacts associated with Installation Restoration Program Site 4. Site characterization occurred in 1992 and remediation occurred from 1993 through 2000. Post-remediation sampling occurred from 2004 through 2005 and WDNR concurred with the NFA in November 2006. | NFA |
| 8 Area 2 | This site encompasses Buildings 412 and 414 and the jet fuel transfer lines associated with the former fuel hydrant system. Site characterization occurred from 1991 through 1992 and again in 1994 to evaluate the presence of hydrocarbons in groundwater. Remediation occurred from 1993 through 2006. Long-term groundwater monitoring occurred from 2000 through 2010. WDNR concurred with NFA in January 2012 with the caveat that contaminated soil and groundwater would need to be managed if soil is excavated or removed and if dewatering was going to take place in area. The site remains on the WDNR GIS registry of contaminated sites due to residual petroleum contaminant concentrations in groundwater and soil. | NFA, Residual petroleum contamination in groundwater and soil |

*Legend:* ERP = Environmental Restoration Program; GIS = Geographic Information System; NFA = no further action; PCB= polychlorinated biphenyl; POL = petroleum, oil, and lubricant; WDNR = Wisconsin Department of Natural Resources; UST = underground storage tank.
*Source:* ANG 2013.

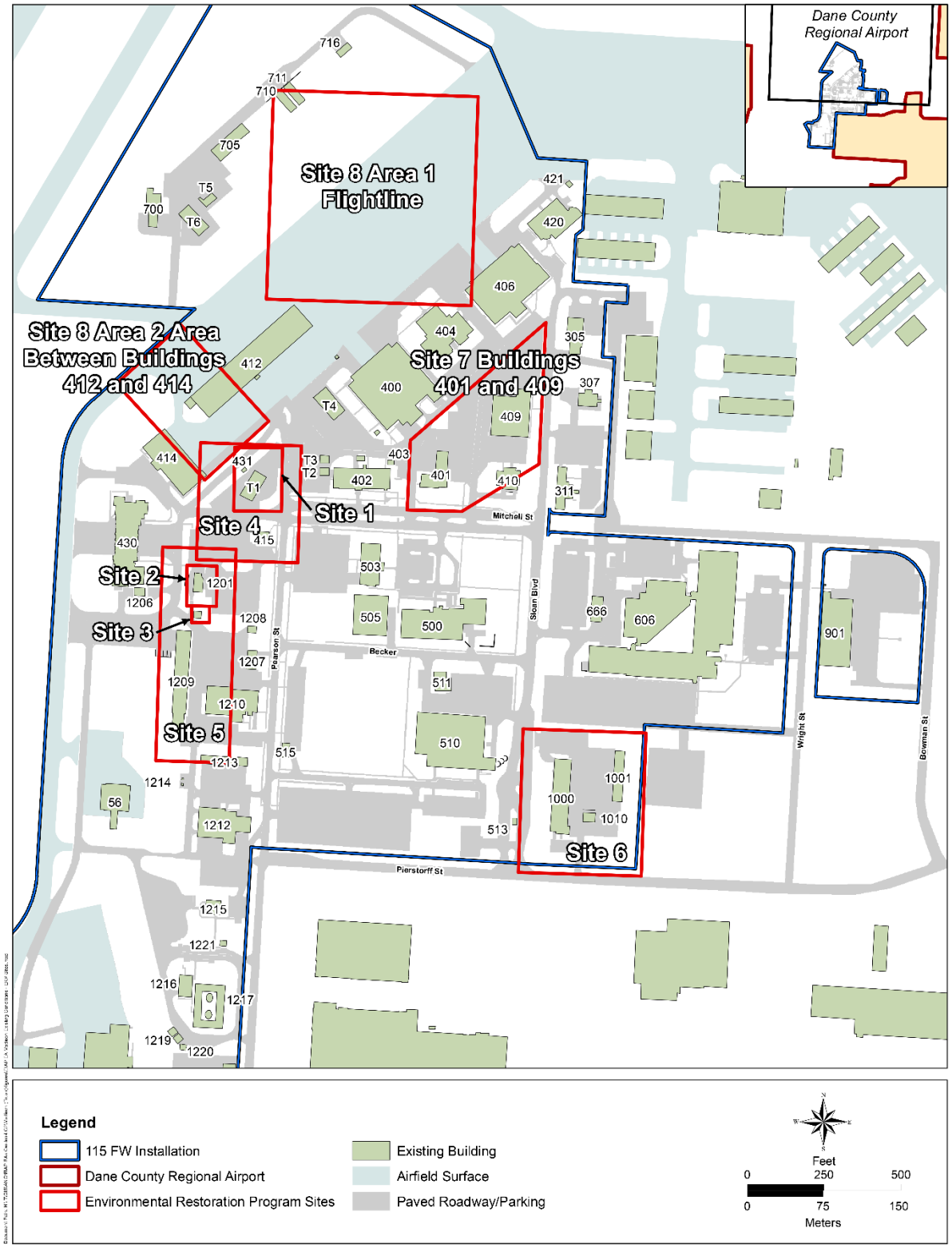


**Figure 3.11-1**
**Existing Environmental Restoration Program Sites**
**at the 115 FW Installation**

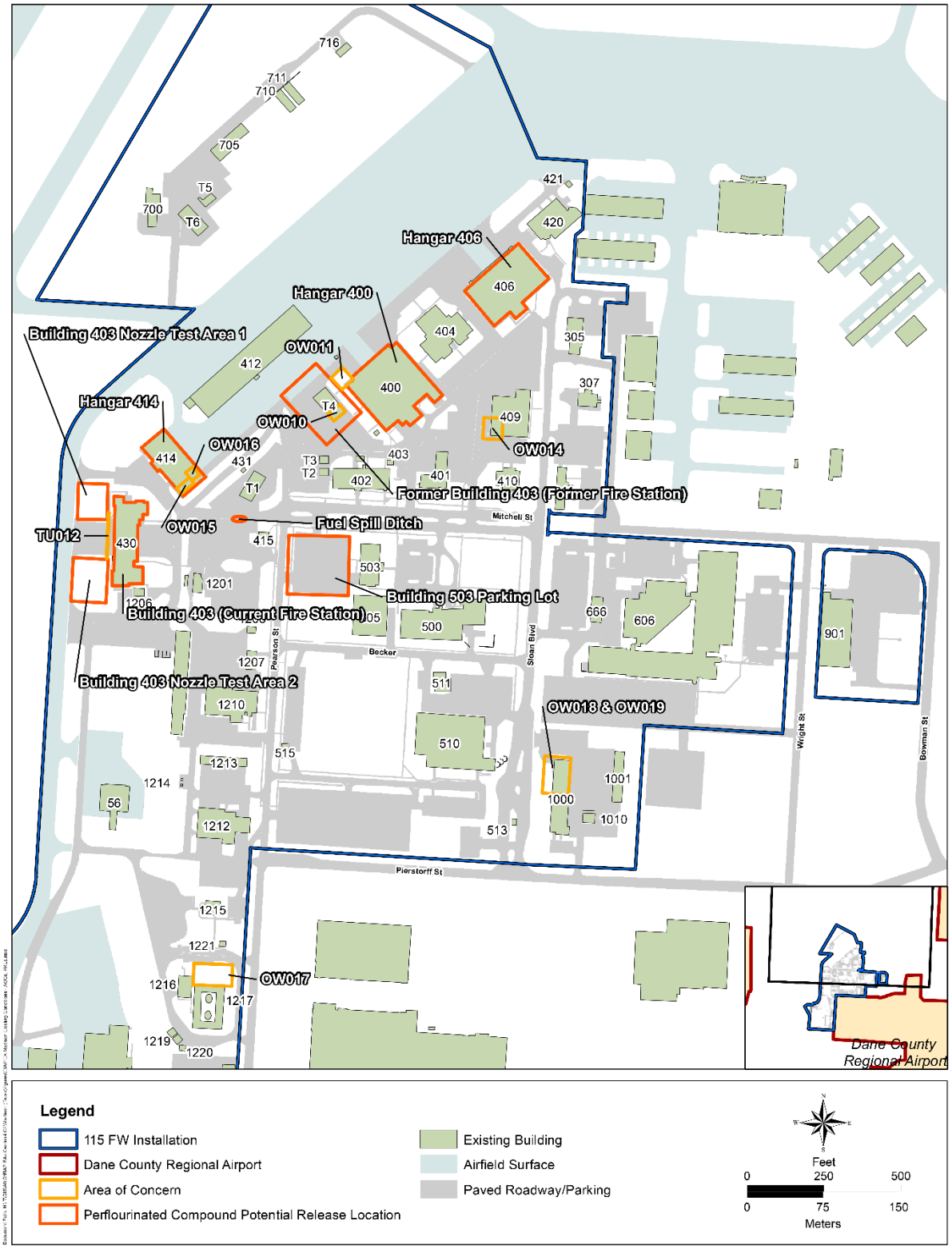


**Figure 3.11-2**
**Existing Areas of Concern and Perfluorinated Compound Potential Release Location Sites at the 115 FW Installation**

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# 4.0 ENVIRONMENTAL CONSEQUENCES

## 4.1 SAFETY

### 4.1.1 Methodology

For the Proposed Action, the elements of the proposal that have a potential to affect safety are evaluated relative to the degree to which the action increases or decreases safety risks to aircrews, the public, and property. Ground safety is assessed for the potential to increase risk, and the unit's capability to manage that risk by responding to emergencies and suppressing fire. When new or altered risks arising from the proposals are considered individually and collectively, assessments can be made about the adequacy of disaster response planning, and any additional or modified requirements that may be necessary as a result of the action.

### 4.1.2 Impacts

#### 4.1.2.1 Proposed Action

Providing new and renovated facilities for the 115 FW installation that support the current mission, and are properly sited with adequate space and a modernized supporting infrastructure, would generally enhance ground safety during required operations, training, maintenance and support procedures, security functions, and other activities conducted by the 115 FW.

Proposed renovation and infrastructure improvement projects related to this alternative would not impact aircraft take-off and landings or penetrate any RPZs. New building construction is not proposed within RPZs; therefore, construction activity would not result in any greater safety risk or obstructions to navigation.

While there are a few planned construction projects within the proposed QD arcs, per Air Force Manual 91-201, *Explosive Safety Standards*, all public transportation route distances and inhabited building distances meet specified net explosive weight quantity-distance criteria (Figure 4.1-1). No explosives would be handled during construction or demolition activities. Therefore, no additional risk would be expected as a result of implementation of this alternative.

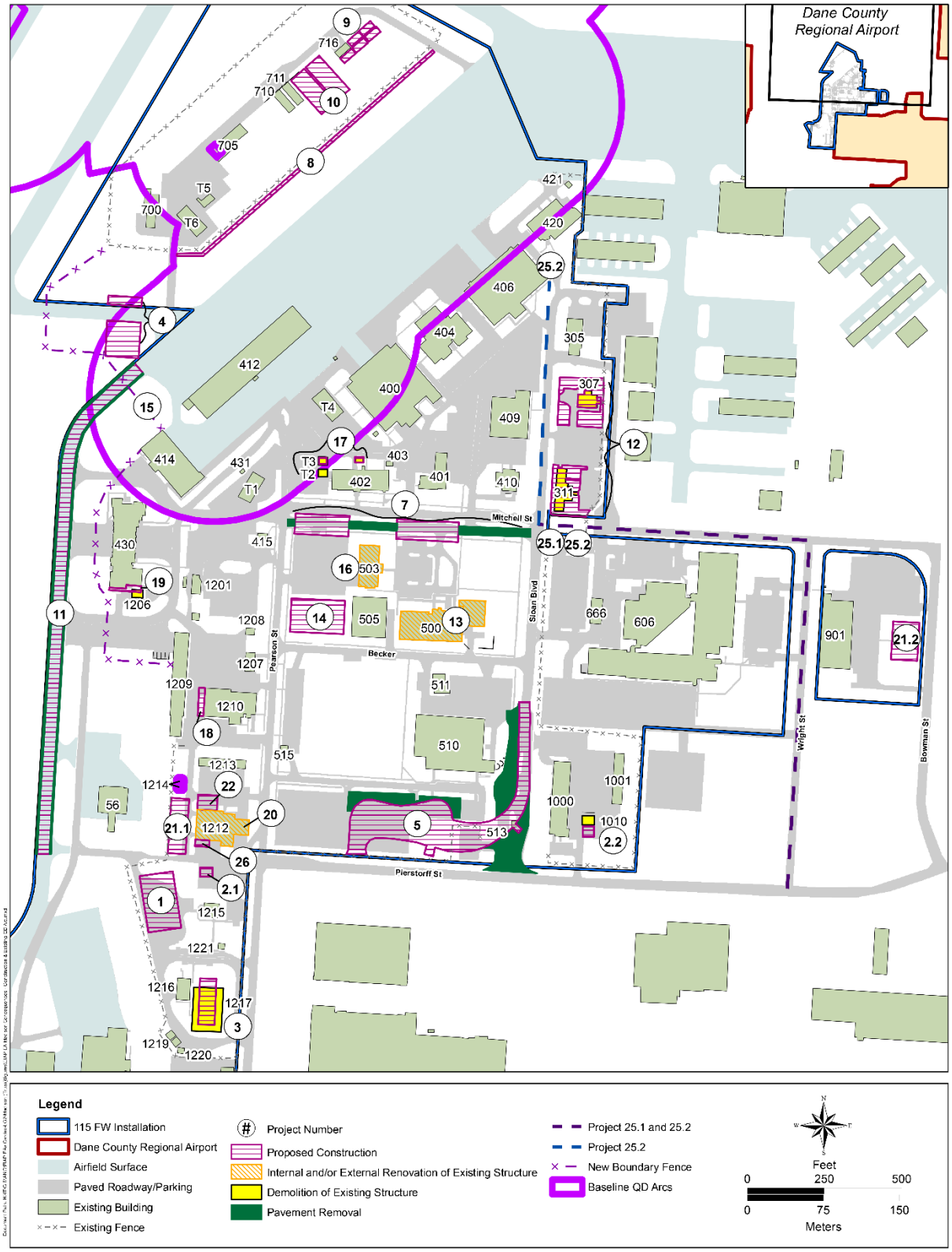


**Figure 4.1-1**
**Proposed QD Arcs and Proposed Construction at the 115 FW Installation**

The proposed construction projects meet all criteria specified in the ANG Handbook 32-1084, *Facility Space Standards*. AT/FP requirements have also been addressed to the extent practicable in all projects. Projects would use AT/FP site design standards for siting of facilities, parking, walkways, and other features. Renovations would bring the facilities into compliance with UFC 4-022-01, *Security Engineering: Entry Control Facilities/Access Control Points* and UFC 4-010-01, *DoD Minimum Anti-terrorism Standards for Buildings*, providing additional protection for the personnel based there.

#### 4.1.2.2 No Action Alternative

Under the No Action Alternative, no construction, renovation, or demolition would be performed and all aspects of safety would be expected to remain as described under affected environment in Section 3.1.2. Therefore, there would be no additional impacts to safety under the No Action Alternative.

