

Indiana Military Compatible Planning Advisory Handbook





This Handbook was prepared under contract with the Southern Indiana Development Commission with financial support from the Department of Defense Office of Local Defense Community Cooperation. The content reflects the views of the key partners involved in the development of this Handbook and does not necessarily reflect the views of the Office of Local Defense Community Cooperation.

Indiana Military Compatible Planning Advisory Handbook

Prepared for



405 JFK Avenue, Suite A
P.O. Box 442
Loogootee, IN 47553

Prepared by



Matrix Design Group
2138 Priest Bridge Court, Suite 1
Crofton, MD 21114

This page intentionally blank.



Acknowledgements

The Southern Indiana Development Commission served as the sponsor for the project and administrator of the grant from the Department of Defense Office of Local Defense Community Cooperation (OLDCC), which funded the project. The project was administered by the Southern Indiana Development Commission in collaboration with Radius Indiana.

Greg Jones, Executive Director
Southern Indiana Development Commission

Matt Craig, Director of Crane Community Support
Radius Indiana

Steering Committee

The Indiana Military Compatible Planning Advisory Handbook was developed collaboratively with representatives from a variety of stakeholders. The Steering Committee, which included representatives from key stakeholder groups, provided direction, oversight, and development of the handbook. The following individuals comprised the project Steering Committee (in alphabetical order).

Brian Asher,
Executive Director, Shelby County Development Corporation

Matt Craig,
Director, Crane Community Support
Radius Indiana

Paul Culter,
Senior Planner, Jacobs
(Grissom Air Reserve Base)

Mark Dobbs,
Community Planning Liaison Office, Naval Support Activity Crane

Kathy Ertel,
Executive Director, Jennings County Economic Development

Jason Hester,
President, Greater Columbus Indiana Economic Development Commission

Indiana || Military Compatible Planning Advisory Handbook

Steering Committee continued

Christine Jeffers,
State Director, Procurement Technical Assistance
Center, Indiana Economic Development
Commission

Greg Jones,
Executive Director, Southern Indiana Development
Commission

Bryan Langley,
Former Senior Vice President, Defense Development,
Indiana Economic Development Commission

Rachel Leslie,
Chief Executive Officer, RJL Solutions
(Hulman Field community)

Ian Nicolini,
VP of Development, Pure Development
(Indiana Intelligence Center community)

John Piper,
Deputy Director, INNG Solutions Group
(Indiana National Guard)

Steven Ray,
Executive Director, North Central Indiana Regional
Planning Council

Jim Tidd,
Executive Director, Miami County Economic
Development Authority

LTC Adam Tscherne,
Indiana National Guard

John Urbahns,
President/CEO, Greater Fort Wayne Inc.

Project Development Team

Matrix Design Group, Inc. was the project consultant contracted to develop the handbook through coordination with and assistance from the Southern Indiana Development Commission, Radius Indiana, and Steering Committee members.

TABLE OF CONTENTS

ACRONYMS..... **A-1**

GLOSSARY..... **G-1**

CHAPTER 1: INTRODUCTION

1.1 Statement of Need 1-1

1.2 Handbook Purpose and Objectives 1-2

1.3 Handbook Organization..... 1-3

1.4 How to Use the Handbook 1-4

CHAPTER 2: MILITARY PROFILE AND READINESS

2.1 Introduction 2-1

2.2 Military Installations in Indiana 2-2

2.3 Military Footprints 2-44

2.4 Indiana Statewide Military Use Airspace 2-121

2.5 Military Readiness..... 2-127

CHAPTER 3: MILITARY COMMUNITIES

3.1 Introduction 3-2

3.2 Indiana Military Compatibility Planning Framework 3-2

3.3 Existing Defense Community Compatibility Tools 3-3

3.4 Grissom Air Reserve Base (ARB) Surrounding Communities..... 3-8

3.5 Naval Support Activity (NSA) Crane Surrounding Communities 3-37

3.6 NSA Crane – Lake Glendora Test Facility Surrounding Communities 3-55

3.7 Indiana National Guard - Baer Field Surrounding Communities 3-59

3.8 Camp Atterbury Surrounding Communities..... 3-70

3.9 Indiana National Guard - Hulman Field Surrounding Communities 3-87

3.10 Indiana Intelligence Center Surrounding Communities 3-95

3.11 Muscatatuck Urban Training Center Surrounding Communities 3-97

3.12 State Aviation Facility Surrounding Communities 3-104

3.13 U.S. Coast Guard Station Michigan City Surrounding Communities 3-113

CHAPTER 4: COMPATIBILITY ASSESSMENT

4.1	Introduction	4-1
4.2	Compatibility Factors	4-2
4.3	Compatibility Factor Definitions.....	4-4
4.3.1	Air Quality.....	4-4
4.3.2	Antiterrorism	4-4
4.3.3	Biological Resources	4-5
4.3.4	Coordination / Communication	4-6
4.3.5	Dust / Smoke / Steam.....	4-7
4.3.6	Energy Development	4-8
4.3.7	Frequency Spectrum Capacity	4-8
4.3.8	Frequency Spectrum Impedance / Interference	4-9
4.3.9	Housing Availability	4-11
4.3.10	Infrastructure and Information Security	4-11
4.3.11	Infrastructure Extensions.....	4-12
4.3.12	Land / Air / Sea Spaces.....	4-12
4.3.13	Land Use	4-15
4.3.14	Legislative Initiatives	4-15
4.3.15	Light and Glare	4-15
4.3.16	Noise	4-16
4.3.17	Public Trespassing	4-17
4.3.18	Resiliency	4-17
4.3.19	Roadway Capacity	4-18
4.3.20	Safety Zones	4-18
4.3.21	Stormwater.....	4-19
4.3.22	Vertical Obstructions.....	4-19
4.3.23	Vibration	4-20
4.3.24	Water Quality / Quantity	4-21

CHAPTER 5: COMPATIBILITY RESOURCES

5.1	Introduction	5-1
5.2	Compatibility Tools.....	5-2
Communication Coordination Tools		
5.2.1	CC-1: Coordination Checklist.....	5-4
5.2.2	CC-2: Geographic Information Systems	5-5
5.2.3	CC-3: Memorandum of Understanding.....	5-6
5.2.4	CC-4: Leadership Engagement	5-7

Table of Contents

5.2.5	CC-5: Community Engagement	5-8
5.2.6	CC-6: Media Outreach	5-9
5.2.7	CC-7: Community Partnership Tools.....	5-10
5.2.8	CC-7: Community Education Partnerships.....	5-13
Land Use Planning Tools		
5.2.9	LU-1: Acquisition.....	5-15
5.2.10	LU-2: Avigation Easement	5-17
5.2.11	LU-3: Cluster Development.....	5-19
5.2.12	LU-4: Code Enforcement.....	5-21
5.2.13	LU-5: Compatible Use Study	5-22
5.2.14	LU-6: Comprehensive Plan	5-25
5.2.15	LU-7: Conditional Use Permitting.....	5-27
5.2.16	LU-8: Construction Standards	5-28
5.2.17	LU-9: Development Review.....	5-29
5.2.18	LU-10: Deed Restrictions	5-30
5.2.19	LU-11: Hazard Mitigation Plan	5-32
5.2.20	LU-12: Light and Glare Controls.....	5-34
5.2.21	LU-13: Military Influence Area	5-36
5.2.22	LU-14: Real Estate Disclosure	5-37
5.2.23	LU-15: Sound Attenuation.....	5-39
5.2.24	LU-16: Subdivision Ordinance	5-41
5.2.25	LU-17: Zoning and Land Use Controls	5-42
Military Planning Tools		
5.2.26	MP-1: Air Installations Compatible Use Zone (AICUZ) Program	5-45
5.2.27	MP-2: Bird/Wildlife Air Strike Hazard (BASH) Program	5-47
5.2.28	MP-3: NEPA.....	5-50
5.2.29	MP-4: Installation Encroachment Action Planning	5-52
5.2.30	MP-5: Installation Master Plan.....	5-54
5.2.31	MP-6: Integrated Cultural Resource Master Plan.....	5-56
5.2.32	MP-7: Integrated Natural Resource Master Plan.....	5-57
5.2.33	MP-8: Noise Management Programs	5-59
5.2.34	MP-9: Range Air Installations Compatible Use Zone (RAICUZ).....	5-60
5.2.35	MP-10: Range Compatible Use Zone (RCUZ).....	5-62
Resource Conservation Tools		
5.2.36	RC-1: Conservation Easement.....	5-64
5.2.37	RC-2: Habitat Conservation Tools	5-67
5.2.38	RC-3: Readiness and Environmental Integration (REPI).....	5-69

Indiana || Military Compatible Planning Advisory Handbook

5.2.39 RC-4: Sentinel Landscapes Program..... 5-71

CHAPTER 6: IMPLEMENTATION TOOLKIT

6.1 Introduction 6-2

6.2 Compatibility Case Studies 6-2

6.2.1 Case Study: Greene County..... 6-3

6.2.2 Case Study: Miami County..... 6-6

6.2.3 Case Study: Vigo County..... 6-10

6.2.4 Case Study: Jennings County..... 6-13

6.2.5 Case Study: Town of Medora..... 6-16

6.3 Communication Checklists and Worksheets 6-18

6.4 Consultation Guide 6-26

6.4.1 Federal and State Contacts..... 6-28

6.4.2 Resources by Topic 6-29

6.4.3 Grissom ARB 6-38

6.4.4 Naval Support Activity Crane/ Lake Glendora Test Facility 6-42

6.4.5 Indiana National Guard - Baer Field 6-46

6.4.6 Camp Atterbury..... 6-49

6.4.7 Indiana National Guard - Hulman Field..... 6-52

6.4.8 Indiana Intelligence Center 6-54

6.4.9 Muscatatuck Urban Training Center 6-56

6.4.10 State Aviation Facility..... 6-58

6.4.11 U.S. Coast Guard Station Michigan City..... 6-60

APPENDIX A: OLDCC (OEA) COMPATIBILITY HANDBOOK.....

APPENDIX B: INDIANA AICUZ STUDIES.....

B.1 Grissom ARB AICUZ

APPENDIX C: INDIANA COMPATIBLE USE STUDIES

C.1 Grissom ARB JLUS

C.2 NSA Crane/Lake Glendora Test Facility JLUS

C.3 Camp Atterbury/Muscatatuck Urban Training Center JLUS.....

APPENDIX D: LAND USE COMPATIBILITY GUIDELINES.....

D.1 Department of Defense Guidance.....



Table of Contents

- D.2 Air Force Guidance
- D.3 Navy / Marine Corps Guidance

This page intentionally blank.



Acronyms

A

AA	Alert Areas	AFI	Air Force Instruction
AAF	Army Airfield	AFMC	Air Force Materiel Command
AAW	Anti-Air Warfare	AFMC	Air Force Materiel Command
AB	Assembly Bill	AFPAM	Air Force Pamphlet
ACSC	Area of Critical State Concern	AFS	Air Force Station
ACUB	Army Compatible Use Buffer	AICUZ	Air Installation Compatible Use Zone
AF	Air Force (US)	AID	Airport Influence District
AFAF	Air Force Auxiliary Field	AIPD	Airfield Influence Planning District
AFB	Air Force Base	AMC	Air Mobility Command
AFCEE	Air Force Center for Environmental Excellence	AMW	Amphibious Warfare
AFGP	Air Force General Plan	APA	American Planning Association
AFH	Air Force Handbook	APFO	Adequate Public Facilities Ordinance

Indiana || Military Compatible Planning Advisory Handbook

APZ Accident Potential Zones
ASW Anti-Submarine Warfare
AT/FP Anti-Terrorism/Force Protection

B

BASH Bird/Wildlife Aircraft Strike Hazard
BCE Base Civil Engineer
BIA Building Industry Association
BLM Bureau of Land Management
BOR Bureau of Reclamation
BRAC Base Realignment and Closure

C

CAA Clean Air Act
CADD Computer Automated Design and Drafting
CAO County Administrative Officer
CAO Critical Area Ordinance
CATEX Categorical Exclusion
CFA Controlled Firing Area
CIP Capital Improvements Plan
CIP Critical Infrastructure Protection
CLUP Comprehensive Land Use Plan
CNEL Community Noise Equivalent Level
CNO Chief of Naval Operations
COE Corps of Engineers (Army)
COG Council of Governments
CUS Compatible Use Study
CONUS Continental United States
CSDGM Content Standards for Digital Geospatial Metadata

CUP Conditional Use Permit
CZ Clear Zone

D

DARR Department of the Army Regional Representative
dB Decibel
dBA A-Weighted Decibel
DEM Digital Elevation Model
DFAR Defense Federal Acquisition Regulations
DFAS Defense Finance Accounting Service
DISDI Defense Installations Spatial Data Infrastructure Initiative
DLA Defense Logistics Agency
DNL Day-Night Average Sound Level
DoD Department of Defense
DOT Department of Transportation
DPW Department of Public Works

E

EA Environmental Assessment
EAP Encroachment Action Plan
ECP Encroachment Control Plan
EIA Environmental Impact Analysis
EIAP Environmental Impact Analysis Process
EIS Environmental Impact Statement
EMI Electro-magnetic Interference
EP Encroachment Partnering
EPA Environmental Protection Agency

EPC Environmental Protection Committee

ESA Endangered Species Act

ESQD Explosive Safety Quantity Distance

F

FAA Federal Aviation Administration

FAR Floor Area Ratio

FCC Federal Communications Commission

FEC Facility Engineering Command

FEMA Federal Emergency Management Agency

FGDC Federal Geographic Data Committee

FMC Future Mission Contour

FMSFIE Facilities Management Standards for Facilities, Installation, and Environment

FONSI Finding of No Significant Impact

FS Feasibility Study

FY Fiscal Year

G

GAO Government Accountability Office

GIS Geographic Information Systems

H

HAZMAT Hazardous Materials

HCP Habitat Conservation Plan

HGC High Ground Cover

HMP Hazard Mitigation Plan

HNZ High Noise (Impact) Zone

I

IA Inter-local Agreement

ICC International Code Council

ICUZ Installation Compatible Use Zone

IECP Installation Encroachment Control Plan (ECP used in this Handbook)

IENMP Installation Environmental Noise Management Program

IFR Instrument Flight Rule

IFSAR Interferometric Synthetic Aperture Radar

INRMP Integrated Natural Resources Management Plan

IPA International Dark-Sky Association

IVT Installation Visualization Tool

J

JLUS Joint Land Use Study

L

LBCS Land Based Classification System

LGC Low Ground Cover

LIDAR Light Detection and Ranging (also LDAR)

LUCP Land Use Compatibility Plan

LUPIN Land Use Planning Information Network

LUPZ Land Use Planning Zones

Indiana || Military Compatible Planning Advisory Handbook

M

MARCORPS	US Marine Corps
MC&G	Mapping, Charting, and Geodesy
MCGWG	Marine Corps GIS Working Group
MAGTFTC	Marine Air Ground Task Force Training Center
MCC	Maximum Capacity Contour
MIDD	Military Influence Disclosure District
MILCON	Military Construction
MIOD	Military Influence Overlay District
MIPD	Military Influence Planning District
MIPE	Military Installation Planning Element
MIZOD	Military Influence Overlay Zoning District
MLS	Multiple Listing Service
MMC	Maximum Mission Contour
MOA	Military Operations Area
MOD	Military Overlay District
MOU	Memorandum of Understanding
MSHCP	Multiple Species Habitat Conservation Plan
MSL	Mean Sea Level
MTR	Military Training Route
MUPD	Multiple-Use Planning District
MxPD	Mixed-Use Planned Development

N

N45	Environmental Protection, Safety and Occupational Health Division, CNO (Navy)
-----	---

NAHB	National Association of Homebuilders
NAID	National Association of Installation Developers
NAS	Naval Air Station
NAVFAC	Naval Facilities Engineering Command
NAVFACINST	Naval Facilities Instruction
NCCP	Natural Communities Conservation Plan
NCITS	National Committee for Information Technology Standard
ND	Negative Declaration
NDAA	National Defense Authorization Act
NEPA	National Environmental Policy Act
NGA	National Geospatial-Intelligence Agency
NGO	Non-Governmental Organization
NIMA	National Imagery and Mapping Agency (renamed to NGA)
NMAS	National Map Accuracy Standards
NMCI	Navy/Marine Corps Intranet
NOA	Notice of Availability
NOD	Notice of Determination
NOI	Notice of Intent
NOP	Notice of Preparation
NP	NIMA's International and Policy Office
NPP	NIMA's Imagery and Geospatial Policy Division
NPS	National Park Service
NSSDA	National Standards for Spatial Data Accuracy

NTIA National Telecommunications and Information Administration

O

O&M Operations and Maintenance

OEА Office of Economic Adjustment

OLDCC Office of Local Defense Community Cooperation

OMAS Office of Military and Aerospace Support

OMB Office of Management and Budget

OMBRR Office of Military Base Retention and Reuse

ONMP Operational Noise Management Program

OPNAVINST Operational Naval Instruction

OSD Office of the Secretary of Defense

P

PA Prohibited Areas

PD Planned Development

PDR Purchase of Development Rights

PUD Planned Unit Development

PWO Public Works Officer

PZDL Planning, Zoning, and Development Laws

Q

QD Arc Quantity Distance Arc

R

RA Restricted Areas

RAICUZ Range Air Installation Compatible Use Zone

RCMP Range Complex Management Plan

REC Regional Environmental Coordinator

REPI Readiness and Environmental Integration

RF Radio Frequency

RFI Radio Frequency Interference

RFP Request for Proposals

ROD Record of Decision

RMI Region of Military Influence

RPMP Real Property Master Plan

RPPB Real Property Planning Board

RSIP Regional Shore Infrastructure Plan

S

SB Senate Bill

SDS/FMSFIE Spatial Data Standards for Facilities, Installation, and Environment

SECDEF Secretary of Defense

SECNAV Secretary of the Navy

SIP State Implementation Plan

SLR Sound Level Reduction

SLUCM Standard Land Use Coding Manual

SNID Special Noise Impact District

SUA Special Use Airspace

SUP Special Use Permit

Indiana || Military Compatible Planning Advisory Handbook

T

TAP	Theater Assessment Program
TDR	Transfer Development Rights
TERF	Tabulation of Existing and Required Facilities
TM	Technical Manual
TNC	The Nature Conservancy
TPL	Trust for Public Land
TSM	Transportation Systems Management
TTCA	Technology, Trade, and Commerce Agency

V

VFR	Visual Flight Rules
-----	---------------------

W

WA	Warning Areas
----	---------------

Z

ZOI	Zone of Influence
-----	-------------------

U

US	United States
USA	United States Army
USACE	United States Army Corps of Engineers
USAEC	United States Army Environmental Center
USAF	United States Air Force
USC	United States Code
USCG	United States Coast Guard
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USMC	United States Marine Corps
USN	United States Navy
UXO	Unexploded Ordnance



Glossary

A

A-Weighted Decibel (dBA)

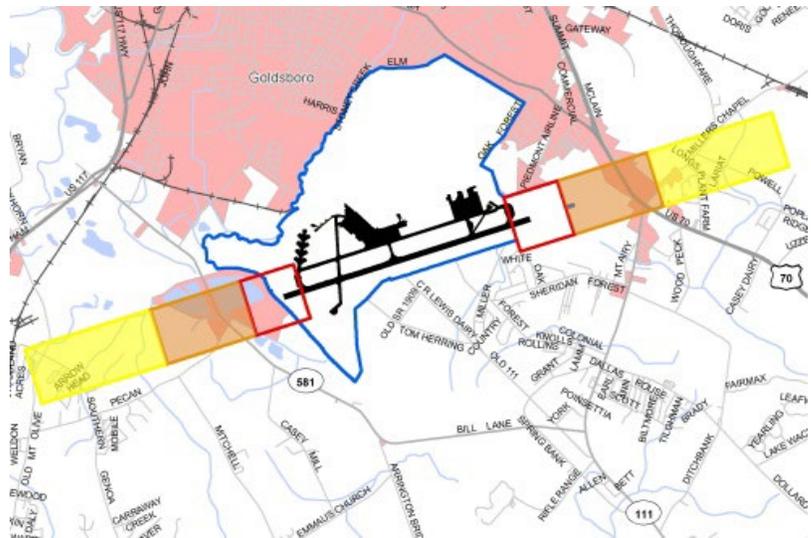
A numerical method of rating human judgment of loudness. The A-weighted scale reduces the effects of low and high frequencies in order to simulate human hearing.

Accessory Use

An activity or structure that is incidental to the main use of a site.

Accident Potential Zone (APZ)

The area immediately beyond the end of the clear zone that possesses a high potential for accidents.



APZs extend outward from each end of the runway (in orange and yellow)

Air Installations Compatible Use Zones (AICUZ)

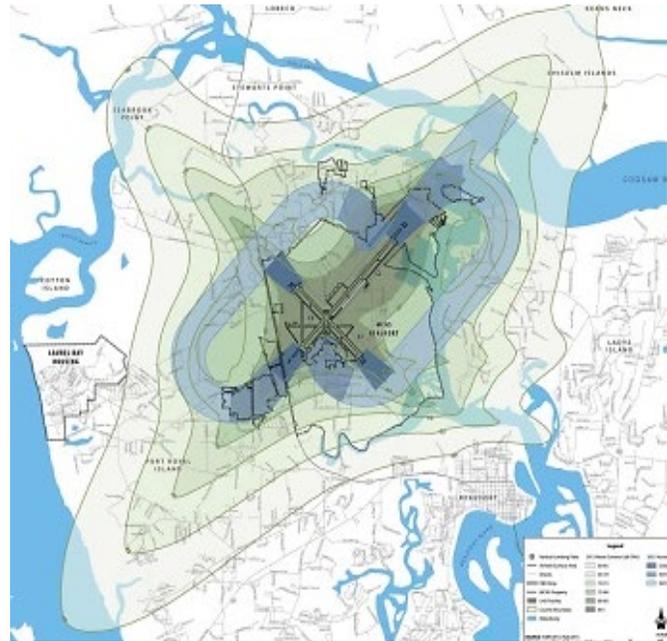
A DoD program designed to promote compatible development around military airfields and to protect the integrity of the installation's flying mission. Some services refer to the program in a singular form "Air Installation Compatible Use Zone."

Army Compatible Use Buffer (ACUB)

A formal agreement between the Army and eligible entities for acquisition of land or interest in land and/or water rights from willing sellers. This agreement may provide for limiting encroachment on the installation through acquisition of development rights, cooperative agreements, conservation easements, and other means in accordance with applicable laws.

Alert Areas (AA)

High volumes of pilot training or an unusual type of aerial activity (e.g., military, aircraft manufacturers, high concentrations of flights in the area) may occur in AAs. All operations taking place in an AA must comply with FAA regulations; however, no special requirements are needed for operations in an AA. These areas are defined by an "A" followed by a number on sectional charts, IFR enroute charts, and terminal area charts.



Avigation

The science of determining and plotting the position of an aircraft and of determining the course to steer to reach any required destination.

B

Bird/Wildlife Aircraft Strike Hazard (BASH)

An Air Force term for wildlife-related hazards to aircraft. The Air Force maintains a program to reduce these hazards at all of its installations.

Building Envelope

The space remaining on a site for structures after all building setback, height limit, and bulk requirements have been met.

C

Capital Improvement Program (CIP)

A timetable for the installation of permanent public structures, facilities, roads, and other improvements based upon budget projections.

Categorical Exclusion (CATEX)

A project type that an agency excludes from detailed NEPA review because it has little potential for impact.

Clear Zone (CZ)

The area of highest accident potential beginning at the runway threshold and extending 3,000 feet. The width of the CZ is based on the class of runway and Service policy.

Cluster Development

Development, which is clustered in a portion of a site, leaving the remainder in open space. The amount of development allowed equals the amount that would have otherwise been allowed on the entire site.

Code Enforcement

Code enforcement is a process that works to ensure that property owners maintain property or bring substandard structures and conditions up to Building and Zoning Code standards.

Community Plan

A portion of the local Comprehensive Plan that focuses on a particular area or community within a county or municipality. Community plans supplement the contents of the Comprehensive Plan.

Compatible Use Plan (CUP)

A program of the Department of Defense Office of Local Defense Community Cooperation to alleviate and prevent incompatible development and/or other man-made or natural installation resiliency activities likely to impair the continued operational utility of a Department of Defense installation, range, special use air space, military operations area, or military training route. Compatible Use Plans, also referred to as Compatible Use Studies, are conducted by states and local governments to assist installations to optimize their mission and sustain their installation and enhance the long-term readiness and military value of the power projection platform. CUPs are designed to help communities make informed decisions through partnerships with local commands to respond to, address, and mitigate activities that are either impairing or likely to impair the use of the installation.



A Clear Zone depicted at the end of the runway (yellow area)

Comprehensive Plan

The Comprehensive Plan is an official public policy document adopted by a government projecting long-range development, future uses of land, resources, and infrastructure through goals, objectives, and policies.

Conditional Use Permit (CUP)

A permit authorizing a use not routinely allowed on a particular site, subject to a public hearing. If approval is granted, the developer must meet certain conditions to harmonize the project with its surroundings.

Conservation Easement

Any limitation in a deed, will or other instrument in the form of an easement, restriction, covenant, or condition, which is or has been executed by or on behalf of the owner of the land subject to such easement and is binding upon successive owners of such land, and the purpose of which is to retain land predominantly in its natural, scenic, historical, agricultural, forested, or open-space condition.

Conservation Partnering Authority

A conservation partnering authority is a land acquisition authority specifically enacted to address land use compatibility challenges.

Controlled Firing Areas (CFA)

These areas contain military or civilian activities that could be hazardous to aircraft not participating in the activity (e.g., rocket testing, ordnance disposal, small arms fire, chemical disposal, etc.). CFAs use ground lookouts or radar to identify aircraft that might be approaching the area. When this happens, all activities in the CFA are suspended until the area is clear again. Non-participating aircraft are not required to change their flight

Indiana || Military Compatible Planning Advisory Handbook

path with regards to a CFA; therefore, CFAs are not charted by the FAA. Personnel may contact the nearest regional FAA headquarters to obtain CFA information.

Council of Governments (COG)

Indiana's 16 COGs are regional planning agencies comprised of member counties and cities in a given region working together to address regional issues in areas such as land use, housing, environmental quality, and economic development. See Indiana Association of Regional Councils. COGs do not directly regulate land use. Elected officials from each of the cities and counties belonging to the COG make up its governing board.

Critical Infrastructure Protection (CIP)

Term describing activities that enhance the cyber and physical security of the public and private infrastructures that are critical to national security, national economic security, and national public health and safety.



Infrastructure protection may incorporate protective bollards

D

Day-Night Average Sound Level (DNL)

The average equivalent sound level during a 24-hour day, obtained after addition of 10 decibels to sound levels in the night after 10 p.m. and before 7 a.m.

Decibel (dB / dBA)

A unit for describing the amplitude of sound, as it is heard by the human ear.

Dedication

A grant of private land to a public agency for public use. Dedications are often used to obtain roads and parkland needed to serve a project.

Defense Installations Spatial Data Infrastructure Initiative (DISDI)

A program in the Business Transformation Directorate under the Deputy Undersecretary of Defense for Installations and Environment, within the Office of the Secretary of Defense. Its goal is to organize the broad geospatial data investments found across the business mission area of the DoD's Global Information Grid.

Density Averaging (or Transfer)

The density of development on a portion of a site is allowed to exceed usual limits provided that the overall density of the site does not do so. Density increases in one area are offset by a corresponding decrease in allowable density in another part of the site.

Density Bonus

An increase in the allowable number of dwelling units. A Density Bonus is granted by the county or municipality in return for the proposed development project providing low- or moderate-income housing.

Design Review Board

A group appointed by the city council to consider the design and aesthetics of development within all or a portion of the community.

Development Agreement

A binding contract between a developer and a county or municipality establishing the conditions under which a particular development may occur. The local government "freezes" the regulations applicable to the site for an agreed upon period of time.

Development Fees

Fees charged as a precondition to construction or development approval. The most common are: (1) impact fees (such as parkland acquisition fees, school facilities fees, or street construction fees) related to funding public improvements necessitated in part or in whole by the development; (2) connection fees (such as water fees) to cover the cost of installing public services to the development; (3) permit fees (such as building permits or

grading permits) for the administrative costs of processing development plans; and, (4) application fees (rezoning, variance, etc.) for the administrative costs of reviewing and hearing development proposals.

Digital Elevation Model (DEM)

The terminology adopted by the USGS to describe terrain elevation data sets in a digital raster form.

Downzone

A change of zoning to a more restrictive zone (for example, from multi-family residential to single-family residential).

E

Easement

The right to use property owned by another for a specific purpose. Power line easements are a common example.

Emblem

A symbol depicting a specific organization and rank. Can also be referred to as an insignia.

Rank Insignia of the United States Armed Forces										
OFFICERS										
O-1	O-2	O-3	O-4	O-5	O-6	O-7	O-8	O-9	O-10	Special
AIR FORCE										
 Second Lieutenant (2d Lt)	 First Lieutenant (1st Lt)	 Captain (Capt)	 Major (Maj)	 Lieutenant Colonel (Lt Col)	 Colonel (Col)	 Brigadier General (Brig Gen)	 Major General (Maj Gen)	 Lieutenant General (Lt Gen)	 General (Gen)	 General of the Air Force (GAF)
ARMY										
 Second Lieutenant (2LT)	 First Lieutenant (1LT)	 Captain (CPT)	 Major (MAJ)	 Lieutenant Colonel (LTC)	 Colonel (COL)	 Brigadier General (BG)	 Major General (MG)	 Lieutenant General (LTG)	 General (GEN)	 General of the Army (GA)
MARINES										
 Second Lieutenant (2ndLt)	 First Lieutenant (1stLt)	 Captain (Capt)	 Major (Maj)	 Lieutenant Colonel (LtCol)	 Colonel (Col)	 Brigadier General (BGen)	 Major General (MajGen)	 Lieutenant General (LtGen)	 General (Gen)	
NAVY										
 Ensign (ENS)	 Lieutenant Junior Grade (LTJG)	 Lieutenant (LT)	 Lieutenant Commander (LCDR)	 Commander (CDR)	 Captain (CAPT)	 Rear Admiral Lower Half (RDML)	 Rear Admiral Upper Half (RADM)	 Vice Admiral (VADM)	 Admiral (ADM)	 Fleet Admiral (FADM)
COAST GUARD										
 Ensign (ENS)	 Lieutenant Junior Grade (LTJG)	 Lieutenant (LT)	 Lieutenant Commander (LCDR)	 Commander (CDR)	 Captain (CAPT)	 Rear Admiral Lower Half (RDML)	 Rear Admiral Upper Half (RADM)	 Vice Admiral (VADM)	 Admiral (ADM)	 Fleet Admiral (FADM)

Indiana || Military Compatible Planning Advisory Handbook

Eminent Domain

The right of government to take private property for public use upon the payment of just compensation to the owner. This is also called condemnation (condemnation can also mean the closing of an unsafe structure by a public agency to protect the community safety).

Encroachment

The DoD defines encroachment as the cumulative result of any and all outside influences that inhibit normal military training and testing. As communities develop and expand in response to growth and market demands, land use decisions can push urban development closer to military installations and operation areas. The resulting land use conflicts (encroachment) can have negative impacts on community safety, economic development, and sustainment of military activities and readiness. This threat to military readiness activities is currently one of the military's greatest concerns.

Encroachment Action Plan (EAP)

A document that captures the results of the identification, quantification, and mitigation of existing and potential land use compatibility challenges to a naval installation, range, airspace, and/or training area.

Encroachment Control Plan (ECP)

An installation ECP is a document that describes the results of an analysis of a Marine Corps installation's current and future encroachment situation, and an action plan presenting encroachment control strategies and actions for reducing the threat to installation missions posed by encroachment.

Environmental Impact Assessment (EIA)

An assessment of the likely human environmental health impact, risk to ecological health, and changes to nature's services that a project may have. An EIA is a creation of the Environmental Protection Agency used to monitor toxics.

Environmental Impact Statement (EIS)

According to the NEPA, whenever the US Federal Government takes a major Federal action significantly affecting the quality of the human environment, it must first consider the environmental impact presented in this document.

Environmental Noise

The intensity, duration, and character of sounds from all sources.

Environmental Noise Management Program (ENMP)

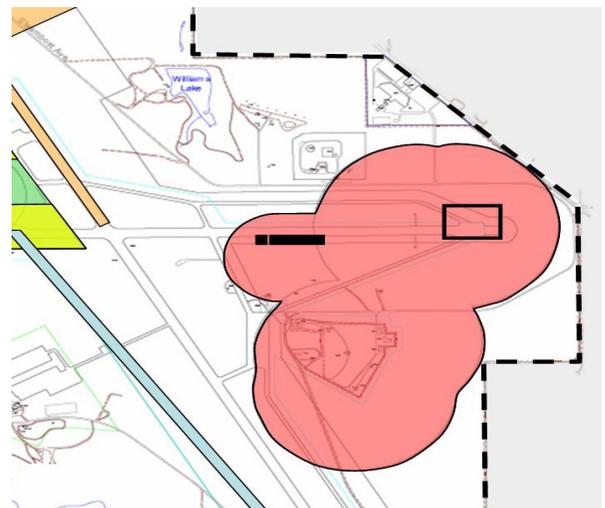
A program, usually at a military installation, that provides a methodology for analyzing exposure to noise and safety hazards associated with military operations, and land use guidelines for achieving compatibility between the military installation and the surrounding communities.

Exaction

A fee or dedication required as a condition of development permit approval.