## 4.2 AIR QUALITY

### 4.2.1 Methodology

Air quality impacts within the affected environment were reviewed relative to federal, state, and local air pollution standards and regulations. Since Dane County is in attainment for all criteria pollutants and has no designated maintenance areas, the General Conformity Rule does not apply; however, for the purposes of this analysis, 100 tons per year per pollutant was used as an indicator to trigger further evaluation of potential air quality impacts. Indicators do not trigger a regulatory requirement; however, they provide an indication or a warning that the action is potentially approaching a threshold that would trigger a regulatory requirement. Used in this way, indicators provide relevant evidence of the potential impacts to air quality. The 100 tons per year per pollutant indicator is based on the *de minimis* thresholds that apply under the General Conformity Regulations. No similar regulatory indicator is available for mobile source emissions, which are the primary sources for construction activities under this proposal. Lacking any regulatory mobile source emissions thresholds, the 100 tons per year per pollutant indicator was used to equitably assess mobile source emissions at the 115 FW installation.

### 4.2.2 Impacts

#### 4.2.2.1 Proposed Action

As a result of the proposed construction, 76,450 SF of new buildings would be constructed and 784,538 SF of demolition would occur, primarily involving paved surfaces that would be subsequently repaved. A total of 33,640 truck trips have been estimated, covering materials

brought in (46,806 cubic yards) and materials removed (35,645 cubic yards). Most of the proposed construction is within the footprint of the developed installation, with the exception of paving that would occur adjacent to the installation. The construction, demolition, and renovation activities would occur beginning in 2020. The following assumptions were used for construction projects at the 115 FW installation:

- New building foundations require excavation of at least 1 foot of grade soil.
- All buildings are single story.
- All new buildings require at least 100 feet of utility trenching.
- All new impervious surfaces are assumed to be concrete unless clearly identified as asphalt.
- All construction activities were assumed to occur in 1 year to provide a worst-case scenario for emissions. This means all construction was calculated to occur in 2020, even though some projects may last longer than 1 year.
- Where two options are under consideration, the option that would generate the greatest emissions was selected for analysis.

Construction emission estimates were prepared using the USAF Air Conformity Applicability Model. Emissions would primarily be generated by:

- diesel-powered construction equipment operating on-site,
- trucks removing or delivering materials from the construction areas,
- construction worker vehicles,
- application of architectural coatings, and
- dust created by grading and other bare earth construction activities.

Results of the modeling are presented in Table 4.2-1. The 100 tons per year value serves as a comparative indicator for all criteria pollutants and precursors. Detailed information on the modeling can be found in Appendix B.

**Table 4.2-1. Annual Construction Emissions Estimates for the 115 FW Installation at Dane County Regional Airport – 2020**

| *Year* | EMISSIONS (TONS/YEAR) | | | | | | |
|---|---|---|---|---|---|---|---|
| | *VOC* | *$NO_x$* | *CO* | *$SO_x$* | *$PM_{10}$* | *$PM_{2.5}$* | *$CO_2e$* |
| 2020 | 4.1 | 16.4 | 13.9 | 0.0 | 87.4 | 0.8 | 3,405 |
| Comparative Indicator | 100 | 100 | 100 | 100 | 100 | 100 | NA |
| Exceedance (Yes/No) | No | No | No | No | No | No | NA |

*Legend:* CO = carbon monoxide; $CO_2e$ = carbon dioxide equivalent; $NO_x$ = nitrogen oxides; $SO_x$ = sulfur oxides; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; $PM_{10}$ = particulate matter less than or equal to 10 microns in diameter; VOC = Volatile Organic Compound.

Based on the Air Conformity Applicability Model calculations, the emissions associated with construction activities proposed at the 115 FW installation would not be significant. All of the criteria pollutant emissions are below the comparative indicator values.

In addition, the NGB plans to implement best management practices (BMPs) in the contracts for the construction activities. These include:

Construction Equipment

- Plan construction scheduling to minimize vehicle trips.
- Verify idling restrictions through unscheduled inspections.
- Non-road Vehicles and Equipment: Non-road vehicles and equipment should meet, or exceed, the USEPA Tier 4 exhaust emissions standards for heavy-duty, non-road compression-ignition engines (e.g., construction equipment, non-road trucks, etc.).
- Prevent tampering, and conduct unscheduled inspections to ensure these measures are followed.
- Use ultra-low sulfur diesel fuel (15 ppm maximum) in construction vehicles and equipment.
- Regularly maintain diesel engines to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance (e.g., blue/black smoke indicates that an engine requires servicing or tuning). Lacking availability of non-road construction equipment that meets Tier 4 engine standards, the responsible agency should commit to using USEPA-verified particulate traps, oxidation catalysts and other appropriate controls where suitable to reduce emissions of diesel PM and other pollutants at the construction site.
- Consider alternative fuels and energy sources for equipment such as natural gas and electricity (plug-in or battery).

Fugitive Dust Source Controls

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative, where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing and phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour. Limit speed of earth-moving equipment to 10 miles per hour.

A Record of Air Analysis has been prepared to document that the impacts would not be significant, and can be found in Appendix B.

*Greenhouse Gas Emissions*

The proposed construction activities would contribute directly to GHG emissions from fossil fuels. Demolition and construction activities would generate 3,405 tons of $CO_2e$ emissions in 2020. To put these emissions in perspective, 3,405 tons of GHGs is the equivalent of 665 cars driving the national average of 11,500 miles per year (USEPA 2018c). These GHG emissions would only be generated during the construction period. The operation of new facilities may result in a small increase in installation-related GHG emissions, primarily through the consumption of electricity and possibly through the combustion of fossil fuel on-site if any oil or natural gas boilers or other heating units are installed in the new facilities.

While the GHG emissions generated from the construction activities and building operations alone would not be enough to cause global warming, in combination with past and future emissions from all other sources they would contribute incrementally to the global warming that produces the adverse effects of climate change.

#### 4.2.2.2 No Action Alternative

Under the No Action Alternative, no construction, renovation, or demolition would be performed at the 115 FW installation. Air emissions would not be notably different from those that occur today.

## 4.3 LAND USE

### 4.3.1 Methodology

Impacts to land use are evaluated by identifying whether an action is incompatible with an existing land use due to safety or other issues. The significance of potential land use impacts is based on the level of land use sensitivity in areas affected by a proposed action. In general, land use impacts would be significant if the action would: (1) be inconsistent or noncompliant with applicable land use plans or policies, including the county or city plans; (2) preclude the viability of an existing land use activity within the affected environment; (3) preclude continued use or occupation of an area; or (4) be incompatible with adjacent nearby land use to the extent that public health or safety is threatened.

### 4.3.2 Impacts

#### 4.3.2.1 Proposed Action

Proposed construction activities would be short-term and intermittent, but may cause minor traffic and/or noise disruptions to local businesses as well as employees at the 115 FW installation. However, construction activities would be temporary and would occur during normal business hours (i.e., between 7 a.m. and 5 p.m., Monday through Friday). The proposed construction activities would improve efficiency in daily operations by providing more efficient and secure operations for the 115 FW. Land uses would be consistent with current functions on the installation and the airport and all facilities would be designed and sited to be compatible with existing land uses and safety guidelines.

Under the Proposed Action, the number of operations at the 115 FW would not change. Furthermore, all of the construction activities would occur on the 115 FW installation or within the Dane County Regional Airport boundary, with the exception of the repair of the roads within the vicinity of the installation. However, these road repairs would not change the existing land use. Therefore, impacts to adjacent land use or land use on the 115 FW installation would be minor.

#### 4.3.2.2 No Action Alternative

Under the No Action Alternative, no construction, renovation, or demolition would occur and land use would be expected to remain as described under affected environment in Section 3.3.2. Therefore, there would be no additional impacts to land use under the No Action Alternative.

## 4.4 EARTH RESOURCES

### 4.4.1 Methodology

This section analyzes the potential for impacts to earth resources. Impacts on topography, geology, and soils can result from clearing of vegetation, soil excavation, introduction of pollutants, placement and grading. Without proper management controls, these actions can adversely affect the quality and/or quantity of earth resources.

Criteria for evaluating impacts related to earth resources associated with the Proposed Action are soil quality and terrain stability. Affects to earth resources would be significant if they: (1) caused long-term erosion of site soil; (2) threaten terrain stability; or (3) introduced contaminants to the soil.

### 4.4.2 Impacts

#### 4.4.2.1 Proposed Action

Under the Proposed Action, new construction would consist of 27 separate projects resulting in up to 1,094,330 SF (25.1 acres) of new construction footprint, including up to 50,600 SF (1.2 acres) of new impervious surfaces. The total construction footprint analyzed represents the largest possible footprint of each of the options (see Table 2.2-1). These proposed construction projects would meet all criteria specified in ANG Handbook 32-1084, *Facility Space Standards.* Long-term positive impacts to storm drainage would occur due to the regrading around Buildings 1000 and 1001 under Project #24, where the current parking area would be repaved. Approximately 40,000 SF of current impervious surfaces would be converted to pervious due to redesign of roadways, taxiways and the main gate complex. The long-term positive impacts of increased pervious surfaces include better drainage and stormwater control, increased soil stability, and improved aesthetics. Minor, direct, short-term soil erosion is possible from the Proposed Action construction projects. A more specific discussion on impacts is discussed below.

*Topography*

The impacts to the topography of the 115 FW would be negligible. The site is located on flat land, much of which has been previously disturbed by past earth-moving (cut and fill) activities. Surrounding lands would not be impacted by any construction-related clearing and grading.

*Geology*

The area is not known to have unstable geologic formations and is not considered high risk for seismic events. As such, no adverse impact or geologic hazards were identified. No deep excavation would occur as part of the Proposed Action projects. No significant impacts to mineral resources are anticipated, as none of the Proposed Action projects would involve the commercial extraction of mineral resources, or would affect mineral resources considered important to local, state, or national interests. Impacts to geology would be minor under the Proposed Action at the 115 FW.

*Soils*

Proposed construction under this alternative would occur on five soil types, including Batavia silt loam (2-6 percent slope), Virgil silt loam (1-3 percent slope), Wacousta silty clay loam, Hayfield silt loam (0-3 percent slope), and Sable silty clay loam (0-3 percent slope). The majority of the proposed construction is on the Batavia silt loam, Virgil silt loam, Wacousta silty clay loam, and the Hayfield silt loam. The NRCS Web Soil Survey rates the Batavia silt loam as somewhat limited

for roads and small commercial building development due to high shrink-swell potential and slope. The Wacousta silty clay loam is rated as very limited due to ponding and a shallow depth to the saturated zone. The Virgil silt loam is also rated as very limited due to ponding, a shallow depth to the saturated zone, a high shrink-swell potential, and flooding. The Hayfield silt loam is rated as not limited for roads and small commercial building development. The ANG would implement appropriate engineering practices necessary in order to construct on these types of soils.

Minor, direct, short-term soil erosion is possible from the Proposed Action construction projects. Construction would remove vegetation, disturb the soil surface, and compact the soil. Stormwater runoff and wind on disturbed soils may contribute to soil erosion. Exposure of the soil during construction has the minor potential to increase sedimentation in off-site surface waters. Adverse impacts of soil erosion can be minimized by using erosion control methods during and after construction until vegetation is established. Such practices could include using well-maintained silt fences or straw bales, minimizing surficial areas disturbed, stabilizing cut/fill slopes, minimizing earth-moving activities during wet weather, and covering soil stockpiles. The standard construction practices described in the 115 FW SWPPP (115 FW 2016) would be implemented during and following the construction period. A Notice of Intent would be filed with the State of Wisconsin to obtain coverage under the General Permit for Stormwater Runoff from Construction Activities prior to implementation of individual projects. Construction activities subject to this permit include clearing, grading, and disturbances to the ground such as stockpiling or excavation. Implementation of these measures, as necessary and appropriate, would ensure that impacts to earth resources under the Proposed Action at the 115 FW installation would be minor.

#### 4.4.2.2 No Action Alternative

Under the No Action Alternative, no construction, renovation, or demolition would occur and earth resources would be expected to remain as described under affected environment in Section 3.4.2. Therefore, there would be no additional impacts to earth resources under the No Action Alternative.

## 4.5 WATER RESOURCES

### 4.5.1 Methodology

When land is developed, the hydrology, or natural cycle of water, can be altered. Impacts on hydrology can result from land clearing activities, disruption of the soil profile, loss of vegetation, introduction of pollutants, new impervious surface, and an increased rate and/or volume of runoff. Without proper management controls, these actions can adversely affect the quality and/or quantity of water resources.

Criteria for evaluating impacts related to water resources associated with the Proposed Action are water availability, water quality, groundwater recharge, and adherence to applicable regulations. Affects to water resources would be significant if they: (1) adversely affect water quality or endanger public health by creating or worsening adverse health hazard conditions; (2) threaten or damage unique hydrologic characteristics; or (3) violate established laws or regulations that have been adopted to protect or manage water resources of an area.

### 4.5.2 Impacts

#### 4.5.2.1 Proposed Action

*Surface Water*

The Proposed Action would result in a net total of 1.2 acres of new impervious surface at the 115 FW installation (as described in Section 2.2). Construction could potentially produce short-term impacts to surface water quality caused by erosion during construction activities. The collective area impacted by the proposed construction activity would exceed one acre in size and therefore require the application for, and compliance with Wisconsin's general stormwater permit, "General Permit to Discharge under the Wisconsin Pollutant Discharge Elimination System - Land Disturbing Construction Activities." Specific stormwater pollution controls would be included in the permit, as required by State regulations NR 151 and 216. Further detail and control of stormwater flow and pollution controls would be applied in accordance with Chapter 14 of the Dane County Ordinances: Erosion Control Permits and Stormwater Control Permit (Chapter 14, Subchapter II: Erosion Control and Stormwater Management). Chapter 14 regulates stormwater pollution and flow for construction activity that disturbs more than 4,000 SF of land area and/or creates more than 20,000 SF of impervious surface. In addition, a cumulative soil annual loss rate of less than or equal to 7.5 tons per acre from construction activity areas would be achieved in accordance with the Dane County Erosion Control and Stormwater Management Manual, by following procedures outlined in Chapter 2, *Erosion Control*, of the Manual.

The sources of impacts from construction would be limited to the area of ground disturbance at any one time and the duration of construction at each distinct project site, and runoff would only be likely to occur during and following a precipitation event. The site-specific SWPPP would include measures to minimize potential impacts associated with stormwater runoff during construction, including best management practices (BMPs) and standard erosion control measures such as straw bales, sandbags, silt fencing, earthen berms, use of tarps or water spraying, soil stabilization, temporary sedimentation basins, and re-vegetation with native plant species, where possible, to decrease erosion and sedimentation. Special consideration would be made to implement these measures for any construction adjacent to Starkweather Creek, which is on the

state list of waterbodies that are impaired for sediment (WDNR 2018). As a result, the Proposed Action is not expected to affect the impairment.

In accordance with UFC 3-210-10 (as amended 2015) and Section 438 of the EISA, facilities having a footprint that exceeds 5,000 SF (0.1 acre) must maintain or restore the pre-development site hydrology to the maximum extent technically feasible. Any potential impacts resulting from erosion or temporary increases in surface stormwater runoff during construction activities would be temporary and minimized by applying erosion control measures (e.g., wetting of soils, silt fencing, and detention basins).

In addition, the existing SWPPP (115 FW 2016) for the installation would be amended as necessary to reflect post-construction operations and potentially new BMPs. This SWPPP provides a management and engineering strategy to improve the quality of stormwater runoff from the 115 FW and thereby improve the quality of the receiving waters. Although there would be a small increase in runoff volumes and rates associated with the additional impervious areas under the Proposed Action, the stormwater management system would be designed in compliance with applicable stormwater regulations. In addition, the 115 FW is currently in compliance with its WPDES permit and proposed facility designs would follow the WPDES permit conditions such that impacts to surface waters from the Proposed Action would be minor.

*Groundwater*

Under the Proposed Action, the net increase in impervious surfaces (1.2 acres) could result in a decrease in groundwater recharge. In accordance with UFC 3-210-10, pre-development site hydrology must be maintained or restored to the maximum extent technically feasible. Any construction that involves foundations that would enter groundwater would need to meet federal, state of Wisconsin, and other pertinent regulations. Therefore, impacts to groundwater from the Proposed Action would be minor.

*Floodplains*

On the 115 FW, only a portion of the drainage ditch connected to Starkweather Creek has been identified as being located within the 100-year floodplain of Starkweather Creek. Therefore, construction associated with the Proposed Action would not impact floodplains.

*Wetlands*

The Proposed Action would not overlap with the one emergent, herbaceous jurisdictional wetland within the 115 FW (Figure 4.5-1). Therefore, there would be no impacts to wetlands under the Proposed Action.

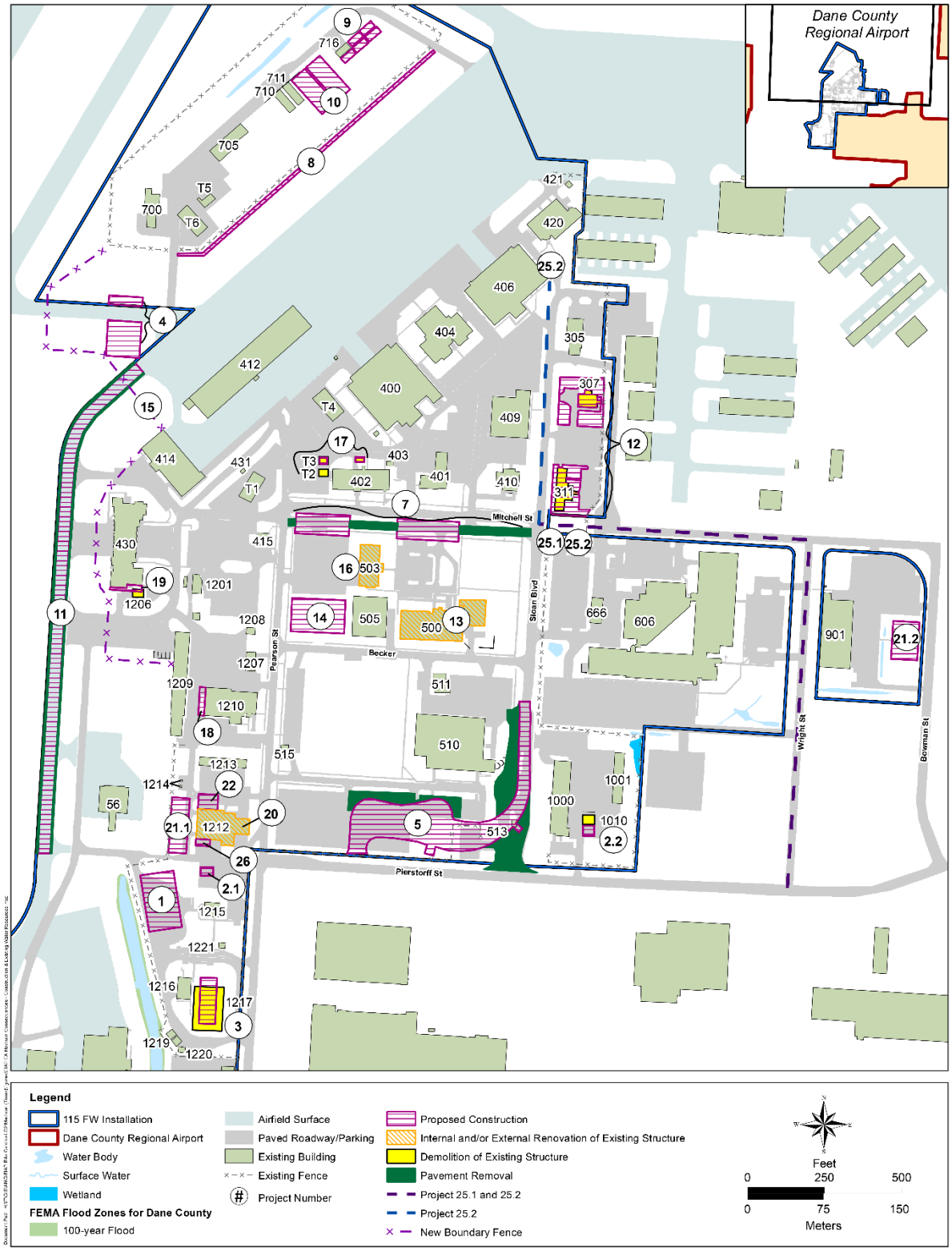


**Figure 4.5-1**
**Water Resources and Wetlands within the Vicinity**
**of the Proposed Construction at the 115 FW**

#### 4.5.2.2 No Action Alternative

Under the No Action Alternative, no construction, renovation, or demolition would occur and water resources would be expected to remain as described under affected environment in Section 3.5.2. Therefore, there would be no additional impacts to water resources under the No Action Alternative.

## 4.6 BIOLOGICAL RESOURCES

### 4.6.1 Methodology

This section analyzes the potential for impacts to biological resources at the 115 FW resulting from implementation of the Proposed Action. Analysis of impacts focuses on whether and how ground-disturbing activities from proposed construction, renovation, and demolition projects at the 115 FW could affect biological resources.

Determination of the significance of potential impacts to biological resources is based on: (1) the importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource; (2) the proportion of the resource that would be affected relative to its occurrence in the region; (3) the sensitivity of the resource to proposed activities; and (4) the duration of ecological ramifications. Impacts to biological resources would be significant if species or habitats of concern were adversely affected over relatively large areas or if disturbances caused reductions in population size or distribution of a special status species. This section analyzes the potential for direct and indirect impacts to biological resources from implementation of the Proposed Action.

*Direct impacts* are associated with ground-disturbing activities resulting from construction of the facilities. Direct impacts may be either temporary (reversible) or permanent (irreversible). Temporary impacts include disturbances caused by construction activities and operations, such as noise, emissions, and traffic. Removal of vegetation can be a temporary or permanent impact. If the vegetation is restored after construction, the impact would be temporary. If a permanent structure is built, the vegetation cannot be restored and the impact is permanent. Permanent impacts include direct mortality of species.

*Indirect impacts* are caused by or result from project-related activities, but occur later in time and can extend beyond the immediate construction footprint(s). Indirect impacts are often diffuse, variable, resource-specific, and less amenable to quantification or mapping than direct impacts, but still need to be considered.

### 4.6.2 Impacts

#### 4.6.2.1 Proposed Action

*Vegetation*

The 115 FW installation is composed of developed land and landscaped areas such as lawns, ornamental trees, or maintained open fields of grass (115 FW 2018b). Native species would be considered for any new landscaping added under the Proposed Action. Therefore, the Proposed Action would have no impact on native habitats or vegetation. Therefore, impacts to vegetation would be minor under the Proposed Action. In addition, as stated in Table 2.2-1, Building 1206 would be demolished and converted to a grass field that would be maintained.

*Wildlife*

Under the Proposed Action at the 115 FW installation, impacts to wildlife due to construction would be minor. Noise associated with construction may cause wildlife to temporarily avoid the area, including those that are protected under the Migratory Bird Treaty Act. Noise associated with construction activities, as well as an increase in general industrial activity and human presence, could evoke reactions in birds. Disturbed nests in the immediate vicinity of construction activity would be susceptible to abandonment and depredation. However, bird and wildlife populations in the vicinity of the airport where project components would occur are accustomed to elevated noise associated with aircraft and general military industrial use. As a result, indirect impacts from construction noise are expected to be minor because the ambient noise levels within the vicinity are high under existing conditions and would be unlikely to substantially increase by the relatively minor and temporary nature of the proposed construction and modifications.

Construction, renovation, and demolition projects associated with the Proposed Action would eliminate or displace wildlife from the project footprints and their vicinities. Individuals of the smaller, less mobile, and burrowing species could be killed or injured by construction in new footprints, whereas mobile species (e.g., birds and larger mammal species) would disperse to surrounding areas. However, wildlife within the installation is limited as habitat is primarily composed of developed land and landscaped areas such as lawns, ornamental trees, or maintained open fields of grass. Any loss of commonly occurring individuals would not represent a noticeable portion of the population. Therefore, impacts to wildlife would be minor under the Proposed Action.

*Special Status Species*

No federally listed species are known to occur at the 115 FW installation. The big brown bat, the only state listed species detected on the installation, would not be impacted by the Proposed Action, as all project activities would occur during daylight hours, when bats are not active. Additionally, big brown bats roost and forage in and around human development and open fields. Migratory birds that may occur in the vicinity of the project activities would disperse to surrounding areas, but no other direct impacts to migratory birds would occur. Therefore, impacts to special status species would be minor under the Proposed Action.

#### 4.6.2.2 No Action Alternative

Under the No Action Alternative, no construction, renovation, or demolition would occur and biological resources would be expected to remain as described under affected environment in Section 3.6.2. Therefore, biological resources would not be impacted.

## 4.7 INFRASTRUCTURE

### 4.7.1 Methodology

The infrastructure components evaluated include the electrical, natural gas, and potable water systems; wastewater; stormwater; solid waste management; and transportation network. Potential impacts to infrastructure elements at the 115 FW installation are assessed in terms of effects of the Proposed Action on existing service levels. Impacts to public services/utilities and transportation networks are assessed with respect to the potential for disruption or improvement of current utility systems and traffic circulation patterns and deterioration or improvement of existing levels of service on local roads. Impacts may arise from physical changes to circulation or utility corridors, construction activity, and introduction of construction-related traffic and utility use.

Utility system effects may include disruption, degradation, or improvement of existing levels of service or potential change in demand for energy or water resources. Adverse impacts to roadway capacities would be significant if roads with no history of capacity exceedance had to operate at or above their full design capacity as a result of an action. Transportation effects may arise from changes in traffic circulation, delays due to construction activity, or changes in traffic volumes.

For the range of public services discussed below, the installation is required to proactively plan for and assess all specific infrastructure and utility requirements and other essential services to ensure that the proposed increase in personnel and their dependents would be accommodated under the Proposed Action. The installation routinely evaluates community facilities and services to account for fluctuations associated with new units assigned to the installation and the deployment of

existing units. In addition, the installation identifies infrastructure or utility needs within the scope of each corresponding project. If particular projects require additional infrastructure or utilities, they are incorporated as a part of that project. This process ensures that any infrastructure or utility deficiencies are identified in the initial planning stages.

### 4.7.2 Impacts

#### 4.7.2.1 Proposed Action

*Electrical and Natural Gas Systems*

Construction activity associated with the Proposed Action could result in some temporary interruption of utility services during construction. These impacts would be temporary, occurring briefly during active construction periods. In addition, the demand for energy (primarily electricity) could increase slightly during demolition and construction phases. The energy supply at the installation and in the region is adequate and would not be affected by this temporary increase in demand.

Demand for electricity and natural gas would be expected to increase slightly in the long term as a result of the new building space and facilities to be constructed. However, any new facilities and additions associated with the Proposed Action would be implemented with more energy-efficient design standards and utility systems than are currently in place. In addition, construction projects would incorporate Leadership in Energy and Environmental Design and sustainable development concepts to achieve optimum resource efficiency, sustainability, and energy conservation. Therefore, average energy consumption would be expected to stay the same or decrease compared to energy consumption associated with existing facilities.

*Wastewater*

No change is anticipated to the generation of wastewater because of the construction or demolition activities planned or as a result of operational use of new facilities under the Proposed Action. Thus, no impact is anticipated to the wastewater system at the 115 FW installation.

*Stormwater*

Under the Proposed Action, there would be up to 1,094,330 SF (25.1 acres) of temporary soil disturbance, including up to 50,600 SF (1.2 acres) of new impervious surface as a result of proposed construction. In accordance with the EISA Section 438, any increase in surface water runoff as a result of the proposed construction would be attenuated through using temporary and/or permanent drainage management features. The proposed construction activities could temporarily

impact the quality of stormwater runoff (see Section 4.5.2, *Water Resources*). However, implementation of appropriate standard construction practices (as described previously), preventative maintenance, and periodic inspections and sampling to detect risk to stormwater, especially during active construction activity, would minimize these potential impacts. Therefore, impacts to the existing stormwater drainage system as a result of the proposed construction would be minor.

*Solid Waste Management*

The building space and facilities to be constructed would generate construction and demolition debris requiring landfill disposal. Proposed increases in personnel and equipment use would also contribute to an increase in solid waste generation. However, impacts to local landfills would not be expected to exceed the permitted throughput or contribute significantly to the remaining capacity.

Off-installation contractors completing construction and demolition projects at the 115 FW installation would be responsible for disposing of waste generated from these activities. Contractors would be required to comply with federal, state, and local regulations for the collection and disposal of municipal solid waste from the installation. Much of this material can be recycled or reused, or otherwise diverted from landfills. All non-recyclable construction and demolition waste would be collected in a dumpster until removal. Construction and demolition waste contaminated with hazardous waste, ACM, LBP, or other undesirable components would be managed in accordance with AFI 32-7042, *Waste Management* (2017).

Following the construction of the new facilities, solid waste management would be similar to current conditions. Therefore, it is not expected there would be long-term impacts to solid waste management.

*Potable Water System*

The demand for water (e.g., if used to control dust) could also increase temporarily during demolition and construction phases. However, this increase would be temporary and intermittent and would not be expected to impact regional water supply. Following the construction of the new facilities, demand for potable water would be similar to current conditions. Therefore, it is not expected there would be long-term impacts to potable water.

*Transportation*

Construction equipment would be driven to proposed construction areas and would be kept on-site for the duration of the respective activity. Construction workers would drive daily in their personal

vehicles to and from the construction site. In general, construction traffic would result in increases of on-installation roadways during construction activities; however, increases would be temporary and intermittent, occurring only during active construction periods. In addition, some of the roads and areas on the installation may have limited access during roadway repairs; however, this would be temporary and intermittent and would be limited to the installation boundaries. Therefore, impacts to transportation infrastructure would be minor under the Proposed Action.

#### 4.7.2.2 No Action Alternative

Under the No Action Alternative, no construction, renovation, or demolition would be performed and infrastructure would be expected to remain as described under affected environment in Section 3.7.2. Therefore, there would be no additional impacts to infrastructure under the No Action Alternative.

## 4.8 CULTURAL RESOURCES

### 4.8.1 Methodology

Cultural resources are subject to review under both federal and state laws and regulations. Section 106 of the NHPA of 1966 empowers the ACHP to comment on federally initiated, licensed, or permitted projects affecting cultural sites listed or eligible for inclusion in the NRHP. Once cultural resources have been identified, significance evaluation is the process by which resources are assessed relative to significance criteria for scientific or historic research, for the general public, and for traditional cultural groups. Only cultural resources determined to be significant (i.e., eligible for the NRHP) are protected under the NHPA.

Analysis of potential impacts on cultural resources considers both direct and indirect impacts. Direct impacts may occur by physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or alter its setting; or neglecting a resource to the extent that it deteriorates or is destroyed. Direct impacts are assessed by identifying the types and locations of proposed activity and determining the location of cultural resources that could be affected. Indirect impacts result primarily from project-induced population increases on-installation and the need for construction to accommodate this population growth. Construction activities and the subsequent use of the facilities could affect cultural resources. The area of potential effects for cultural resources encompasses areas where ground-disturbing activities and alterations/modifications to buildings would occur.