Explosive Safety Quantity Distance (ESQD)

The quantity of explosives material and distance separation relationships that provide definitive types of protection. These relationships are based on the level of risk considered acceptable for each stipulated exposure. Separation distances are not absolute safe distances but are relative protective or safe distances.



ESQD arcs around munitions facilities (red areas) internal to a military installation (dotted boundary)

F

Facilities Management Standards for Facilities, Installation, and Environment (FMSFIE)

An initiative assigned to the CADD/GIS Technology Center to provide integration with the CADD/GIS Technology Center's CADD (AEC CADD Standard) and GIS (SDSFIE) data standards. The Center was established to promote CADD/GIS and FM technology applications.

Final Map Subdivision (Also, Tract Map or Major Subdivision)

Land divisions creating 5 or more lots. They are generally subject to stricter standards than parcel maps. Requirements may include road improvements, the construction of drainage and sewer facilities, park land dedications, and more.

Finding of No Significant Impact (FONSI)

One of two results from the EA. The other result is the decision to do an EIS.

Findings

The legal "footprints" which an agency must leave to bridge the analytical gap between the raw data considered by the agency and its ultimate decision. They expose its mode of analysis of facts, regulations, and policies.

Floor Area Ratio (FAR)

A measure of development intensity. FAR is the ratio of the floor area of a building to the area of its site. For instance, both a two-story building that covers an entire lot and a four-story building that covers 1/2 of a lot have a FAR of 2.

Flight Path

The line connecting the successive positions occupied, or to be occupied, by an aircraft, missile, or space vehicle as it moves through air or space.

Future Mission Contour (FMC)

Specially developed AICUZ and noise maps that reflect potential and future aircraft and aircraft operations.

G

Geographic Information System (GIS)

A collection of computer hardware, software, and geographic data for capturing, storing, manipulating, analyzing, and displaying all forms of geographically referenced information.

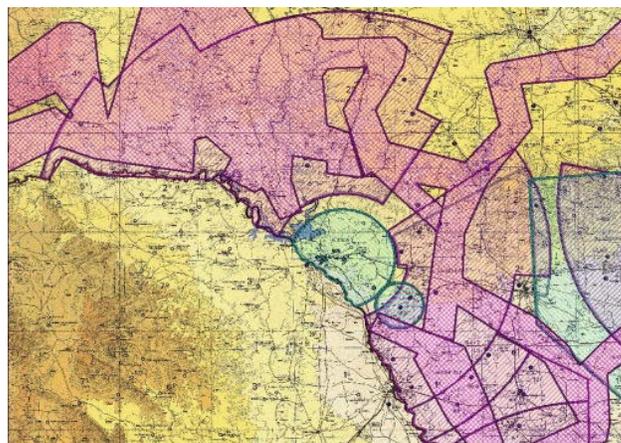
Growth Management

A process by which local governments attempt to minimize the negative effects of rapid development by controlling the timing, location, amount, and/or density of growth. Growth management strategies are determined by each local government, and can include standard zoning controls, limiting the annual number of building permits, relating allowable development intensity to certain levels of infrastructure service, limiting the location of new development, and so forth.

H

Habitat Conservation Plan (HCP)

Incidental take permits help landowners legally proceed with activities that might otherwise result in the illegal impacts to a listed species. A HCP is a document that supports an incidental take permit application pursuant to section 10(a)(1)(B) of the Federal Endangered Species Act. HCPs are an evolving tool. Initially designed to address individual projects, HCP are more likely today to be broad-based plans covering a large area. The geographically



Flight paths and corridors overlaid on a physical map

Indiana || Military Compatible Planning Advisory Handbook

broader HCP is then used as the basis for an incidental take permit for a project within the boundaries of the HCP. Regardless of size, a HCP should include measures that would be implemented to minimize and mitigate impacts to the species to the maximum extent possible, and the means by which these efforts will be funded.

Hazard Mitigation Plan (HMP)

A formal document detailing the steps or actions taken to reduce or eliminate long-term risk to life and property from a hazard event.

Hazardous Materials (HAZMAT)

Defined under the US Department of Transportation regulations as chemicals that are determined by the Secretary of Transportation to present risks to safety, health, and property during transportation.



Hazardous materials (HAZMAT) protective suit

Impact Fees

See Development Fees.

Indiana Association of Regional Councils (IARC)

A 501 (c)(3) statewide association of regional planning organizations that promotes regional strategies and solutions to address local issues. Established in 1997, IARC provides a statewide forum for directors, staff and board members of regional planning organizations in Indiana to network and share ideas that promote economic and community development, transportation planning, smart growth and a multitude of other issues on a regional basis statewide. IARC is a member focused, member managed organization whose Executive Board is composed of representatives from all 16 member regions who meet monthly to conduct the business of the organization.

Infrastructure

A general term for public and quasi-public utilities and facilities such as roads, bridges, sewer plants, water lines, power lines, fire stations, etc.

Initial Study

An analysis of a project's potential environmental effects and their relative significance. An initial study is preliminary to deciding whether to prepare a negative declaration or an EIR.

Installation Environmental Noise Management Program (IENMP)

See Environmental Noise Management Program.

Inverse Condemnation

The illegal removal of property value through excessive government regulation. Legal advice should be sought before proceeding in cases of potential inverse condemnation.

J

Joint Land Use Study (JLUS)

The Joint Land Use Study (JLUS) is a continuation and implementation of the ONMP (Operational Noise Management Plan). It is a collaborative land use planning effort involving the military installation and adjacent local governments. The study evaluates the planning rationale necessary to support and encourage compatible land use development surrounding the installation. Its purpose is to provide support to sustain and provide flexibility to military missions on the installation while guiding the long-term land use needs of the neighboring counties and communities.

L

Land Based Classification System (LBCS)

Classification, coding, and data standards for land-use data to ensure that a broad variety of land-based data collected and stored at the local, regional, state, and national levels in a variety of formats and classification systems be standardized so that such data would be compatible and, thus, easily transferable between jurisdictions, agencies, and institutions.

Land Entitlement

Permitted uses for a parcel of property as approved by the local government entity in which the property is located.

Land Trusts

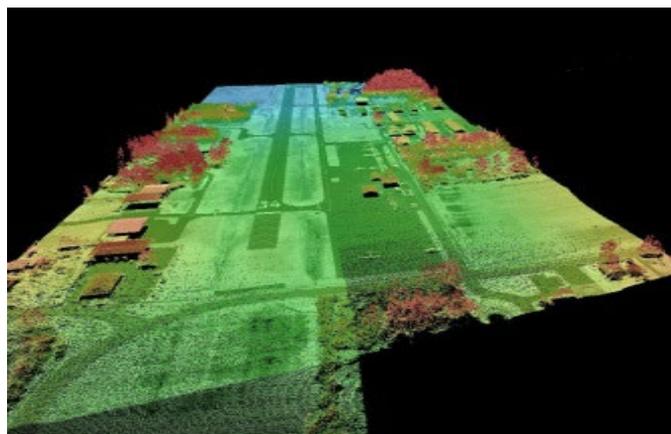
A nonprofit organization that, as all or part of its mission, actively works to conserve land by undertaking or assisting in land or conservation easement acquisitions, or thorough its stewardship of such land or easements. Land trusts are not government agencies; they are independent organizations that work with landowners who are interested in protecting open space. Land trusts often work cooperatively with government agencies by acquiring or managing land, researching open space needs and priorities, or assisting the development of open space plans.

Lead Agency

The primary public agency responsible for managing and carrying out a project.

Light Detection and Ranging (LDAR or LIDAR)

A remote sensing technique that uses a laser mounted to an aircraft to measure vertical height of a land surface.



*LIDAR image of airport and environs
Source: Global Navigation Sciences*

M

Maximum Mission Contour (MMC)

The noise level associated with the military installation's highest level of activity.

Memorandum of Understanding (MOU)

A Memorandum of Understanding (MOU) is contract between two or more government entities.

Military Construction (MILCON)

Appropriations fund major projects such as bases, schools, missile storage facilities, maintenance facilities, medical/dental clinics, libraries, and military family housing.



MILCON projects include facility construction

Indiana || Military Compatible Planning Advisory Handbook

Military Influence Area (MIA)

A Military Influence Area (MIA) is an official geographic planning or regulatory area where military operations impact local communities, and conversely, where local activities may affect the military's ability to carry out its mission. (These areas are also referred to as a Region of Military Influence (RMI), Military Compatibility Area (MCA), Military Influence Planning District (MIPD), Military Influence Overlay District (MIOD), Military District Disclose District (MIDD), Airfield Influence Planning District (AIPD), and Areas of Critical State Concern (ACSC)).

Military Influence Disclosure District (MIDD)

A designed zoning district where real estate transactions are required to have disclosure related to exposure to excessive noise from military operations of types, including aerial over-flight, weapons and munitions firing.

Military Influence Overlay District (MIOD)

A designated contiguous overlay-zoning district that may conform to the perimeter boundaries of a MIPD. The zoning address compatible uses related to hazards, safety, and noise issues.

Military Influence Planning District (MIPD)

A designate official planning area surrounding a military installation. Its purpose is to promote compatible land use planning and development patterns that will sustain the military mission while promoting the public health, safety, and welfare.

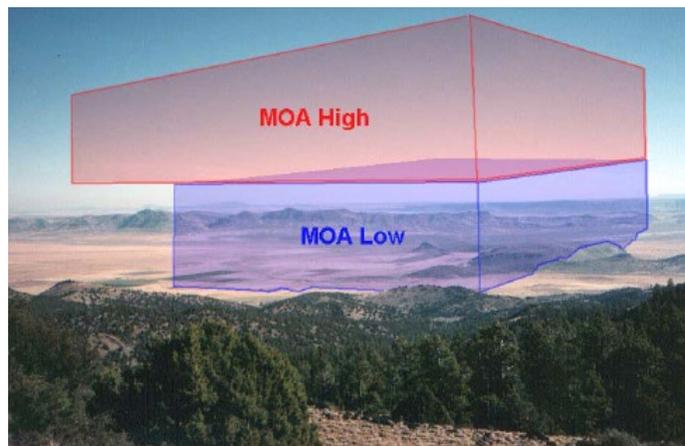
Military Installation

The term military installation means a base, camp, post, station, yard, center, homeport facility for any ship, or other activity under the jurisdiction of the United States Department of Defense as defined in paragraph (1) of subsection (e) of Section 2687 of Title 10 of the United States Code.

Military Operations Area (MOA)

A MOA is airspace established to segregate certain non-hazardous flight activities from Instrument Flight Rules (IFR) traffic and to identify Visual Flight Rules (VFR) traffic. Within these areas, the military conducts flight activities, such as acrobatic or abrupt flight maneuvers, intercepts, air combat maneuvering missions, and aerial refueling. These areas are used to maintain military readiness in the air and to train student pilots.

MOAs are three dimensional areas. In addition to the mapped boundaries, MOAs have a defined floor (minimum altitude) and ceiling (maximum altitude). These altitudes can range from the surface up to the maximum ceiling of 18,000 feet above mean sea level (MSL). MOAs can be "stacked" vertically, as illustrated in the figure. On sectional charts, IFR enroute charts, and terminal area charts, these are identified in magenta lettering that states a specific name followed by the letters "MOA".



Three-dimensional visualization of Military Operating Area
Source: Interagency Airspace Coordination Guide

Military Readiness

"Military readiness activities" mean all of the following:

- Training, support, and operations that prepare the men and women of the military for combat.
- Operation, maintenance, and security of any military installation.
- Testing of military equipment, vehicles, weapons, and sensors for proper operation or suitability for combat use.

Military Training Route (MTR)

An airspace of defined dimensions established for the conduct of military aircraft training flights. MTRs are similar to complex systems of interrelated and interdependent highways in the sky that connect military installations and training ranges. They are used by the DoD to conduct low-altitude navigation and tactical training at airspeeds in excess of 250 knots and at altitudes as low as 200 feet above MSL. These low-level, high-speed routes allow pilots to develop the skills necessary to avoid detection by enemy radar.

Mitigation Measure

The National Environmental Policy Act requires that when an environmental impact or potential impact will occur, measures must be proposed that will eliminate, avoid, rectify, compensate for or reduce that effect.

Moratorium

A halt to new development or the issuance of permits. Moratoria are often imposed while a new Comprehensive Plan or zoning ordinance is written or when sewer or water facilities are inadequate to serve additional development.

Multiple Species Habitat Conservation Plan (MSHCP)

Regional study undertaken to determine the preferred habitats and ecology of native plants and animals throughout an area in an attempt to balance habitat and species protection with economic development.



Mitigation measure at water outfall (white float collecting contaminants)

N

Natural Communities Conservation Plan (NCCP)

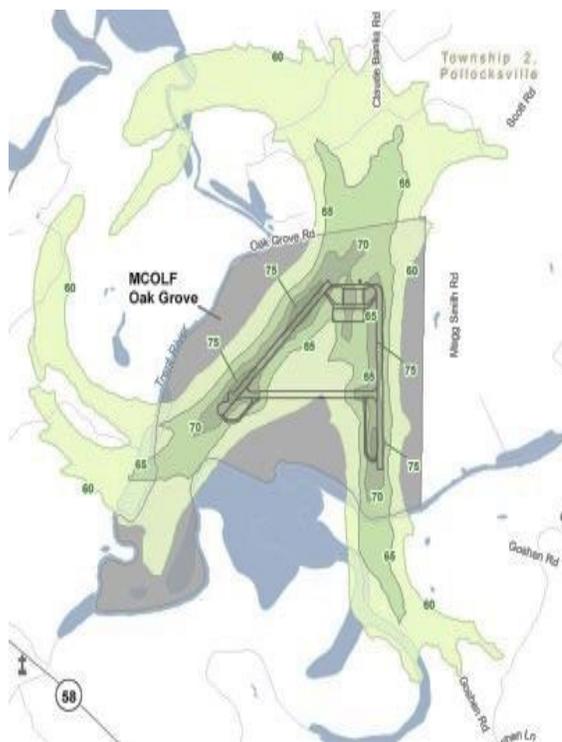
An NCCP identifies and provides for the regional or areawide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity.

National Environmental Policy Act (NEPA)

The United States' basic national charter for protection of the environment, which establishes policy, sets goals, and provides means for carrying out the policy.

Noise Contours (NC)

Continuous lines of equal noise level usually drawn around a noise source. The lines are generally drawn in 5-decibel increments so that they resemble elevation contours found in topographic maps except that they represent contours of equal noise level. Noise contours are generally used in depicting the noise exposure around airports, highways, and industrial plants.



Noise level contours on an AICUZ map measured in dB.

Nonconforming Use

A land use which does not meet current zoning requirements.

O

Operations and Maintenance (O&M)

Appropriations fund expenses such as civilian salaries, travel, minor construction projects, operating military forces, training and education, depot maintenance, stock funds, and base operations support.

Overlay Zone

A zone which is superimposed upon other zoning districts. Overlay zones are used in areas which need special protection (as in a historic preservation district) or have special problems (such as steep slopes or flooding). Development of land subject to an overlay must comply with the regulations of both zones.

P

Parcel Map

A minor subdivision resulting in fewer than five lots.

Planned Unit Development (PUD)

Land use zoning which allows the adoption of a set of development standards that are specific to a particular project. PUD zones usually do not contain detailed development standards; those are established during the process of considering proposals and adopted by ordinance upon project approval.

Prohibited Areas (PA)

These areas vary in dimensions and are established over sensitive ground facilities (e.g., the White House, Camp David, presidential homes, etc.). Aircraft wishing to navigate in this airspace must receive approval from the FAA or PA controlling agency. PAs are identified with a "P" followed by a number on sectional charts, IFR enroute charts, and terminal area charts.

Purchase of Development Rights (PDR)

A PDR is a voluntary program where a land trust or some other agency usually linked to local government makes an offer to a landowner to buy the vested development rights on a land parcel. The landowner is free to turn down the offer, or to try to negotiate a higher price.

R

Range

Military range means designated land and water areas set aside, managed, and used to conduct research on, develop, test, and evaluate military munitions and explosives, other ordnance, or weapon systems, or to train military personnel in their use and handling. Ranges include firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, and buffer zones with restricted access and exclusionary areas (definition of range per 40 CFR 266.201).



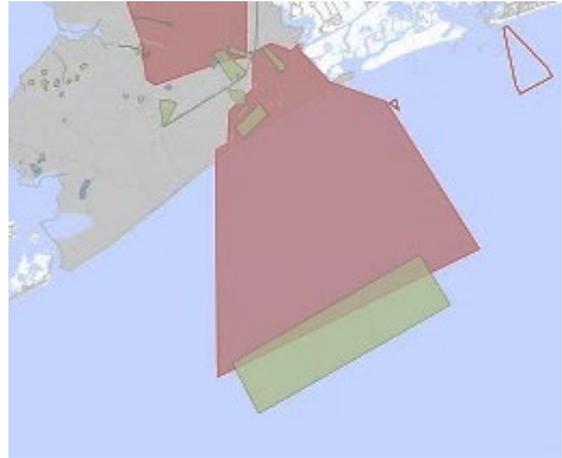
Munitions explosion on a range

Range Air Installation Compatible Use Zone (RAICUZ)

Navy/Marine Corps and Air Force programs designed to protect public health, safety, and welfare, and to prevent encroachment from degrading the operational capability of air-to-ground ranges. This program is similar to the AICUZ Program. It includes range safety and noise analyses, and provides land use recommendations, which will be compatible with range safety zones and noise levels associated with the military range operations.

Range Compatible Use Zone (RCUZ)

Marine Corps program designed to protect public health, safety, and welfare, and to prevent encroachment from degrading the operational capability of ground-to-ground and air-to-ground ranges. This program is similar to the RAICUZ Program. It includes range safety and noise analyses, and provides land use recommendations, which will be compatible with range safety zones and noise levels associated with the military range operations.



RCUZ Map

Record of Decision (ROD)

A public document, under the NEPA, that reflects the agency's final decision, rationale behind that decision, and commitments to monitoring and mitigation.

Referendum

A voter challenge to legislative action taken by a city council or county board of supervisors. If enough voters' signatures are filed before the legislative action becomes final, the council or board must either rescind its decision or call an election on the issue.

Region of Military Influence (RMI)

A new three-dimensional planning model that looks beyond the immediate environs of the home military base and the surrounding jurisdictions. It recognizes the connectivity between the home base and distant test and training ranges.

Regional Shore Infrastructure Plan (RSIP)

A US Navy comprehensive, long-range regional plan encompassing a specific geographic region. The RSIP identifies alternatives for optimizing the use of land and facilities and incorporates strategic CNO and Installation Management Claimant (IMC) visions through functional consolidations, regionalization, outsourcing, privatization and joint use with other DoD, federal and government entities. RSIP content reflects the requirements defined for the comprehensive land and facilities planning process.

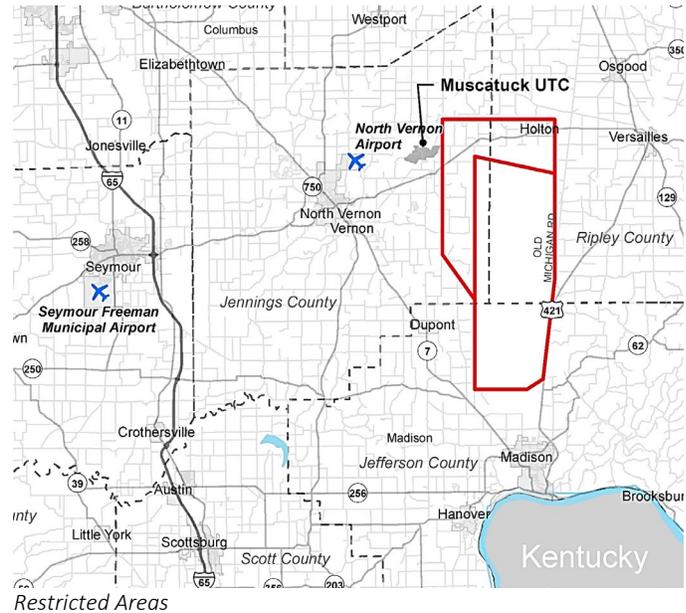
Readiness and Environmental Integration Program (REPI)

A key DoD tool for combating encroachment that can limit or restrict military training, testing, and operations. The REPI Program protects these military missions by helping remove or avoid land-use conflicts near installations and addressing regulatory restrictions that inhibit military activities. The REPI Program is administered by the Office of the Secretary of Defense (OSD).

Indiana || Military Compatible Planning Advisory Handbook

Restricted Areas (RA)

Restricted Areas are an important asset to the DoD because they allow for the use of weapons for training purposes. These areas are necessary for ground weapons and artillery firing, aerial gunnery, live and inert practice bomb dropping, and guided missile testing. Military Restricted Airspace ensures the combat readiness of aviation and ground combat units while separating these activities from the public and general aviation users. These areas are identified by the letter "R" followed by a number on sectional charts, IFR enroute charts, and terminal area charts. The floor and ceiling altitudes, operating hours, and controlling agency can be found in the sectional chart legend.



S

School Impact Fees

Fees imposed on new developments to offset their impacts on area schools.

Sentinel Landscapes Partnership

Coalition of federal agencies, state and local governments, and non-governmental organizations that works with private landowners to advance sustainable land management practices around military installations and ranges. The partnership's mission is to strengthen military readiness, conserve natural resources, bolster agricultural and forestry economies, and increase climate change resilience.

Setback

The minimum distance required by zoning to be maintained between two structures or between a structure and a property line.

Sound Attenuation

Sound attenuation refers to special construction practices designed to lower the amount of noise that penetrates the windows, doors, and walls of a building.

Special Use Airspace (SUA)

Airspace wherein activities must be confined because of their nature or wherein limitations are imposed upon aircraft operations that are not a part of those activities, or both. Except for controlled firing areas, special use airspace areas are depicted on aeronautical charts.

Specific Plan

A plan addressing land use distribution and intensity, open space availability, infrastructure, and infrastructure financing for a portion of the community. Specific plans put the provisions of the community Comprehensive Plan into action.

Spot Zoning

The zoning of an isolated parcel in a manner which is inconsistent or incompatible with surrounding zoning or land uses, particularly if done to favor a particular landowner. A conditional use permit is not a spot zone.



Setback between building on left and building at center

Strip Development

Commercial and high-density residential development located adjacent to major streets. This type of development is characterized by its shallow depth, street-oriented layout, lack of unified design theme, and numerous points of street access. It impedes smooth traffic flow.

Subdivision Ordinance

An ordinance used by local governments that sets forth the regulations that guide site development standards such as road and grading requirements, utility provision, etc. (Also known as land development control ordinance, platting).

T**Tentative Map**

The map or drawing illustrating a subdivision proposal. The county or municipality will conditionally approve or deny the proposed subdivision based upon the design depicted on the tentative map.

Tract Map

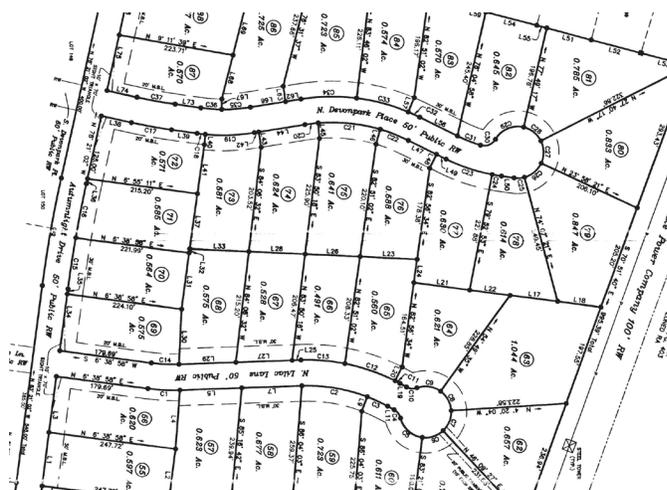
See Final Map Subdivision

Transfer Development Rights (TDR)

Also known as "Transfer of Development Credits," a Transfer of Development Rights (TDR) program is utilized to relocate potential development from areas where proposed land use or environmental impacts are considered undesirable (the "donor" site) to another ("receiver") site chosen on the basis of its ability to accommodate additional units of development beyond that for which it was zoned, with minimal environmental, social, and aesthetic impacts.

Transportation Systems Management (TSM)

A program coordinating many forms of transportation (car, bus, carpool, rapid transit, bicycle, etc.) in order to distribute the traffic impacts of new development. Instead of emphasizing road expansion or construction, TSM examines methods of increasing road efficiency.



Tract Map (Subdivision)

V**Variance**

A limited waiver from the requirements of the zoning ordinance. Variance requests are subject to public hearing and may only be granted under special circumstances.

Vested Tentative Tract Map

A vested tentative tract map follows a procedure for the approval of tentative maps that will provide certain statutorily vested rights to a subdivider. When a local agency approves or conditionally approves a vesting tentative map, that approval shall confer a vested right to proceed with development in substantial compliance with the ordinances, policies, and standards in effect at the time the vesting tentative map is approved or conditionally approved.

W

Warning Areas (WA)

Warning Areas can exist in domestic and international waters. These airspace areas are similar to a combination of restricted airspace areas and MOAs because the activities that occur can be hazardous, non-hazardous, or both. Within these areas, the military can conduct major exercises using dozens of ships and aircraft performing an array of training, such as naval gunfire, aerial gunnery, guided missile exercises, and practice interceptions. These areas are identified by a "W" followed by a number on sectional charts, IFR enroute charts, and terminal area charts.

Z

Zoning

Local codes regulating the use and development of property. The zoning ordinance divides the county or municipality into land use districts or "zones", illustrated on zoning maps, and specifies the allowable uses within each such zone. It establishes development standards such as minimum lot size, maximum structure height, building setbacks, and yard size.



1 Introduction

Inside Chapter 1...

1.1. Statement of Need.....	1-1
1.2. Handbook Purpose.....	1-2
1.3. Handbook Organization.....	1-3
1.4. How to Use the Handbook.....	1-4

1.1. Statement of Need

The State of Indiana, its cities, counties, and rural towns, and the Department of Defense (DOD) have worked together to strengthen Indiana, the Nation, and its people. In Indiana, there are installations, ranges, airspace, and land controlled by the Air Force Reserve Command, U.S. Navy, Indiana National Guard, and U.S. Coast Guard but used by all branches of the Armed Forces. The following specific Military Installations in Indiana described and highlighted in this Handbook:

- Grissom Air Reserve Base (GARB)
- Naval Support Activity (NSA) Crane
- NSA Crane Lake Glendora Test Facility

Indiana || Military Compatible Planning Advisory Handbook

- Indiana National Guard facilities:
 - Baer Field (at Fort Wayne International Airport)
 - Camp Atterbury
 - Indiana National Guard at Hulman Field (at Terre Haute Regional Airport)
 - Indiana Intelligence Center (INIC)
 - Muscatatuck Urban Training Center (MUTC)
 - State Aviation Facility (at Shelbyville Municipal Airport)
- U.S. Coast Guard Station Michigan City

These Installations are home to a significant military active-duty, reserve and civilian staff population, and defense contractors who support thousands of military, civilian, and local veteran jobs and contribute to the state, regional and local economies. Additionally, Indiana is also home to additional military commands such as Defense Finance Accounting Service (DFAS) that are not located on a military installation.

While there are numerous benefits, partnerships and positive relationships between local communities and military installations, activities that occur both inside and outside a military installation can have mutual impacts – both positive and adverse. As Indiana communities continue to grow and develop to fulfill the needs of the future, land-use decisions must be carefully addressed to ensure that both the public and military thrive. This is done through coordination, collaboration, and partnerships, which help to prevent, limit and mitigate land-use and resource conflicts, often referred to as encroachment, and promote quality of life for citizens in defense communities as well as the military. Compatibility between the military and communities is essential to protect military missions and readiness, and the health of local economies, industries, and the environment.

This Handbook is intended to serve as a guide to achieving compatibility between the military and civilian communities by sharing information about the military in Indiana and their surrounding defense communities and highlighting opportunities for collaboration and cooperation so that military and community leaders can make more informed and mutually beneficial decisions.

1.2. Handbook Purpose

The primary purpose of the Handbook is to encourage coordination and collaboration by guiding Indiana towns, cities, counties, property owners, developers, military personnel, and the state. The Handbook provides various tools and strategies to develop, sustain, and strengthen compatibility between military activities and community land uses. The Handbook outlines different planning tools, best practices, and processes for local leaders, planners, developers, the military, and the public to share information and communicate successfully. All parties and stakeholders need to be well informed on these topics to make effective land-use decisions and resolve conflicts.

1.2.1. Defining the Issues

Land use compatibility is achieved when communities and military installations balance complementary and competing needs and interests for the benefit and success of both parties. There are dozens of factors that determine and affect compatibility including social, resource, and development factors. These compatibility factors are listed

and further explained in Chapter 4: Compatibility Assessment. In addition to Coordination and Communication, affecting all Indiana Military Installations, other common compatibility factors include Biological Resources, Dust / Smoke / Steam, Energy Development, Frequency Spectrum Impedance / Interference, Land Use, Light and Glare, Noise, Roadway Capacity, and Safety. The Handbook is intended to provide a flexible planning toolbox that can be applied in a variety of ways to meet the unique needs of each stakeholder involved in promoting community and military compatibility planning.

1.2.2. Local Planning Needs

To guide growth and development in communities large and small, local governments use a variety of planning tools and processes. These determine the location, character, level, and intensity of development that will be allowed or permitted through long-range comprehensive planning and day-to-day zoning regulations in their community. These processes also determine what areas will be conserved and protected from development. This is not an easy process. To capture the future envisioned by its residents, local governments often must balance competing interests and make difficult trade-off decisions. Recognition of local planning needs and their relationship to military operations is critical to collaborative and comprehensive planning processes that avoid incompatible land uses. It is important for local governments to recognize the needs of military installations and their operational areas to determine the most appropriate planning tools to promote compatibility.

1.2.3. Military Planning Needs

The fundamental purpose of military installations in Indiana is to support military readiness, including the testing and training needs of the United States Armed Forces. Indiana Military Installations must have access to air and land space, as well as other supporting elements, such as an interference-free frequency spectrum, to accomplish their missions. The absence of access to or degradation of these resources can adversely affect military capability to support Indiana and national security objectives.

1.3. Handbook Organization

One of the primary objectives of the Handbook is to provide a user-friendly resource for all parties. To do this, the Handbook has been organized into the following sections for quick and easy reference.

Chapter 1 – Introduction. This chapter is designed to provide background on the purpose and intent of the Handbook and a general overview and organization.

Chapter 2 – Military Profile and Readiness. This chapter provides an overview of each Military Installation in Indiana, including a summary of the history, a description of the installation, and an overview of their missions and operations. The chapter also includes military operational footprints that extend beyond an installation boundary to understand the broader military influences. This information is provided as a context of military activities across the state to analyze their resiliency and assist stakeholders make informed decisions about future development and economic growth in surrounding communities that could potentially impact or be impacted by military activities.

Chapter 3 – Military Communities. This chapter provides information about the surrounding communities of Indiana's military installations by including state enabling legislation for community powers and military compatibility, an overview of which communities employ planning tools that support compatibility, an overview of each surrounding

Indiana || Military Compatible Planning Advisory Handbook

county and municipality, as well as a summary narrative of their existing planning tools and processes related to military compatibility. The goal is to provide information that enables stakeholders to understand the dynamic nature of these communities and development trends that have the potential to impact the future of each military installation. This information can be considered with other factors to assist decision-makers with informed planning policies, regulations, and processes to support military compatibility. The objective of this chapter is to foster an understanding of the nature of activities occurring “outside the fenceline” when considering military missions and operations.

Chapter 4 – Compatibility Assessment. This chapter provides an overview of compatibility concerning military readiness, and the goal of promoting an environment where both communities and the military communicate, coordinate, and implement mutually supportive actions that allow both to achieve respective objectives. An action by either the military or community that minimizes, hinders, or presents an obstacle to the other is characterized as an issue. A list of compatibility factors and explanation that characterizes the range of compatibility factors between the military and communities is provided. These are applicable not only in communities surrounding military installations but also in areas under military airspace that extends across the state.