### 4.8.2 Impacts

#### 4.8.2.1 Proposed Action

*Archaeological Resources*

The open areas of the 115 FW installation have been intensively surveyed for archaeological resources, and no NRHP-eligible archaeological resources have been identified. The Truax Mound Human Burial Site is located near the 115 FW installation, but not within the proposed construction areas. It is not expected that undiscovered cultural resources would be found during implementation of the Proposed Action at the 115 FW installation; however, in the event of an inadvertent discovery during ground-disturbing operations, the following specific actions would occur. The Project Manager would cease work immediately and the discovery would be reported to the 115 FW Environmental Manager, who would secure the location with an adequate buffer and notify the Commander and the NGB Cultural Resources Manager. The Environmental Manager would then continue to follow ANG Inadvertent Discovery protocol. Under these conditions, there would be no adverse effects to archaeological resources with implementation of this alternative

The 115 FW is consulting with the Wisconsin SHPO on its finding of effect for the Proposed Action.

*Architectural Resources*

Under the Proposed Action, seven architectural resources (Buildings 307, 311, 1010, 1206, Tent 2, Tent 3, and Grain Bin) are proposed for demolition and eight architectural resources are proposed for additions or interior renovations (Buildings 430, 500, 503, 710, 711, 716, 1210, and 1212). Three of the impacted architectural resources were determined not eligible as a result of the 2007 survey (Buildings 311, 1210, and 1212), and two were determined not eligible after the 2014 survey (Buildings 307 and 500). Additionally, several architectural resources were included in a recent survey in 2018 (Buildings 430, 503, 710, 711, 716). The NGB determined the resources in the 2018 survey are not eligible and is consulting with the Wisconsin SHPO on their eligibility determination. Building 1010 is a tank and is not considered a building or a structure according to the NRHP resource classification.

Four resources that would be demolished under the Proposed Action have not been surveyed. These resources include Building 1206 (Explosive Ordinance Disposal), Tent 2, Tent 3, and the Grain Bin. Building 1206 was constructed in 1985 during the Cold War (1946–1991). The Wisconsin SHPO and the NGB did not raise any concerns about the installation's Cold War resources when the 115 FW obtained a waiver for an Integrated Cultural Resources Management

Plan (115 FW 2018d). Additionally, an architectural inventory and evaluation of six Cold War-era buildings was completed in 2014 for proposed installation development plan projects. The 115 FW determined the buildings are not eligible for listing in the NRHP. The Wisconsin SHPO concurred that the development projects would have no effect on historic properties (NGB 2015). Tent 2 and Tent 3 were constructed in the late 2000s and the Grain Bin was constructed in 2015. These resources are less than 50 years in age and are excluded from eligibility for listing in the NRHP because they lack exceptional importance under NRHP Criteria Consideration G (properties that have achieved significance within the past 50 years).

Because there are no architectural resources considered eligible for listing in the NRHP at the 115 FW installation, implementation of the Proposed Action would have no significant impacts.

The 115 FW is consulting with the Wisconsin SHPO on its finding of effect for the Proposed Action.

*Traditional Resources*

No traditional resources have been identified at the 115 FW installation and the highly developed nature of the installation makes it unlikely to contain any such resources. Government-to-government consultation between the NGB and each federally recognized American Indian Tribe associated with the 115 FW installation is being conducted for this action in recognition of their status as sovereign nations to provide information regarding tribal concerns per Section 106 of the NHPA, as well as information on traditional resources that may be present on or near the installation. An initial government-to-government consultation letter and a copy of the Final Description of Proposed Action and Alternatives was sent to 11 federally-recognized American Indian Tribes with ancestral ties to the 115 FW installation in February 2019. These 11 federally recognized American Indian Tribes include Bad River Band of Lake Superior Chippewa; Forest County Potawatomi Community; Ho-Chunk Nation; Lac Courte Oreilles Band of Lake Superior Chippewa; Lac du Flambeau Band of Lake Superior Chippewa; Menominee Indian Tribe of Wisconsin; Stockbridge-Munsee Community Band of Mohican Indians; Oneida Nation of Wisconsin; Red Cliff Band of Lake Superior Chippewa; St. Croix of Lake Superior Chippewa Community; and the Sokaogon Chippewa Community (Mole Lake Band of Lake Superior Chippewa Indians). After the initial government-to-government consultation letter and the Final Description of Proposed Action and Alternatives was sent, NGB followed up with telephone calls and emails in an effort to increase accessibility and encourage communication in the event an American Indian Tribe would have any concerns regarding the Proposed Action. Correspondence sent to the American Indian Tribes is located in Appendix A. To date, no responses have been received from the federally-recognized American Indian Tribes associated with the 115 FW.

#### 4.8.2.2 No Action Alternative

Under the No Action Alternative, no construction, renovation, or demolition would be performed and cultural resources would be expected to remain as described under affected environment in Section 3.8.2. Therefore, there would be no additional impacts to cultural resources under the No Action Alternative.

## 4.9 SOCIOECONOMICS

### 4.9.1 Methodology

Socioeconomic impacts are assessed in terms of direct effects on the local economy and population, and related indirect effects on other socioeconomic resources within the ROI. Socioeconomic impacts would be considered significant if the Proposed Action resulted in a substantial shift in population trends or notably affected regional employment, earnings, or community resources such as schools.

### 4.9.2 Impacts

#### 4.9.2.1 Proposed Action

Economic activity associated with proposed construction and demolition activities at the 115 FW installation, such as employment and materials purchasing, would provide short-term economic benefits to the local economy. However, short-term beneficial impacts resulting from construction payrolls and materials purchased would be negligible on a regional scale. As the Proposed Action would not result in a change in 115 FW personnel levels, no long-term economic or demographic changes would occur upon implementation of the Proposed Action. Therefore, the Proposed Action would result in minor beneficial impacts to regional or local socioeconomic characteristics.

#### 4.9.2.2 No Action Alternative

Under the No Action Alternative, no construction, renovation, or demolition would be performed and socioeconomic conditions would be expected to remain as described under affected environment in Section 3.9.2. Therefore, there would be no additional impacts to regional or local socioeconomic characteristics.

## 4.10 ENVIRONMENTAL JUSTICE

### 4.10.1 Methodology

In order to comply with EO 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, and EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, areas containing relatively high disadvantaged or youth populations are given special consideration regarding potential impacts in order to address the potential for disproportionately high or adverse human health or environmental effects to these communities. Ethnicity and poverty status in the vicinity of the Proposed Action have been examined and compared to city, county, state, and national data to determine if any minority or low-income communities could potentially be disproportionately affected by implementation of the Proposed Action or alternatives.

Three criteria must be met for impacts to minority and low-income communities to be considered significant: (1) there must be one or more such populations within the ROI, (2) there must be adverse (or significant) impacts from the Proposed Action, and (3) the environmental justice populations within the ROI must bear a disproportionate burden of those adverse impacts. If any of these criteria are not met, then impacts with respect to environmental justice would not be significant.

### 4.10.2 Impacts

#### 4.10.2.1 Proposed Action

Under the Proposed Action, construction activities would be contained entirely within the boundaries of the 115 FW installation with the exception of road repairs that would occur within the vicinity of the installation main entrance. Analysis of each resource has concluded that populations, including minority populations and low-income populations outside the boundaries of the installation, would not be significantly impacted by implementation of the Proposed Action. Therefore, implementation of the Proposed Action would not disproportionately impact minority or low-income populations. Implementation of the Proposed Action would not result in environmental health risks or safety risks to children as there are no such facilities located within the vicinity of the proposed construction.

#### 4.10.2.2 No Action Alternative

Under the No Action Alternative, no construction, renovation, or demolition would be performed and environmental justice conditions would be expected to remain as described under affected

environment in Section 3.10.2. Therefore, there would be no additional impacts to regional or local minority populations, low-income populations, or children.

## 4.11 HAZARDOUS MATERIALS AND WASTES

### 4.11.1 Methodology

State and federal laws regulate the storage, handling, disposal and transportation of hazardous materials and wastes. Hazardous materials and wastes issues can occur during ground-disturbing activities near USTs, ASTs, and areas used for the storage or transport of pesticides, bulk fuel, and POLs. No USTs exist at the 115 FW installation, so this issue will not be discussed further. Impacts to hazardous materials and wastes would be considered significant if the Proposed Action projects: 1) altered the quantity of materials/ wastes generated, 2) caused a release of hazardous materials/waste that negatively affected human or environmental health, or 3) impacted an ERP site or site containing hazardous materials. Toxic substances are addressed separately from other hazardous substances. The impacts of toxic substances would be significant if the Proposed Action projects posed a risk to human health due to exposure to ACMs, LBP, and/ or PCBs.

### 4.11.2 Impacts

#### 4.11.2.1 Proposed Action

*Hazardous Materials*

As a result of the Proposed Action projects, short-term, minor impacts are anticipated due to construction activities. The net increase in construction would produce minor increases in handling, storage, use, and transportation of hazardous materials. Additional vehicles and equipment would temporarily increase consumption of operating fluids and fuel.

Two projects would directly affect hazardous materials on the 115 FW installation. Project #2 would consist of draining two existing 6,000-gallon fuel tanks that contain motor gas and diesel fuel. These two tanks would be replaced in the existing location or closer to the rest of the installation POL near Building 1212. Project #3 involves the draining and removal of two 105,000-gallon Jet A fuel tanks. These tanks would be replaced at the existing location with five 50,000-gallon double-wall steel tanks. Possible impacts associated with these projects include tank ruptures or leaks and tank draining or filling spills. The 115 FW has in place an Oil and Hazardous Substances Spill Prevention and Response Plan which would address these impacts should they occur (115 FW 2011). The Hazardous Spill Prevention and Response Plan should be updated to reflect the increase in fuel storage capacity as a result of Project #3. Additionally, the 115 FW should ensure contractors follow the American Petroleum Institute standards to ensure

safe and proper tank decommissions. The removal of all ASTs must be in compliance with state and federal standards and regulations.

*Hazardous Waste*

Implementing the Proposed Action would have short-term, minor impacts on hazardous waste accumulation. There would be an increase in temporary construction-related hazardous wastes. All construction hazardous waste would be managed by the contractors and would be applicable to all federal and state rules and regulations. Additionally, SAPs may need to be relocated or temporarily decommissioned in Building 500 and Building 1210. Project #13 would completely remodel Building 500 and Project #18 would include an addition to Building 1210. Both buildings currently house SAPs (115 FW 2017b).

The Proposed Action would not result in any adverse long-term environmental impacts that would affect the installation hazardous materials storage and handling procedures, outlined in the Hazardous Waste Management Plan. Hazardous waste generation would continue to be managed in accordance with the installation's Hazardous Waste Management Plan and all applicable federal, state, and local regulations (115 FW 2017b). Additionally, no changes to the installation's SQG status would be expected to occur.

*Toxic Substances*

Toxic substances typically associated with buildings and facilities include ACM, LBP, and/ or PCBs. Buildings 307, 311, 500, 1210 are known to contain ACM. Projects #12 and #18 would demolish, renovate, or add on to these buildings. However, all known friable asbestos has been removed from the buildings. An Asbestos Remediation Master Plan, which details the known location(s) of ACM in each building, is maintained by the 115 FW installation (115 FW 2008). The history of LBP at the 115 FW is not known; therefore, all buildings constructed prior to 1978 included in the Proposed Action projects would be tested for LBP prior to demolition or renovation. The installation is considered to be PCB-free.

No new toxic substances would be used or stored due to the Proposed Action. If ACM is discovered within a building that is to be demolished or renovated, the proper state and federal rules and regulation would be followed including, but not limited to, 40 CFR 61.145, *Standard for Demolition and Renovation* and 29 CFR 1926.1101, *Asbestos Construction Standard*. As a BMP, contractors who renovate or demolish buildings testing positive for LBP should be certified by the USEPA and follow lead-safe work practices. LBP would be managed and disposed of in accordance with Toxic Substances Control Act, Occupational Safety and Health Administration regulations, Wisconsin requirements, and established ANG procedures. If BMPs are followed, toxic substances would have minor impacts due to the Proposed Action.

*Environmental Restoration Program*

In accordance with AFI 32-7020, *The Environmental Restoration Program*, construction, modifications, and/or additions to existing buildings can occur on or in proximity to existing ERP sites. Accordingly, the appropriate organizations (e.g., installation planners, ERP managers, design engineers) must consider a compatible land use based on current site conditions and the selected or projected remedial action alternatives. If the potential for uncharacterized ERP sites exist, the installation is responsible for identifying existing contamination at the proposed construction sites to avoid unknowingly locating construction projects in contaminated areas. The installation is responsible for performing necessary environmental baseline surveys, accomplishing EIAP requirements, and for otherwise being informed about existing site conditions and associated cost impacts in preparation for a construction project. When warranted by the site history, environmental restoration funds may be used to accomplish RCRA facility assessments, or preliminary assessments and site inspections undertaken in accordance with the CERCLA process, or similar site investigations in accordance with applicable state laws for suspected releases. To the extent that a construction project generates actions to address contamination, or a need to change the timing of ERP-generated actions to address contamination, the costs of such actions are not Environmental Restoration Account-eligible and shall be funded as part of the construction project. This includes the handling, mitigation, and disposal or other disposition of contamination discovered before or during the construction activity.

The removal and disposal of unexpected contamination encountered within the construction project footprint would be undertaken as part of the construction project using project funds, which may include other military construction funds reprogrammed to a military construction project. Construction contractor costs (such as direct delay costs and unabsorbed or extended overhead) incidental to discovery and removal of the contamination would be construction-project funded to the extent that the government is responsible and liable for such costs.

Excavation of contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken to prevent a direct contact health threat to humans. As applicable, the 115 FW would coordinate with the WDNR and NGB regarding updated human/environmental health risk information and proposed construction at or near ERP/AOC or PRL sites. Vapor intrusion should be evaluated when volatile chemicals are present in soil, soil gas, or groundwater that underlies existing structures or has the potential to underlie future buildings and there may be a complete human exposure pathway. Due to their physical properties, volatile chemicals can migrate through unsaturated soil and into the indoor air of buildings located near zones of subsurface contamination.

Nine ERP sites are located on the 115 FW installation. All nine sites are closed with concurrence from WDNR. There are seven projects within the Proposed Action that potentially include ground disturbance and are located in the footprint of five ERP sites (Figure 4.11-1). Additional projects, including installation-wide pavement repairs, may be located on ERP sites. However, these projects have no or limited ground disturbance. The five ERP sites affected by the Proposed Action are described below.

- Site 4 is the Former POL Storage and Distribution Facility. Four 50,000 gallon aviation fuel USTs and associated piping were present until 1999. The site was remediated from 1998 through 2010. WDNR concurred with NFA with Land Use Controls on contaminated soil and groundwater in 2012. If dewatering activities occur, the WDNR Watershed Management Program must be contacted and if necessary a discharge permit must be approved. A small portion of Project #7 falls within the footprint of Site 4. This portion of Project #7 would include the removal of a part of Mitchell Street and replacement with previous green space. No dewatering activities are expected to occur. Excavation of contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken to prevent a direct contact health threat to humans. All excavated soil should be properly managed, including sampling and analyzing soil to determine if residual contamination remains. If sampling confirms that contamination is present, the 115 FW will need to determine if the material is solid or hazardous waste and ensure proper storage and disposal. The construction project should be coordinated with WDNR to prevent further contamination or danger to human health (WDNR 2012).
- Site 5 contained a 3,000-gallon UST, removed in 1991, where a 100-gallon release occurred. As a result of the corrective action activities completed, no unacceptable risks to human or ecological receptors remain. The site was closed with an unlimited use and unrestricted exposure designation in 2007. Project #18 is located within the footprint of Site 5. This addition on Building 1210 would not cause any further site contamination or danger to human health and no deep excavation would occur (ANG 2013).

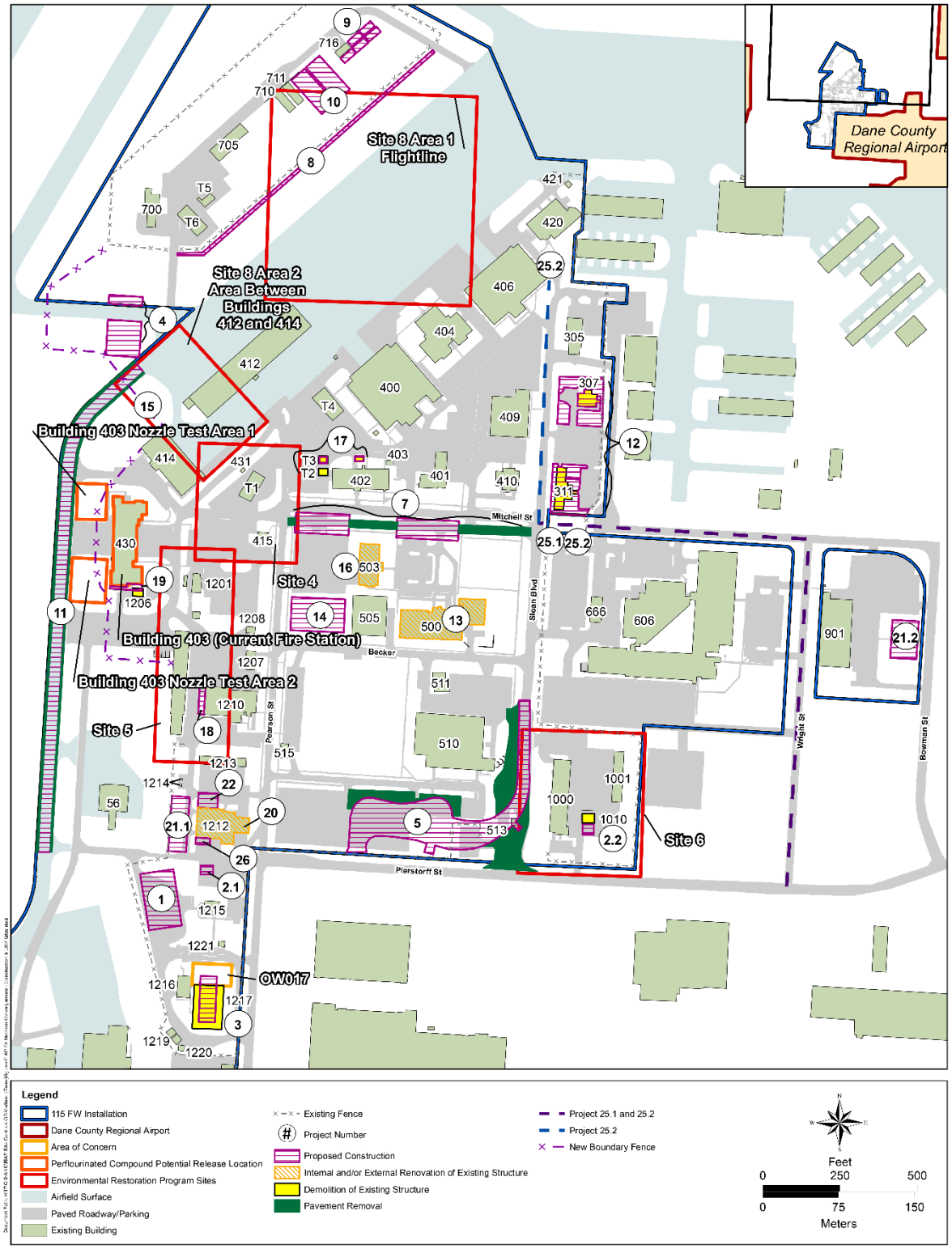


**Figure 4.11-1**
**Environmental Restoration Program Sites, Areas of Concern, and Perfluorinated Compound Potential Release Location Sites within the Vicinity of the Proposed Construction at the 115 FW Installation**

- Site 6 is associated with five former USTs and corresponding piping and dispensers. All USTs have been removed and approximately 15 cubic yards of contaminated soil was removed. As a result of the corrective action activities completed, no unacceptable risks to human or ecological receptors remain. The site was closed with an unlimited use and unrestricted exposure designation in 2006. Projects #5 and #2 would occur within the footprint of Site 6. Project #5 would consist of repaving some existing gate entry road, laying new pavement to the west of the existing entrance to create a new entrance, and replacing unneeded existing road with pervious surface. Only a portion of the repaving and road removal for Project #5 is within the footprint of Site 6. The repaving would not disturb the ground surface; however, the removal of existing pavement most likely would depend on the depth of removal. Project #2 would include the removal of existing ASTs and possible replacement in this location, very little ground disturbance is expected. While ground disturbance is likely to occur as a result of Project #5 construction, no further site contamination or danger to human health is expected due to the unlimited use and unrestricted exposure designation (ANG 2013).
- Site 8 Area 1 is associated with a refueling hydrant system consisting of two fuel lines, a 12,000-gallon UST, and a fuel meter. As a result of the corrective action activities completed, no unacceptable risks to human or ecological receptors remain. Site closure was achieved in 2006 with an unlimited use and unrestricted exposure designation. Project #8 and Project #10 would be constructed within the Site 8 Area 1 footprint. While ground disturbance would be included in this construction, no further site contamination or danger to human health is expected to occur (ANG 2013).
- Site 8 Area 2 includes Buildings 412 and 414, and the jet fuel transfer lines associated with the former fuel hydrant system. The site was closed in 2011 with Land Use Control restrictions on groundwater withdrawal and access to site soils and no residential construction permitted. The *Final Record of Decision* prepared in 2013 states Site 8 Area 2 has residual soil contamination that must be properly managed should it be excavated or removed in the future. Excavation of contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken to prevent a direct contact health threat to humans. A small portion of Project #11 falls within the Site 8 Area 2 footprint and excavation of soil may be required. All excavated soil should be properly managed, and the construction project coordinated with WDNR to prevent further contamination or danger to human health (ANG 2013).

Ten AOCs were identified in a Preliminary Assessment/Site Investigation performed in 2015. A complete list of these AOCs can be found in Section 3.11.2. All AOCs were recommended for NFA in 2015. One of the Proposed Action projects would affect the AOCs (see Figure 4.11-1) (WIANG 2015a).

- Building 1216 OWS (OW017) was a 65-gallon, steel OWS installed in 2000 and associated with the POL pumphouse drains. The OWS was removed in 2009. The OWS did not receive flow from the pumphouse and was administratively closed in 2015 (WIANG 2015a). Project #3 includes the replacement of two 100,000-gallon tanks with five new 50,000-gallon Jet A fuel tanks. The new tanks and concrete pad will expand the footprint of the existing tank area into the area of AOC Site OW017. Because OW017 was administratively closed and no historical evidence of a spill exists, no negative impacts to human or ecological health are expected due to the Proposed Action.

A Site Investigation was conducted in 2018 for nine Per- and Polyfluoroalkyl Substances PRLs. A complete list of these PRLs can be found in Section 3.11.2. The results of the Site Investigation are still pending. Of the nine PRL locations further investigated, three PRLs are associated with a Proposed Action projects (see Figure 4.11-1).

- Building 430 Current Fire Station was recommended for further investigation to evaluate concentrations of Per- and Polyfluoroalkyl Substances in soil and groundwater after the completion of a 2018 Site Inspection, the report for which is still in Draft Phase. Project #19 involves the demolition of Building 1206, next to Building 430, and an addition to Building 430. This Proposed Action would be coordinated with the 115 FW Environmental Manager to ensure that no negative effect to future PRL investigations or to human or ecological health occur.
- Building 430 Nozzle Test Area 1 was recommended for further investigation to evaluate concentrations of Per- and Polyfluoroalkyl Substances in soil and groundwater after the completion of a 2018 Site Inspection. Building 430 Nozzle Test Area 2 was recommended for further groundwater investigation. Project #15 includes constructing a new boundary fence to separate the ANG property from the airport and Army property, as well as enclose buildings related to the flying mission. A portion of the Project #15 fence will run through PRL Nozzle Test Area 1 and Area 2. This Proposed Action would be coordinated with the 115 FW Environmental Manager to ensure that no negative effect to future PRL investigations or to human or ecological health occur.

It is recommended that a vapor intrusion analysis/test is completed in the proposed construction areas for Project #5, Project #7, Project #8, Project #10, Project #11, and Project #19 in order to investigate any potential concern. If testing indicates a vapor intrusion concern, the 115 FW installation would implement practices in accordance with site-specific vapor mitigation design considerations. If contaminated media (e.g., soil, vapor, groundwater) is encountered during the course of site preparation (e.g., clearing, grading) or site development (e.g., excavation for installation of building footers) for proposed activities, work would cease until the 115 FW Environmental Manager establishes an appropriate course of action for the projects to ensure that

federal and state agency notification requirements are met, and to arrange for agency consultation as necessary if existing ERP/AOC/PRL sites are affected.

#### 4.11.2.2 No Action Alternative

Under the No Action Alternative, no construction, renovation, or demolition would be performed and hazardous materials and waste would be expected to remain as described under affected environment in Section 3.11.2. Therefore, there would be no additional impacts to hazardous materials and waste.

# 5.0 CUMULATIVE IMPACTS

## 5.1 CUMULATIVE IMPACTS

Cumulative impacts to environmental resources result from incremental effects of proposed actions when combined with other past, present, and reasonably foreseeable future projects in the ROI. Cumulative impacts can result from individually minor, but collectively substantial, actions undertaken over a period of time by various agencies (federal, state, and local) or individuals. In accordance with NEPA, a discussion of cumulative impacts resulting from projects that are proposed (or anticipated over the foreseeable future) is required.

The 115 FW installation is an active, dynamic airfield where operational changes and facility upgrades occur on a frequent basis. Projects that have been identified in the ROI that have the potential to act in a cumulative manner with the Proposed Action are discussed in this section. The ROI for cumulative impacts is generally limited to the 115 FW installation and the immediately adjacent property because physical impacts related to the proposal are largely confined to these properties. Planning efforts in the ROI include the actions described within this EA, as well as those other projects that are ongoing or planned over the short term. Additional projects within the ROI are discussed below.

### 5.1.1 Current and Reasonably Foreseeable Actions in the ROI

Currently the 115 FW installation is one of the preferred alternatives in the ongoing *Environmental Impact Statement (EIS) for the USAF F-35A Air National Guard Operational Beddown*. If the 115 FW is chosen to receive the F-35A aircraft, then a number of F-35A-related construction, renovation, and demolition projects would occur and some of the projects discussed under the Proposed Action for this EA may not occur. However, in order to look at the maximum potential cumulative impact, this section analyzes both the projects under this EA and those considered in the EIS. Table 5.1-1 identifies F-35A-related proposed projects.

**Table 5.1-1. ANG F-35A EIS Proposed Construction and Modifications for the 115 FW Installation**

| *Anticipated Year Construction will Begin* | *Action* | *Total Area of New Ground Disturbance (SF)* | *New Impervious Surface (SF)* |
|---|---|---|---|
| Flight Simulator | | | |
| 2019 | Construct a new 19,000 SF flight simulator building located over the current site of B410 or construct a 6,000 SF addition to the northwest side of B420 and internal renovations to B420. Demolish B410 (4,646 SF). | 19,000 | 19,000 |

**Table 5.1-1. ANG F-35A EIS Proposed Construction and Modifications for the 115 FW Installation**

| *Anticipated Year Construction will Begin* | *Action* | *Total Area of New Ground Disturbance (SF)* | *New Impervious Surface (SF)* |
|---|---|---|---|
| Engine Shop | | | |
| 2019 | Undertake interior renovation of B409, including the modification of the doors to fit a 7-ton Gantry crane. | 0 | 0 |
| Aircraft Shelters | | | |
| 2019 | Add three new aircraft shelters. | 24,000 | 0 |
| Maintenance Hangar | | | |
| 2019 | Undertake interior renovations to B400, to include power/air, fall protection, ventilation of battery room, and fire protection. | 0 | 0 |
| Weapons Release Shop | | | |
| 2019 | Conduct interior renovations to B406, to include installing a 1-ton crane, power/air, fall protection, ventilation of battery room, and fire protection. | 0 | 0 |
| Fuel Cell/Corrosion Control | | | |
| 2019 | This project includes either the renovation of B414 or the construction of a new 22,700 SF building within the footprint of the "Hush House" (B1202). The Hush House is a piece of equipment that would be demolished. | 22,700 | 22,700 |
| Taxiway F | | | |
| 2019 | Replace or widen Taxiway F | 45,600 | 15,200 |
| Munitions Maintenance and Inspection | | | |
| 2019 | Construct a 1,183 SF Munitions Maintenance and Inspection facility. | 1,183 | 1,183 |
| Squadron Operations | | | |
| 2019 | Undertake interior modifications to B404 F-16 FMS simulator area for ALIS or Construct ALIS 1,000 SF addition to Squadron Operations and remodel interior of B404 to meet mission needs. In addition, a 300 SF addition would be added to B404. | 300 | 300 |
| Repurpose B420 for AGE Maintenance | | | |
| 2019 | Remodel interior of B420 for new AGE Maintenance or remodeled Avionics space (B409), assuming Project #1 Option #1 is selected. | 0 | 0 |
| Flow Through Aircraft Shelters – B412 | | | |
| 2019 | Undertake interior renovations to B412, including power/air, fall protection, and fire protection. | 0 | 0 |
| Deployable Spares Kit. | | | |
| 2019 | Remodel a portion of B510 or B420 for Deployable Spares Kit. | 3,400 | 0 |
| Upgrade Aircraft Pavements – Ramp | | | |
| 2019 | Upgrade aircraft pavements to support aircraft taxi as a result of new aircraft shelters. | 67,500 | 0 |
| Weapons Loading Training | | | |
| 2019 | Construct a new weapons loading training facility adjacent to B414 or northwest of facility T1. | 11,500 | 0 |

**Table 5.1-1. ANG F-35A EIS Proposed Construction and Modifications for the 115 FW Installation**

| *Anticipated Year Construction will Begin* | *Action* | *Total Area of New Ground Disturbance (SF)* | *New Impervious Surface (SF)* |
|---|---|---|---|
| AGE | | | |
| 2019 | This project includes a 2,000 SF addition to B426 as well as adding new doors and 1,500 SF of new asphalt driveway to B401. | 3,500 | 3,500 |
| Distributed Spares | | | |
| 2019 | This project includes a 6,000 SF addition to the northeast or east side of B510 or the construction of a new 6,000 SF facility. | 6,000 | 3,000 |
| Levelator | | | |
| 2019 | A levelator would be added to the loading dock of B1207. A levelator is an apparatus that connects the truck to the loading dock and helps with the transfer of goods from the truck to the loading dock. In addition, the asphalt adjacent to the building would be replaced. | 1,200 | 0 |
| Refueler Parking | | | |
| 2019 | Two parking spots would be added for the refueler vehicles. | 5,700 | 5,700 |
| Hazardous Materials Storage Facility | | | |
| 2019 | Internal renovations to B511 to install new fire suppression system. | 0 | 0 |

*Legend:* ADAL = Addition or Alteration; AGE = Aerospace Ground Equipment; ALIS = Autonomic Logistics Information System; AT/FP = Anti-terrorism/Force Protection; CERFP = Chemical, Biological, Radiological, Nuclear and High Yield Explosive Enhanced Response Force Package; FMS = Full Mission Simulator; HVAC = heating, ventilation, and air conditioning; LPS = Lightning Protection System; MILCON = military construction; SF = square feet; UFC = Unified Facilities Criteria.