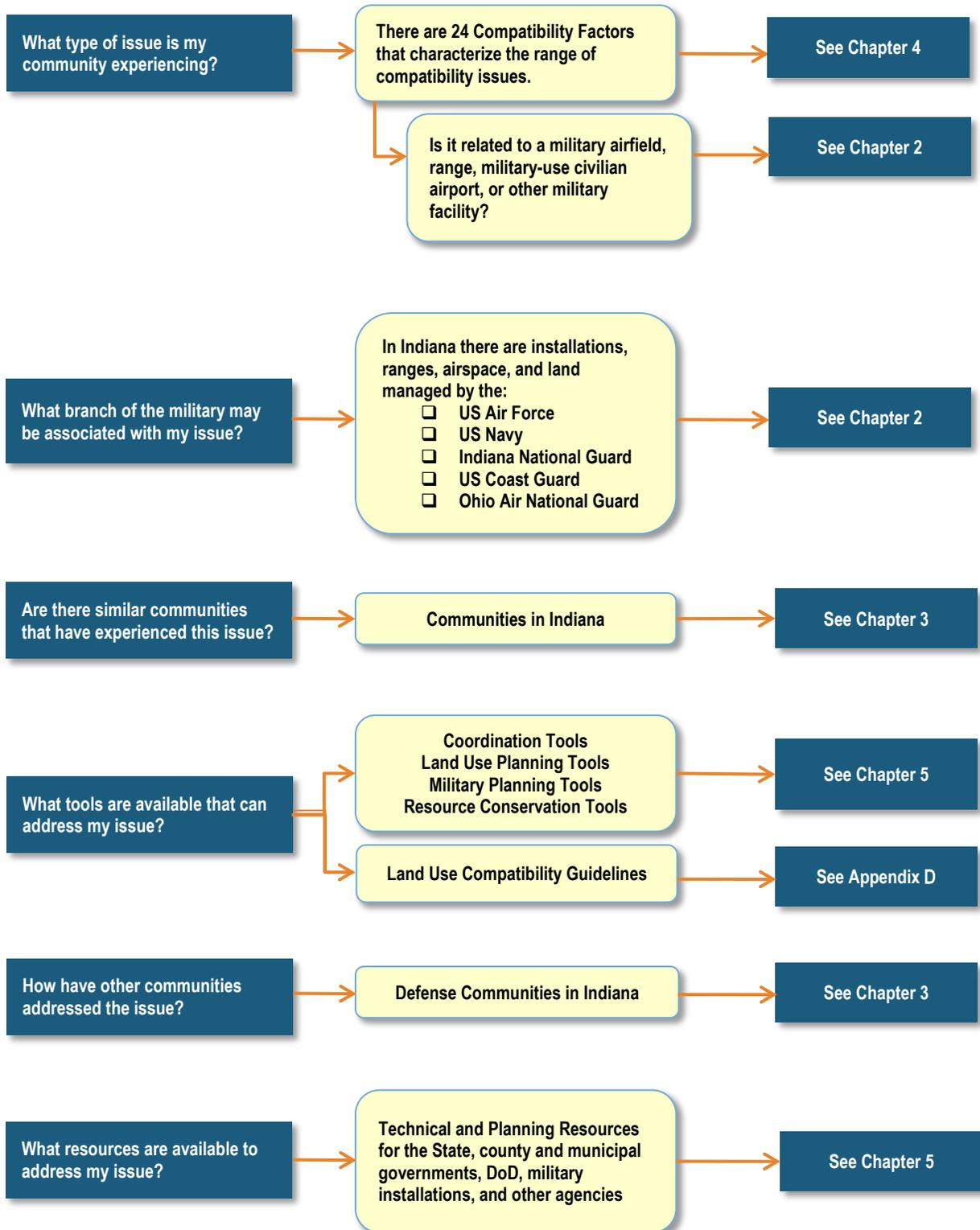
Chapter 5 – Compatibility Resources. This chapter provides an overview of existing tools that can be used to encourage, promote, and manage compatibility and resources by the military and civilian communities. A summary table of key plans and programs is included organized into four types of tools: Communication / Coordination, Land Use, Military Planning, and Resource Conservation. Following the table is an in-depth summary of each tool including roles and responsibilities for implementation, implementation and maintenance practices and considerations, and relevant resources/references.

Chapter 6 – Implementation Toolkit. This chapter includes five scenario Case Studies, Communication Checklists and Worksheets, and a Consultation Guide. The Case Studies serve as examples of how different communities can use this handbook to create successful partnerships and effective solutions for military compatibility. The Consultation Guide provides helpful resources, contacts, and support for civilian-military communication and coordination.

Appendix. This section includes Compatible Use Studies for Indiana Installations, Indiana Military Compatibility Legislation, Department of Defense (DoD) Land Use Compatibility Guidelines, and DoD Office of Local Defense Community Cooperation (formerly OEA) Handbook: Practical Guide to Compatible Civilian Development Near Military Installations.

1.4. How to Use the Handbook

The Handbook is intended to be a guide for the types of military compatibility issues that Indiana communities experience or may experience in the future and how they can identify solutions to prevent, address or mitigate them. The flow chart on the following page presents how specific chapters of the handbook can be used.



This page left intentionally blank.



2

Military Profile and Readiness

Inside Chapter 2...

2.1. Introduction.....	2-1
2.2. Military Installations in Indiana	2-2
2.3. Military Footprints.....	2-44
2.4. Indiana Statewide Military Use Airspace	2-121
2.5. Military Readiness.....	2-127

2.1. Introduction

This chapter provides a profile overview of each military installation in Indiana, including a summary of the history, a description of the installation, and an overview of the missions and operations that occur there. This section also includes the military operational footprints that extend beyond the installation’s boundary to understand the broader military influence areas.

Identifying and describing the various activity performed at each military installation provides valuable insight into their importance as regional, state, and national strategic assets and as part of the fabric of their surrounding communities. This information provides context of the military activities across the state to help stakeholders make informed decisions about future development and economic growth within neighboring communities that could potentially be impacted by military activities or impact the military’s viability and future missions.

2.2. Military Installations in Indiana

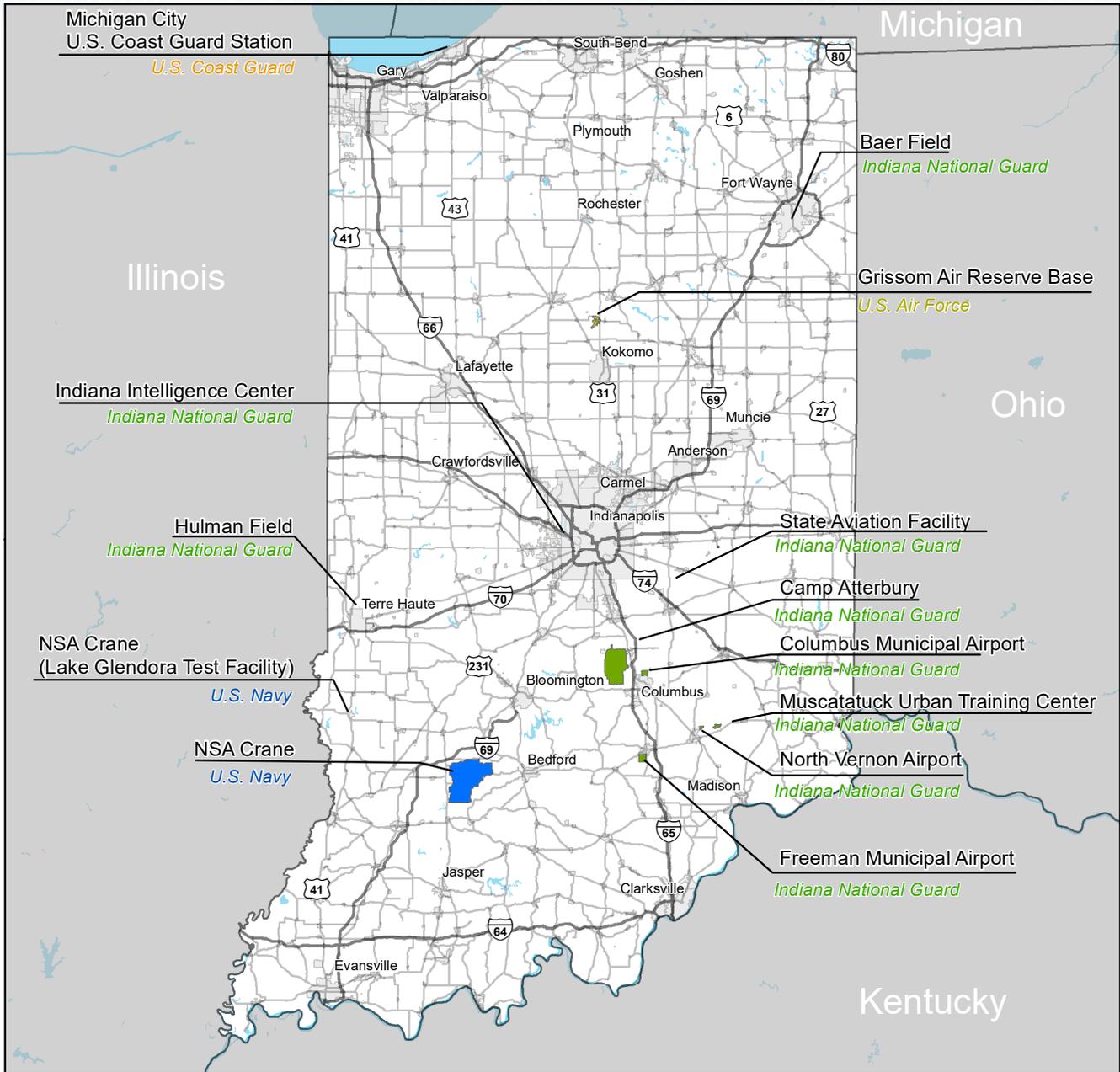
The following Military Installations in Indiana are described in this section including their Mission & Operations as well as their Operational Areas:

- Grissom Air Reserve Base (GARB)
- Naval Support Activity (NSA) Crane
- Naval Support Activity (NSA) Crane – Lake Glendora Test Facility
- Indiana National Guard Facilities
 - Baer Field (at Fort Wayne International Airport)
 - Camp Atterbury
 - Indiana National Guard at Hulman Field (at Terre Haute Regional Airport)
 - Indiana Intelligence Center (INIC)
 - Muscatatuck Urban Training Center (MUTC)
 - State Aviation Facility (at Shelbyville Municipal Airport)
- U.S. Coast Guard Station Michigan City

Figure 2-1 on the following page shows the locations of the military installations in Indiana.

- Fort Benjamin Harrison

In addition to the military installations in Indiana, Fort Benjamin Harrison requires acknowledgement for its historic contribution as a military installation dating back to 1906 and for the ongoing partnership between the military and the Fort Harrison Reuse Authority. During World War II, it became the largest reception center in the United States and site where thousands of young draftees were introduced to Army life. From 1948 to 1950, the facility functioned as Benjamin Harrison Air Force Base. With the closure of the facility resulting from the 1991 Base Closure and Realignment Commission, a new life began for civilian reuse through the Fort Harrison Reuse Authority. Today, the military maintains a strong presence at Fort Benjamin Harrison with the Department of Defense retaining an **Army Reserve Center** and the **Defense Finance and Accounting Service which employs a staff of more than 12,000** and continues its mission of providing payment services for the Department of Defense in the third largest government building in the country. The Fort Harrison Reuse Authority, in partnership with the Department of Defense, United States Army, Defense Commissary Agency, and the Army Air Force Exchange Service constructed a new state of the art, Exchange and Commissary in 2007, with over 35,000 families from across the state travelling annually to shop there. In March 2011, the Indiana National Guard Lawrence Armory opened its Readiness Center serving as the headquarters for 4 units of the 76th Infantry Brigade. Fort Benjamin Harrison is a model for an integrated civilian and military community, demonstrating the value and benefit of the military and communities coming together to create mutually beneficial synergies and partnerships.



Source: US Census, 2020. DoD, 2020. ESRI, 2020.

- | | |
|---|---|
| ■ U.S. Navy | State Boundary |
| ■ U.S. Air Force | City Boundary |
| ■ Indiana National Guard | Interstate |
| ■ U.S. Coast Guard | US / State Hwy |
| | ~ River |
| | ■ Water Body |

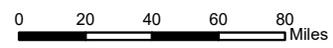
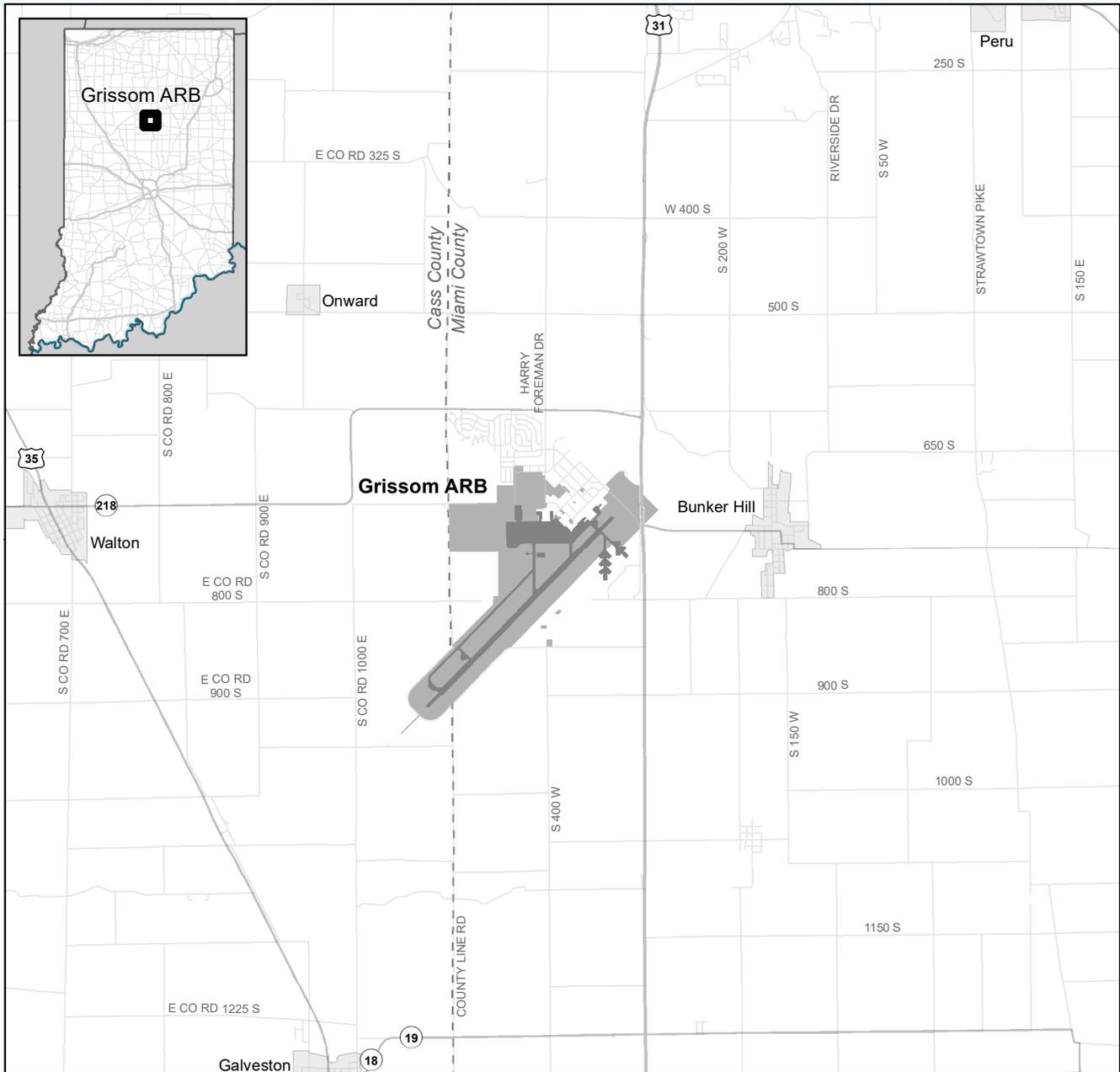


Figure 2-1
Indiana Military Installations

2.2.1. Grissom Air Reserve Base (GARB)



GARB encompasses approximately 2.66 square miles (~1,700 acres) in Miami and Cass Counties in north central Indiana. Geographically, it is roughly 2 miles west of the Town of Bunker Hill, 5 miles east of the Town of Walton, 8 miles southwest of the City of Peru, and 12 miles north of the City of Kokomo. Initially established as a Naval facility in 1942 before serving as an active Air Force base, the installation was ultimately realigned and downsized under the Air Force Reserve Command (AFRC) in 1994. It is adjacent to the civilian Grissom Aeroplex development comprising part of the former GARB realigned through the Base Realignment and Closure process. The location of GARB is shown on Figure 2-2.



Source: US Census, 2020. DoD, 2020. ESRI, 2020. Grissom ARB, 2022.

-  Grissom ARB
-  City Boundary
-  County Boundary
-  US / State Hwy
-  Local Road
-  Airfield Surfaces

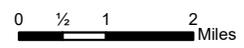


Figure 2-2
Grissom ARB

2.2.1.1. Mission & Operations



The **434th Air Refueling Wing** (434 ARW) is the host unit at GARB today. The Air Refueling Wing's mission is to develop and maintain the operational capability of its units and train reservists for worldwide duty. Training consists of flight operations, deployments, and weekend training. The 434 ARW also generates aircraft and crews in support of the Air Mobility Command (AMC), with the AFRC providing a substantial portion of the Department of Defense's (DoD) total aerial refueling capability.

The 434 ARW's refueling capabilities and activities directly support two key Air Force missions in times of peace and in crises: Rapid Global Mobility and Global Strike. Aerial refueling is the process of transferring aviation fuel from one military aircraft to another during flight, which allows the receiving aircraft to remain airborne longer. A series of air refueling events can extend an aircraft's range significantly. Mid-air refueling capabilities also allow aircraft to takeoff with a greater payload, including weapons, cargo, and/or personnel. Critical training and operational requirements are met through the aircraft and aviation facilities at G ARB.



2.2.1.2. Operational Areas

The airfield and its associated facilities are where operations are conducted. These areas are shown on Figure 2-2. Key activities include aircraft maintenance and flight operations, summarized below.

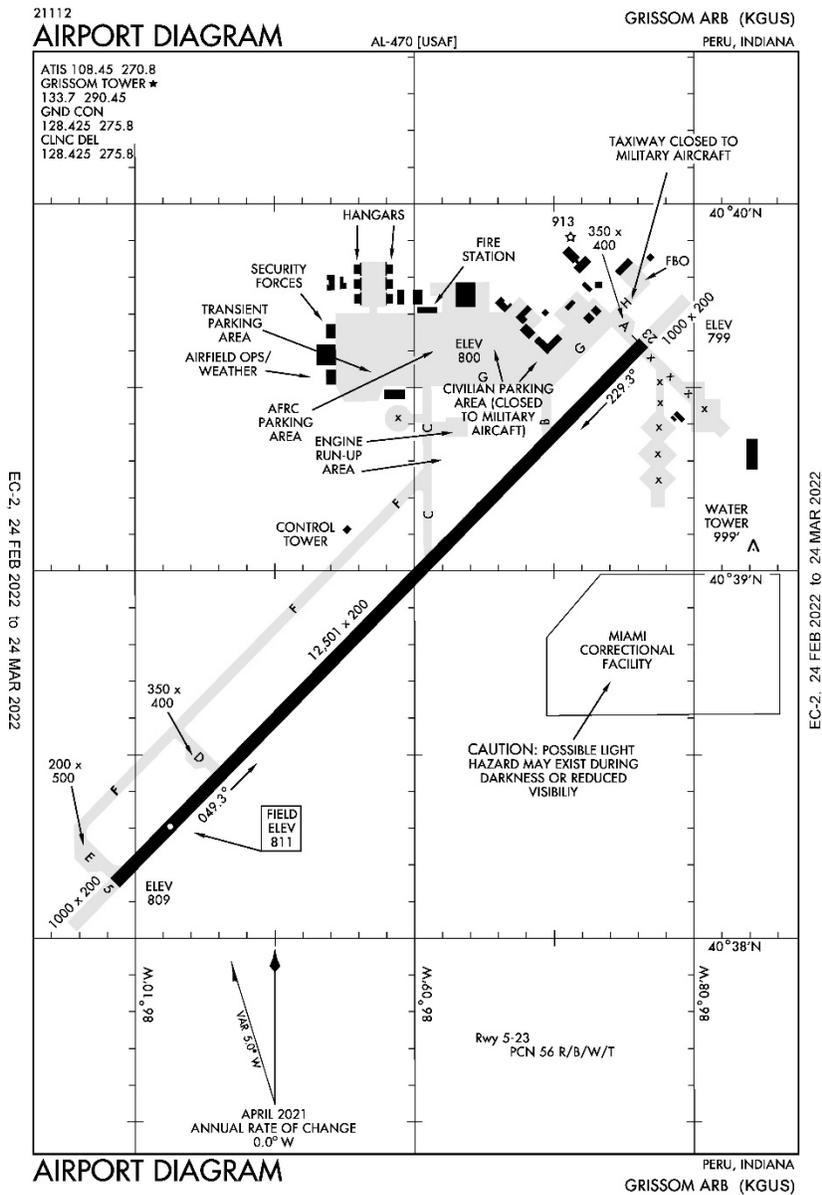
Airfield

Parking Apron

Routine aircraft maintenance is conducted on the parking apron on the north side of the airfield between 7:00 AM and 10:00 PM. This maintenance includes engine runs-ups consisting of idle engine runs, sound/flight idle engine runs, and high-power runs (Final Air Installation Compatible Use Zone (AICUZ) Study, GARB, Indiana, 2020; GARB Joint Land Use Study, 2018).

Runways

GARB includes Runway 05/23, oriented in a northeast/southwest direction, with approximately 25% of flights using Runway 05 and 75% using Runway 23. Aircraft land at and depart from these facilities from various directions; however, most approach and depart to the west and southwest of the airfield. Exceptions include closed flight patterns that are flown to the north and south. Flight paths are designed to avoid more densely populated areas, such as the City of Kokomo to the south, in order to minimize impacts on civilian populations to the greatest extent possible (GARB Joint Land Use Study, 2018). Runway specifications are provided on the following page.



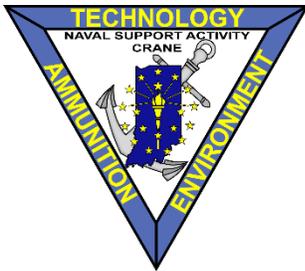
Source: FAA

Figure 2-3 GARB Airport Diagram

GARB (KGUS) Runways			
Direction	Length	Width	Surface Type
5/23	12,501'	200'	Asphalt/Concrete

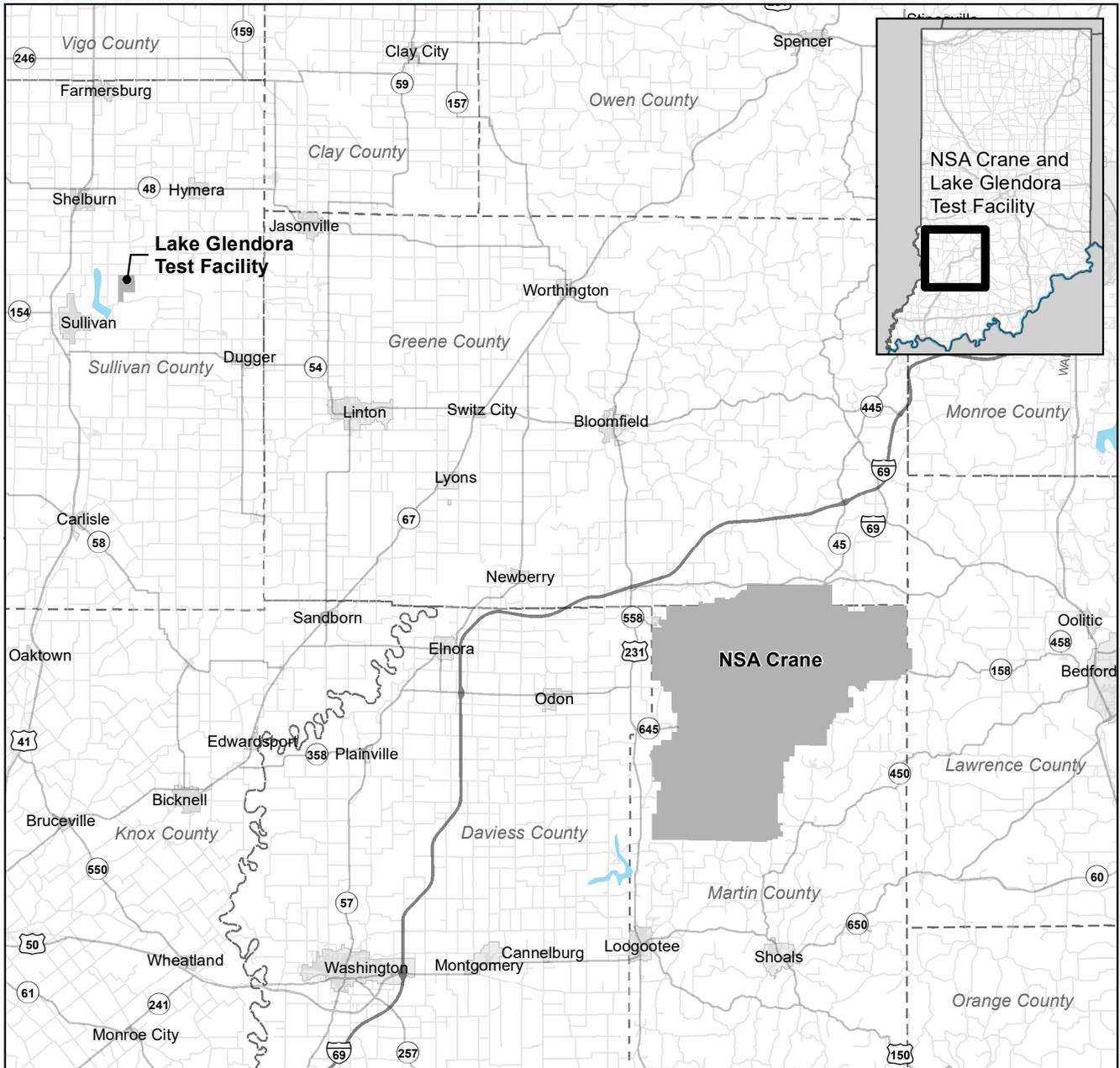
Source: Airport Data and Information Portal: (KGUS) GARB, Federal Aviation Administration, 2022

2.2.2. Naval Support Activity (NSA) Crane



Naval Support Activity (NSA) Crane was established in southwestern Indiana in 1941, roughly 75 miles south of Indianapolis and 25 miles southwest of the City of Bloomington. NSA Crane is bordered by Daviess, Greene, Lawrence, and Martin counties as shown in Figure 2-4. The closest communities are the Town of Crane, immediately adjacent to the installation's northwest corner, and the unincorporated community of Burns City, immediately adjacent to its western perimeter. NSA Crane encompasses approximately 97.6 square miles (approximately 62,464 acres). It is the third largest U.S. Naval facility in the world.

Situated in a rural and sparsely populated area, NSA Crane consists of heavily forested, undulating terrain cut by six (6) creeks, 124 miles of roadway, and 90 miles of rail line. Eight-hundred-acre Lake Greenwood is in the northwest part of the installation, while most facilities are clustered in a "downtown" area just south of it. Other key areas include live fire and demolition ranges and munitions testing and disposal areas. Ordnance storage occupies 51,000 acres, or more than 80% of the installation. The Lake Glendora Test Facility, an integral part of NSA Crane, is 30 miles northwest of the installation in Sullivan County as shown on Figure 2-4 and discussed below.



Source: US Census, 2020. DoD, 2020. ESRI, 2020.



Figure 2-4
NSA Crane and Lake Glendora Test Facility

2.2.2.1. Mission & Operations

NSA Crane's primary mission is to enable and sustain readiness by providing consistent, standardized, and reliable support to its many tenant partners. The installation's largest and most active tenants are Naval Surface Warfare Center Crane Division and Crane Army Ammunition Activity, with operations ranging from high-powered electromagnetic systems testing to explosives and ammunition disposal.

Naval Surface Warfare Center (NSWC) Crane Division Operations



NSWC Crane leverages advanced technological capabilities to support military personnel in rapidly changing combat environments, specializing in Expeditionary Warfare, Strategic Missions, and Electronic Warfare.

. NSWC Crane's Expeditionary Warfare focus area is the Center of Excellence for Special Warfare Weapons and Weaponry, providing full spectrum life cycle engineering and testing support functions for reliable and effective weapons, munitions, and electronic systems for Special Operations and Expeditionary Forces with an emphasis on the most elite warfighters and the environment in which they operate. NSWC Crane utilizes its unique warfighter relationship to gain insight into the distinct expertise required for rapid development, test and evaluation, fielding and new equipment training.¹

. The Strategic Missions Center is a trusted technical solution source for the high-reliability systems and components required for the Nation's strategic systems. Through its recognized leadership, preeminent facilities, and experienced personnel, the Center is dedicated to developing, deploying, and sustaining the technologies that ensure the vital sensors and systems that are part of the strategic capability are fully reliable and always available to defend the homeland.²

With the DoD's largest concentration of Multi-Spectral, Multi-Domain (air, land, sea) EW Expertise, NSWC Crane is leading the Navy in electromagnetic capability development. Spanning all branches of the military, NSWC Crane has the largest concentration of technical EW expertise, facilities, and equipment. NSWC Crane provides distinct electronic warfare and integrated sensing technology to Control the Electromagnetic Spectrum in order to Control the Fight.³

¹ Warfare Centers NSWC Crane Division: Expeditionary Warfare; accessed September 2022: <https://www.navsea.navy.mil/Home/Warfare-Centers/NSWC-Crane/What-We-Do/Expeditionary-Warfare>

² Warfare Centers NSWC Crane Division: Strategic Missions; accessed September 2022: <https://www.navsea.navy.mil/Home/Warfare-Centers/NSWC-Crane/What-We-Do/Strategic-Missions/>

³ Warfare Centers NSWC Crane Division: Electronic Warfare; accessed September 2022: <https://www.navsea.navy.mil/Home/Warfare-Centers/NSWC-Crane/What-We-Do/Electronic-Warfare/>

Crane Army Ammunition Activity (CAAA) Operations



CAAA is responsible for the production, distribution, storage, and demolition of ordnance and related materiel in support of the United States Army and Joint Force readiness. It is one of 17 components of the Joint Munitions Command and a key organic industrial site under the U.S. Army Materiel Command.

CAAA has the ability to produce bombs, mines, shock test and demolition charges, cluster bombs, and projectiles, as well as pyrotechnic smoke and signal devices, marine location markers, and infrared flares. The center also stores 25% of the DoD's ammunition reserves throughout the installation and is one of four (4) primary distribution facilities under the defense department. Ammunition is mostly shipped from the installation by truck, with over 12,000 heavy transport vehicles using local roads and highways to meet defense needs each year. CAAA ships a variety of products to other military installations, government agencies, and private industry partners around the world.

2.2.2.2. Operational Areas

Crane Army Ammunition Activity (CAAA)

Demilitarization is central to CAAA's mission, with most of this activity involving open detonation and burning at the Demolition and Explosive Ordnance Disposal (EOD) Range and Ammunition Burning Area, respectively. Demolition and disposals occur an average of 110 days a year, typically up to two (2) events per day, Monday through Thursday. CAAA also recycles and reuses ammunition and munition components and maintains the only operational white phosphorous demilitarization conversion plant in North America. The Demolition and Explosive Ordnance Disposal (EOD) Range consists of an 80-acre area for outdoor detonations. In an effort to be a good neighbor and keep the noise level low, there is a 500-pound self-imposed limit on explosives. The Range is also located in the center of the property to decrease any danger or noise associated with the operations.



Crane Army Ammunition Activity detonation testing. (CBS4Indy, 2016)

The CAAA also conducts burning operations at the ammunition burning area which occupies about 40 acres at NSA Crane. Burns are conducted using open-air burn pads, incinerator pits, and burn pans. Burning operations on the installation have the same restrictions as the demolition ranges. Water, air, and dirt testing are conducted prior to any burning.

CAAA operations ultimately span 79.69 square miles (51,000 acres), 124 linear miles of paved road, and 94 miles of active rail inside NSA Crane boundaries.

NSWC Crane Division

Special Weapons Assessment Facility

The facility allows the rapid and efficient testing and analysis of field weapons and ammunition. The facility features a firing range with the ability to track ballistics in 100-yard increments up to 1,400 yards. In addition, an electronic target acquisition system is integrated to improve the process of analyzing internal and external ballistics data when ammunition is fired. A large concrete wall separates the range into two sections. The facility also includes an internal armory and multiple ammunition magazines. Shooting bays are temperature controlled, which provides the ability to test in different environmental conditions. Observation bunkers located at 600-, 1,000-, and 1,400-yards down range allow workers to quickly and efficiently replace used targets and are equipped with high-definition video recorders to allow for accurate visual records.

Ordnance Test Area (OTA)

The OTA consists of 88 acres. The OTA is used to test 5 and 20 lb. ordnance. Testing occurs outdoors in open test pits. Prior to testing, environmental and quality monitoring is conducted.

2.2.3. Naval Support Activity (NSA) Crane – Lake Glendora Test Facility

The Lake Glendora Test Facility (LGTF) is a critical part of NSA Crane under the operation of the NSWC Crane Division. Located in rural Sullivan County, it is approximately 30 miles northwest of the main installation and surrounded by forest and agricultural land with a small cemetery at the northwest edge of the property. Sullivan County Park and Lake, a local recreational area and adjacent single-family residential development, is approximately 1.5 miles west of the test facility.

2.2.3.1. Mission & Operations

The LGTF was established in 1989 and encompasses 460 acres with a 100-acre lake that provides three (3) independent water ranges for a variety of testing purposes. Testing is normally performed between 8:00 am and 5:00 pm; however, operations and tests may occur outside this window ad hoc including during nighttime. The facility is unique in having environmental clearances and FAA-designated Special Use Airspace to support electronic warfare and laser testing capabilities, putting it in high demand. It is also the only lake used for such testing that is fully owned and controlled by the military.

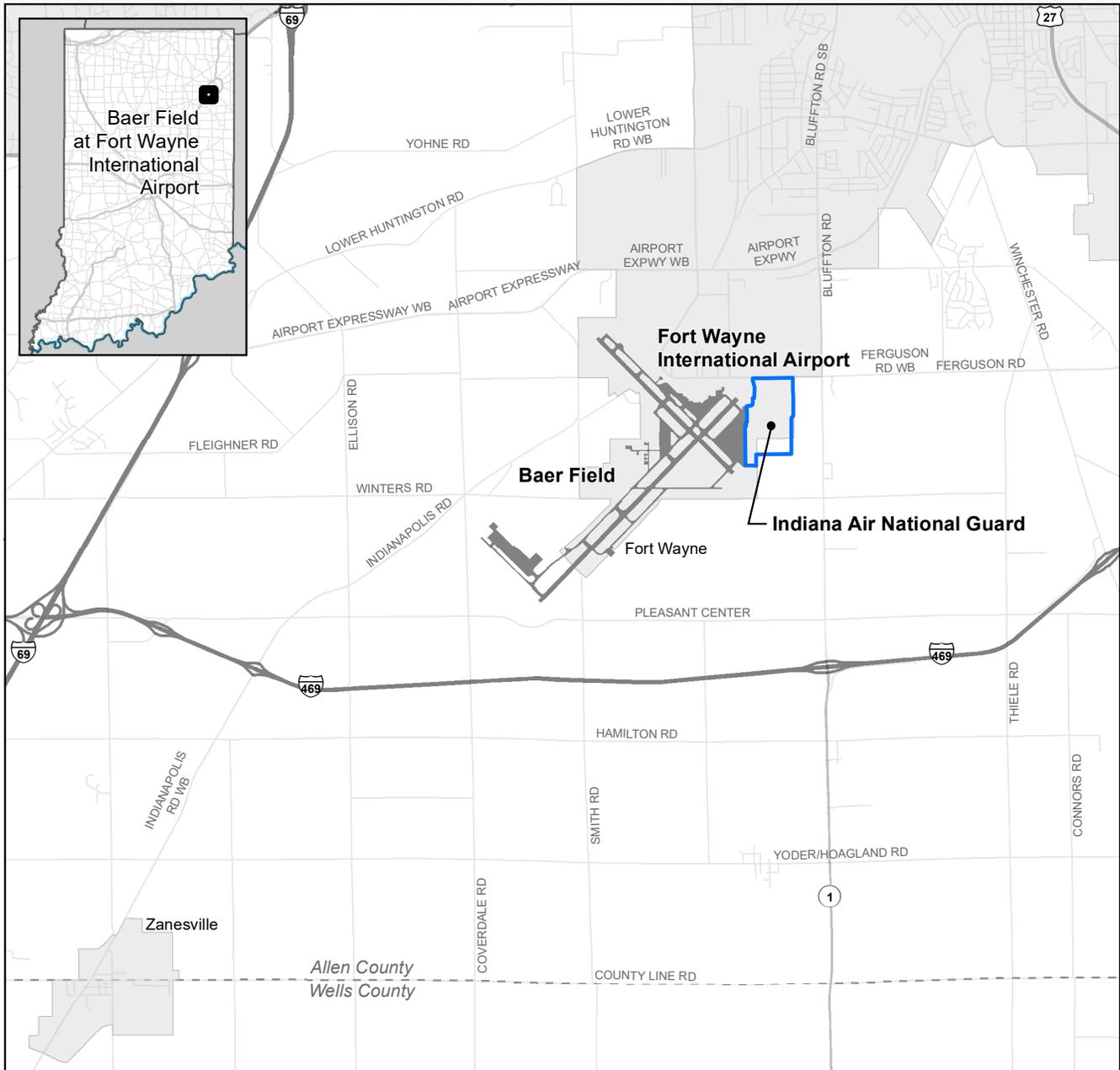
Lake Glendora is used for surface burst testing of various signal flares and marine markers; laser testing; underwater explosive and surface launch testing that involves functional testing, lot acceptance testing, and static/dynamic testing to stop small watercraft; hydroballistic testing; and hydroacoustic testing involving sonar technology and requiring still and silent waters. Unmanned aerial vehicles (UAVs) – “drones” – are also tested at LGTF.

2.2.3.2. Operational Areas

While the 100-acre Glendora Lake is only a part of the 460-acre test facility, the deep-water quarry is where operations are conducted. The body of water, made up of three (3) independent water ranges, is the focal point of military activity on the site where various underwater testing is conducted.

2.2.4. Baer Field (at Fort Wayne International Airport)

Fort Wayne Air National Guard Base, known as “Baer Field,” is located at Fort Wayne International Airport (FWA), 7.6 miles south-southwest of the City of Fort Wayne in northeast Indiana. Established as an Army Air Force training facility in 1941, the airfield was largely given over to civil control after World War II, with the Air Force maintaining jurisdiction over a small section of the civil airport for reserve training and Air National Guard use. The base now encompasses approximately 111 acres extending from just east of where the primary runways intersect to east of Air Guard Road (Figure 2-5); 28 acres is owned by the State with the remainder leased from the Fort Wayne-Allen County Airport Authority.



Source: US Census, 2020. DoD, 2020. ESRI, 2020.



- Indiana Air National Guard
- City Boundary
- County Boundary
- Interstate
- US / State Hwy
- Local Road
- Airfield Surfaces

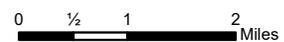


Figure 2-5

Indiana National Guard – Baer Field (at Fort Wayne International Airport)

2.2.4.1. Mission & Operations



The 122nd Fighter Wing (122d FW), a unit of the Indiana Air National Guard, has been stationed at Baer Field since 1952. The Fighter Wing's primary federal mission is to achieve and maintain the level of operational readiness needed to provide combat-ready tactical units that are capable of global deployment and immediate integration to assure air offense, air defense, or joint action with ground forces.

The 122d FW may be further ordered to active duty by the President of the United States in a national emergency or may serve under orders of the Governor of Indiana to assist local authorities in emergencies. The unit is able to support rescue and relief operations, aid in disaster recovery efforts, and protect life and property.

The 122d FW consists in four (4) groups focused on operations, maintenance, mission support, and medical services that collectively fulfill mission critical goals. The operations group includes the 163rd Fighter Squadron, responsible for providing firepower in offensive and defensive operations, day or night, to support ground forces. The squadron is equipped with A-10 Thunderbolt II aircraft, with regular flight training and aviation exercises critical to the Close Air Support mission.



Source: An A-10C pilot from the 163rd Fighter Squadron lands at Fort Wayne (SSgt. Hopper/IN ANG, 2015)

On June 22, 2022, Rep. Jim Banks announced the retiring of 21 A-10 aircrafts at the Fort Wayne Air National Guard Base and replacing them with F-16 aircrafts in the FY2023 National Defense Authorization Act (NDAA). Per Chairman Banks remarks, this transition will provide certainty that the 122nd Fighter Wing will remain operational well into the future and will continue to strengthen the Indiana-Slovakia National Guard Partnership. The Slovakia allies are set to receive a fleet of F-16s in 2024.⁴ This transition will cause higher noise levels in the future.

2.2.4.2. Operational Areas

The Air National Guard has joint use of FWA's three (3) runways, with the FAA reporting 21 military aircraft accounting for 7% of airport operations from October 2020 through September 2021.⁵ Guard-controlled facilities and operational areas include a large apron and adjacent aviation support facilities, a state-of-the-art training center, and armory.

⁴ <https://banks.house.gov/news/documentsingle.aspx?DocumentID=2064>

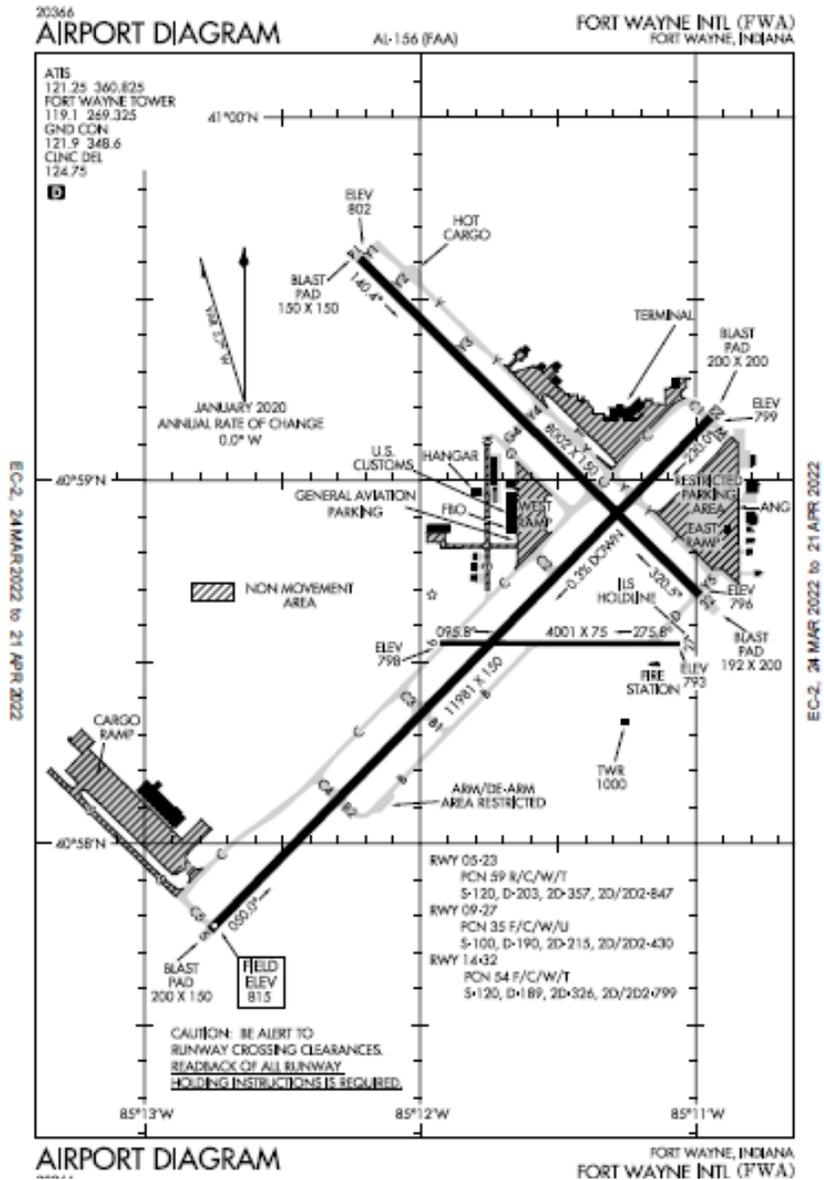
⁵ <https://www.airnav.com/airport/KFWA>

Security Forces Operations and Training Facility

This 18,494-square-foot building houses the Guard's security division and a Homeland Security field office, as well as a Combat Arms Training and Simulator/Combat Arms Training Maintenance (CATS/CATM) area, weapons storage areas, and a fitness center. The Security Forces and CATS/CATM facilities are wired for communications, security monitoring, intrusion detection systems, LAN, intercom, CCTV, and CATV.

Airfield

The Fort Wayne International Airport includes two runways – Runway 05/23, oriented in a northeast/southwest direction, and Runway 14/32, oriented in a northwest/southeast direction.



Source: FAA

Figure 2-6 Baer Field Airport Diagram

Fort Wayne International Airport (FWA) Runways			
Direction	Length	Width	Surface Type
05/23	11,981'	150'	Asph-Conc-G
09/27	4,001'	75'	Asph-Conc-F
14/32	8,002'	150'	Asph-Conc-G

Source: Airport Data and Information Portal: (FWA) Fort Wayne Intl, Federal Aviation Administration, 2022

2.2.5. Camp Atterbury

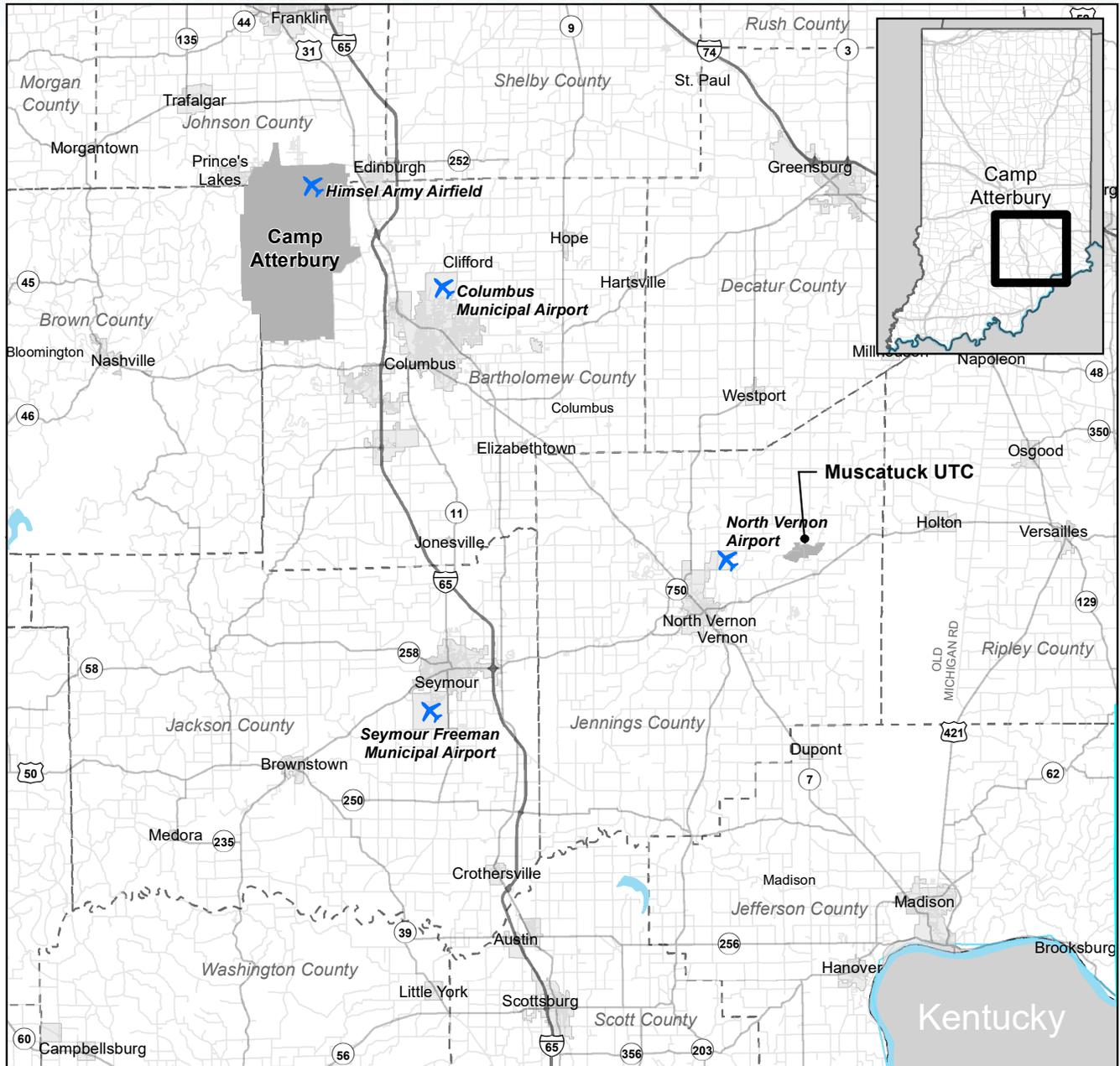


**ATTERBURY
MUSCATATUCK**

Camp Atterbury (CAIN) is operated by the Indiana National Guard as a military and civilian training facility that provides state-of-the-art training and testing support to Guard, Reserve, Active, and Joint armed forces. The facility comprises 36,000 discontinuous acres, primarily in Bartholomew, Brown, Johnson, and Jennings Counties in south central Indiana, with the main installation roughly five (5) miles east of Prince's Lakes, 12 miles south of the City of Franklin, and 3.5 miles west of the Town of Edinburgh (Figure 2-7). The Atterbury Job Corps Center and 622-acre Johnson County Park are immediately north.

Muscatatuck Urban Training Center, an integral component of the Camp Atterbury mission and the DoD's largest urban training facility, is located approximately 42 miles southeast of the main and discussed in Section 2.2.8.

Indiana || Military Compatible Planning Advisory Handbook



- Military Use Airfield
- Military Installation
- City Boundary
- County Boundary
- Interstate
- US / State Hwy
- Local Road
- River
- Water Body

Source: US Census, 2020. DoD, 2020. ESRI, 2020.

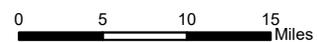


Figure 2-7
Indiana National Guard – Camp Atterbury

2.2.5.1. Mission & Operations

Camp Atterbury serves as a Joint Maneuver Training Center and Regional Collective Training Capability (RCTC) installation with three (3) primary missions: providing traditional training and testing support to the Army National Guard (ARNG), Active, Reserve, and Joint Forces; providing state-of-the-art multidomain training opportunities such as realistic venues for live/virtual/constructive (LVC) training and testing events; and serving as a Primary Mobilization Force Generation Installation (pMFGI). Camp Atterbury is further focused on attracting commercial defense industry participation and building strategic partnerships.

The installation's capabilities and operations include, but are not limited to, pre-mission and task force training, Special Operations Command (SOCOM) testing and evaluation, Command, Control, Communications, Computers, Combat Systems (C5ISR), Intelligence training, cyber course and cyber validation exercises, UAS launch and recovery testing and training, and private sector testing and evaluation. Ultimately, CAIN can provide excellence and full logistics assistance for up to two (2) brigade-sized elements at one time and for division-level exercises and can further participate in distributed training events located at any Joint Maneuver Training Center in the world to provide simulation and gaming-based training exercises capable of replicating complex operational environments.



The 157th Infantry Brigade, an active/reserve component of the U.S. Army, is headquartered at CAIN and responsible for training selected Army Reserve and National Guard units. The Guard's Wolf Operations Group (OGW) is stationed at the camp, as are five (5) other National Guard units, including the airborne 2/20th Special Forces Group (20th-SFG), the 387th Military Police Company, UAS detachment, and several medical units. The Navy SEAL Sniper Training Facility is also located at Camp Atterbury.



Indiana Regional Training Institute (RTI)

The Indiana Regional Training Institute is operated by the 138th Regiment (Combat Arms) to provide combat arms training, including military occupational specialty qualification, skill identifier (ASI), and non-commissioned officer education system training at a regional scale as part of the One Army School System. The Indiana RTI further operates a fully accredited Warrant Officer Candidate School, Officer Candidate School and supports the National Deployment Center civilian training program.

Regional Collective Training Center (RTC)

The Regional Collective Training Center provides immersive training environments for domestic and foreign active and military reserve components with a focus on military units, special operations forces, civilian expeditionary workforce volunteers – including RTI trainees. The RTC also supports law enforcement and homeland defense agencies.

Atterbury-Muscatatuck Center for Complex Operations (AMCCO)

AMCCO serves as the integrating headquarters for operations at Camp Atterbury and Muscatatuck Urban Training Center and is charged with maintaining the most realistic and modern operating environment possible in which to mobilize and train teams; providing subject matter experts for developing, training, and testing events; and supporting the operational testing and evaluation programs that sustain those missions.

Training Support Center (TSC)

Camp Atterbury's Training Support Center provides training aids, devices, and simulations to enable units and commanders to successfully operate across the ever-changing spectrum of contemporary conflict.

The TSC supports customized operational scenarios to teach doctrine, tactics, techniques, and procedures, with assets ranging from reconfigurable, simulated tactical vehicles and egress trainers to IED Battle Drill Simulators and Casualty Simulation Kits. Training can incorporate wind, rain, fog, clouds, specific times of day, and tide simulations in diverse terrains for engagements with friendly forces, opposing forces, and/or noncombatants.

Users can further test, train, evaluate, and develop computer network operations, electronic warfare, military deception, psychological operations, and operations security in urban environments. Users can create events to assess new technologies and systems integration in the cyber and information operations domains and conduct persistent data collection and analysis.

The center comprises an approximately 10,000-foot indoor training facility, a 25-acre Training Aids, Devices, Simulators, and Simulations (TADSS) complex, and 25-acre Joint Simulations, Training and Exercise Center (JSTEC) in the camp cantonment area. TSC facilities can also be digitally connected to other locations around the world for integrated mission objective exercises and joint force training.

Indiana Air Range Complex (IARC)

The Indiana Air Range Complex supports both day and night operations, including high-altitude and close-air support training; kinetic and non-kinetic air-to-ground operations; heavy equipment, container, and personnel insertions; and laser training. The IARC also provides certificates of authorization for five (5) unmanned aircraft systems over real-world urban environments.

The complex consists of more than 500 square miles of special use airspace, as well as 4 military operations areas for transitioning between restricted areas, 2 air-to-ground gunnery ranges, and 10 drop zones. The IARC further integrates airfields on and around Camp Atterbury, including Himsel Army Airfield, North Vernon Airport, Columbus Municipal Airport, Seymour Freeman Field Municipal Airport, and Fort Wayne International Airport.

2.2.5.2. Operational Areas

Camp Atterbury offers extensive facilities to provide realistic, immersive experiences that ensure training excellence and superior outcomes for all branches of the armed services, government agencies, law enforcement partners, first responders, and other entities that use the camp. Assets at the installation include 26,000 acres of maneuver training space; a number of live fire, explosives, and demolition ranges; urban training venues; multiple USAF-approved drop zones, including one of the longest personnel drop zones east of the Mississippi River; a UAS launch and recover area with an 1,800-foot paved runway; airstrips and helipads; and extensive special use airspace for air operations and air safety over live fire and demolition areas.

Airfields

Himsel Army Airfield (HBE)

Located at the southern end of the main installation cantonment area, Himsel Army Airfield was named after Major General Kenneth Himsel and provides one (1) of only two (2) military air control towers in the state. GARB provides the other.

The runway can accommodate C-130 cargo planes but is most often use by the 38th Aviation Brigade in Shelbyville and other regional Army helicopter units.⁶



Source: Civilian aircraft at CAIN's Warbird Salute to Soldiers Fly-in public outreach event (CAIN, 2012)

Himsel Army Airfield (HBE) Runways			
Direction	Length	Width	Surface Type
18/36	4,039'	72'	Asphalt

Source: Airport Data and Information Portal: (HBE) Himsel AAF, Federal Aviation Administration, 2022

North Vernon Airport (OVO)

North Vernon Airport (OVO) Runways			
Direction	Length	Width	Surface Type
05/23	5002'	75'	Asphalt-E
15/33	2730'	50'	Asphalt-E

Source: Airport Data and Information Portal: (OVO) North Vernon, Federal Aviation Administration, 2022

Columbus Municipal Airport (BAK)

Columbus Municipal Airport (BAK) Runways			
Direction	Length	Width	Surface Type
05/23	6401'	150'	Concrete-E
14/32	5000'	100'	Concrete-E

Source: Airport Data and Information Portal: (BAK) Columbus Muni, Federal Aviation Administration, 2022

Seymour Freeman Field Municipal Airport (60F)

Seymour Municipal Airport (60F) Runways			
Direction	Length	Width	Surface Type
17/35	4300'	50'	Asphalt-E

Source: Airport Data and Information Portal: (60F) Seymour Muni, Federal Aviation Administration, 2022

⁶ <https://www.atterburymuscatactuck.in.ng.mil/Indiana-Air-Range-Complex/Himsel-Air-Field/>

Air-to-Ground Gunnery Ranges

Jefferson Range

Jefferson Range encompasses 1,033 acres within the former Jefferson Proving Ground in Ripley and Jefferson Counties just east of Muscatatuck Urban Training Center. The main range offers rocket and other targets, as well as a Large-Scale Target Sensor System (LSTSS) installed throughout the target area and linked by a radio or fiber optic channel Local Area Network (LAN) for aircrew training.



Source: Training at Camp Atterbury (CAIN, n.d.)

Range 36

Range 36 is located about 20 nautical miles south/southeast of Indianapolis. The Air National Guard-operated gunnery range is part of the U.S. Army-operated Camp Atterbury Joint Maneuver Training Center. Associated special use airspace is R-3401, covering 103 square miles. The terrain is hilly and wooded, permitting a good mix of highly visible and terrain-integrated targets. Several low altitude routes are available.

Live Fire, Explosives, and Demolition Areas

- Direct Fire Ranges – Individual Weapons (18)
- Direct Fire Ranges – Machine Gun and Heavy Machine Gun (9) \ Maneuver Live Fire (4)
- Urban Assault Ranges / Military Operation in Urban Terrain (MOUT) (4)
- Home Station Training Lanes (6)
- Demolition and Explosives Area (multiple)



Source: Training on an M2 Browning .50-caliber machine gun at Camp Atterbury (Sgt. M. Sauret/DoD, 2015)

Ammunition Supply Point (ASP)

The ASP is located at the north end of the installation, just east of the main gate on the south side of Hospital Road. The facility is responsible for receiving, storing, and issuing all Class V ammunitions required by all TRADOC, FORSCOM and SOCOM units and all U.S. Army Reserve and Guard units assigned to the installation.

Military vehicles access the ASP and transport all ammunition used at the camp via Ammo Alley off County Line Road to minimize safety concerns.⁷

⁷ Camp Atterbury Ammunition Supply Point External Standard Operating Procedures, 2017

Atterbury Rail Deployment Facility (ARDF)

The Deployment Facility or “railhead” at CAIN has the capacity for 120 rail cars per day and the ability to load/unload a brigade combat team in 72 hours. The ARDF includes a 20,000 square foot vehicle deployment processing facility, a weigh-in-motion scale house, rail operations building, and loading, marshalling, and staging areas, ultimately constituting one of the most economical ways to transport large equipment and personnel. It is a critical asset in the Guard’s ability to meet any mission, anytime, anywhere in the world.⁸

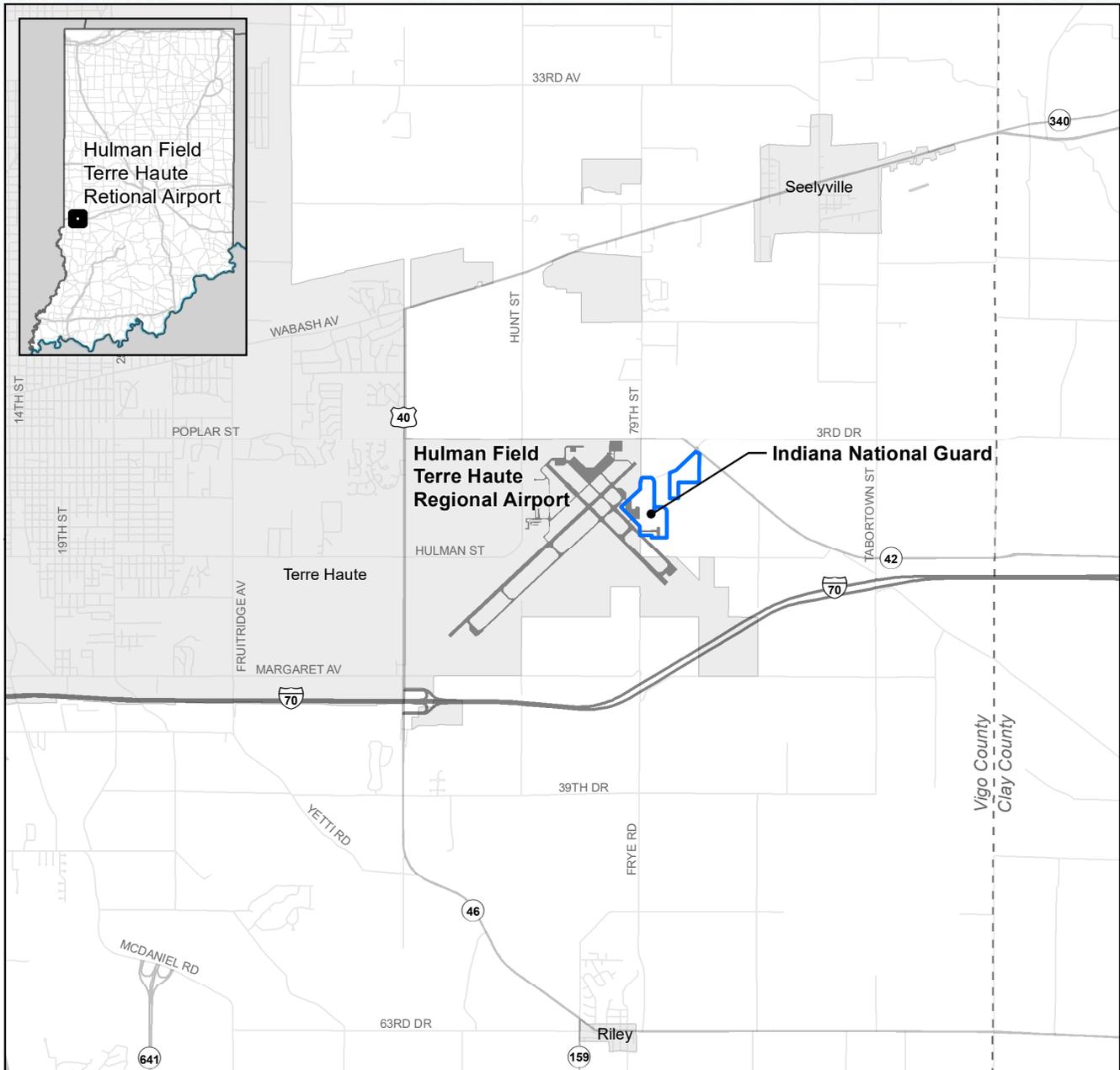


Source: Atterbury Rail Deployment Facility. Source: CAIN, n.d.

⁸ <https://www.atterburymuscatatuck.in.ng.mil/Camp-Atterbury/Atterbury-Rail-Deployment-Facility/>; accessed February 2022

2.2.6. Indiana National Guard at Hulman Field (Terre Haute Regional Airport)

Hulman Field Air National Guard Base is located at Terre Haute Regional Airport (HUF), a civil-military, general aviation airport in the City of Terre Haute, Vigo County, Indiana (Figure 2-8). The Guard facilities are in the northeast portion of the airfield, which is approximately six (6) miles from the city center and surrounded by agricultural land uses. Hulman Field serves as the headquarters of the Indiana Air National Guard and its 181st Intelligence Wing, while the USAF uses the facility for worldwide command and control of remotely piloted aircraft (RPA).



Source: US Census, 2020. DoD, 2020. ESRI, 2020.



- Indiana National Guard
- City Boundary
- County Boundary
- Interstate
- US / State Hwy
- Local Road
- Airfield Surfaces



Figure 2-8
Indiana National Guard – Hulman Field (at Terre Haute Regional Airport)

2.2.6.1. Mission & Operations



The 181st Intelligence Wing (IW) is one of the Air National Guard's leading intelligence organizations and only one of six (6) ANG Wings to serve with the United States' Air Force Intelligence, Surveillance and Reconnaissance Agency (AFRISA). The 181st "Racers" ensure readiness in assisting local communities, the State of Indiana, and the nation, while supporting contingencies around the world. Units include the 181st ISR Group (ISRG), 181st Mission Support Group (MSG), 181st Medical Group (MDG), as well as the 113th Weather Flight (WF) and the 113th Air Support Operations Squadron (ASOS).

The 181st ISRG is part the Air Force's primary intelligence, surveillance, and reconnaissance (ISR) planning and direction, collection, processing and exploitation, analysis, and dissemination (PCPAD) system that employs a global communications architecture connecting multiple intelligence platforms and sensors. The 181st ISRG provides full-spectrum capabilities to coalition, joint and Air Force warfighters, and national decision makers. The mission is a total force concept.

The 181st MDG provides highly skilled medical professionals as part of a Chemical, Biological, Radiological, Nuclear and High Yield Explosive Enhanced Response Force Package (CERF-P) that acts as the first line of triage to victims during natural or manmade disasters, while the 113th WF analyzes and forecasts atmospheric weather for military decision makers.

The 113th ASOS deploys with joint forces troops to forward locations and provides information regarding air support assets to forward deployed commanders. Elements serve as Tactical Air Control Party (TACP) Airmen aligned with conventional, Special Operation Forces, and Tier 1 combat maneuver units to provide precision terminal attack control and guidance of close air support, artillery, and naval gunfire; establish and maintain command and control communications; and advise ground commanders on the best use of air power.

The 181st IW's operations and training exercises require a host of advanced communications and intelligence technologies, and serve transient rotary and fixed-wing aircraft, including cargo, fighter, and Special Operations aircraft:

- F-15
- F-16
- V-22 Osprey
- Boeing P-8
- C-130
- Helicopters
- RPAs



Source: Flight preparation at sunset, Hulman Field, Terre Haute, IN (In National Guard, 2021)

2.2.6.2. Operational Areas

Indiana National Guard at Hulman Field operates at two areas of the facility. On the east side of the facility is the ING Maintenance Shop FMS 8. West of FMS 8 and on the east side of airport runway is the primary ING facility. These facilities include landside and airside access to the airport runways.