Other ongoing and proposed activities planned in the ROI over the next several years are identified in Table 5.1-2.

**Table 5.1-2. Past, Present, and Reasonably Foreseeable Actions**

| *Proponent* | *Project Name* | *Anticipated Year for Implementation* |
|---|---|---|
| Airport | Construction of a new employee parking lot. | 2018 |
| Airport | Terminal modernization. | 2019-2020 |
| Airport | Replacing jetways. | Unknown at this time |
| Airport | Road relocation. | 2018 |
| Airport | Reconstruct Taxiway J, construct Taxiway M, and remove Taxiway A2 and K and a portion of Taxiway C. Construct parallel taxiway to Runway 14/32. Other projects include expanding runway 9/27 and apron, reconstruct terminal access road, reconstruct west air carrier ramp, reconfigure Runway 18/36. | 2019-2024 |
| Airport | Construct a new corporate taxiway. | 2020 |
| Airport | Reconstruct south ramp. | 2023 |
| Airport | Reconstruct Corben Court on east side of airport and construct a private hangar – constructed by a tenant. | 2019 |
| Airport | Pavement joint replacements on runways. | 2019 |
| Airport | Solar installation – private developer. | 2021 |

**Table 5.1-2. Past, Present, and Reasonably Foreseeable Actions**

| *Proponent* | *Project Name* | *Anticipated Year for Implementation* |
|---|---|---|
| Wisconsin Department of Transportation | U.S. 51, Stroughton Road Corridor Project – This project will address safety concerns, reduce congestion, and improve bicycle and pedestrian accommodations within the corridor. Alternatives include adding travel lanes, improving intersection spacing, and consolidating access points. | 2020 or later |
| Army National Guard | Construct New Aircraft Maintenance Hangar. | Unknown at this time |

#### 5.1.1.1 Safety

Providing new and renovated facilities for the 115 FW installation that are properly sited with adequate space and a modernized supporting infrastructure, would generally enhance ground safety during required operations, training, maintenance and support procedures, security functions, and other activities conducted by the 115 FW. AT/FP have also been addressed in all facility construction projects. The fire response capability currently provided by the 115 FW installation is sufficient to meet all requirements. Risk of a catastrophic event occurring during construction activities under this alternative or those activities described in Tables 5.1-1 and 5.1-2 is considered low, and strict adherence to all applicable occupational safety requirements further minimize the relatively low risk associated with described construction activities. Cumulative impacts to ground safety would be minor at the airfield.

#### 5.1.1.2 Air Quality

Emissions associated with the projects described in Table 5.1-2 cannot be evaluated quantitatively, as too little information is available regarding the project details and timeframes for that level of analysis. Emission estimates are available for the projects listed in Table 5.1-1, as well as the field operations with the F-35A. The timeline for these projects varies, with the analysis of the F-35A beddown construction projects occurring between 2019 and 2023, the analysis of the construction projects associated with this EA in 2020, and the full beddown of the F-35A in 2025. Construction associated with the beddown would be minimal, with the highest emissions being approximately 3.5 tons for VOCs, $NO_x$, and CO, respectively. The overall level of criteria pollutant emissions would increase temporarily during construction periods, but at a level that would generate few, temporary impacts. The replacement of the F-16 with the F-35A would result in an increase in long-term emissions. However, the overall emissions profile for the installation as a result of these activities would not be significant. It is unlikely that significant impacts to air quality, such as violation of a NAAQS or delayed attainment of a NAAQS, would result.

GHG emissions would modestly increase due to implementing the proposed construction projects, as identified in Section 4.2.2. All of the projects listed in Tables 5.1-1 and 5.1-2 would generate

GHGs and most involve construction, which is of temporary duration. Some long-term benefits may offset the GHGs emitted during construction (for example, energy-efficient buildings or solar generation). While quantification of GHG emissions for the projects listed in Table 5.1-2 is not possible, it can generally be assumed that an overall temporary increase in GHG emissions, compared to the baseline, would occur as a result of the proposed construction projects. The GHG emissions associated with the F-35A beddown EIS have been estimated at 731 tons for the construction projects. The total for F-35A construction projects and construction projects evaluated in this EA would be 4,136, which is the equivalent of 808 cars each driving the national average of 11,500 miles per year.

Climate change, by definition, is a cumulative impact that results from the incremental addition of GHG emissions from millions of individual sources that collectively have a large impact on a global scale. Impacts of climate change on the region would include severe rain events and flooding, which could produce negative impacts on mission activities and installation infrastructure.

#### 5.1.1.3 Land Use

Under the Proposed Action at the 115 FW installation, construction projects are inside the installation boundaries and would introduce short-term noise increases; however, these would not generate noise levels to cumulatively affect or change land use compatibilities. In summary, cumulative impacts to land use due to the Proposed Action at the 115 FW installation and reasonably foreseeable future projects are expected to be negligible.

#### 5.1.1.4 Earth Resources

Total acreage disturbed by the proposed construction projects would be up to 1,094,330 SF (25.1 acres) of temporary soil disturbance, including up to 50,600 SF (1.2 acres) of new impervious surface such as paved areas. It is unknown how many acres of other projects would be rendered impervious or otherwise disturbed, due to the unknown nature of the individual project status. All proposed construction is within the footprint of the developed 115 FW installation and would not require any regrading or movement of large amounts of earth. As such, minimal impacts to geology, soils, or topography are expected under the Proposed Action at the 115 FW installation.

The CWA considers stormwater from a construction site as a point source of pollution regulated by the NPDES permit. Therefore, those projects described in Tables 5.1-1 and 5.1-2 larger than 1 acre, are required to have a site-specific and detailed SWPPP that coordinates the timing of soil disturbing activities with the installation on soil erosion and runoff controls in an effort to reduce the impacts to the local watershed; this is an effective way of controlling erosion while soil is exposed and subject to construction activity. Implementation of standard construction practices

would be used to limit or eliminate soil movement, stabilize erosion, and control sedimentation. These standard construction practices would include the use of: velocity dissipation devices; well-maintained silt fences; minimizing surficial area disturbed; stabilization of cut/fill slopes; minimization of earth-moving activities during wet weather; and use of temporary detention ponds. Following construction, disturbed areas not covered with impervious surfaces would be reestablished with appropriate vegetation and managed to minimize future erosion potential. Given the use of engineering practices that would minimize potential erosion, cumulative impacts to earth resources would be expected to be minor.

The FPPA is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. However, none of the projects (neither the Proposed Action at the 115 FW installation, nor the present/reasonably foreseeable projects) are proposed on lands subject to the FPPA. In summary, implementing the Proposed Action at Dane County Regional Airport, along with other anticipated projects, would result in negligible cumulative impacts to earth resources.

#### 5.1.1.5 Water Resources

*Surface Water*

The collective area impacted by the Proposed Action would exceed 1 acre in size and therefore require the application for, and compliance with Wisconsin's general stormwater permit, "General Permit to Discharge under the Wisconsin Pollutant Discharge Elimination System - Land Disturbing Construction Activities." Specific stormwater pollution controls would be included in the permit, as required by State regulations NR 151 and 216. Likewise, other projects that exceed 1 acre in size would be required to do the same. In compliance with coverage under this permit, a Construction BMP Plan would be implemented and prepared to maintain effective erosion and sediment controls. The Construction BMP Plan includes the erosion, sediment, and pollution controls used, identifies periodic compliance inspections, and prescribes maintenance measures for the controls identified, throughout the life of the construction projects. Through compliance with Wisconsin's Construction General Permit, cumulative effects are expected to be minor when considering the Proposed Action at the 115 FW installation and other projects.

*Groundwater*

Construction and demolition impacts to groundwater under the Proposed Action at the 115 FW installation, when considered with present and reasonably foreseeable projects, would not extend below ground surface to a depth that would affect the underlying aquifer. Although fuel or other chemicals could be spilled during construction, demolition, and renovation activities, implementation of the required Spill Prevention Control and Countermeasures Plan and immediate

cleanup of any spills would prevent any infiltration into groundwater resources. Therefore, cumulative impacts to groundwater resources are expected to be minor under this alternative.

*Stormwater*

Construction and demolition activities associated with the Proposed Action at the 115 FW installation, when considered with present and reasonably foreseeable projects, could result in a temporary, cumulative increase in surface water turbidity; however, BMPs associated with the SWPPP are designed to minimize these impacts. These BMPs include practices such as wetting of soils and installing silt fencing, as well as adherence to federal and state erosion and stormwater management practices, to contain soil and runoff on the project areas. All other present and foreseeable projects would be required to follow the same state and federal guidelines for construction permitting to ensure water quality was protected from possible erosion and sedimentation. This includes implementing project-specific BMPs to minimize impacts to water quality and using stormwater engineering controls (e.g., stormwater runoff control systems directing water off the developed areas) to decrease future impacts to water quality following construction. The use of spill prevention plans and SWPPPs during construction would minimize impacts to water quality.

Additionally, in accordance with UFC 3-210-10, *Low Impact Development* (as amended, 2016) and EISA Section 438, any temporary increase in surface water runoff as a result of the proposed construction is required to be attenuated through the use of temporary and/or permanent drainage management features. Under these requirements, federal facility projects with over 5,000 SF of new impervious surface must maintain or restore, to the maximum extent technically feasible, the pre-development hydrology of the property with regard to the temperature, rate, volume, and duration of flow. This would apply to several of the construction projects proposed under this alternative and as such would minimize impacts to stormwater runoff.

*Floodplains*

None of the Proposed Action Alternative projects or other projects lie within the 100-year floodplain. Therefore, cumulative impacts to floodplains are anticipated to be negligible when the Proposed Action at the 115 FW installation is considered along with present and reasonably foreseeable projects.

*Wetlands*

None of the construction activities are associated with wetlands. Therefore, cumulative impacts to wetlands are anticipated to be negligible when the Proposed Action at the 115 FW installation is considered along with present and reasonably foreseeable projects.

#### 5.1.1.6 Biological Resources

No federally threatened and endangered species are currently known to reside on the 115 FW installation. One state listed species, the big brown bat, is known to occur on the installation. Construction-related impacts to the vegetation at the installation and in the vicinity of projects identified in Tables 5.1-1 and 5.1-2 would be minor due to the lack of sensitive vegetation in the project areas. In general, construction activities at the 115 FW installation and at the Dane County Regional Airport would primarily occur on sites that are already highly altered. These impacts would include the removal of some vegetation and associated wildlife habitat. However, wildlife that use these areas are typical of urban and suburban areas. No impacts to any federally or state threatened, endangered, or special status species is expected as a result of the Proposed Action at the 115 FW installation; therefore, cumulative impacts to biological resources would be minor.

#### 5.1.1.7 Infrastructure

For the purposes of this analysis, infrastructure includes potable, waste, and stormwater; electrical and natural gas systems; solid waste management; and transportation. Under the Proposed Action at the 115 FW installation, short- and long-term demand for all services would increase by a minor degree when considered regionally. The Proposed Action and other projects would increase demand for potable water, increase production of wastewater, and create more impervious surfaces to increase stormwater runoff. However, cumulative effects are anticipated to be minor because there is current and long-term capacity to meet increased demand for drinking water and disposal of wastewater. For stormwater, BMPs such as silt fencing, vegetation management, and ditching would minimize erosion and sedimentation during the short-term construction phases; retention and detention pond systems would avoid excessive runoff due to increases in impervious surfaces in the long term.

Demand for electricity and natural gas would be expected to increase in the short term due to construction activities. In the short term, existing energy systems have the ability to meet increased demand. In the long term, there is capacity to meet the demands of the minor increase in personnel. Further, any new facilities and additions associated with these projects would incorporate Leadership in Energy and Environmental Design and sustainable development concepts to achieve optimum resource efficiency, sustainability, and energy conservation when compared to facilities currently in place.

Under the Proposed Action at the 115 FW installation and reasonably foreseeable future projects, it is anticipated that there would be short-term increases in solid waste generation. During demolition, renovation, and construction phases, all materials would be disposed in permitted facilities, which have the capacity to accept these materials.

In terms of transportation, the local traffic network has the ability to meet the short-term increases in traffic during construction activities from the Proposed Action and reasonably foreseeable future projects. In summary, cumulative impacts to infrastructure due to the Proposed Action at the 115 FW installation and reasonably foreseeable future projects are expected to be minor.

#### 5.1.1.8 Cultural Resources

The areas of proposed construction are considered to have no to low probability of containing archaeological resources. In the event of an inadvertent discovery during ground-disturbing operations, work would cease immediately, the area would be secured, and the Environmental Manager would be contacted. The Environmental Manager would follow ANG Inadvertent Discovery protocol. None of the facilities listed for renovation and/or modification under the Proposed Action at the 115 FW installation or those listed in Tables 5.1-1 and 5.1-2 are eligible for listing in the NRHP. No traditional cultural resources have been identified on the installation or in areas proposed for present and future development. Therefore, cumulative impacts to cultural resources are expected to be minor under the Proposed Action at the 115 FW installation.

#### 5.1.1.9 Socioeconomics

Economic activity associated with proposed construction, renovation, and demolition activities described as a component of this alternative and those shown in Tables 5.1-1 and 5.1-2, such as employment and materials purchasing, would provide short-term economic benefits to the local economy. However, short-term cumulative beneficial impacts resulting from construction payrolls and materials purchased as a result of implementation of the Proposed Action Alternative and those projects listed in Tables 5.1-1 and 5.1-2 would be negligible on a regional scale.

#### 5.1.1.10 Environmental Justice

The Proposed Action at the 115 FW installation, when considered with projects listed in Tables 5.1-1 and 5.1-2, would not be expected to impact environmental justice communities or children. Therefore, no cumulative impacts to the health or safety of environmental justice populations or children are anticipated under the Proposed Action at the 115 FW installation.

#### 5.1.1.11 Hazardous Materials and Waste

It is expected that short-term increases in the quantity of fuel used during construction activities for this action and the present/reasonably foreseeable projects would occur. Hazardous and Nonhazardous waste generation (e.g., used oil, used filters, oily rags, etc.) would continue to be managed in accordance with the installation's Hazardous Waste Management Plan and all applicable federal, state, and local regulations. If contaminated media is encountered during the

course of site preparation or site development for proposed construction activities, work would cease until an appropriate course of action is established for the construction projects to ensure that federal and state agency notification requirements are met, and to arrange for agency consultation as necessary if existing ERP/AOC/PRL sites are affected. The pollution prevention practices would continue to be managed in accordance with the Hazardous Waste Management Plan and would include any construction-related materials or waste associated with aircraft operations. Additionally, no changes to the 115 FW installation's SQG status would be expected to occur due to the no net change in hazardous waste generation from aircraft operations. Any structures proposed for demolition, addition, or retrofit would be inspected for ACM and LBP according to established procedures prior to any renovation or demolition activities. Cumulative impacts as a result of the Proposed Action at the 115 FW installation and present/reasonably foreseeable projects are expected to be minor.