Airfield

Runways

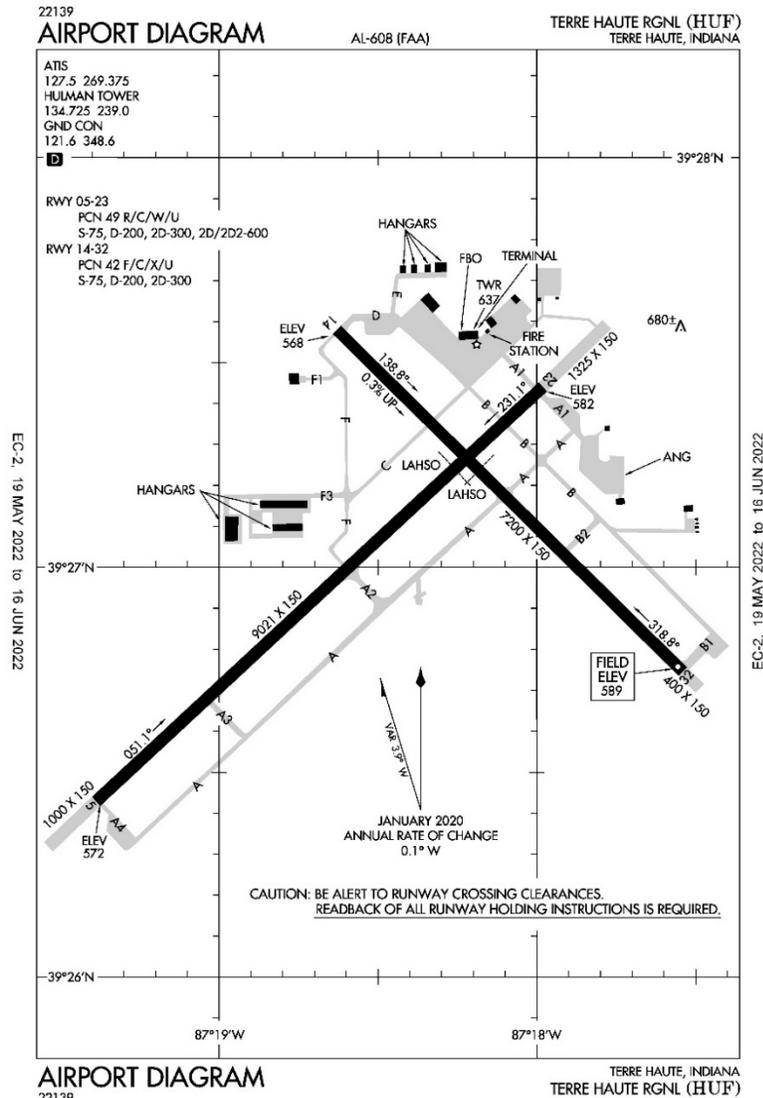


Figure 2-9 Hulman Field Airport Diagram

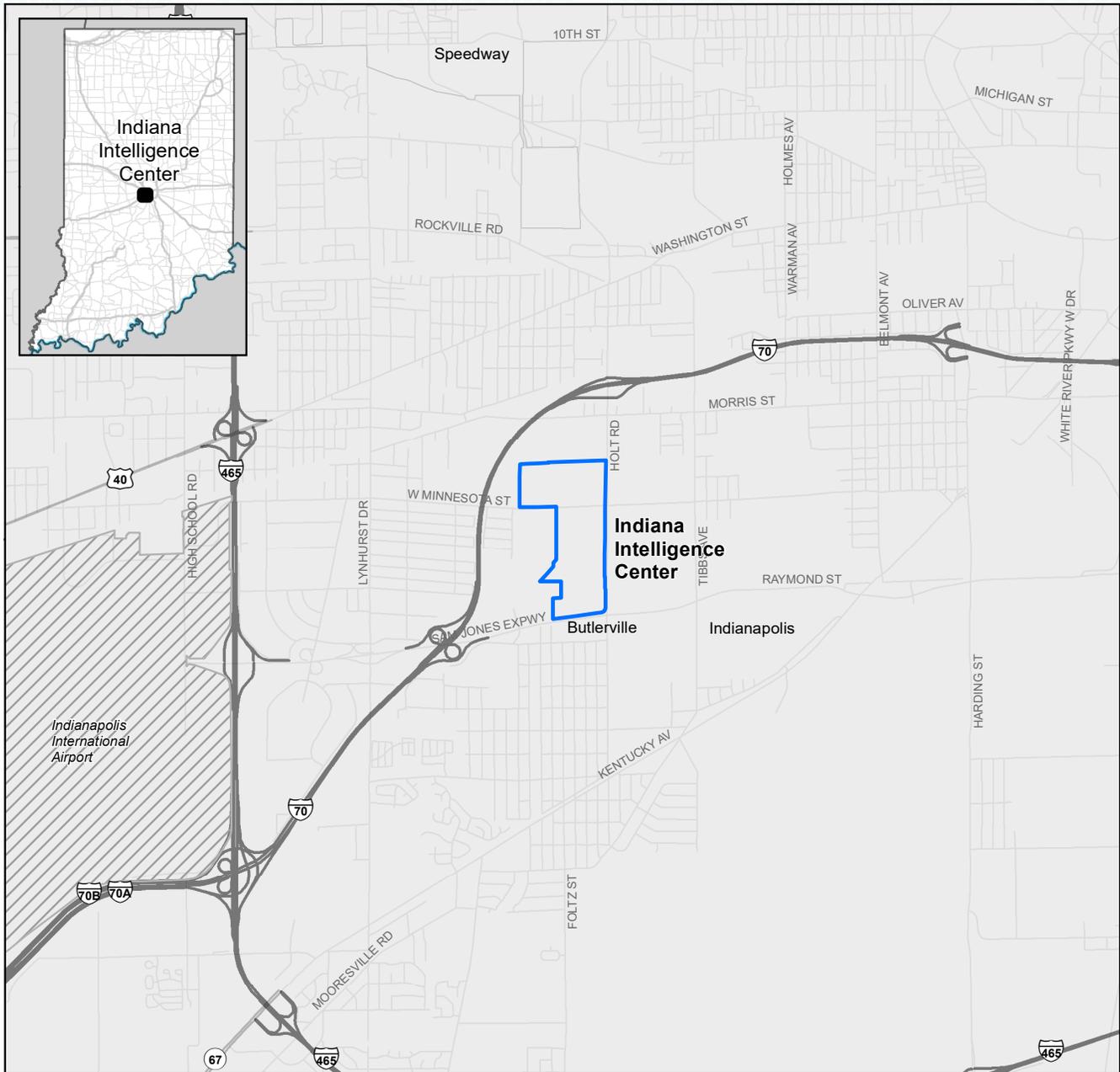
Terre Haute Regional Airport (HUF) Runways			
Direction	Length	Width	Surface Type
05-23	9021'	150'	Asphalt-F
14/32	7200'	150'	Asphalt-Concrete-F

Source: Airport Data and Information Portal: (HUF) Terre Haute RGNL, Federal Aviation Administration, 2022

2.2.7. Indiana Intelligence Center (INIC)



The Indiana Intelligence Center is collocated with the Indiana National Guard headquarters at Stout Field in the City of Indianapolis, Marion County, Indiana. One of the top intelligence training sites in the U.S. Army, the facility is immediately adjacent to commercial and industrial uses that share the former World War II site northeast of the I-70/Sam Jones Expressway interchange on the west side of the city. It is further surrounded by industrial uses to the north, east, and southeast and by residential uses and several schools to the south and west. The INIC is approximately two (2) miles east of Indianapolis International Airport (Figure 2-10).



Source: US Census, 2020. DoD, 2020. ESRI, 2020.

- Indiana National Guard
- City Boundary
- Airport
- Interstate
- US / State Hwy
- Local Road



Figure 2-10
Indiana National Guard – Indiana Intelligence Center

2.2.7.1. Mission & Operations

The INIC ensures the readiness of military and public sector intelligence forces by providing Sensitive Compartmented Information Facility (SCIF) capabilities, tactical and classroom training facilities and highly experienced and trained intelligence personnel, and intelligence support for authorized users. The INIC serves active, guard, and reserve military components, as well as outside governmental organizations such as the FBI, TSA, and Department of Homeland Security. It is the designated Eastern Region new equipment fielding and training location and the Federal Emergency Management Agency's Region V site for joint incident awareness and assessment training. The Center is also available to private entities working on classified projects.

The INIC capabilities include virtualization infrastructure and virtual intelligence training platforms, geospatial intelligence and signal intelligence training, language and cultural simulation, HUMINT interview modules, Live Environment Training platforms, and remote UAS close-air operations. It is the only Army location instructing field service engineering and one (1) of only four (4) National Guard Project FOUNDRY Platforms.

2.2.7.2. Operational Areas

The Indiana Intelligence Center offers a 17,500-square-foot facility with 170 multiclassification workstations and 2,500-square-foot tactical vehicle area. Training programs further integrate facilities at Camp Atterbury and the CyberTropolis at Muscatatuck Urban Training Complex, only 35 and 85 miles to the south, respectively. In executing layered, mission-centric training experiences that take advantage of regional assets and in providing intelligence support and retention for headquarters, commands, authorized units, and outside entities, the INIC is critical to defense preparedness.

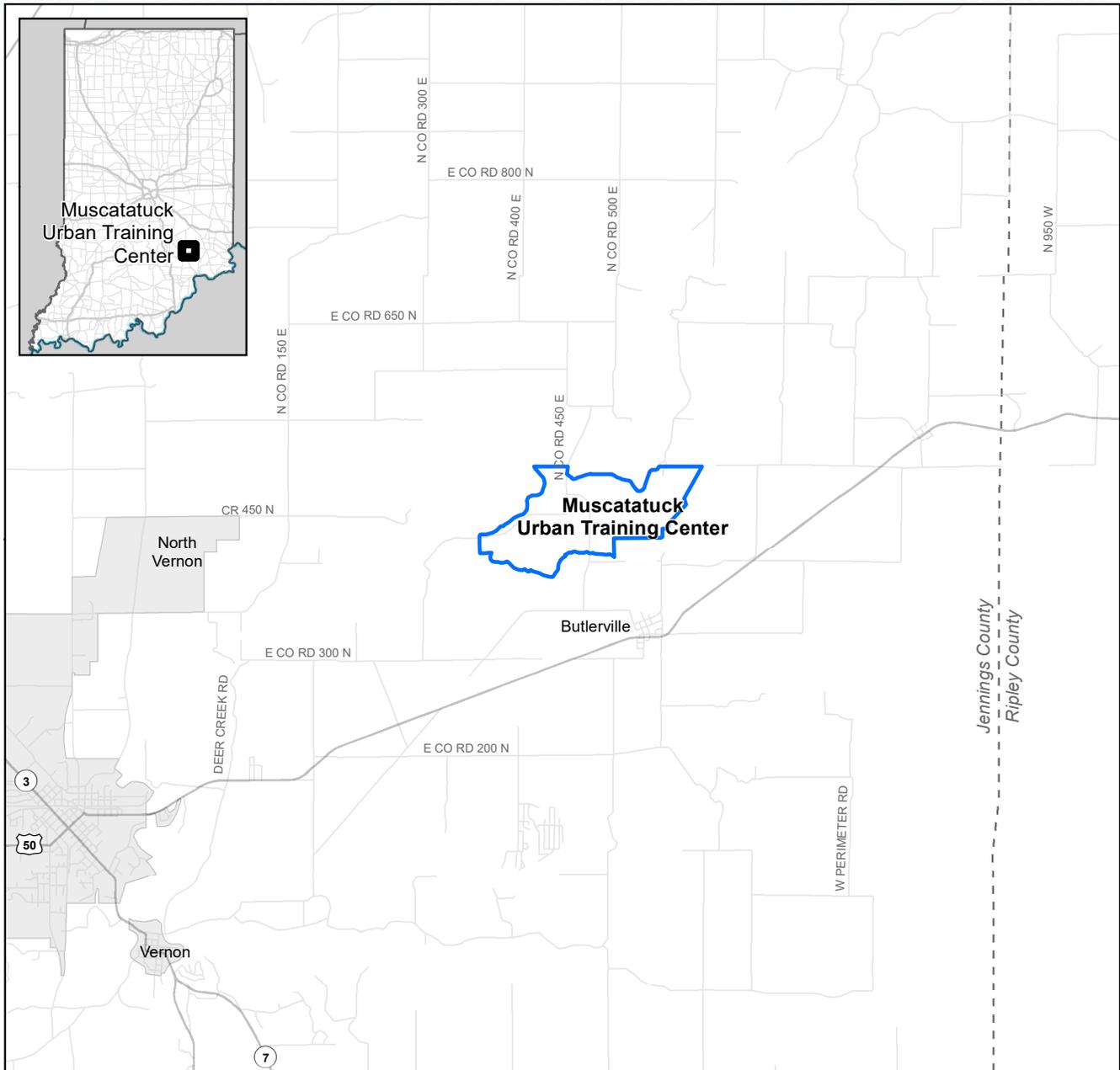
2.2.8. Muscatatuck Urban Training Center (MUTC)



The Muscatatuck Urban Training Center is situated just west of Brush Creek Reservoir near the confluence of the Muscatatuck River and Pleasant Run in Campbell Township, Jennings County, Indiana (Figure 2-11). The facility is mostly surrounded by forested areas and agricultural land uses, including Brush Creek State Fish and Wildlife

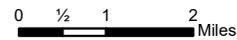
Area less than two (2) miles to the northeast and the collocated Big Oaks Wildlife Refuge/Jefferson Proving Ground roughly three (3) miles southeast. Census-designated Butlerville is also just one (1) mile southeast of MUTC, while the City of North Vernon is approximately five (5) miles to the southwest.

The MUTC was established on the grounds of a former mental institution in 2005 as an integral component of Camp Atterbury, which is approximately 35 miles northwest of the MUTC. The Indiana National Guard leverages the institution's extensive infrastructure to provide a globally unique, urban and rural, multi-domain operating environment that is recognized as the DOD's largest urban training facility.



Source: US Census, 2020. DoD, 2020. ESRI, 2020.

-  Indiana National Guard
-  City Boundary
-  County Boundary
-  US / State Hwy
-  Local Road



Indiana National Guard – Muscatatuck Urban Training Center Figure 2-11

2.2.8.1. Mission & Operations

The MUTC was developed in conjunction with the State of Indiana to support Camp Atterbury's urban training requirements and its mission of providing individual, collective, and joint operations realistic, virtual, and constructive training and test events. Muscatatuck is a real city that integrates all five warfighting domains, including air, land, maritime, space, and cyberspace to provide a focused, immersive, and customizable training environment that meets unified combatant command requirements for DoD, government organizations, partner nations, and private entities.

The MUTC further provides developmental and evaluation testing platforms for government and private entities and serves, on order, as a FORSCOM Primary Mobilization Force Generation Installation (pMFGI).

2.2.8.2. Operational Areas

Operating areas at MUTC range from on-site specialized cyber training environments to nearby facilities managed by Camp Atterbury. MUTC also maintains its own staging areas at Himsel Army Airfield and North Vernon Municipal Airport, both of which can support C-130 aircraft.

CyberTropolis



CyberTropolis is a cyberwarfare training environment that comprises more than 120 training structures, including a 5-story hospital, prison complex, houses of worship, homes, businesses, and municipal buildings, as well as 1.5 miles of searchable tunnels, a roadway network and transit centers, an oil refinery and power station, other infrastructure, downed aircraft, drop zones, landing/pick-up zones, and a 185-acre reservoir, among other assets.⁹ CyberTropolis also offers a closed-loop cellular network, as well as Electromagnetic Environment (EME) and Electronic Attack (EA) capabilities managed by Crane Naval Surface Warfare Center (see Section 2.2.3). The facility is connected to the DoD Enterprise Cyber Range Environment and other locations through

the Joint Information Operations Range (JIOR), Joint Training and Evaluation Network (JTEN), and other secure networks.¹⁰

CyberTropolis facilities are programmed and built on a six-year horizon to ensure the most advanced support capabilities and for multiple brigade combat teams. Stationing-based goals include sufficient Combined Arms Collective Training Facilities, shoot houses, Urban Assault Courses, and multi-site environments for maneuver combat training.

⁹ <https://www.atterburymuscatatuck.in.ng.mil/Muscatatuck/Infrastructure/>; accessed March 2022

¹⁰ <https://www.atterburymuscatatuck.in.ng.mil/Muscatatuck/CyberTropolis/>; accessed March 2022



Source: Training Exercises at the MUTC (CAIN, n.d.)

Indiana Air Range Complex (IARC)

The Indiana Air Range Complex supports both day and night operations, including high-altitude and close-air support training; kinetic and non-kinetic air-to-ground operations; heavy equipment, container, and personnel insertions; and laser training. The IARC also provides certificates of authorization for five (5) unmanned aircraft systems over real-world urban environments.

The complex consists of more than 500 square miles of special use airspace, as well as four (4) military operations areas for transitioning between restricted areas, two (2) air-to-ground gunnery ranges, and 10 drop zones. The IARC further integrates airfields on and around Camp Atterbury, including Himsel Army Airfield, North Vernon Airport, Columbus Municipal Airport, Seymour Freeman Field Municipal Airport, and Fort Wayne International Airport.

Airfields

LZ Boling Aerodome

The LZ Boling comprises approximately 20.5 acres of undeveloped grassland at the very northern extent of the MUTC. It is bounded by 450 E to the east, 475 E to the south, and forest to the west, north, and northeast.

Himsel Army Airfield (HBE)

Located at the southern end of Camp Atterbury's cantonment area, Himsel Army Airfield provides one (1) of only two (2) military air control towers in the state. GARB provides the other. The runway can accommodate C-130 cargo planes but is most often use by Army helicopter units.¹¹

¹¹ <https://www.atterburymuscatatuck.in.ng.mil/Indiana-Air-Range-Complex/Himsel-Army-Air-Field/>

Himsel Army Airfield (HBE) Runways			
Direction	Length	Width	Surface Type
18/36	4,039'	72'	Asphalt
Source: Airport Data and Information Portal: (HBE) Himsel AAF, Federal Aviation Administration, 2022			

North Vernon Airport (OVO)

North Vernon Airport (OVO) Runways			
Direction	Length	Width	Surface Type
05/23	5002'	75'	Asphalt-E
15/33	2730'	50'	Asphalt-E
Source: Airport Data and Information Portal: (OVO) North Vernon, Federal Aviation Administration, 2022			

Columbus Municipal Airport (BAK)

Columbus Municipal Airport (BAK) Runways			
Direction	Length	Width	Surface Type
05/23	6401'	150'	Concrete-E
14/32	5000'	100'	Concrete-E
Source: Airport Data and Information Portal: (BAK) Columbus Muni, Federal Aviation Administration, 2022			

Seymour Freeman Field Municipal Airport (60F)

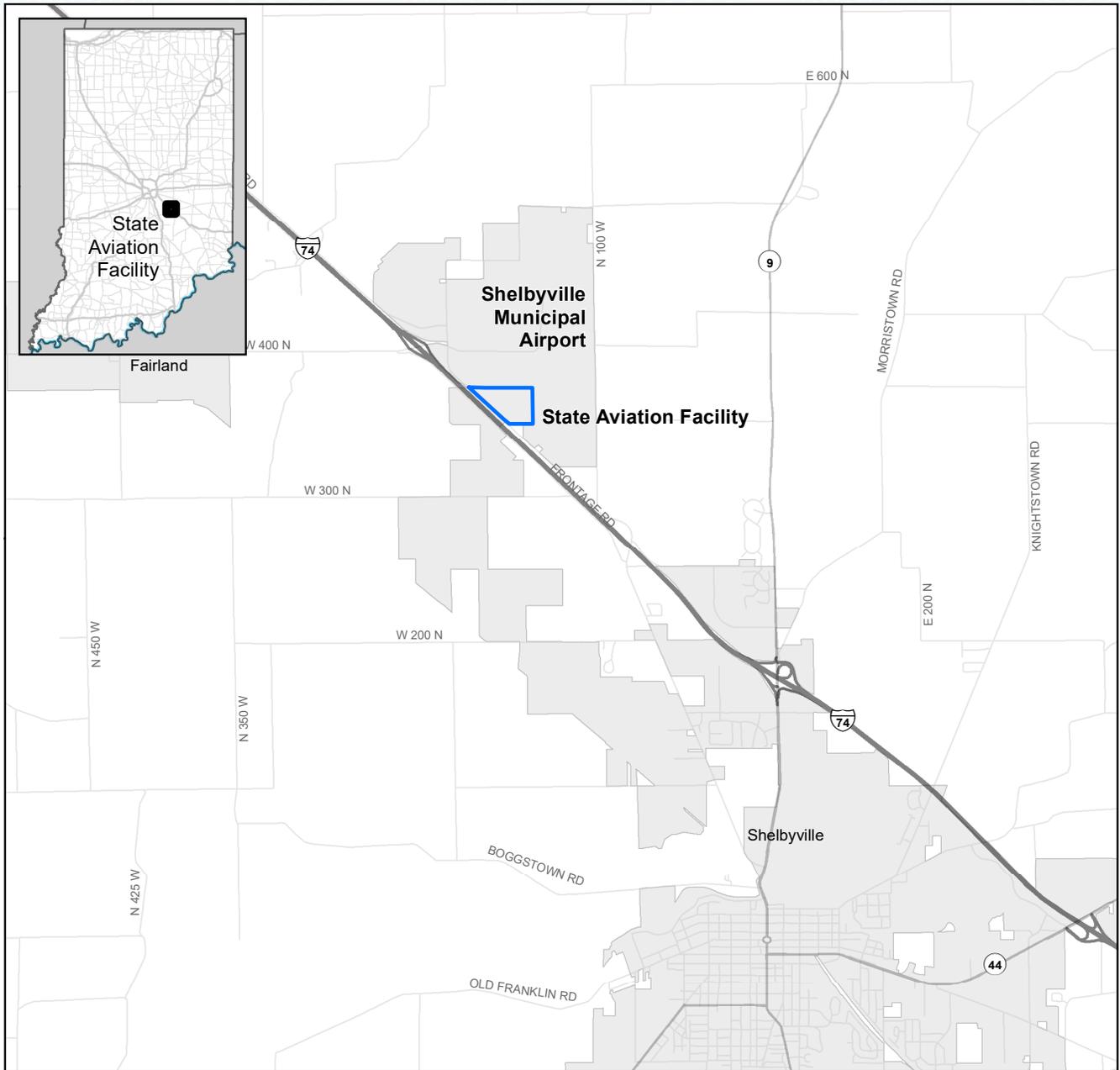
Seymour Municipal Airport (60F) Runways			
Direction	Length	Width	Surface Type
17/35	4300'	50'	Asphalt-E
Source: Airport Data and Information Portal: (60F) Seymour Muni, Federal Aviation Administration, 2022			

Fort Wayne International Airport (FWA)

Fort Wayne International Airport (FWA) Runways			
Direction	Length	Width	Surface Type
05/23	11,981'	150'	Asph-Conc-G
09/27	4001'	75'	Asph-Conc-F
14/32	8002'	150'	Asph-Conc-G
Source: Airport Data and Information Portal: (FWA) Fort Wayne Intl, Federal Aviation Administration, 2022			

2.2.9. State Aviation Facility (at Shelbyville Municipal Airport)

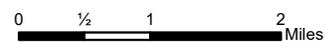
The Shelbyville National Guard Armory Army Aviation Support Facility is located immediately west of the Shelbyville Municipal Airport (GEZ), roughly three (3) miles northwest of the City of Shelbyville, Shelby County, Indiana (Figure 2-12). The armory was built in 1971 as a four-unit facility that would serve the Shelby County area but now provides military and community support to Indiana at large as the only aviation unit in the state.



Source: US Census, 2020. DoD, 2020. ESRI, 2020.



-  Indiana National Guard
-  City Boundary
-  Interstate
-  US / State Hwy
-  Local Road



Indiana National Guard – State Aviation Facility (at Shelbyville Municipal Airport)

Figure 2-12

2.2.9.1. Mission & Operations



The Aviation Support Facility headquarters the 38th Combat Aviation Brigade (CAB), 38th Infantry Division (ID), one of 18 U.S. Army divisions and eight (8) National Guard divisions. It includes Army National Guard units from Indiana, Ohio, Kentucky, Delaware, Michigan, Tennessee, and other states. Known as the “Cyclones,” the division fields assault helicopters and conducts full spectrum operations to win decisive campaigns in support of communities in the U.S. and locations abroad. The division is supported by the 38th CAB in Indianapolis to provide the region full force capabilities.

Nineteen (19) UH-60 Black Hawk helicopters were stationed at the facility in 2018 with the military accounting for 5% of aircraft operations.

The 38th Infantry Division has further mission responsibility for the Domestic All-hazards Response Team (DART) Coordination Cell, comprised of Indiana Air and Army Guard personnel. DART cells mobilize and deploy to affected areas to meet gaps in local response capabilities during catastrophic events. DART coordinates with existing multistate emergency management compacts, conducts contingency planning, provides command and control support, and can help establish forward operating bases for sustained operations.

The Aviation Support Facility is also home to an Aviation Combined Arms Tactical Trainer (AVCATT). AVCATT is a mobile, multi-station virtual simulation device that supports unit collective and combined arms training for helicopter aircrews and provides the region multi-aircraft training capabilities and specifically for Apache Longbow, Chinook, Kiowa Warrior, Lakota and Black Hawk helicopters.



Source: 38th Combat Aviation Brigade at the Army Aviation Support Facility near Shelbyville, IN (IN National Guard, n.d.)

2.2.9.2. Operational Areas

Operations are conducted on the property from within buildings, hangars, and multiple outdoor pads at the heliport.

Heliport

Army Aviation Support Facility Heliport

Heliport			
Direction	Length	Width	Surface Type
3117	50'	50'	Asphalt

Source: Airport Data and Information Portal: (3117) Army Aviation Support Facility, Federal Aviation Administration, 2022

2.2.10. U.S. Coast Guard Station Michigan City

The U.S. Coast Guard Station Michigan City is a 10,396 square foot United States Coast Guard station that began operation in 1889. Located In Michigan City, (Figure 2-13), it is the located at the mouth of Trail Creek and is the sole Lake Michigan unit in Indiana.



Source: US Census, 2020. DoD, 2020. ESRI, 2020. Grissom ARB, 2022.

-  Military Installation
-  US / State Hwy
-  Local Road
-  River
-  Water Body



Figure 2-13
U.S. Coast Guard Station Michigan City

2.2.10.1. Mission & Operations

USCG Station Michigan City is a multi-mission unit that conducts Search and Rescue, Law Enforcement, Homeland Security, Maritime Safety and Response Operations, and Public Relations. In the winter months, USCG Station Michigan City is designated as an ice capable unit and trains for rescue operations on the ice.

2.2.10.2. Operational Areas

The station's area of responsibility is encompassed by a line from the eastern Lake Michigan shoreline at 41-53'N, thence northwesterly to 42-04'N 087-00'W, thence southwesterly to shore at 87-14'W, thence easterly along the shoreline to the point of origin. USCG Station Michigan City is responsible for Lake Michigan's Southwest corner, responding to cases from their most east point, Warren Dunes, MI, to their most west point, Ogden Dunes, IN. On average Michigan City carries out an annual average of 70 SAR cases and 300 LE boardings.

2.3. Military Footprints

A military footprint consists in those areas outside an installation where mission activities can negatively impact or be impacted by surrounding communities if incompatible land uses are developed near operational areas. Examples of potential impacts on surrounding communities include an increased risk of aircraft accidents and noise disturbance from flight activities, live weapons firing, and detonations. Conversely, military missions are susceptible to hazards from vertical obstructions to air space and increased complaints from noise sensitive land uses in high noise zones. These and other incompatibilities can threaten the viability of current and future operations and, ultimately, installation sustainability.

The DoD conducts comprehensive studies to define the nature and extent of community exposure to military activities that include recommended land uses for surrounding areas based on current and potential future missions at a given location. The studies are critical to understanding the spatial patterns of operational impacts and compatible development as defined by mission footprints and to informed decision-making and effective planning for a vibrant future.

Several elements comprise the mission footprints that extend outside military installation boundaries in the State of Indiana. These elements are listed and then defined below, with each installation's specific footprint discussed in subsequent sections. Where possible, analysis of land use compatibility has been provided if the information is documented one of the compatible use studies for NSA Crane, GARB, Camp Atterbury or Muscatatuck Urban Training Center. This installation-specific compatibility information has not been updated since completion of the compatible use studies.

These elements are key to the viability of Indiana's military installations:

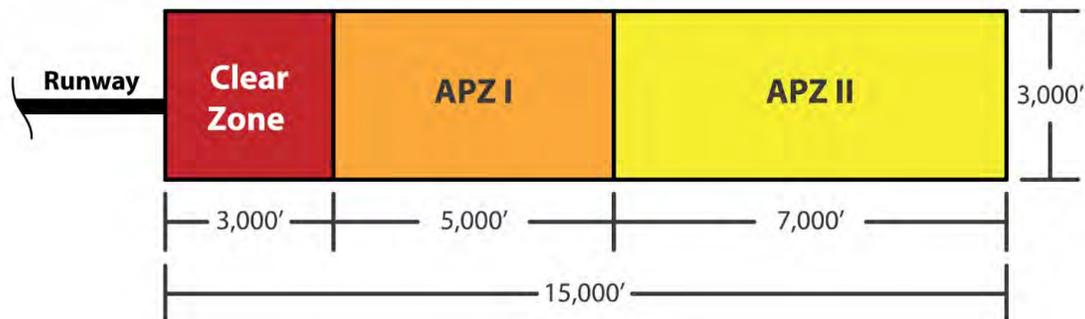
- Airfield Safety Zones
- Airfield Imaginary Surface
- Vertical Obstruction Areas
- Live Fire/Explosives Safety Areas
- Noise Zones
- Managed Airspace

2.3.1. Airfield Safety Zones

Airfield safety zones are designed to help military and community planners regulate land uses that are compatible with airfield operations and thereby protect the health and safety of communities and the military mission.¹² Although aircraft mishaps are rare, identifying different zones and the safest land use types, densities, and intensities relative to the accident potential in them is a practical and effective way to advance compatible development, public welfare, and military sustainability.

Typically, three (3) safety zones are designated at both ends of a runway and for helipads, as defined, below.¹³ An example airfield safety configuration follows.

- **Clear Zone** – Clear Zones (CZs) begin at each end of a runway and correspond to areas with the highest potential for aircraft incidents. CZs are required for all DoD runways and helipads, but with the exact shape and dimension specific to each branch of the Armed Force. To protect the public health, safety and welfare, the DoD recommends no development within the Clear Zone unless needed to enhance the safety of aircraft operations.
- **Accident Potential Zone I** – The first Accident Potential Zone (APZ I) begins at the farthest ends of each CZ, with exact specifications also varying by department and for fixed-wing and rotary aircraft. There is a lower probability of accidents in APZ I than in the CZ, with fewer development restrictions recommended by the DoD to protect the public health, safety, and welfare.
- **Accident Potential Zone II** – APZ II begins at the farthest end of each APZ I. The accident potential in APZ II is even further reduced, as are recommended land use restrictions by the DoD to protect the public health, safety, and welfare.



Example Plan View of an Airfield Safety Zone Configuration

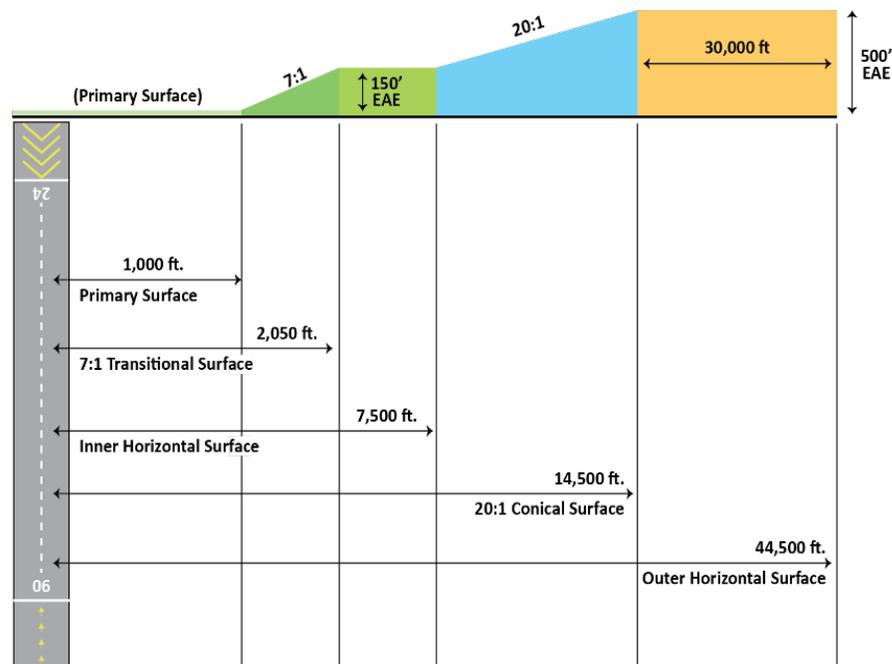
¹² DoD Instruction 4165.57: Air Installations Compatible Use Zones

¹³ DoD Instruction 4165.57: Air Installations Compatible Use Zones

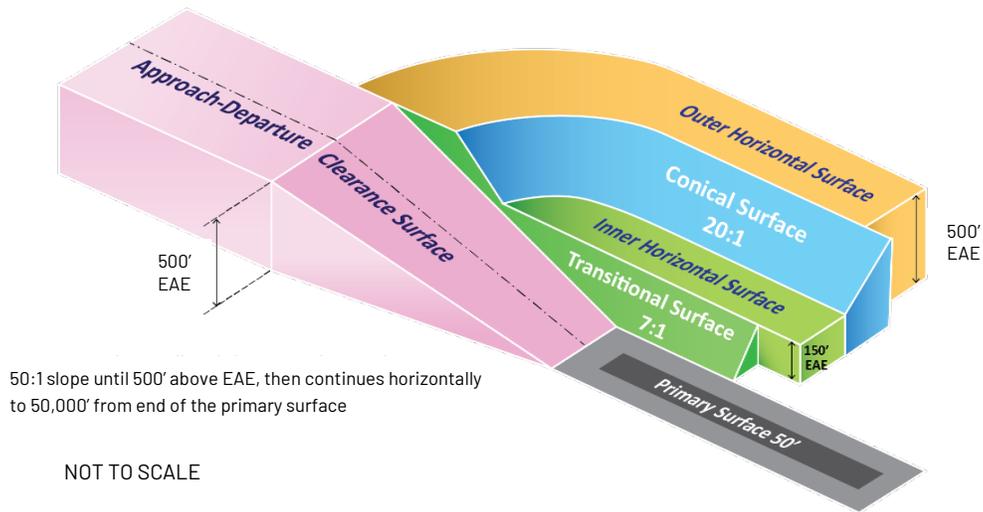
2.3.2. Airfield Imaginary Surfaces

Imaginary surfaces comprise those areas surrounding heliports and airfields that must be kept clear of man-made and natural features that could obstruct flight paths and viewshed or create other safety hazards to aviation activities. Imaginary surfaces extend around runways in a bowl shape, starting at specified heights above established airfield elevations (EAEs) based on distance from the airfield. Five (5) distinct surfaces are defined for military and civilian airports, as summarized below. Example illustrations follow.