## 5.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

NEPA CEQ regulations require environmental analyses to identify any irreversible and irretrievable commitments of resources that would be involved in the Proposed Action should it be implemented (40 CFR Section 1502.16). Irreversible and irretrievable resource commitments are related to using nonrenewable resources and the effects the uses of these resources have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable timeframe. Building construction material such as gravel and gasoline usage for construction equipment would constitute the consumption of nonrenewable resources.

The Proposed Action would have irreversible impacts due to the consumption of nonrenewable resources, such as gasoline used in vehicles. The primary irretrievable impacts of the Proposed Action would involve using energy, labor, and materials and funds. Irretrievable impacts would occur as a result of construction, facility operation, and maintenance activities. Direct losses of biological productivity and the use of natural resources from these impacts would be inconsequential because the relative consumption of these materials is expected to change negligibly.

# 6.0 SPECIAL OPERATING PROCEDURES

To minimize potential environmental effects determined to result from the alternatives presented in this EA, the following special operating procedures would be completed by knowledgeable, responsible personnel from the 115 FW, working through the appropriate federal, state, and local agencies.

**Special Operating Procedures:**

- The 115 FW would obtain any required permits, approvals, or certifications prior to implementing construction or demolition activities. Any special procedures or methods required by permits or approvals would be implemented.
- Personnel conducting demolition activities would strictly adhere to all applicable occupational safety requirements during construction activities.
- If necessary, sampling for ACM and LBP would occur prior to demolition activities for those buildings not previously tested and materials would be handled in accordance with USAF policy. If ACM or LBP are present, the 115 FW would employ appropriately trained and licensed contractors to perform the ACM and/or LBP removal work and would notify the construction contractors of the presence of ACM and/or LBP so that appropriate precautions could be taken to protect the health and safety of the workers.
- If contaminated media (e.g., soil, vapor, groundwater) is encountered during the course of site preparation (e.g., clearing, grading) or site development (e.g., excavation for installation of building footers) for proposed construction activities, work would cease until the 115 FW Environmental Manager establishes an appropriate course of action for the construction projects to ensure that federal and state agency notification requirements are met, and to arrange for agency consultation as necessary if existing ERP/AOC/PRL sites are affected.
- All excavated soil from Project #7 within the footprint of ERP Site 4 should be properly managed, including sampling and analyzing soil to determine if residual contamination remains. If sampling confirms that contamination is present, the 115 FW will determine if the material is solid or hazardous waste and ensure proper storage and disposal. Project #7 should be coordinated with WDNR to prevent further contamination or danger to human health.
- In the event of an inadvertent discovery during ground-disturbing operations, the following specific actions would occur. The Project Manager would cease work immediately and the discovery would be reported to the 115 FW Environmental Manager, who would secure the location with an adequate buffer and notify the Commander and the NGB Cultural

Resources Manager. The Environmental Manager would then continue to follow ANG Inadvertent Discovery protocol.

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# APPENDIX A
# INTERAGENCY AND INTERGOVERNMENTAL COORDINATION FOR ENVIRONMENTAL PLANNING

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## IICEP List

Mr. Kurt Thiede, Interim Secretary
Wisconsin Department of Natural Resources
Central Office
101 S Webster Street
Madison WI 53707-7921

Mr. Sanjay Olson, Division Administrator
Wisconsin Department of Natural Resources
Fish, Wildlife, & Parks Division
Central Office
101 S Webster Street
Madison, WI 53707-7921

Mr. Dave Ross, Secretary
Wisconsin Department of Transportation
Hill Farms State Transportation Building
4802 Sheboygan Avenue
Madison, WI 53707-7999

Ms. Heather Stouder, Director
City of Madison Planning
126 S. Hamilton Street
Madison, WI 53703

Mr. Matthew Mikolajewski, Director
City of Madison Economic Development Division
30 W. Mifflin St., Suite 502-507
Madison, WI 53703

Ms. Daina Penkiunas, Deputy State Historic Preservation Officer
Wisconsin Historical Society
Division of Historic Preservation
Office of Preservation Planning
816 State Street
Madison, WI 53706

Mr. Robert Kaplan, Acting Administrator
U.S. Environmental Protection Agency, Region 5
77 W. Jackson Boulevard
Mail Code: R-19J
Chicago, IL 60604-3507

Mr. Tom Melius, Regional Director
U.S. Fish and Wildlife Service, Region 3
Ecological Services
5600 American Boulevard West, Suite 990
Bloomington, MN 55437-1458

Col. Sam Calkins, District Commander
U.S. Army Corps of Engineers, St. Paul District
180 5th St. East, Ste. 700
St. Paul, MN 55101-1678

Brigadier General Mark Toy, Division Commander
U.S. Army Corps of Engineers, Great Lakes and Ohio River Division
550 Main Street, Room 10524
Cincinnati, OH 45202-3222

Mr. Pete Fasbender, Field Supervisor
U.S. Fish and Wildlife Service
2661 Scott Tower Dr.
New Franken, WI 54229

Ms. Kimberly Bouchard, Superintendent
Bureau of Indian Affairs
916 West Lakeshore Dr.
Ashland, WI 54806

Mr. Bradley Livingston, AAE, Airport Director
Dane County Regional Airport
4000 International Ln.
Madison, WI 53704

Mr. Gerald J. Mandli, P.E., Commissioner
Dane County Public Works Department
2302 Fish Hatchery Rd.
Madison, WI 53713

Mr. William Schaefer, Transportation Planning Manager
Madison Area Transportation Planning Board
121 S. Pinckney Street, Suite 400
Madison, WI 53703

Mr. Joe Parisi, County Executive
Government of Dane County
City-County Building
210 Martin Luther King Jr. Blvd.
Madison, WI 53703

Capital Area Regional Planning Commission
210 Martin Luther King Jr. Blvd.
Madison, WI 53703

Mr. Robert Blanchard, Chairman
Bad River Band of Lake Superior Chippewa
Chief Blackbird Center, 72682 Maple Street
Odanah, WI 54861

Mr. Harold "Gus" Frank, Chair
Forest County Potawatomi Community
5416 Everybody's Road
Crandon, WI 54520

Mr. Wilfrid Cleveland, President
Ho-Chunk Nation
9814 West Airport Road
Black River Falls, WI 54615

Mr. Louis Taylor, Chair
Lac Courte Oreilles Band of Lake Superior Chippewa
Tribal Governing Board
13394 West Trepenia Road
Hayward, WI 54843

Mr. Joseph Wildcat Sr., President
Lac du Flambeau Band of Lake Superior Chippewa
418 Little Pines Road
Lac du Flambeau, WI 54538

Mr. Gary Besaw, Chairperson
Menominee Indian Tribe of Wisconsin
Menominee Tribal Legislature
W2908 Tribal Office Loop
Keshena, WI 54135-0910

Ms. Shannon Holsey, President
Stockbridge-Munsee Community Band of Mohican Indians
8476 North Mo He Con Nuck Road
Bowler, WI 54416

Mr. Tehassi Hill, Chairman
Oneida Nation of Wisconsin
PO Box 365
Oneida, WI 54155

Mr. Rick Peterson, Chairman
Red Cliff Band of Lake Superior Chippewa
88455 Pike Rd., Hwy. 13
Bayfield, WI 54814

Mr. Lewis Taylor, Chair
St. Croix of Lake Superior Chippewa Community
24463 Angeline Avenue
Webster, WI 54893

Mr. Chris McGeshick, Chairman
Sokaogon Chippewa Community (Mole Lake Band of Lake Superior Chippewa Indians)
3051 Sand Lake Road
Crandon, WI 54520

**Sample IICEP Letter**

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

FEB - 7 2019

Major Joseph T. Sundy, USAF
Plans and Requirements Officer
Air National Guard Readiness Center, NGB/A4AM
3501 Fetchet Ave
Joint Base Andrews MD 20762

Mr. Kurt Thiede
Interim Secretary
Wisconsin Department of Natural Resources
Central Office
101 S Webster St
Madison WI 53707-7921

Dear Mr. Thiede

The National Guard Bureau (NGB) is preparing a Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) for construction, renovation, and demolition of facilities at the 115th Fighter Wing (115 FW), Madison, Wisconsin. This EA will evaluate potential impacts to the human and natural environment as a result of the implementation of short-term infrastructure improvement projects at the 115 FW. The environmental analysis for the Proposed Action is being conducted by the NGB in accordance with the Council on Environmental Quality guidelines pursuant to the National Environmental Policy Act of 1969.

In general, the Proposed Action is needed to provide the 115 FW with properly sized and configured facilities to allow it to efficiently accomplish its mission. The Proposed Action includes construction, renovation, and demolition projects. The 115 FW would operate in the new and renovated facilities in the same capacity as they do now. The Proposed Action would comply with Air National Guard (ANG) Instruction 32-1023, Criteria and Standards for Air National Guard Construction, and ANG Handbook 32-1084, Facility Space Standards.

In accordance with Executive Order 12372, Intergovernmental Review of Federal Programs, we request your participation by reviewing the attached Description of Proposed Action and Alternatives (DOPAA), and solicit your comments concerning the proposal and any potential environmental consequences of the action.

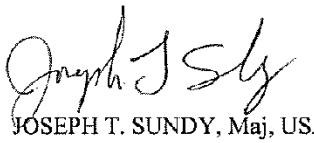
We also request information regarding other recently completed, ongoing, or proposed projects in the vicinity that create cumulative impacts in association with the Proposed Action.

**Sample IICEP Letter**



Please provide any comments you may have within 30 days of receipt of this letter to me at Major Joseph Sundy, 3501 Fetchet Avenue, Joint Base Andrews MD 20762-5157 or usaf.ibanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil. Thank you for your assistance.

Sincerely



JOSEPH T. SUNDY, Maj, USAF, P.E.
Plans and Requirements Officer

Attachment:
Description of Proposed Action and Alternatives

**Sample Tribal Letter**

**WISCONSIN AIR NATIONAL GUARD**
**HEADQUARTERS 115TH FIGHTER WING (ACC) (ANG)**
**3110 MITCHELL STREET**
**MADISON WISCONSIN 53704-2529**

FEB 1 5 2019

Colonel Erik A. Peterson
Wing Commander
115th Fighter Wing
3110 Mitchell St
Madison WI 53706-2529

Mr. Gerald Blanchard
Chairman
Bad River Band of Lake Superior Chippewa
Chief Blackbird Center
72682 Maple St
Odanah WI 54861

Dear Mr. Blanchard

The National Guard Bureau (NGB) is preparing an Environmental Assessment (EA) for construction, renovation, and demolition of facilities at the 115th Fighter Wing (115 FW) at Dane County Regional Airport in Madison, Wisconsin. The purpose of the Proposed Action is to provide the 115 FW with properly sized and configured facilities that are required to effectively accomplish its mission.

In accordance with Executive Order (EO) 13175, Consultation and Coordination with Indian Tribal Governments; EO 12372, Intergovernmental Review of Federal Programs; and Section 106 of the National Historic Preservation Act (36 Code of Federal Regulations Parts 800.2, 800.3, and 800.4), the 115 FW would like to initiate Government-to-Government consultation regarding this proposal.

The 115 FW would like to discuss the proposal with you, and to understand and consider any comments, concerns, and suggestions you may have. In particular, the 115 FW requests your assistance in identifying:

1) the existence of any traditional resources that may be located close to or within the 115 FW at Dane County Regional Airport;
2) historic properties in or near the Area of Potential Effects (APE) of which we may not be aware; and/or
3) your tribe's interest in participating in Tribal or Section 106 consultation.

*Dedicated to Excellence*

**Sample Tribal Letter**



To guarantee its consistent compliance with federal laws and regulations, the ANG has developed a transparent and consistent consultation process. For this EA, we have developed the following contact schedule to contact you several times during the process:

- One phone call to tribal offices to verify contact information and current Senior-level Tribal Officials before any materials are mailed to the tribe for review (complete);
- Sending of this scoping letter;
- Sending a letter with a copy of the Draft EA (expected April 2019); and
- Sending a letter with a copy of the Final EA (expected July 2019).

You will receive the following after each letter is mailed:

- One phone call to tribal offices to confirm receipt of any review packages and ensure questions and concerns are addressed.

We believe these procedures reflect the NGB's commitment to integrate Native American voices and experiences into its planning processes, and we will abide by this process even if your tribe chooses not to consult. Furthermore, if your tribe accepts our invitation to consult, the NGB is prepared to adopt customized procedures that meet your tribe's particular requirements. We believe the proposed process presents a predictable roadmap on which to orient yourselves within the overall scoping and consultation processes.

Please provide any comments you may have within 30 days of receipt of this letter to Major Joseph Sundy, 3501 Fetchet Avenue, Joint Base Andrews MD 20762-5157 or usaf.jbanafw.ngb-a4.mbx.a4a-nepa-comments@mail.mil. Thank you for your assistance.

Sincerely,

ERIK A. PETERSON, Colonel WI ANG
Commander

Attachment:
Description of Proposed Action and Alternatives

*Dedicated to Excellence*

**From:** Heggelund, Eric P - DNR <Eric.Heggelund@wisconsin.gov>
**Sent:** Friday, March 08, 2019 1:56 PM
**To:** Mednick, Adam C - DNR
**Cc:** Pardee, James D - DNR
**Subject:** RE: Request for info related to National Guard Bureau EA
**Attachments:** air-5yr-plan.pdf

Hi Adam,

There are several projects in various stages at the Dane County Airport (DCRA):

Last year the airport added a employee parking lot along international lane. There were wetland impacts and new impervious surfaces.

DCRA has an on-going project to reconfigure taxiway "M" and runways 14/32. That resulted in a realignment of the waterway (Starkweather Creek) through the airport.

They area also reconstructing Taxiway "J" in the near future. This is near the NE section of the airport.

DCRA has a proposal to reconstruct Corben Court on the east side of the airport. There is another proposal to add private hangers in that area.

**I attached the 5 year plan. Projects for DCRA are on pages 69-75. Let me know if you want additional information about the projects or a more complete breakdown.**

WisDOT has/had a study on USH 51 - Stoughton Road. Project limits were the Terminal/Voges Road just south of the beltline to STH 19 just north of the Interstate. I was very involved in the study a few years ago and then it got "slowed." The area around the airport may have had some proposed changes to the Reider Road intersection, but the alternatives did not include added lanes, a realignment or anything vastly different through this section.

**Stoughton Road Study page:**
https://wisconsindot.gov/Pages/projects/by-region/sw/51/default.aspx

Is this what you are looking for?

Have a good weekend,

Eric

**We are committed to service excellence.**
Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Eric Heggelund
Cell: 608-228-7927
Eric.heggelund@wisconsin.gov

1

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

MAR 1 8 2019

REPLY TO THE ATTENTION OF:

Major Joseph Sundy
National Guard Bureau
Air National Guard Readiness Center, NGB/A4AM
3501 Fetchet Avenue
Joint Base Andrews, Maryland 20762-5157

**Re: Project Scoping for Proposed Construction, Renovation, and Demolition of Facilities at the 115th Fighter Wing, Truax Field, Madison, Dane County, Wisconsin**

Dear Major Sundy:

The U.S. Environmental Protection Agency (EPA) has reviewed the referenced project scoping document, which was prepared by the National Guard Bureau (NGB). We are providing comments 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 action involves construction, demolition, and renovation activities at the 115th Fighter Wing facilities at Truax Field. Two alternatives have been provided:

- *No Action Alternative*. No construction, demolition, or renovation activities would occur at Truax Field.
- *Proposed Action*. Consists of 27 individual projects at Truax Field, with a total of 25.1 acres of new construction and up to 1.2 acres of new impervious surfaces:
  - Project 1. Construct one canopy covering up to seven R-11 fuel trucks;
  - Project 2. Demolish existing diesel fuel and gasoline tanks in Building B1010 and add new tanks behind Building B1212;
  - Project 3. Replace two existing 100,000-gallon tanks with five new 50,000-gallon jet fuel tanks in same area;
  - Project 4. Construct a new 12,700 square-foot (SF) arm/de-arm pad near the intersection of Taxiways G and F;
  - Project 5. Construct a new gate house, two privately owned vehicle lanes, and one truck lane at the main gate;
  - Project 6. Repave all roads on base (except for Mitchell Street);
  - Project 7. Convert Mitchell Street to a two-lane road (from a 4-lane road), and expand the parking areas to the south in a northward direction;
  - Project 8. Construct an earthen berm southeast of the munitions storage area (MSA) fence would be constructed to provide protection from aircraft artillery;

- Project 9. Construct five 1,000 SF concrete fuel cells onto the existing fuel cell structure (Building B716);
- Project 10. Construct two new MSA igloos to the northeast side of the existing MSA igloos (Buildings B710 and B711);
- Project 11. Convert the 50-foot-wide asphalt taxiway to a 40-foot wide concrete road;
- Project 12. Demolish Buildings B31 and B307, and construct a new parking area in the same location;
- Project 13. Perform internal renovations of Building B500 to create room for a multi-use facility and a new fitness center;
- Project 14. Construct a new 3,400 SF warehouse;
- Project 15. Replace the existing boundary fence with a new 10-foot-high fence;
- Project 16. Perform internal renovations to Building B503;
- Project 17. Demolish two 500 SF unheated enclosed shelter and repave all existing asphalt in the Building B402 complex;
- Project 18. Construct a 15-by-100-foot-wide bay onto the west side of Building B1210 for warm storage;
- Project 19. Construct a 1,500 SF bay on the south side of Building B430, and demolish Building B1206;
- Project 20. Renovate Building B1212 and add new windows;
- Project 21. Construct a 10,500 SF indoor small arms;
- Project 22. Add on 1,800 SF to Building B1212;
- Project 23. Perform road repairs near the front gate of the installation, including on Pierstorff Street to Highway 51 and on Pearson Street to Anderson Street;
- Project 24. Replace pavement and regrade the area around Buildings B1000 and B1001;
- Project 25. Install underground fiber optic communications cable along Wright Street from Mitchell Street to Sloan Street;
- Project 26. Construct a 1,000 SF small arms storage building; and
- Project 27. Add new street lighting on Benson and Becker Streets.

Based on the information provided in the scoping document, we have comments relating to water quality, wetlands, air quality strategies, stormwater management and transportation resiliency, legacy pollution, environmental justice, pollinators and native plant species, energy efficiency, recycling and reuse of construction materials, cumulative impacts, and consultation records, as stated below.

*Water Quality*

The forthcoming draft environmental assessment (EA) should describe how the proposed action may affect water bodies listed as impaired by the Wisconsin Department of Natural Resources under Section 303(d) of the Clean Water Act 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.

*Wetlands*
The EA should identify any jurisdictional waters of the United States that may be impacted by dredging or filling activities associated with the project. Please explain how the Clean Water Act Section 404(b)(1) guidelines have been applied with regard to both stream and wetland impacts. The Section 404 (b)(1) guidelines call for the Least Environmentally Damaging Practicable Alternative to be selected to address impacts to wetlands, streams, and other waters of the United States. The guidelines also require the sequence of first avoiding, then minimizing, and finally mitigating for any impacts to aquatic resources. Please also provide discussion of proposed mitigation for unavoidable, minimized, wetland and stream impacts (if applicable).

*Air Quality Strategies*
We recommend NGB consider implementing air quality best management practices (BMPs) during the construction phase of this project. Several recommendations are included in an enclosure entitled, *U.S. Environmental Protection Agency Construction Emission Control Checklist*.

*Stormwater Management and Transportation Resiliency*
One-hundred-year storm events are occurring with increasing frequency. The number of storm events occurring with greater intensity is also increasing. The National Climate Assessment[1] finds that in the Midwest, extreme heat, heavy downpours, and flooding will affect infrastructure. We recommend that NGB account for increased storm frequency and intensity in the design of this project to help ensure the health and safety of the public by using appropriate airport-specific stormwater management designs. See EPA's adaptation resource center for more information on adaptation strategies that may benefit this project.[1]

*Legacy Pollution*
Polyfluoroalkyl substances (PFAS) are known to be present in groundwater at Truax Field, and existing structures that may be demolished or renovated are likely to contain lead paint, polychlorinated biphenyl (PCB) material, and asbestos. We recommend testing occur for each of these substances, and remediation (and appropriate disposal) be conducted if these substances are known or discovered during renovation or demolition activities. The EA should document the presence of these contaminants in the project areas and describe what actions are planned to address them, consistent with federal and state regulatory requirements. Since the proposed project includes removal and replacement of fuel storage tanks, NGB should assess whether any soil contamination exists associated with these tanks. The EA should describe any known contamination, any future sampling and analysis planned, and NGB's intent to remove and replace these tanks consistent with Federal and State regulatory requirements governing underground and above-ground storage tanks.

*Environmental Justice*
Communities with environmental justice (EJ) concerns are located near Truax Field. Executive Order 12898 directs Federal agencies to identify and address disproportionately high and adverse human health or environmental effects of their actions on minority and/or low-

[1] See: https://www.epa.gov/arc-x

income populations. Tools are available to assist the project team in their EJ analysis for the EA. The Inter-agency Workgroup for EJ released a report entitled, "Promising Practices for EJ Methodologies in NEPA Reviews." The report includes examples of methodologies used across the Federal government for EJ analyses in the NEPA process. In addition, EPA released "EJ SCREEN," which is a publicly-available mapping tool designed to screen for potential impacts to communities living with or vulnerable to EJ concerns. Our EJ recommendations follow:

- Include a detailed community outreach strategy aimed at gaining local input from all communities that would be affected and specify targeted activities to reach low income and/or minority communities. Describe how input would be used to inform project development.
- Clearly describe baseline conditions and potential impacts to each community that would be affected, including unincorporated communities. Identify any important community facilities that could be displaced and effects on community cohesion and character, among other community impacts.
- Identify low income and/or minority populations that may be impacted by the proposed project. Compare percentages of low income and/or minority residents in the project area to an appropriate reference community to determine whether the project could have disproportionately high and adverse effects. Include clear maps and summary tables.
- Consider the "Promising Practices for EJ Methodologies in NEPA Reviews"[2] report. Discuss its applicability to this project and any best practices utilized from the report.
- Use EPA's "EJ SCREEN"[3] tool to screen for potential impacts to communities living with or vulnerable to EJ concerns.
- Provide specific measures to avoid, minimize, and mitigate any anticipated adverse impacts to communities.
- Ensure that the project would not have disproportionately high and adverse human health or environmental effects on minority and/or low-income populations.

The EA should also describe ongoing outreach planned throughout the NEPA process and project implementation. Plans to address any disproportionate adverse impacts to environmental justice communities should be included and committed to in the EA.

*Pollinators and Native Plant Species*

We encourage NGB to implement the 2014 Presidential Memorandum (PM) entitled, "Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators[4]," which responds to evidence of steep declines in certain pollinator populations. Pollinators are critical contributors to our nation's economy, food system, and environmental health. Vegetation within the project area can provide much needed habitat for pollinators, providing food, shelter, and connections to other patches of habitat. Maintenance staff and landscape designers can all take steps to improve the quality of vegetation to benefit pollinators, steps that can also reduce costs,

[2] See: Environmental Justice Interagency Working Group "Promising Practices for EJ Methodologies in NEPA Reviews" is available at: https://www.epa.gov/environmentaljustice/ej-iwg-promising-practices-ej-methodologies-nepa-reviews

[3] See: EPA's EJSCREEN Environmental Justice and Mapping Tool is available at: https://www.epa.gov/ejscreen

[4] See: www.whitehouse.gov/briefing-room/presidentialactions/presidential-memoranda

maintain public safety, and improve public good will. We recognize that any habitat that is created or preserved at or near the airport must conform to Air National Guard Instruction 32-1023 and FAA practices to minimize the risk of wildlife hazards to aircraft.

*Energy Efficiency*
For new and renovated structures, we encourage the use of energy-efficient and/or sustainable building materials, such as south-facing skylights and windows, motion-sensored lighting, Energy Star certified windows and doors, and installation of renewable energy sources. Section 438 of the Energy Independence and Security Act provides examples of how to integrate energy efficiency into Federal projects.

*Recycling and Reuse of Construction Materials*
We recommend reuse or recycling of used construction material, to the maximum extent possible.

*Cumulative Impacts*
NGB should consult with the Dane County Regional Airport to determine if any proposed Airport actions may affect the proposed NGB project cumulatively. Similarly, the EA should describe cumulative impacts associated with the proposed F-35 beddown project that is being proposed at Truax Field.

*Consultation Records*
EPA recommends attaching to the EA inter-agency consultation documents regarding historic resources (Wisconsin Historical Society), wetlands and streams (U.S. Army Corps of Engineers), and Federal and state threatened and endangered species (U.S. Fish and Wildlife Service and the Wisconsin Department of Natural Resources). We also recommend including a list of agency contacts in the EA.

We are available to discuss these comments 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: U.S. Environmental Protection Agency Construction Emission Control Checklist

**U.S. Environmental Protection Agency**
**Construction Emission Control Checklist**

Diesel emissions and fugitive dust from project construction may pose environmental and human health risks and should be minimized. In 2002, EPA classified diesel emissions as a likely human carcinogen, and in 2012 the International Agency for Research on Cancer concluded that diesel exhaust is carcinogenic to humans. Acute exposures can lead to other health problems, such as eye and nose irritation, headaches, nausea, asthma, and other respiratory system issues. Longer term exposure may worsen heart and lung disease. We recommend NGB consider the following protective measures and commit to applicable measures in the EA:

**Mobile and Stationary Source Diesel Controls**

- Purchase or solicit bids that require the use of vehicles that are equipped with zero-emission technologies or the most advanced emission control systems available. Commit to the best available emissions control technologies for project equipment in order to meet the following standards.
- On-Highway Vehicles: On-highway vehicles should meet, or exceed, the EPA exhaust emissions standards for model year 2010 and newer heavy-duty, on-highway compression-ignition engines (e.g., long-haul trucks, refuse haulers, shuttle buses, etc.).
- Non-road Vehicles and Equipment: Non-road vehicles and equipment should meet, or exceed, the EPA Tier 4 exhaust emissions standards for heavy-duty, non-road compression-ignition engines (e.g., construction equipment, non-road trucks, etc.).
- Marine Vessels: Marine vessels hauling materials for infrastructure projects should meet, or exceed, the latest U.S. EPA exhaust emissions standards for marine compression-ignition engines (e.g., Tier 4 for Category 1 & 2 vessels, and Tier 3 for Category 3 vessels).
- Low Emission Equipment Exemptions: The equipment specifications outlined above should be met unless: 1) a piece of specialized equipment is not available for purchase or lease within the United States; or 2) the relevant project contractor has been awarded funds to retrofit existing equipment, or purchase/lease new equipment, but the funds are not yet available.
- Consider requiring the following best practices through the construction contracting or oversight process:
- Establish and enforce a clear anti-idling policy for the construction site.
- Use onsite renewable electricity generation and/or grid-based electricity rather than diesel-powered generators or other equipment.
- Use electric starting aids such as block heaters with older vehicles to warm the engine.
- Regularly maintain diesel engines to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance (e.g., blue/black smoke indicates that an engine requires servicing or tuning).
- Retrofit engines with an exhaust filtration device to capture diesel particulate matter before it enters the construction site.
- Repower older vehicles and/or equipment with diesel- or alternatively-fueled engines certified to meet newer, more stringent emissions standards (e.g., plug-in hybrid-electric

vehicles, battery-electric vehicles, fuel cell electric vehicles, advanced technology locomotives, etc.).

- Retire older vehicles, given the significant contribution of vehicle emissions to the poor air quality conditions. Implement programs to encourage the voluntary removal from use and the marketplace of pre-2010 model year on-highway vehicles (e.g., scrappage rebates) and replace them with newer vehicles that meet or exceed the latest EPA exhaust emissions standards.

**Fugitive Dust Source Controls**

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative, where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing and phase grading operations where appropriate and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

**Occupational Health**

- Reduce exposure through work practices and training, such as maintaining filtration devices and training diesel-equipment operators to perform routine inspections.
- 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 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.
- 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 the type of 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.

**NEPA Documentation**

- Per Executive Order 13045 on Children's Health, EPA recommends the lead agency and project proponent pay particular attention to worksite proximity to places where children live, learn, and play, such as homes, schools, and playgrounds. Construction emission reduction measures should be strictly implemented near these locations in order to be protective of children's health.
- Specify how impacts to sensitive receptors, such as children, elderly, and the infirm will be minimized. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners.

# APPENDIX B
# RECORD OF AIR ANALYSIS

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

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

**a. Action Location:**

**Base:** 115 FW Installation
**State:** Wisconsin
**County(s):** Dane
**Regulatory Area(s):** NOT IN A REGULATORY AREA

**b. Action Title:** Construction and Demolition Projects at the 115th Fighter Wing Installation, Dane County Regional Airport, Madison WI

**c. Project Number/s (if applicable):**

**d. Projected Action Start Date:** 1 / 2020

**e. Action Description:**

Under the Proposed Action, the 115 FW would implement 27 infrastructure improvement projects, in addition to the demolition of seven facilities, in order to support the current mission. These improvement projects would provide adequate space needed to fulfill mission requirements and would consolidate job functions and improve workflow.

**f. Point of Contact:**


**Name:** Lesley Hamilton
**Title:** Sr Assoc
**Organization:** Cardno GS
**Email:** Lesley.Hamilton@cardno-gs.com
**Phone Number:**


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

_____ applicable
__X__ not applicable

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

"Air Quality Indicators" were used to provide an indication of the significance of potential impacts to air quality. These air quality indicators are EPA General Conformity Rule (GCR) thresholds (de minimis levels) that are applied out of context to their intended use. Therefore, these indicators do not trigger a regulatory requirement; however, they provide a warning that the action is potentially significant. It is important to note that these indicators only provide a clue to the potential impacts to air quality.

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

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

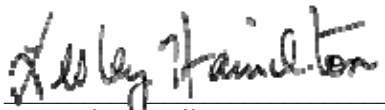
93.153). Therefore, the worst-case year emissions were compared against the GCR Indicator and are summarized below.

**Analysis Summary:**

**2020**

| Pollutant | Action Emissions (ton/yr) | AIR QUALITY INDICATOR | |
|---|---|---|---|
| | | Threshold (ton/yr) | Exceedance (Yes or No) |
| NOT IN A REGULATORY AREA | | | |
| **VOC** | 4.100 | 100 | No |
| **NOx** | 16.435 | 100 | No |
| **CO** | 13.917 | 100 | No |
| **SOx** | 0.034 | 100 | No |
| **PM 10** | 87.377 | 100 | No |
| **PM 2.5** | 0.768 | 100 | No |
| **Pb** | 0.000 | 25 | No |
| **NH3** | 0.010 | 100 | No |
| **CO2e** | 3405.3 | | |

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



Lesley Hamilton, Sr Assoc

3/27/19
DATE