- **Approach-Departure Clearance Surface** – This surface follows the runway centerline and extends for 50,000 feet from the runway. It extends upward at a slope of 50:1 (50 vertical feet for every horizontal foot) until it reaches an elevation of 500 feet above the EAE.
- **Inner Horizontal Surface** – This surface is an oval-shaped plane, 150 feet above the EAE.
- **Conical Surface** – This is an inclined surface extending outward and upward from the inner horizontal surface (150-foot elevation) at a slope of 20:1 (20 vertical feet for every 1 horizontal foot) until it reaches an elevation of 500 feet above the EAE.
- **Outer Horizontal Surface** – This surface is a plane located 500 feet above the airfield elevation. It extends horizontally 30,000 feet from the outer periphery of the conical surface.
- **Transitional Surfaces** – Transitional surfaces connect the other surfaces and extend upward at a slope of 7:1 (7 vertical feet for every 1 horizontal foot).



2D Example Profile of Imaginary Surfaces



3D Example Cross-section of Imaginary Surfaces

Man-made structures, trees, and other objects that are tall enough to penetrate any of these imaginary surfaces are considered a vertical obstruction and can cause safety hazards to aircraft. Typically, areas where vertical obstructions are most likely to occur are in the approach and departure corridors near a runway. The closer the property is to the runway, the more likely a tall structure will be a vertical obstruction for flight operations. Without proper land planning, structures such as tall buildings, cell towers, and factory smokestacks built in close proximity to runways have the potential to encroach into imaginary surfaces.

2.3.3. Live Fire/Explosives Safety Areas

The DoD designates safety areas around locations that are used for munitions and explosives storage and handling, explosives detonation, and live fire weapons training and operations. Exclusionary zones may be established around areas with Unexploded Ordnance (UXO) or Abandoned Explosive Ordnance (AXO), as well. The configuration of live fire and explosive safety areas is site-, weapon-, and caliber-specific and can extend from the ground surface to encompass airspace in order to protect air activity from live rounds, ricochet, and detonation debris. In all cases, safety zones that extend beyond installation boundaries can preclude civilian land use in the area and restrict public access to valued resources.



Example Explosives Siting Software Output showing ESQD Arcs

Explosive Safety Quantity Distance (ESQD) Arcs

ESQD arcs are typically concentric arcs that are designated around areas used for explosives handling, storage, and/or detonation to protect people and structures from flying debris associated with planned and unplanned detonation. The radius of ESQD arcs is based on the operation that are supported, the net explosive weight of the materials in question, and location.

Surface Danger Zones (SDZ)

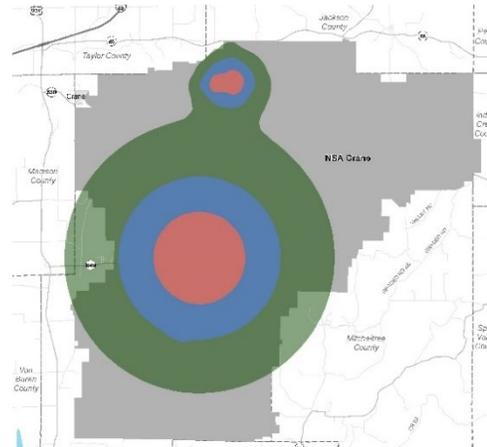
Surface Danger Zones are designated areas around weapons firing ranges within which military personnel and civilian access is restricted due to the inherent dangers associated with firing munitions. SDZs can include the surface and subsurface of land and water, as well as overhead air space. All SDZs include firing positions and trajectories, targeted impact areas, and secondary buffer areas to protect from errant projectiles and munitions fragments that could harm life and/or property.

2.3.4. Noise Zones

Noise is produced by aircraft operations, live-fire activities, and explosives detonations. Impacts on the community are determined by calculating a weighted average noise level that is measured as a day-night average sound level (DNL). The term DNL refers to the average noise level over a 24-hour period. Noise contours are developed through the Air Installation Compatible Use Zones (AICUZ) study using DoD NOISEMAP program. It should be noted, however, that because the contours are based on averaged sound measures, individual events may create more extreme noise disturbances than the contours predict and result in noise complaints.

CDNL Noise Contours

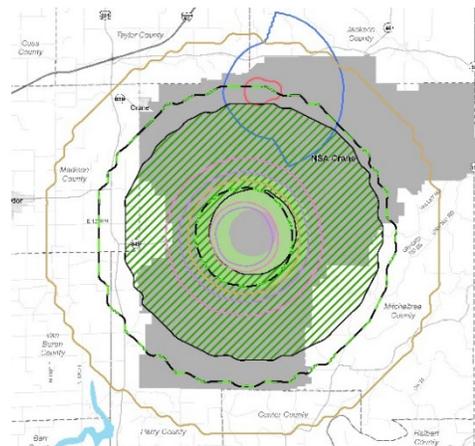
CDNL contours are used to graphically represent noise levels experienced from military readiness activities including air operations and engine maintenance, and from demolition and large caliber weapons that produce low-frequency energy noise. The noise generated from these activities can adversely impact an installation and nearby communities.



Example Map with CDNL Noise Contours

PK15 (met) Noise Contours

The PK15 (met) noise metric is used to measure impulse noise from individual events such as one firing of a single weapon and captures the peak energy disturbances of those events. PK 15 (met) contours are not based on on-the-ground noise values but on sound modeling and indicate an 85% certainty that sound will fall within a given range.¹⁴



Example Map with PK15(met) Noise Contours

¹⁴ New Jersey Army National Guard Statewide Operational Noise Management Plan, U.S. Army Center for Health Promotion and Preventative Medicine, 2007

2.3.5. Frequency Spectrum

The military's use of frequency spectrum allows for safe operations and the effective delivery of weapons on target without interference. The military's frequency spectrum needs for testing, evaluation, and training is constantly increasing, while the spectrum available for DoD use is decreasing. The National Telecommunications and Information Administration (NTIA) Office of Spectrum Management explains that:

...almost every agency of the Federal Government uses the spectrum in performing mandated missions. The DoD uses the spectrum extensively for tactical uses and non-tactical uses. In the United States tactical uses are generally limited to a number of specific testing sites and training facilities, but DoD's non-tactical applications are extensive and include aircraft command and control, mobile communication in and around military bases, and airfields and long-distance communications using satellites.

Military operations extend beyond a military installation to airspace throughout the state. The statewide military footprints are discussed in Section 2.4 and illustrated on Figures 2-28 and 2-29. These statewide footprints include Military Training Routes, Special Use Airspace (Restricted Areas and Military Operations Areas) where development of tall structures such as wind turbines and communications towers can affect the transmission of frequencies used for military training and testing.

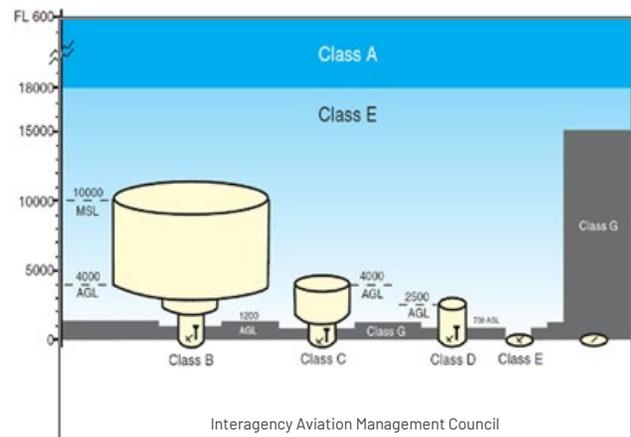
2.3.6. Managed Airspace

Airspace over the United States and its territories is managed to ensure the safe and orderly flow of air traffic and to satisfy the airspace needs of its users, both military and civilian. Managing airspace in areas used for military operations promotes safe and flexible airspace use with minimal restraints on friendly users, facilitates the identification of non-friendly users, and increases both training and combat effectiveness. There are multiple types of managed airspace, with classifications based on the nature of operations conducted in an area, the complexity or density of aircraft executing those operations, the level of safety required, and national and public interests. The types of airspace that comprise mission footprints at Indiana's major military installations are reviewed here. Definitions are taken from the Interagency Airspace Coordination Guide, where additional information can also be found.¹⁵

Controlled

"Controlled airspace" is a generic term for different classes of airspace that are defined relative to airspace dimension, altitude, and level of air traffic control (ATC) services provided. There are five (5) classes of controlled airspace (A, B, C, D, E, F) with distinct requirements for entry, pilot qualifications, and radio and transponder capabilities, as well as different weather standards under visual flight rules (VFR).

- **Class A** – Class A airspace generally extends from 18,000 feet mean sea level (MSL) up to and including flight level (FL) 600, including airspace overlying waters within 12 nautical miles (NM) of the coast of the 48 contiguous states and Alaska. All operations in this class of airspace must be conducted under instrument flight rules, unless otherwise authorized.
- **Class B** – Class B airspace generally extends from the surface of the earth to 10,000 feet MSL surrounding the nation's busiest airports in terms of airport operations or passenger enplanements. Every Class B airspace area is tailored for individual airports and its operations but consists of a surface area and two or more layers and often resembles an upside-down wedding cake. It is designed to contain all published instrument procedures once an aircraft enters the airspace, with ATC clearance required for any aircraft to operate in the area.
- **Class C** – Class C airspace generally spans from ground level to 4,000 feet in elevation surrounding airports that have an operational control tower, are serviced by a radar approach control, and meet certain operational minimums. Aircraft must establish two-way radio communications with the ATC facility prior to entering the airspace and maintain communication while there. Class C areas are also tailored.
- **Class D** – Class D airspace generally extends from ground level to 2,500 feet in elevation surrounding airports that have an operational control tower. The configuration of each Class D airspace area is individually tailored



Controlled Airspace Configurations

¹⁵ Interagency Airspace Coordination Guide, Interagency Aviation Management Council, 2003

Indiana || Military Compatible Planning Advisory Handbook

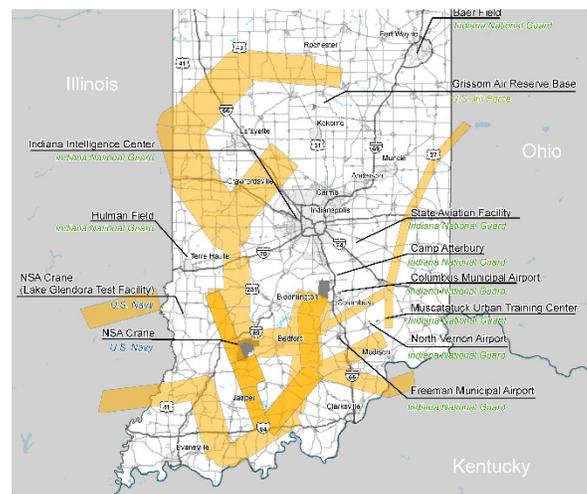
but typically designed to contain all instrument procedures, when published. As with Class C airspace, aircraft must establish two-way radio communications with the ATC facility prior to entering Class D airspace and maintain communication while there.

- **Class E** – Class E airspace is controlled airspace not classified as Class A, B, C, or D. A large amount of the airspace over the United States is designated Class E, and, in most cases, begins at 1,200 feet AGL. Class E airspace typically extends up to, but not including, 18,000 feet MSL, or the base of Class A airspace. All airspace above FL 600 is Class E airspace.

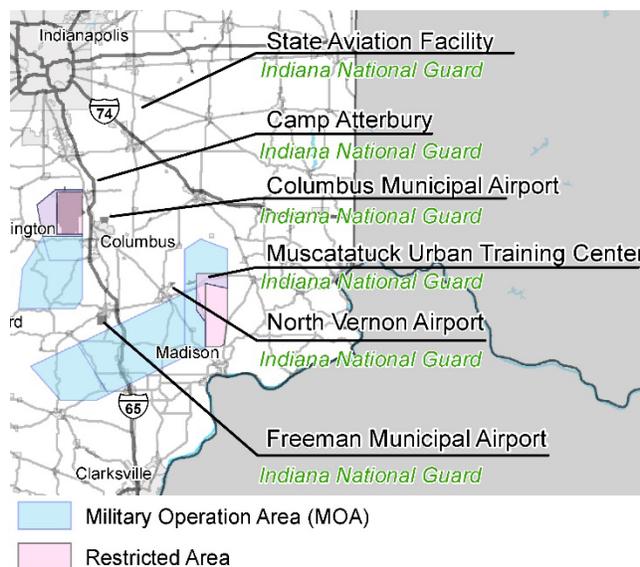
Any portion of airspace not classified as Class A, B, C, D, or E airspace is considered uncontrolled, or Class G airspace. It extends from the surface of the earth to the base of overlying Class E airspace.

Military Training Routes (MTRs)

The DoD uses Military Training Routes as airspace corridors for maneuvering and operating tactical military aircraft at various altitudes below 10,000 feet and at high speeds. Some route segments may be defined at higher altitudes for purposes of route continuity.



Example Map Showing MTRs



Example Map Showing Special Use Airspace

Special Use Air Space (SUA)

Special Use Airspace consists in areas designated for operations of such a nature that limitations may be imposed on other aircraft not participating in those operations, often military in nature. SUA is of a defined dimension and includes the corresponding area on the surface of the earth. SUA designations indicate where predicate operations can occur and effectively segregate those activities from other users of air and land resources. There are several different types of SUA: Restricted Areas, Prohibited Areas, Military Operations Areas, Warning Areas and Alert Areas. Only Restricted Areas and Military Operations Areas are in Indiana.

- **Restricted Areas** – Restricted Areas are designated in areas where military operations are hazardous to nonparticipating aircraft, such as areas where live weapons firing, and missile activity occur. Military operations are not always active in SUAs, and civilian flights may transit Restricted Areas with authorization from the appropriate ATC. Penetration of Restricted Areas without authorization can be extremely hazardous to aircraft, pilots, and passengers, and published schedules that facilitate the coordination of incompatible uses should be consulted.
- **Military Operations Areas (MOAs)** – Military Operational Areas include airspace of defined horizontal and vertical limits for the purpose of separating certain military activities from air traffic. Aircraft may transit MOAs if separation can be maintained by the appropriate ATC.

2.3.7. Grissom Air Reserve Base (GARB)

Military mission footprints are those areas outside installation perimeters within which military operations may impact or be impacted by civilian activities. At GARB, these footprints include safety zones, noise contours, and imaginary surfaces.

2.3.7.1. Airfield Safety Zones

As discussed in Section 2.3.1, areas immediately beyond the ends of military runways and below approach and departure paths are where aircraft accidents are statistically most likely to occur if they occur. Consequently, defining where accident potential zones extend beyond installation perimeters is critical to mitigating existing and potential impacts associated with civilian development in higher risk areas.

Accident potential is greatest in CZs. Shown in Figure 2-14, the Clear Zones at GARB are 3,000 feet wide by 3,000 feet long, beginning at either end of the runway. The majority of the northeastern CZ is within the installation boundary, with institutional, industrial, and commercial uses.

The APZs are also 3,000-feet wide, with APZ I extending 5,000 feet from the end of each CZ and APZ II extending another 7,000 feet from the end of each APZ I. In all cases, these accident potential zones extend beyond the base and encompass some incompatible development in both Miami and Cass Counties.



Source: US Census, 2020. DoD, 2020. ESRI, 2020. Grissom ARB, 2022.

- | Feature Name | |
|--------------|----------------------------|
| | Clear Zone Surface |
| | Accident Potential Zone I |
| | Accident Potential Zone II |
| | Graded Clear Zone Surface |
| | Grissom ARB |
| | City Boundary |
| | County Boundary |
| | US / State Hwy |
| | Local Road |
| | Airfield Surfaces |



Figure 2-14
Grissom ARB Airfield Safety Zones

2.3.7.2. Airfield Safety Zone Compatibility

The following airfield safety zone compatibility assessment and maps are provided “as is” from the 2020 GARB AICUZ Study.

Compatibility Concerns within the CZs and APZs

As shown on Figure 6-8, the 2020 AICUZ CZs and APZs for Grissom ARB extend off the installation and pose compatibility concerns with certain types of land uses. As shown in Table 6-3, there is a total of 1,818 acres of land use within the CZs and APZs deemed compatible, incompatible, or incompatible with exceptions.

Table 6-3. Off-installation Existing Land Use Acreage within Clear Zones/Accident Potential Zones

Generalized Land Use Category	Compatibility Designation	CZ	APZ I	APZ II	Total (acres)
Residential	Compatible				0
	Incompatible		22.84	47.29 ¹	70.13
Agriculture	Compatible	124.3 ²	595.67 ²	869.8 ²	1,589.77
	Incompatible				0
Commercial	Compatible				0
	Incompatible	2.08	11.79 ¹		13.87
Industrial	Compatible				0
	Incompatible	4.41			4.41
Institutional	Compatible			8.57 ²	8.57
	Incompatible	34.91	43.65		78.56
Utility	Compatible		0.62 ²	4.95 ²	5.57
	Incompatible				0
Vacant	Compatible	2	2.52	32.06	36.58
	Incompatible				0
Subtotal	Compatible	126.3	598.81	915.38	1,640.49
	Incompatible	41.4	78.28	47.29	166.97
No Data Available	N/A	1.47	8.2	0.9	10.57
Total (acres)		169.17	685.29	963.57	1,818.03

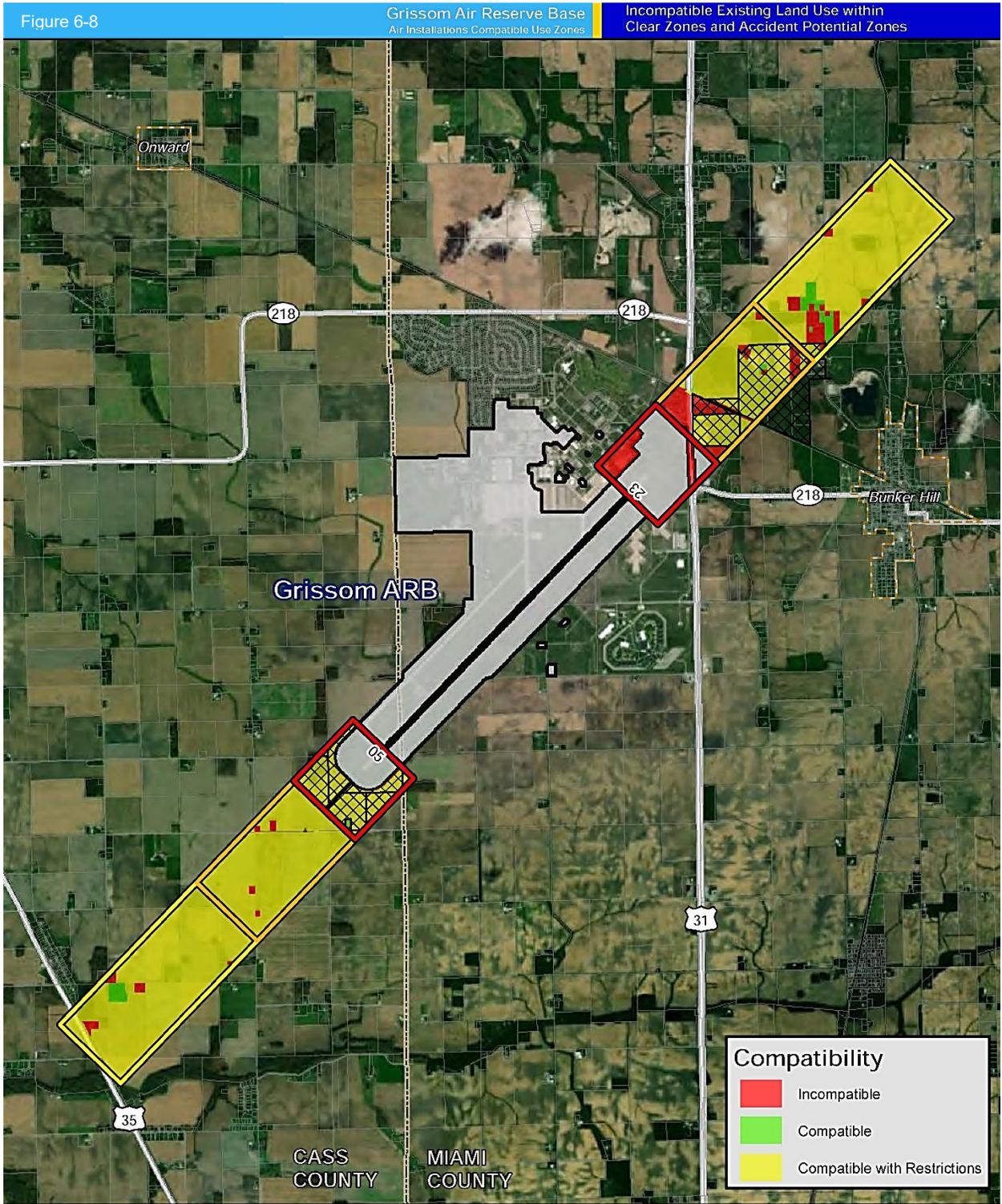
Notes:

¹ Incompatible with exceptions

² Compatible with restrictions

All noise zone areas on-installation are excluded from the acreage counts

Refer to Appendix A for details



U.S. Route 31 passes through the CZ, which is incompatible per Air Force AICUZ compatibility guidelines. Land uses within the CZ extending northeast of Runway 23 are institutional, commercial, and industrial. These uses are designated as incompatible. As noted in the Grissom JLUS, there are several buildings and improvements located within the portion of the CZ that extends northeast off Runway 23 that are outside the base boundary. Many of these are former Air Force buildings that were passed to community ownership when the Aeroplex was created and are currently managed by the Miami County Economic Development Authority (MCEDA).

Grissom ARB is currently partnering with MCEDA to develop the implementation strategies as a part of the JLUS, which identifies funding sources, remedies, and phasing for the demolition of existing structures and pavements in the CZ. In addition, there are a series of deed restrictions on the Aeroplex properties, which include terms related to repairs and expansions to buildings within the northeast CZ. These restrictions limit further development and expansion of these areas within the CZ. In addition to deed restrictions on properties within the Aeroplex, Grissom ARB has executed multiple Perpetual Avigation and Clearance Easements on private property adjacent to the base boundary to further safeguard the public and prevent future incompatible development. An avigation easement ensures the right to conduct air operations in the airspace above, angle plane, or in the vicinity of a particular property. It also includes the right to create such noise or other effects, as may result from the lawful operation of aircraft in such airspace, and the right to remove any obstructions to such overflight. The easements state that properties shall only be used for growing, cultivating, and harvesting crops, not including trees, or grazing (excluding feed lots and dairy herds); and that no construction of any structures or erect structures shall be placed upon the property, except fences. Tracts within the CZs have specific easements that includes use restrictions as previously mentioned above (i.e., only used for growing or cultivating crops) plus authority to remove trees, shrubs, brush, and other forms of obstructions. As identified in the compatibility analysis, the land uses associated with these parcels may indicate compatibility concerns per the Air Force AICUZ compatibility guidelines. However, the established avigation easement with the restricted uses removes this concern and ensures existing and future compatibility within the Grissom ARB AICUZ footprint.

U.S. Route 31 also passes through APZ I and is compatible with restrictions, because no aboveground passenger terminals and no aboveground power transmission or distribution lines should be present in this area. Within APZ I, residential land use is incompatible per Air Force AICUZ compatibility guidelines and APZ I agriculture uses are compatible with restrictions. Activities that attract concentrations of birds, creating a hazard to aircraft operations, should be excluded in this area. There are commercial uses within APZ I that are designated as incompatible with exceptions. APZ II contains uses that are compatible, compatible with restrictions, and incompatible with exceptions. Agriculture land uses are compatible with restrictions. Residential uses within APZ II are incompatible with exceptions, as the suggested maximum density for detached single-family housing is 2 Du/Ac within APZ II.

Land uses within the CZ southwest of Runway 05 include a small portion of institutional use around the base boundary, as well as agriculture and vacant use. The institutional use is recommended incompatible per Air Force AICUZ compatibility guidelines. Agriculture use is compatible with restrictions, as the uses are vacant and cash grain, or general farming. Residential uses that could be associated with agriculture are not

permitted in the CZ or APZ I. In addition, crops, such as corn, have been planted too close to Runway 05 at times. Grissom ARB's airfield manager and safety personnel monitor these issues. Agriculture within APZ I is compatible with restrictions. Activities that attract concentrations of birds, creating a hazard to aircraft operations, should be excluded in this area. Areas with no data available may have various uses not specified by a land use category or property class in the data. Vacant areas are compatible; however, compatibility should be considered during future development. To determine the compatibility for the undesignated areas, the Air Force AFH 32-7084, AICUZ Program Manager's Guide, provides suggested land use compatibility guidelines, based on the SLUCM that reflects the site-specific land use. Residential uses within APZ II are incompatible with exceptions, as the suggested maximum density for detached single-family housing is 2 Du/Ac within APZ II.

Future Compatibility Concerns

Based on the overall zoning and future plans available, development around Grissom ARB is expected to mostly remain agricultural. The potential future compatibility concerns are highlighted below.

Northeast of Runway 23

Land zoned A-1 Agriculture is present within the CZ. Agriculture and residential uses are incompatible within the CZ.

APZ I contains land that is mostly zoned A-2 Agriculture and also contains a small portion of A-1 Agriculture. Residential uses are not recommended within APZ I. Land uses that are bird attractants should not be present, per the Air Force compatibility guidelines.

APZ II covers land entirely zoned A-2 Agriculture.

U.S. Route 31 has projected road improvements that could attract additional development and cause increased traffic. U.S. Route 31 crosses through the CZ and APZ I.

The Miami County Comprehensive Plan's zoning information noted potential Planned Unit Development areas north of the base. This could lead to potential increased growth or development in the future for that area.

Southwest of Runway 05

Areas within CZ, APZ I, and APZ II is zoned agriculture, which allows for agriculture uses and low-density residential uses. Residential is incompatible within these safety zones. Residential uses within APZ II are incompatible with exceptions, as the suggested maximum density for detached single-family housing is 2 Du/Ac within APZ II.

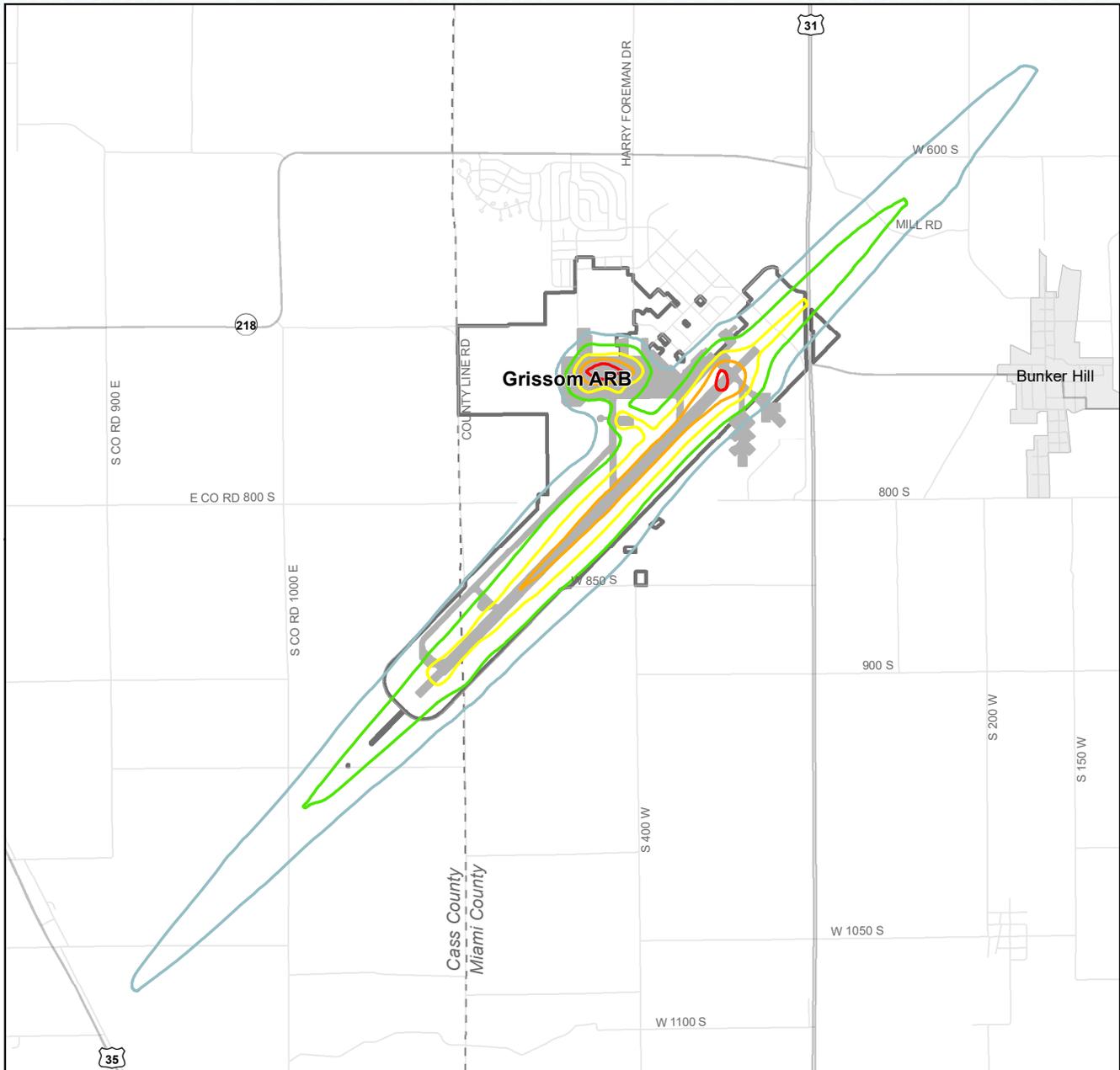
Future land use data for Cass County indicates potential agriculture (AG) and single-family residential (SFR) uses within the CZ and APZ I. AG Rural, SFR, and AG future land uses are within APZ I. The APZs extend toward U.S. Route 35, a transportation corridor with potential for development.

2.3.7.3. Noise Zones

CDNL Noise Contours

Noise generated at GARB is predominately from aircraft operations. This air traffic noise has declined with a reduction in the number of aircraft assigned the 434 ARW and quieter engine design. There has been an increase in civilian flight operations at the base; however, the civilian aircraft used are generally quieter than military aircraft. Flight patterns are also designed to minimize conflict with civilian populations.

The GARB AICUZ study conducted in 2020 identified noise contours based on the average day-night noise level (expressed as dB DNL) expected to be generated from aircraft operations at the installation (Figure 2-15). Since the contours are based on average sound levels, noise from any given operation may be higher or lower than projected for a specific location on or near the base.



Source: Grissom ARB, 2022.

Mean Noise Level - 2020

- 60 db
- 65 db
- 70 db
- 75 db
- 80+ db

- Grissom ARB
- City Boundary
- County Boundary
- US / State Hwy
- Local Road
- Airfield Surfaces



Figure 2-15
Grissom ARB Airfield Noise Contours

2.3.7.4. Noise Zone Compatibility

The following noise zone compatibility assessment and maps are provided “as is” from the 2020 GARB AICUZ Study.

Compatibility Concerns within the Noise Contours

The 2020 AICUZ noise contours that extend off the installation include 65 to 75 dB DNL noise contours. While the majority of the impacted areas are on Air Reserve Base land, there are limited areas of the local community located within these noise zones directly adjacent to the installation boundary. As shown in Table 6-2, there are approximately 155 acres of off-base land uses within the Grissom noise contours. Land uses impacted by the noise contours include agriculture, commercial, institutional, and vacant. As shown in Figure 6-7, land uses within the noise contours are compatible or compatible with restrictions. On the north side of the base within Miami County, 65 to 69 dB DNL and 70 to 74 dB DNL noise zones extend off base over commercial and institutional uses.

Commercial uses are compatible. In addition, 0.22 acres of 75 to 79 dB DNL noise zone extend off base over institutional uses. Institutional uses are compatible with restrictions in these noise zones and should incorporate measures to achieve Noise Level Reduction (NLR) into the design and construction of the building to realize compatibility, per the Air Force compatibility guidelines within the 70 to 74 dB DNL and 75 to 79 dB DNL noise zones. Land within the 65 to 69 dB DNL noise zone extending northeast of Runway 23 is both compatible and compatible with restrictions. Commercial uses are compatible within the 65 to 69 dB DNL noise zone. Agriculture and institutional uses are compatible with restrictions, as some uses within these areas may require NLR measures.

Southwest of the base, in Cass County, a portion of the 65 to 69 dB DNL noise zone extends off base over agriculture land uses, and is designated as compatible with restrictions, as residential buildings may be permitted here, which would need NLR measures.

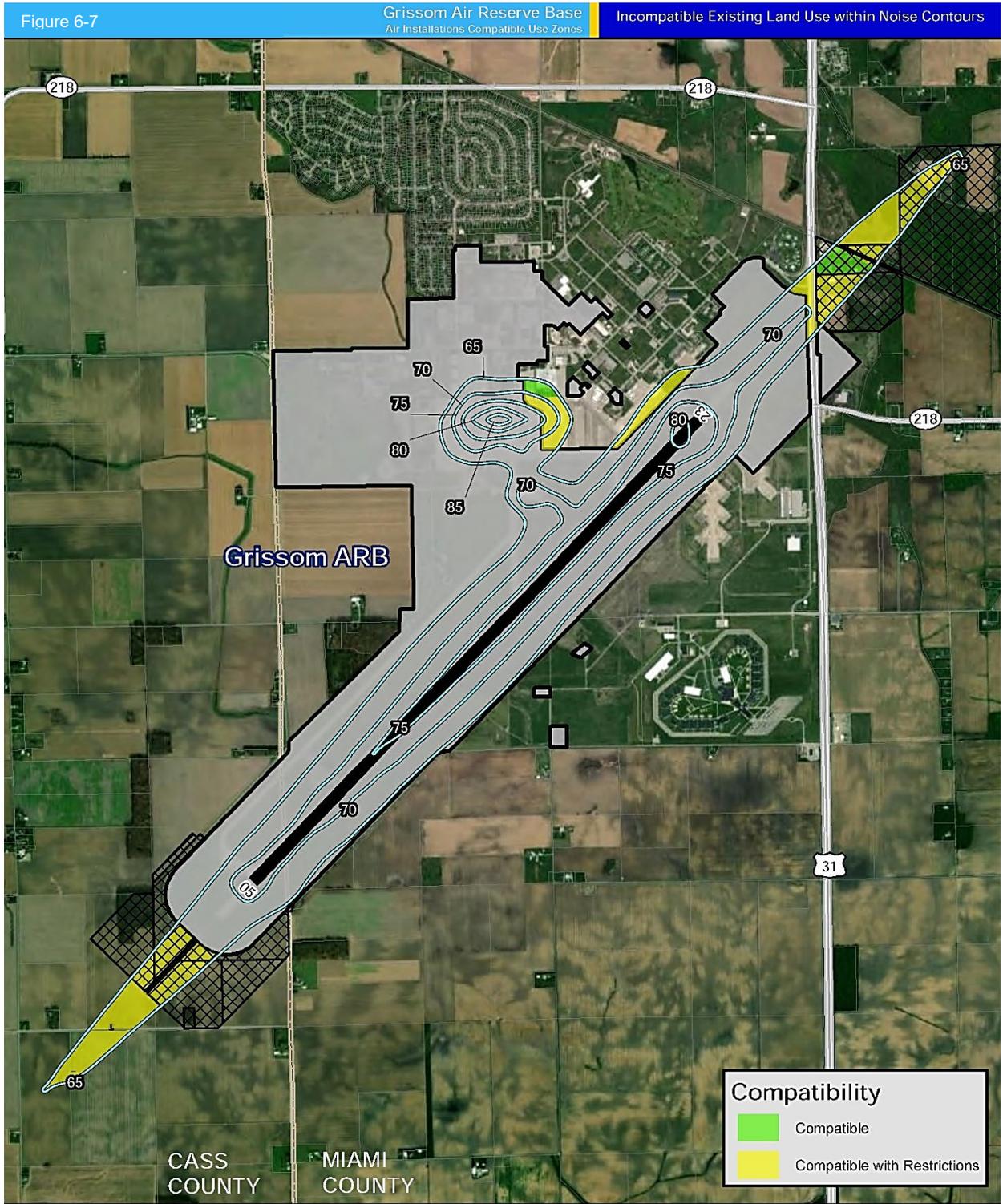
Table 6-2. Off-Installation Existing Land Use Acreage within AICUZ Noise Zones

Generalized Land Use Category	Compatibility Designation	Noise Zone (dB DNL) (acres)					Total (acres)
		65-69	70-74	75-79	80-84	85+	
Residential	Compatible						0
	Incompatible						0
Agriculture	Compatible	106.75*					106.75
	Incompatible						0
Commercial	Compatible	13.31	0.4*				13.71
	Incompatible						0
Industrial	Compatible						0
	Incompatible						0
Institutional	Compatible	27.21*	5.57*	0.22*			33
	Incompatible						0
Utility	Compatible						0
	Incompatible						0
Vacant	Compatible						0
	Compatible	0.13					0.13
No Data Available	N/A	1.81					1.81
Total (acres)		149.21	5.97	0.22	0	0	155.4

Notes:

* Compatible with restrictions

All noise zone areas on-installation are excluded from the acreage counts
Refer to Appendix A for details



Legend

- State/U.S. Highway
- 2020 AICUZ Noise Contours

- Airfield Runway
- Avigation and Clearance Easement Properties

- County Boundary
- Installation Boundary
- Parcel Boundary

Note: Areas within AICUZ Footprint with no land use data available are not assigned compatibility classification.

0 0.5 1 Mile

Future Compatibility Concerns

Based on the overall zoning and future plans available, development around Grissom ARB is expected to mostly remain agricultural. The potential future compatibility concerns are highlighted below.

Northeast of Runway 23

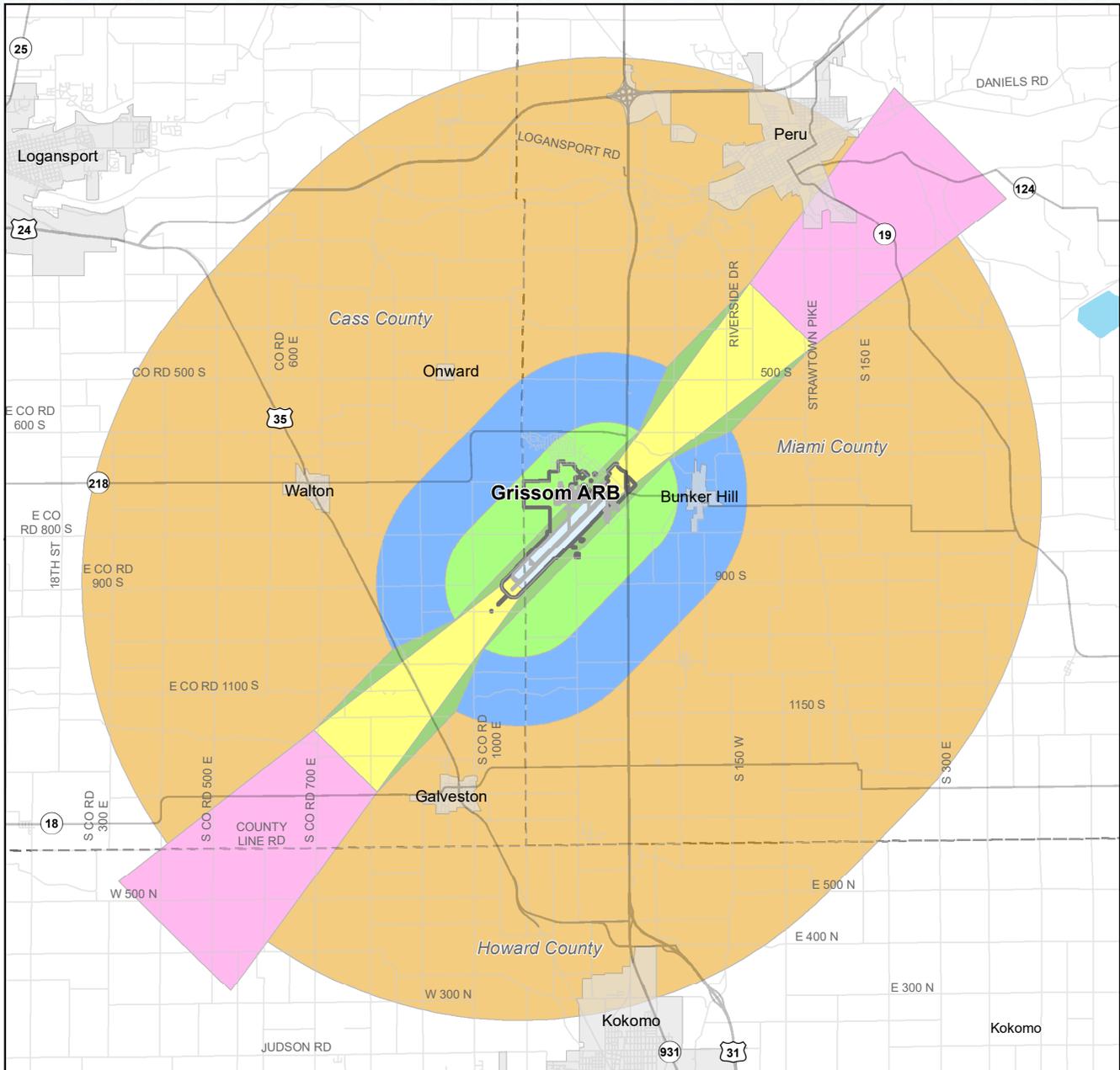
North and northeast of the base in Miami County, land use is zoned as A-1 Agriculture within the 65 to 69 dB and 70 to 74 dB DNL noise zones. This designation allows agriculture uses and farm dwellings. The A-2 Agriculture designation allows for agriculture uses and low-density residential uses and is present within the 65 to 69 dB DNL noise zone. Although local conditions regarding the need for housing may require residential uses in these zones, residential uses are discouraged in the 65 to 69 dB DNL noise zone and strongly discouraged in the 70 to 74 dB DNL noise zone.

Southwest of Runway 05

Southwest of the base in Cass County, land use is zoned as A-2 Agriculture within the 65 to 69 dB DNL noise zone. Although local conditions regarding the need for housing may require residential use in these zones, residential use is discouraged in the 65 to 69 dB DNL noise zone.

2.3.7.5. Airfield Imaginary Surfaces

In relation to flight operations from GARB, vertical obstructions are addressed through compliance with FAA Regulation Title 14 Part 77, which establishes standards and notification requirements for objects affecting navigable airspace. Awareness of vertical obstructions and how they can impact GARB's operations and mission is necessary to limit encroachment within jurisdictions surrounding the base. Structures of a certain height, whether natural or manmade, can degrade the installation's mission capability as vertical obstructions if they conflict with Part 77 imaginary surfaces heights. Figure 2-16 shows the imaginary surfaces surrounding GARB.



- | | | | |
|--|---|--|-------------------|
| | Primary Surface | | Grissom ARB |
| | Approach/Departure Clearance Surface (Sloped) | | City Boundary |
| | Approach/Departure Clearance Surface (Horizontal) | | County Boundary |
| | Inner Horizontal Surface | | US / State Hwy |
| | Conical Surface | | Local Road |
| | Outer Horizontal Surface | | Water Body |
| | Transitional Surface | | Airfield Surfaces |

Source: US Census, 2020. DoD, 2020. ESRI, 2020. Grissom ARB, 2022.

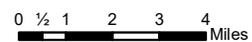


Figure 2-16
Grissom ARB Imaginary Surfaces

2.3.7.6. Managed Airspace

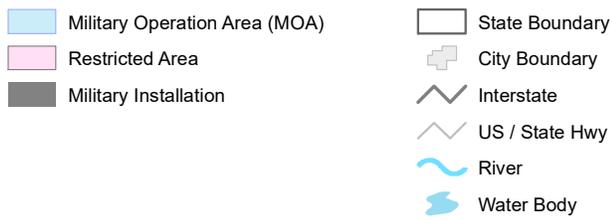
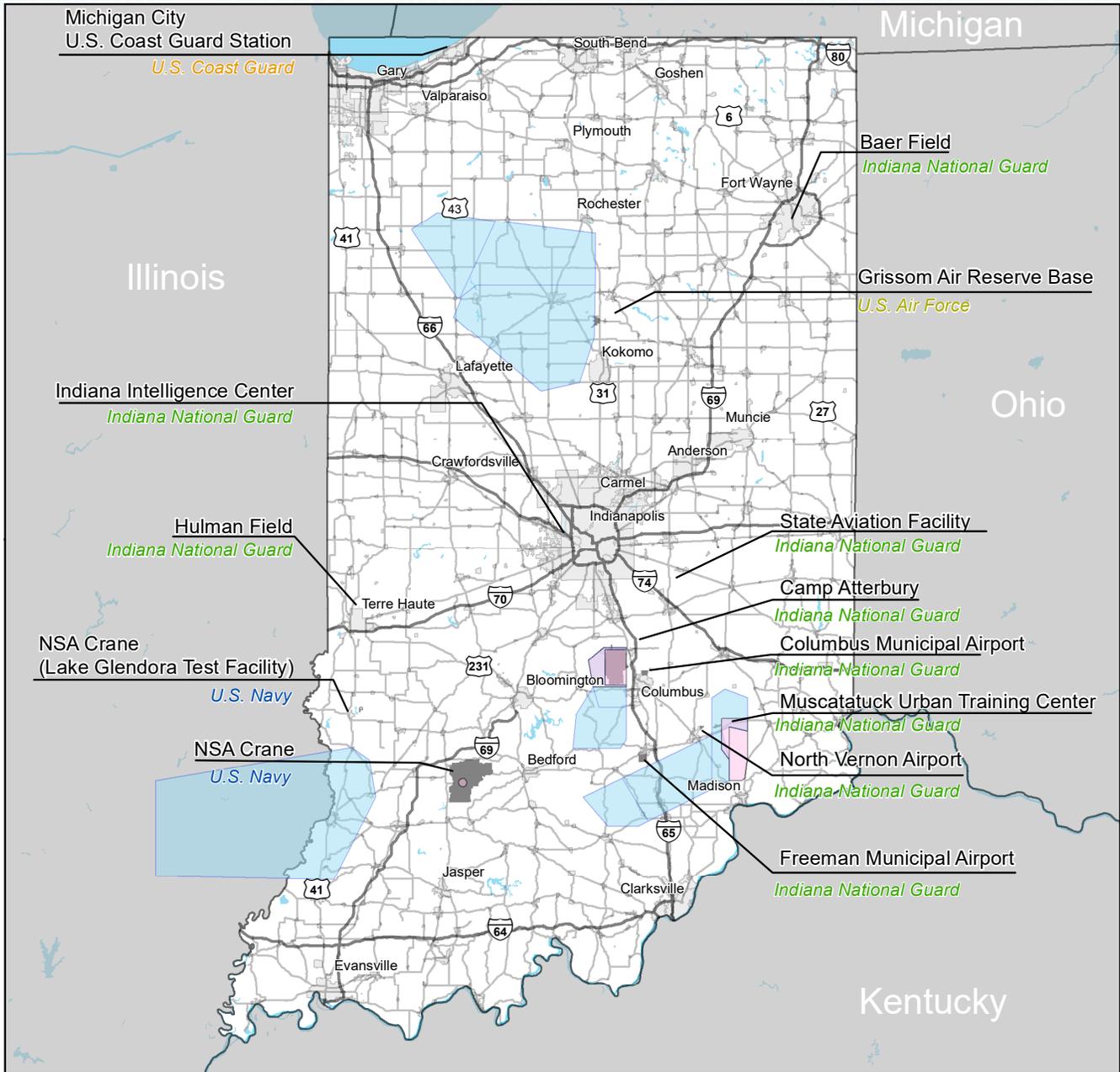
Controlled Airspace

Class D airspace has been established around GARB to manage air traffic and extends from the surface up to 3,300 feet above mean sea level (MSL) within a 5.6-nautical mile (NM) radius around the installation (Final Air Installation Compatible Use Zone (AICUZ) Study, GARB, Indiana, 2020).

Special Use Airspace

Military Operational Areas - Three military operational areas have been defined within GARB's Approach Control airspace: Twelve East MOA, Twelve West MOA, and Hill Top MOA (Figure 2-17). Both the Twelve East and Twelve West MOAs are northwest of the base, with Twelve East extending from 500 ft. to 9,999 ft. above ground level (AGL) and Twelve West extending from 500 ft. to 5,999 ft. AGL. The Hill Top MOA is located west of the airfield and extends from 10,000 ft. to 18,000 ft. AGL (Area Planning Special Use - North America, National Geospatial Intelligence Agency, 2016; GARB Joint Land Use Study, 2018).

The Indiana Air National Guard is the primary user of these MOAs, although GARB and other military units may use them pending coordination with the ANG's 122nd Fighter Wing. Installation and transient military aircraft also train in these areas (Area Planning Special Use - North America, National Geospatial Intelligence Agency, 2016; GARB Joint Land Use Study, 2018).



Source: US Census, 2020. DoD, 2020. ESRI, 2020.

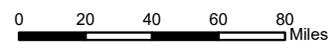


Figure 2-17
Special Use Airspace

2.3.8. Naval Support Activity (NSA) Crane

Both NSWC Crane and CAAA operations may impact areas outside NSA Crane boundaries and affect health, safety, and overall quality of life in surrounding communities. Conversely, military operations can be adversely impacted by civilian development near the installation, such as land uses that congregate large numbers of people in areas most vulnerable areas such as noise sensitive land uses in high noise zones that can affect the public's quality of life and result in complaints. At NSA Crane, areas related to demilitarization and research and development comprise the mission footprint extending beyond the perimeter, including live fire and explosives safety areas, noise zones, and Special Use Airspace.

2.3.8.1. Live Fire/Explosives Safety Areas

Explosive Safety Quantity Distance Arcs

At NSA Crane, ESQDs that mitigate harm from unplanned detonations are associated with the storage of ammunition. However, while the CAAA has the capacity to store 650,000 tons of ordnance and maintains storage magazines throughout the installation, storage capacity is administratively restricted in certain areas to ensure no ESQD extends beyond the perimeter. There is no community compatibility issue with ammunition storage.

Surface Danger Zones

All of the surface danger zones that have been delineated at NSA Crane to protect the public from ricochet and stray bullets are located within the installation's boundaries due to the current configuration of ranges at the Special Weapons Assessment Facility and the interior location of the Ordnance Test Area (OTA) and the Demolition and EOD Range. There is no community compatibility issue with stray fire.

2.3.8.2. Noise Zones

While not a new operation or function, CAAA's utilization of the demolition range during winter months has increased in past years meeting requirements of the Army and DoD. No change in demolition type activities, however, during winter months a reduction in net explosive weight (NEW) to ensure external noise impacts and existing modeled noise contours are not exceeded (No Change in Noise Contours as documented in 2017 JLUS).

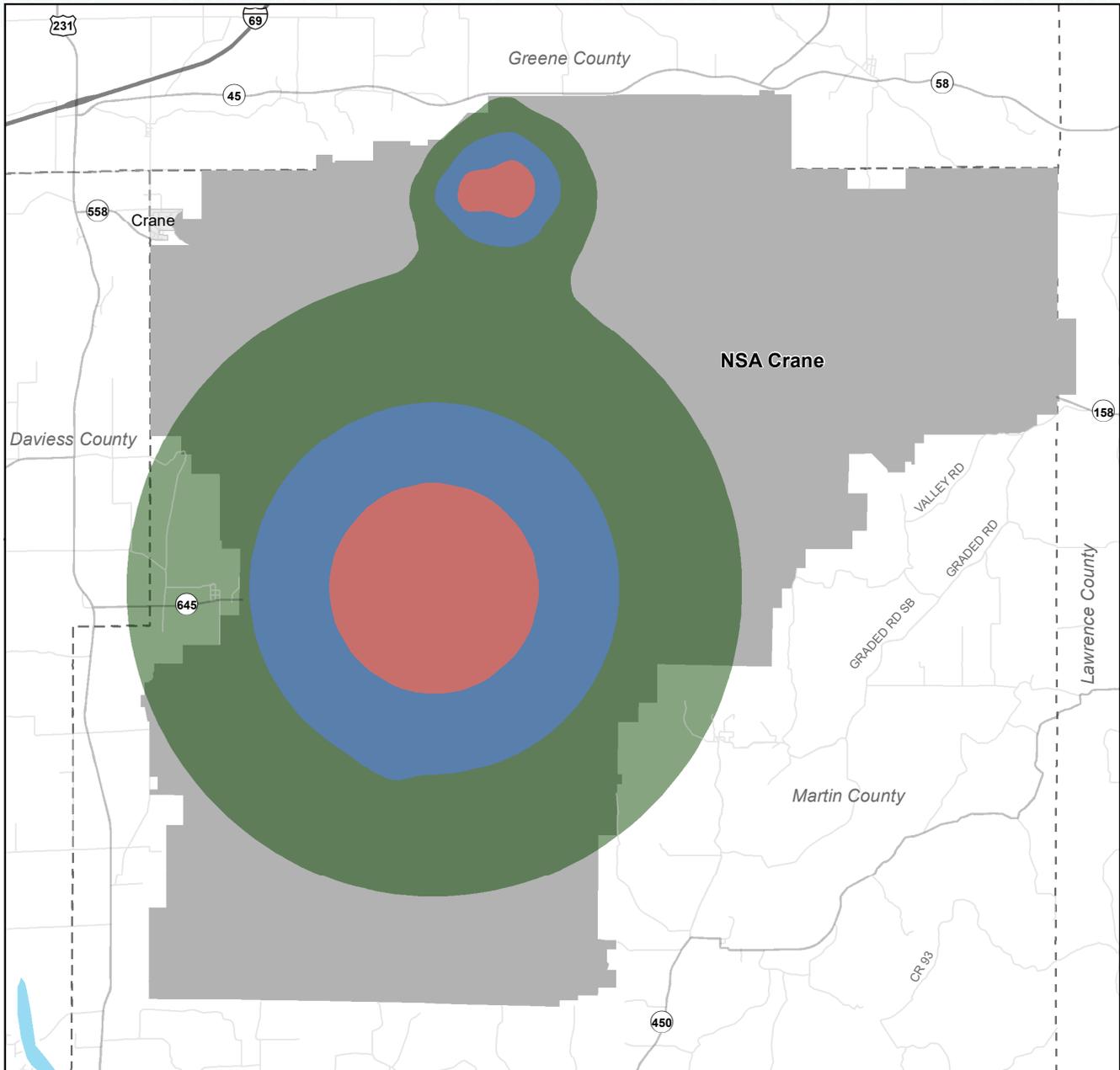
The main source of noise at NSA Crane is large and small caliber weapons activity and demilitarization efforts at the Special Weapons Assessment Facility, Demolition and Explosive Ordnance Disposal (EOD) Range, and OTA, with associated CDNL and PK15 (met) contours defined in the NSA Crane Operational Noise Assessment that was completed in 2013.

CDNL Noise Contours

The CDNL noise metric is used at NSA Crane to indicate annual average noise levels produced from demolition and large caliber weapons activities at the Special Weapons Assessment Facility and EOD Range. The CDNL contours or zones are where different levels of operational noise are likely to be experienced and are depicted on Figure 2-18 and listed below.

- Between 57-62 dB CDNL
- Between 62-70 dB CDNL
- Greater than 70 dB CDNL

Although most of the CDNL contours do not extend beyond NSA Crane's perimeter, noise contours within the 57-62 dB CDNL noise contours extend 0.10 miles north, 1 mile southeast, and 1.5 miles west of the installation to include forest and agricultural lands and some scattered residential properties. The community of Burns City falls within this area west of NSA Crane.



Source: US Census, 2020. DoD, 2020. ESRI, 2020.

- 2013 CDNL Noise Contours**
- 57 dB
 - 62 dB
 - 70 dB
- Military Installation
 - City Boundary
 - County Boundary
 - Interstate
 - US / State Hwy
 - Local Road
 - Water Body

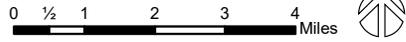


Figure 2-18
NSA Crane Noise Contours (CDNL)

PK15 (met) Noise Contours

In addition to the CDNL contours, PK15 (met) noise contours have been defined for the Special Weapons Assessment Facility to indicate where single-event impulse noise from small caliber arms activity may be experienced. These three (3) zones are illustrated on Figure 2-19 and listed below.

- Less than 87 dB PK15 (met)
- Between 87-104 dB (PK15 (met)
- Greater than 104 dB PK15 (met)

Based on the mapped noise contours, noise greater than 104 dB PK15 (met) is contained within NSA Crane boundaries. However, noise within the 87-104 dB (PK15 (met) noise contours extends up to 1.5 miles beyond the northern perimeter and includes approximately four (4) dozen scattered residential properties.

Peak blast measures are also used to determine the potential risk of noise complaints due to large explosions at the OTA and the Demolition and EOD Range. Peak blast noise was modeled at NSA Crane for both neutral and unfavorable weather conditions and for both 50 lb. and 500 lb. explosions buried 10 feet below the ground – as is customary at the installation – and at five (5) feet below ground to mimic scenarios with uneven ground coverage.

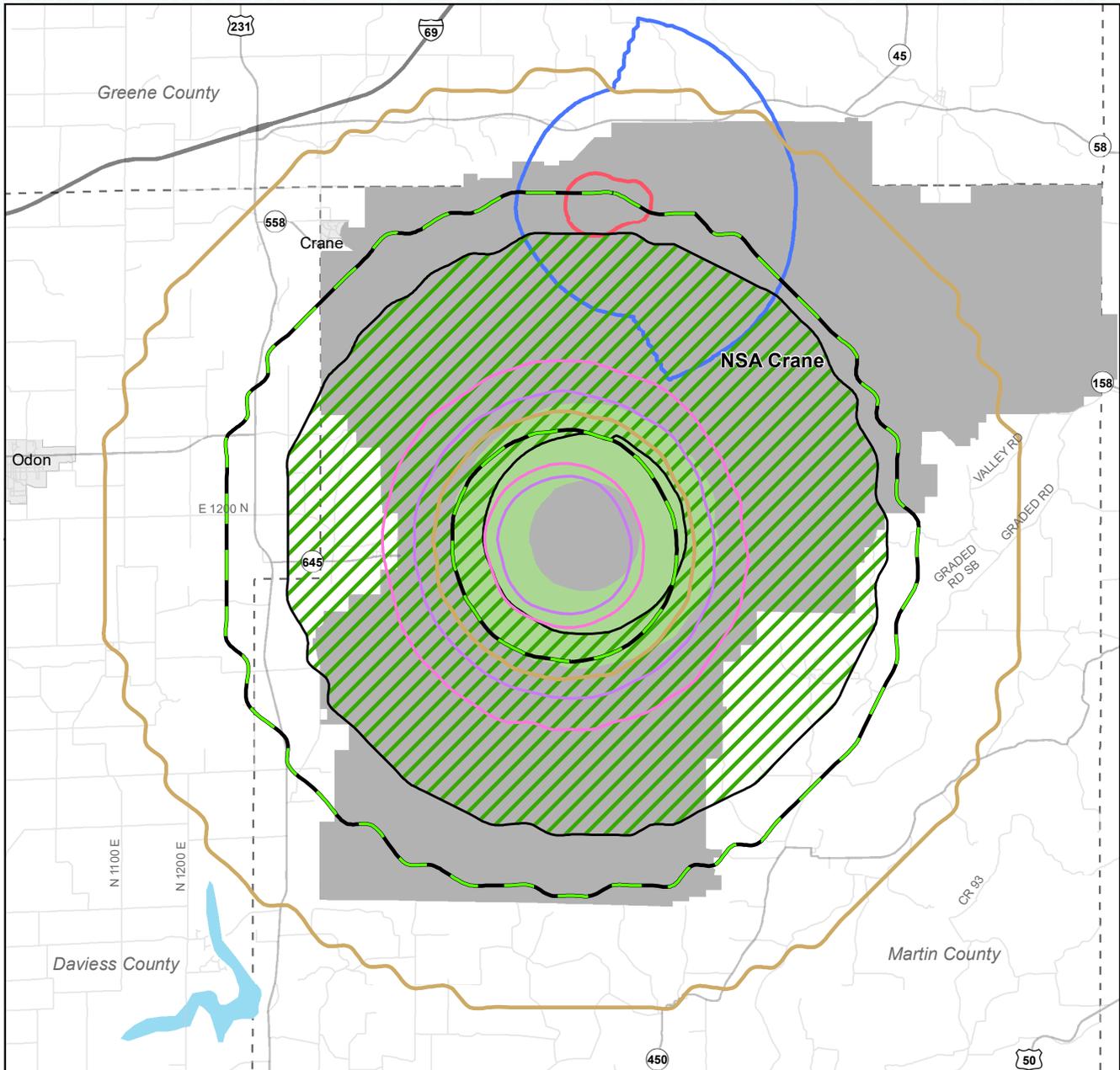
The peak blast noise ranges and associated risk levels presented here are based on the models that used unfavorable weather conditions, which results in the most off-site noise exposure, and were used for the 2017 NSA Crane JLUS compatibility analysis. The risk of complaint associated with different levels of PK15 (met) noise is defined as high, moderate, or low.

- High Risk: Greater than 130 dB PK15 (met)
- Moderate Risk: Between 115-130 dB PK15 (met)
- Low Risk: Less than 115 dB PK15 (met)

In all scenarios involving unfavorable weather conditions, all areas where the risk of noise complaints is high are within NSA Crane boundaries. Areas where the risk of complaints about activities is moderate or low are also fully contained within the installation. This is not the case for activities conducted at the Demolition and EOD Range.

The moderate risk area associated with the detonation of 50 lb. charges at the Demolition and EOD Range under unfavorable weather conditions extends up to 1.7 miles beyond NSA Crane's western boundary and approximately 1.5 miles beyond its southeastern boundary. The area is characterized by forest and agricultural lands with scattered residential properties. The small communities of Burns City, Bramble, Indian Springs, and Cale are in this moderate risk area.

For 500 lb. charges detonated 10 feet below ground under unfavorable weather conditions, the area with moderate risk of complaints extends up to 2.5 miles beyond the installation, both to the west and southwest. Forest, agricultural uses, and scattered residential properties also characterize this moderate risk zone, with the Town of Crane, Farlen, Burns City, Bramble, Indian Springs, and Cale encompassed.



Source: NSA Crane 2015.

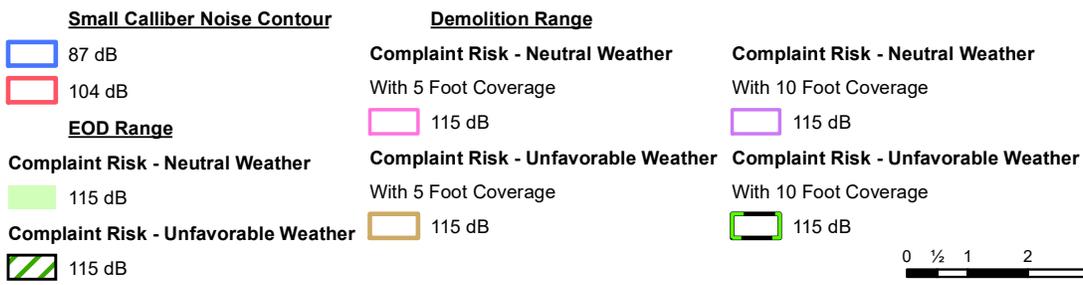


Figure 2-19
NSA Crane Noise Contours (Peak Noise)

Models of 500 lb. charges detonated at five (5) feet below ground under unfavorable weather conditions at the Demolition and EOD Range, indicate there is moderate risk of noise complaints up to 4.8 miles beyond the installation's western boundary, 4 miles beyond its eastern boundary, and up to 1.5 miles beyond the northern and southern boundaries. This area is characterized by forest and agricultural land with scattered residential properties. The Town of Crane and the communities of Doans, Scotland, Farlen, Rablesville, Burns City, Bramble, Dover Hill, Indian Springs, and Cale are within this moderate risk area.

2.3.8.3. Noise Zone Compatibility

The following noise zone compatibility assessment and maps are provided "as is" from the 2017 Joint Land Use Study for NSA Crane.

Noise From NSA Crane Ranges

Demolition Range Noise

Explosive ordnance disposal (EOD) occurs when explosive ammunition such as grenades, ballistic missiles, artillery, mines, or any other ordnance, are prepared for destruction within designated explosive areas to ensure the secure disposal of the explosive weapon. Noise-generating activities at NSA Crane include the Demolition Range, which is located in the central portion of the Installation approximately 2.5 miles from the closest boundary, the EOD Range which is co-located with the Demolition Range the Ordnance Test Area (OTA) located in the southern half of NSA Crane, approximately 2.5 miles from the closest boundary, and the Special Weapons Assessment Facility (SWAF) located in the northern part of NSA Crane, approximately 0.75 miles from the nearest boundary. Activity at the SWAF includes large and small arms weapons firing.

While the CDNL Noise Zones II and III for demolitions do not extend past the boundaries of NSA Crane, the base does occasionally receive noise complaints. The CDNL Noise Zones are based on an annual average of noise events.

Although annual average sound levels are compatible with the surrounding environment, there is potential for individual events to cause annoyance and possibly generate noise complaints. These individual events are characterized as peak blast noise complaint risk areas. Peak Sound Levels are identified as complaint risk areas of 115 PK15(met) and 130 PK15(met). Table 5.18-1 identifies the estimated complaint risk for different peak levels.

Table 5.18-1 Noise Complaint Risk Guidelines

Perceptibility	dB Peak	Risk of Receiving Noise Complaints
Audible	< 115	Low
Noticeable, distinct	115 - 130	Moderate
Loud, may startle	> 130	High

Source: *Operational Noise Consultation for Naval Support Activity Crane, Indiana, September 30, 2013*

Peak levels can vary significantly for the same activity dependent on weather conditions. Although NSA Crane plans the demilitarization activity to coincide with favorable weather conditions, weather conditions could change during scheduled detonation times. The extent of the complaint risk area is also dependent upon the depth at which the detonation item is buried or the amount of ground coverage over it. Charges at the Demolition Range are usually buried with 10 feet of dirt, but sometimes this coverage may not provide the anticipated noise level reduction effect if the burial is not evenly dispersed.

The worst-case scenario for detonation at the Demolition Range is assessed using unfavorable weather conditions and a coverage of explosives providing half of the anticipated effect (equivalency rating of five-foot coverage). Although according to the NSA Crane Operational Noise Consultation, the likelihood of both conditions occurring simultaneously is low, these conditions represent the maximum impact that could be expected in the surrounding community. The other ranges are not assessed because the complaint risk area for the Demolition Range encompasses the complaint risk area of the other ranges.

Under unfavorable weather conditions and irregular burial at the Demolition Range, the moderate complaint risk area extends up to 4.8 miles beyond the western boundary, four miles beyond the eastern boundary, and up to 1.5 miles beyond the northern and southern boundaries as illustrated on Figure 5.18-2. For this scenario, the entirety of the high complaint risk area [greater than 130 PK15(met)] is contained within the NSA Crane boundary.

The majority of the existing land use within the off-installation noise zones is undeveloped or very low-density residential development. Although these residences are existing noise-sensitive land uses, there is currently not a large risk to community quality of life or mission sustainment. The primary goal is to ensure that future development is unaffected by military noise.

The complaint risk area for neutral weather conditions and irregular burial is much smaller than the above scenario and the moderate complaint risk area only extends outside the NSA Crane boundary to the west approximately a quarter of a mile as illustrated in Chapter 3, Figure 3-7.

Although the moderate noise complaint risk area for the Demolition Range extends several miles around NSA Crane, the installation rarely receives noise complaints.

Existing Land Use

Existing land uses within complaint risk areas within the JLUS Study Area were analyzed to determine areas most likely to be impacted by noise. By determining noise sensitive land uses within the complaint risk areas, jurisdictions can better prevent noise complaints from increasing. Existing land uses within the NSA Crane moderate noise complaint risk area are shown on Figure 5.18-2 and discussed by county as follows. There are no areas of Lawrence County that are within the noise complaint risk area.

Daviess County

As shown on Figure 5.18-2, the moderate noise complaint risk area extends into eastern Daviess County, west of NSA Crane. Existing land use in Daviess County within the moderate noise complaint risk area [115 PK15(met)] are primarily agricultural, but also include commercial, institutional, unspecific residential, single family residential, and two family residential. Agricultural use is not likely to be impacted from noise events,

but if the land is developed with residential or other noise-sensitive uses in the future, it could result in noise complaints. Existing land uses and the corresponding noise contours are described in Table 5.18-2. There are several pockets of residential and institutional, including three religious facilities, which may be affected by noise events. These impacts have the potential to cause adverse effects on the health and quality of life for occupants within the area.

**Table 5.18-2 Daviess County Existing Land Use within 115 PK15(met)
NSA Crane Noise Complaint Risk Area**

Existing Land Use	Number of Parcels	Number of Acres
Agriculture	743	13,291.7
Commercial	33	67.0
Conservation/Park	1	0.6
Institutional	39	73.9
Residential: Unspecific	115	147.7
Residential: Single Family	206	313.7
Residential: Two Families	1	2.3

Source: Operational Noise Consultation for Naval Support Activity Crane, Indiana, September 30, 2013; State of Indiana, 2015; Matrix Design Group

Martin County

As shown on Figure 5.18-2 and Table 5.18-3, most of the land uses within Martin County that are located within the moderate noise complaint risk area are agricultural. The other uses in this area are commercial, industrial, institutional, unspecific residential, single family residential, two family residential, and three family residential. There is a clustering of institutional uses to the southeast of NSA Crane, which could include some noise sensitive uses and two communities in Martin County close to NSA Crane: Bramble and Burns City. These communities include some clustering of residential uses, which may be impacted by noise events.

**Table 5.18-3 Martin County Existing Land Use within 115 PK15(met)
NSA Crane Noise Complaint Risk Area**

Existing Land Use	Number of Parcels	Number of Acres
Agriculture	850	22,102.2
Commercial	25	150.2
Industrial	10	212.8
Institutional	74	1,629.8
Residential: Unspecific	335	322.9
Residential: Single Family	424	674.5
Residential: Two Families	2	7.0
Residential: Three Families	1	1.9

Source: Operational Noise Consultation for Naval Support Activity Crane, Indiana, September 30, 2013; State of Indiana, 2015; Matrix Design Group

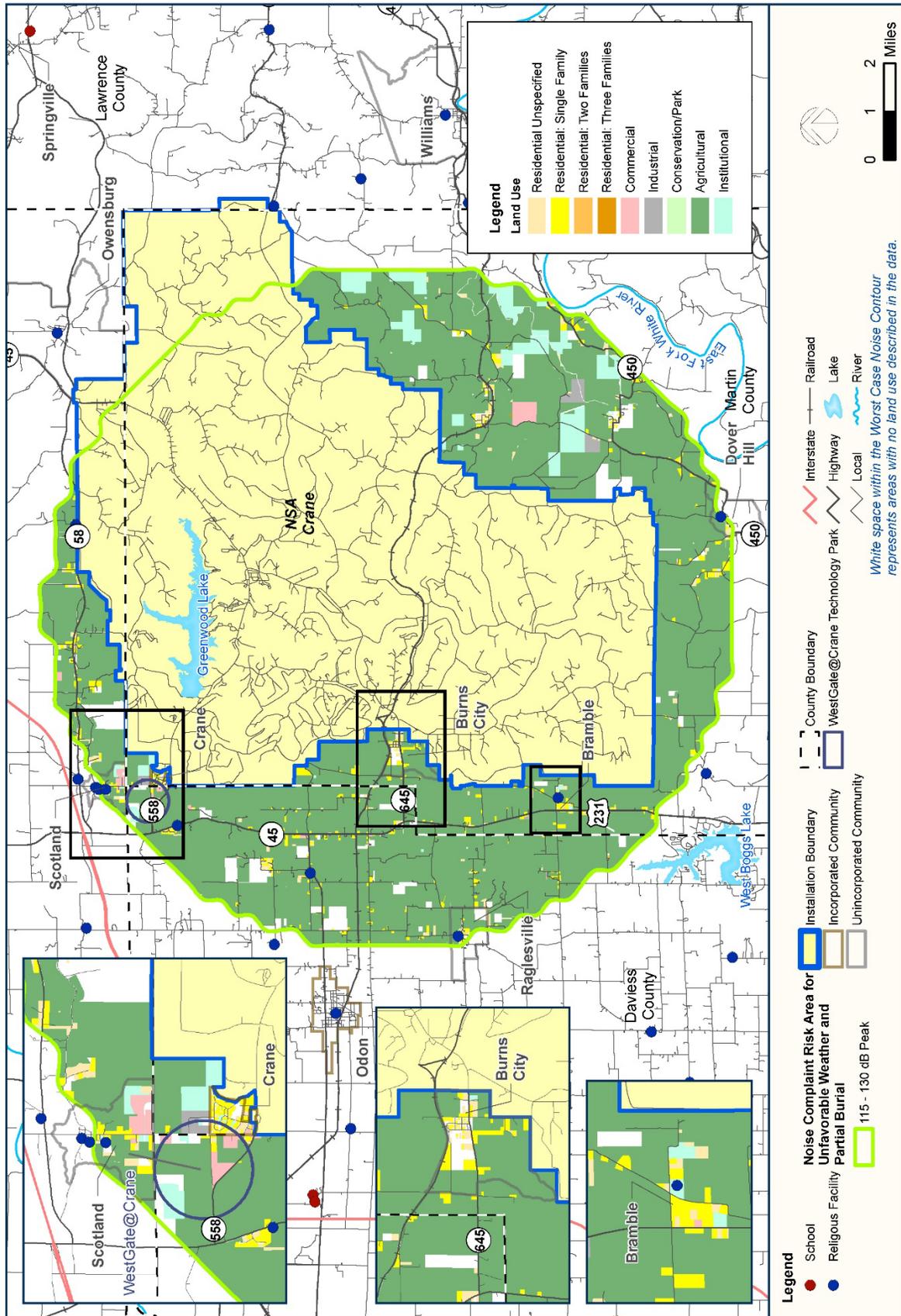


Figure 5.18-2
NSA Crane - Existing Land Use and Worst Case Noise

Matrix
 DESIGN GROUP
 Source: State of Indiana, 2015; NSA Crane, 2015.

Greene County

As shown on Figure 5.18-2 and in Table 5.18-4, the moderate noise complaint risk area extends into southern Greene County, to the north of NSA Crane. Agriculture is the predominant use in this area, but commercial, institutional, unspecified residential, and single family residential also exist. The community of Scotland is located in the moderate noise complaint risk area and contains residential, institutional, and a few religious facilities, which may be impacted by noise.

Table 5.18-4 Greene County Existing Land Use within 115 PK15(met) NSA Crane Noise Complaint Risk Area

Existing Land Use	Number of Parcels	Number of Acres
Agriculture	173	3,234.8
Commercial	21	55.6
Institutional	18	26.2
Residential: Unspecific	75	91.1
Residential: Single Family	90	165.4

Source: Operational Noise Consultation for Naval Support Activity Crane, Indiana, September 30, 2013; State of Indiana, 2015; Matrix Design Group

Land Use Controls

Compatibility is based on the actual land use, which is determined by the land use (zoning) district the property is within. There is no DoD guidance for land uses within the Peak Blast noise zones. Therefore, land use compatibility cannot be determined based on DoD guidance.

Daviess County is the only jurisdiction that has a land use controls within the moderate noise complaint risk area. Figure 5.18-3 illustrates the districts within the moderate noise complaint risk area within Daviess County.

Within Daviess County, districts General Agriculture (A-1), Light Industrial (I-1), General Business (B-2), Single Family (R-1), and Rural Estate (R-E) are within the moderate noise complaint risk area, as indicated on Figure 5.18-3.

Within the A-1, R-E, and R-1 districts all noise sensitive uses including churches/synagogues, schools, libraries, hospitals, hotels, residential development, and mobile homes are "sensitive noise receptors" and could lead to a moderate volume of complaints under unfavorable weather conditions. Table 5.18-5 shows the number of acres in each district within the moderate noise complaint risk area.

Table 5.18-5 Daviess County Zoning within 115 PK15(met) NSA Crane Noise Complaint Risk Area

Zoning District	Number of Acres
A-1 General Agriculture	13,919.2
B-2 General Business	618.9
I-1 Light Industrial	5.2
R-1 Single Family	48.7
R-E Rural Estate	75.7

Source: Operational Noise Consultation for Naval Support Activity Crane, Indiana, September 30, 2013; Daviess County, 2013; State of Indiana, 2015; Matrix Design Group

Vacant Parcels

Vacant parcels are important to consider for potential future compatibility issues. In general, undeveloped land is compatible with military operations, in this case noise. The type of development that occurs in the future may be incompatible with noise if it is developed for a noise-sensitive use such as residential, or with medical, religious, or education facilities. There is a large amount of vacant land within the moderate noise complaint risk area as shown on Figure 5.18-4. Table 5.18-6 identifies the number of parcels and acreage of vacant land within the complaint risk area by county. While there are minimal noise complaints currently, future development in these areas may lead to more complaints, which could impact military operations. New development in these areas should be monitored and managed to ensure compatibility.

Table 5.18-6 Vacant Parcels within 115 PK15(met) NSA Crane Noise Complaint Risk Area

County	Number of Parcels	Number of Acres
Daviess	403	5,962.9
Greene	149	1,400.5
Martin	854	14,550.9

Source: Operational Noise Consultation for Naval Support Activity Crane, Indiana, September 30, 2013; State of Indiana, 2015; Matrix Design Group

As mentioned previously, Daviess County is the only jurisdiction within the moderate noise complaint risk area that has zoning. Table 5.18-7 shows the distribution of vacant land by zoning district within the noise complaint area. Most of this land is zoned agricultural, which is not likely to be impacted by noise. However, changes in the zoning districts (through zoning amendments) to facilitate development could allow incompatible use if developed as residential or with medical, religious, or education facilities. The zoning of vacant parcels in Daviess County is shown on Figure 5.18-5.

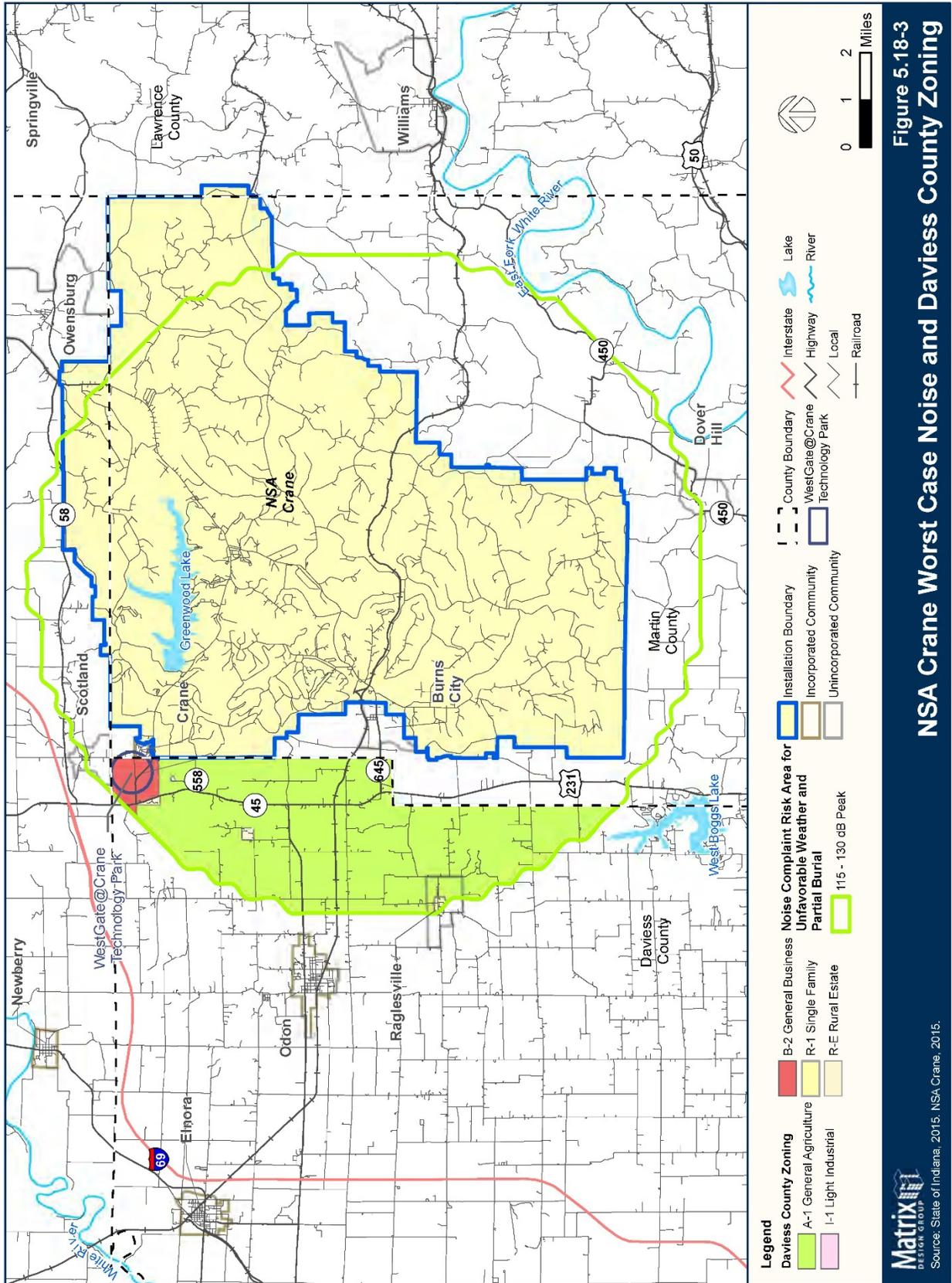
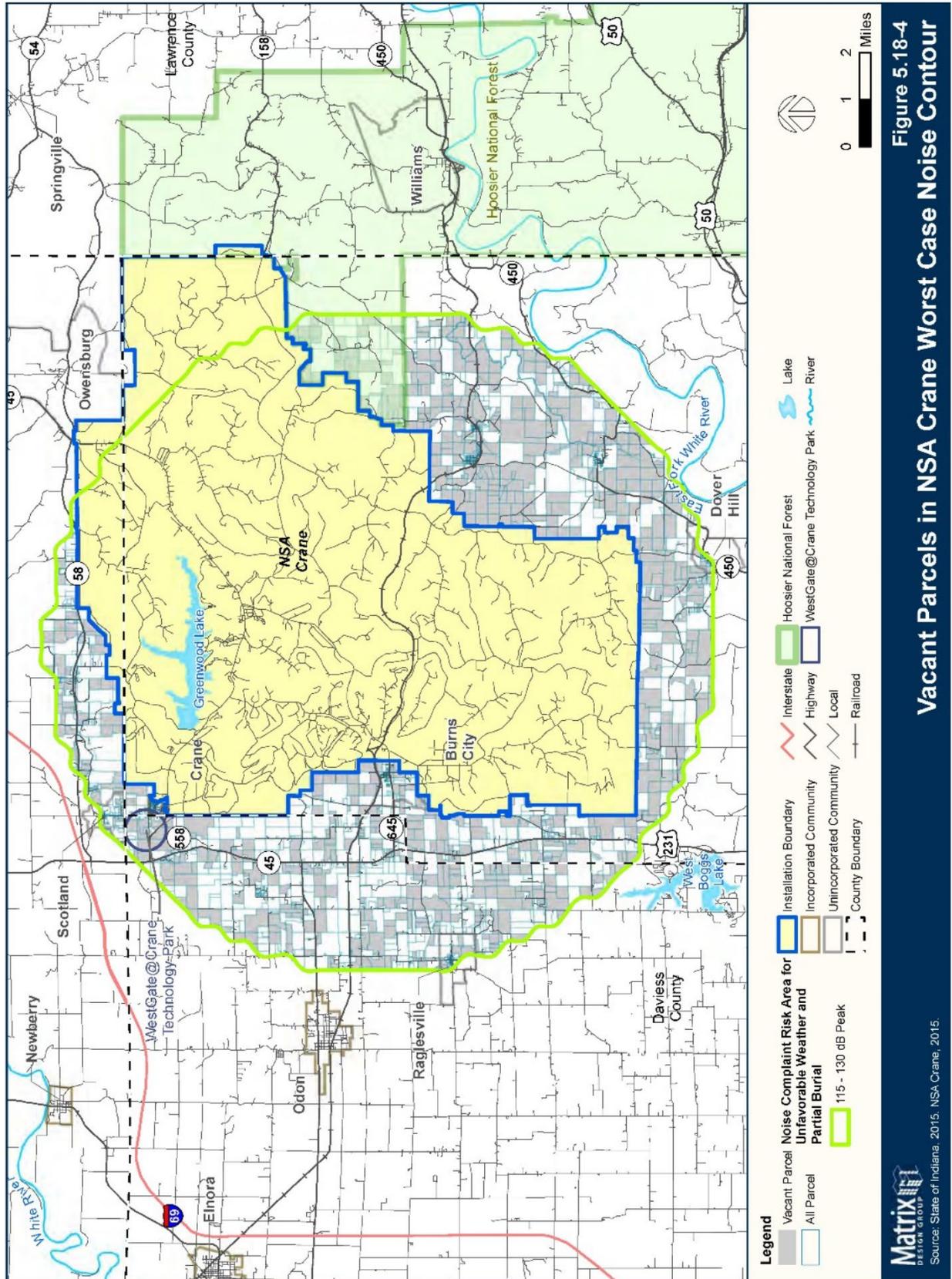


Figure 5.18-3
NSA Crane Worst Case Noise and Daviess County Zoning

Matrix DESIGN GROUP
Source: State of Indiana, 2015; NSA Crane, 2015.



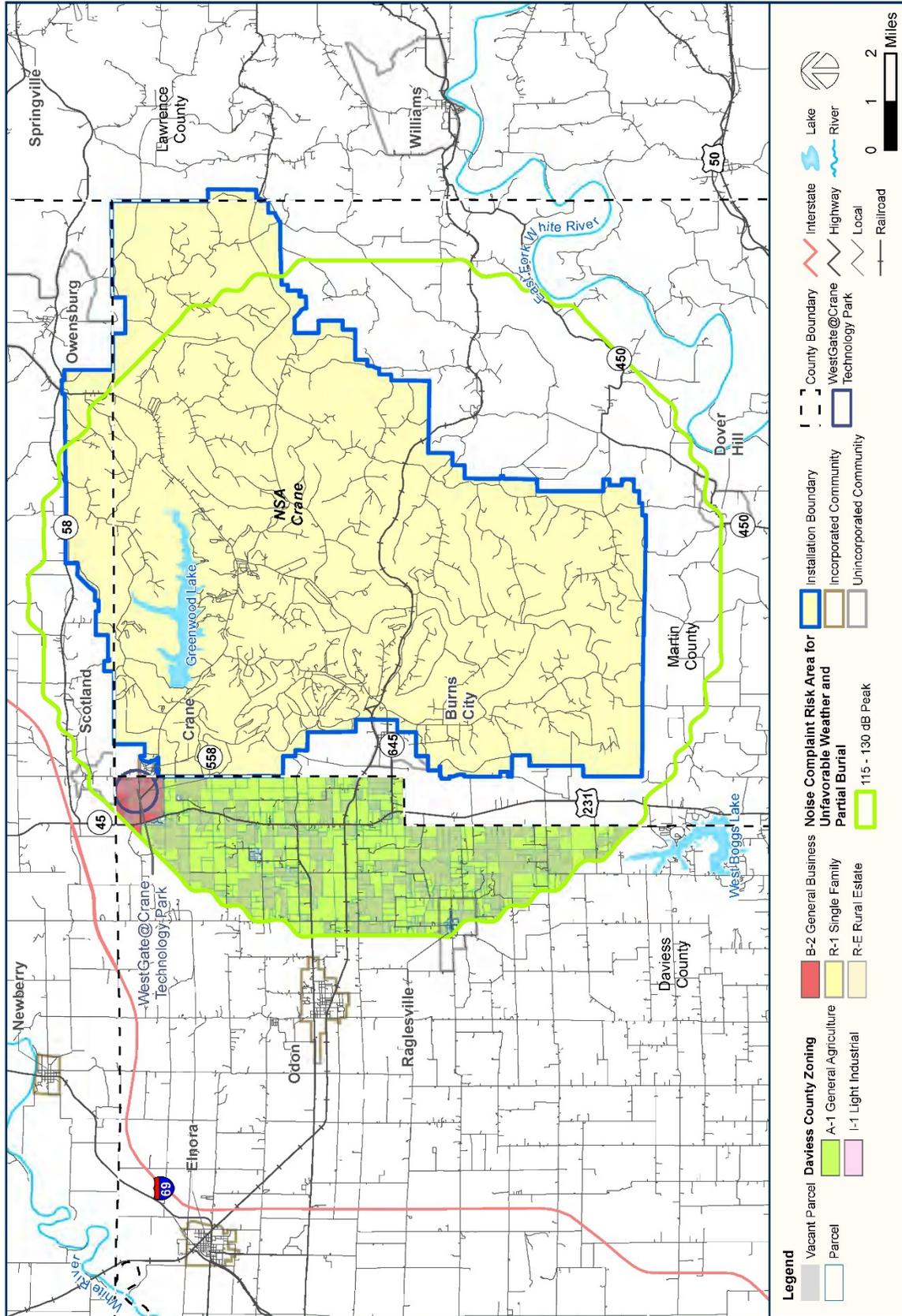


Figure 5.18-5
Vacant Parcels in NSA Crane Worst Case Noise and Davies County Zoning

Matrix DESIGN GROUP
 Source: State of Indiana, 2015; NSA Crane, 2015.

Table 5.18-7 Daviess County Zoning of Vacant Parcels within 115 PK15(met) NSA Crane Noise Complaint Risk Area

Zoning District	Number of Parcels	Number of Acres
I-1 Light Industrial	2	0.4
A-1 General Agriculture	334	5,489.5
B-2 General Business	30	431.5
R-1 Single Family	27	11.2
R-E Rural Estate	25	27.4

Source: Operational Noise Consultation for Naval Support Activity Crane, Indiana, September 30, 2013; Daviess County, 2013; State of Indiana, 2015; Matrix Design Group

Special Weapons Assessment Facility

Large and small caliber weapons firing training occurs at the Special Weapons Assessment Facility (SWAF) range, located in the northern portion of NSA Crane, approximately 0.75 miles south of the installation boundary.

Large Caliber Weapons

Under normal conditions (neutral weather), the risk of noise from large caliber weapons (larger than .50 caliber) at the SWAF is low and extends outside the installation to the north less than a tenth of a mile, with the potential to impact 4.8 acres. This area is within the lowest measured noise contours (57 dB CDNL). Because of the low incidence of noise, there is no prescribed land use guidance for this area.

Under unfavorable weather conditions, the moderate risk complaint area extends less than 0.5 miles beyond the northern boundary of NSA Crane. This area is within the 115-130 dB PK15 (met) noise contours where the sound is noticeable, distinct and may cause vibration or rattling. Because this area is within the Small Caliber Weapons impact area where noise impacts are greater, the emphasis of the compatibility analysis is focused on the noise impacts of small caliber weapons.

Small Caliber Weapons

Noise contours for small caliber weapons (those that are .50 caliber and below) are modeled using the US Army's noise simulation program called the Small Arms Range Noise Assessment Model. This program considers range layout, terrain, weapons firing points, and includes algorithms to account for weather conditions and wind that increases sound. Small caliber weapons noise is addressed via peak levels and has no assessment period.

Army regulations categorize noise into different zones, or noise contours, based on the level of noise within that zone. For the SWAF, noise was modeled as Zone II and Zone III. Zone III [noise greater than 104 dB PK15(met)], where no noise-sensitive uses are recommended, is located entirely within the boundaries of NSA Crane. As shown on Figure 5.18-6, Noise Zone II, with noise ranging from 87 to 104 dB PK15(met) for the SWAF extends past the northern boundary of NSA Crane up to 1.5 miles into unincorporated Greene County,

encompassing approximately 2,162 acres, including roughly four dozen scattered residential properties. Noise-sensitive land uses are strongly discouraged in Noise Zone II and all viable alternatives should be considered to limit development in Zone II to non-sensitive activities such as industry, manufacturing, transportation, and agriculture.

Though all military services recognize the importance of compatible land use with noise, only the Air Force has published specific land use compatibility guidelines for small caliber weapons noise based on the PK15(met) noise measurement in Air Force Instruction AFI 32-7063. Because the intent of the JLUS is to promote land use compatibility regardless of military service and because the recommendations are provided for local governments, the land use compatibility assessment for noise from small caliber weapons is based on these recommendations as a best practice.

Per the recommended land use compatibility prescribed by the Department of Defense, land uses which are compatible in Noise Zone II are amusements, fishing, mining, other resource production or extraction. Agriculture, livestock farming, animal breeding and forestry are considered compatible provided that any associated residential use achieves a noise level reduction (NLR) of 30 dB by incorporating noise attenuation in the design and construction of the structure.

Land uses which are considered incompatible in Noise Zone II include all residential uses except for transient lodging which is conditionally compatible provided a NLR of 25 dB is achieved by incorporating noise attenuation in the design and construction of the structure. Other uses considered incompatible with Noise Zone II include hospitals and other medical facilities; nursing homes; nature exhibits; public assembly facilities; outdoor music and sports facilities; outdoor recreation facilities such as golf courses, riding stables, and water recreation; resorts and group camps; parks; and "other" cultural, entertainment, and recreation uses not specifically listed in the table.

Several non-residential uses are conditionally compatible provided a NLR reduction of 25 dB is achieved in public spaces by incorporating noise attenuation in the design and construction of a structure, including:

- Manufacturing (except for facilities with professional scientific and controlling instruments; photographic and optical goods; watches and clocks, which achieve a NLR of 25 dB throughout the structure).
- Transportation and communication utilities (except for communication and other transportation, communication and utilities not listed in the table that achieve a NLR of 25 dB throughout the structure).
- Wholesale trade (all other trade and retail achieving a NLR of 25 dB throughout the structure).
- Services (except for finance, insurance, and real estate services; personal services; business services; professional services; contract construction services; and government services, which achieve a NLR of 25 dB throughout the structure).

Indiana || Military Compatible Planning Advisory Handbook

Non-residential uses including education facilities, childcare facilities, miscellaneous services, and religious facilities are considered conditionally compatible provided a NLR of 35 dB is achieved by incorporating noise attenuation in the design and construction of the structure.

Existing Land Use

Existing land uses within Noise Zone II were analyzed to determine compatibility relative to recommended use guidelines. Existing land uses considered incompatible within Noise Zone II are considered nonconforming though they may continue to be impacted by small caliber noise from NSA Crane. Figure 5.18-6 shows the geographic distribution of land uses in Noise Zone II, while Table 5.18-9 provides a breakdown of these existing land uses. Most of the land within Zone II is agriculture which is considered compatible with the land use guidelines. The institutional use within this zone is the Pleasant Kentucky Ridge Baptist Church at the intersection of State Road 58 and Black Ankle Rd. Due to the age of this facility, it is unlikely constructed with sound attenuation to achieve a NLR of 35 dB, making it incompatible but nonconforming.

As previously noted, approximately 50 residences are within Noise Zone II which are considered incompatible uses. These uses are primarily located within the first quarter of a mile from the northern NSA Crane boundary, making them more prone to noise exposure than other areas in Noise Zone II.

While no complaints have been documented within Noise Zone II, future development of noise sensitive uses in this area may lead to complaints, which could impact military operations. New development in these areas should be monitored and managed to ensure compatibility.

Table 5.18-9 Existing Land Use within Noise Zone II

Existing Land Use	Number of Parcels	Number of Acres
Agriculture	87	2,053.8
Institutional	6	3.49
Residential: Unspecified	15	19.8
Residential: Single Family	23	47.6
Total	131	2,124.8

Source: Operational Noise Consultation for Naval Support Activity Crane, Indiana, September 30, 2013; State of Indiana, 2015; Matrix Design Group

Vacant Parcels

There are 45 vacant parcels comprising approximately 983 acres in Noise Zone II as shown on Figure 5.18-6. All these parcels currently contain agricultural uses and no structural improvements. The type of development that occurs in the future may be incompatible with noise if developed with noise-sensitive uses.

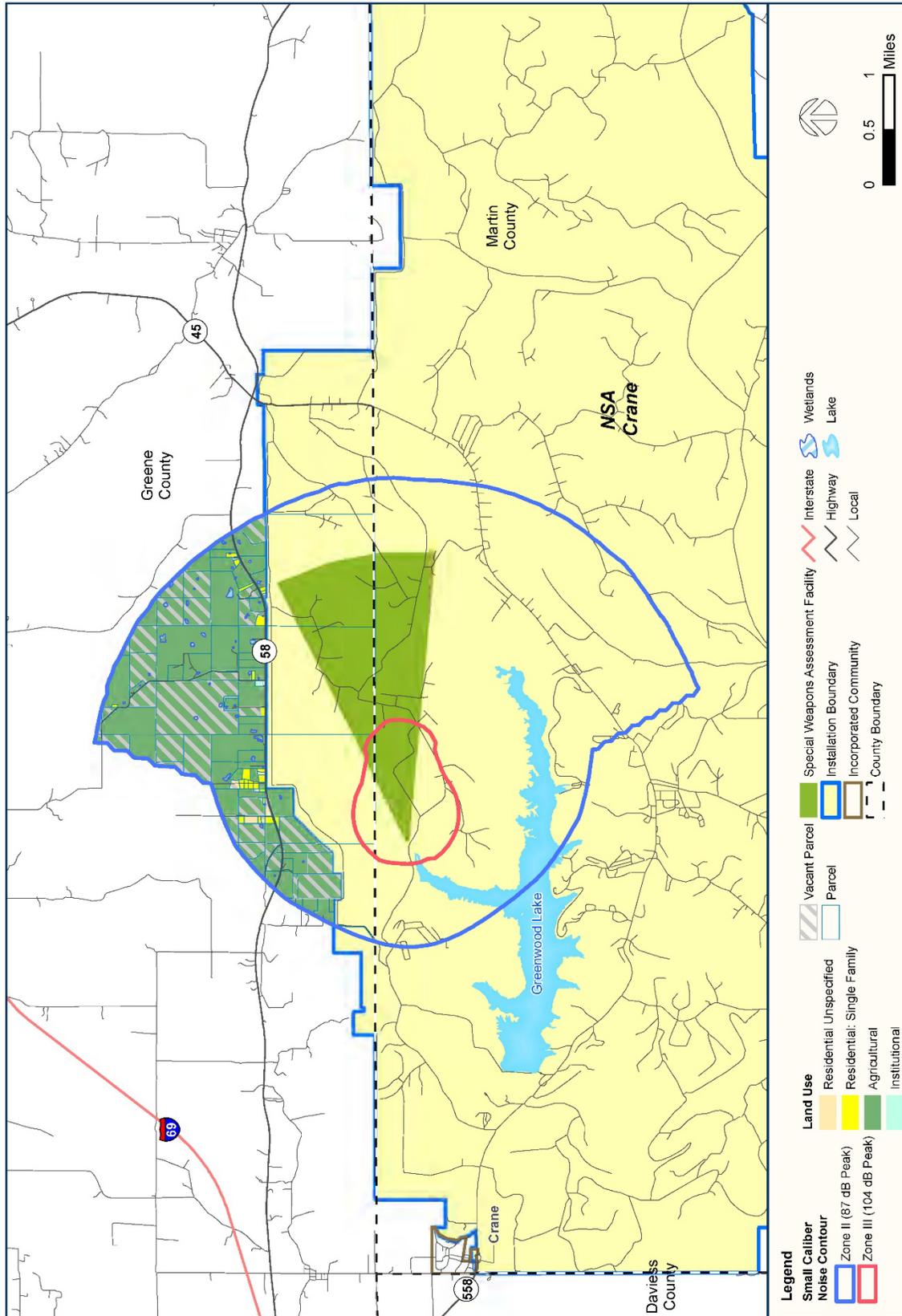


Figure 5.18-6
Small Caliber Weapons Noise and Vacant Parcels NSA Crane

Matrix
 DESIGN GROUP
 Source: State of Indiana, 2015; NSA Crane, 2015.

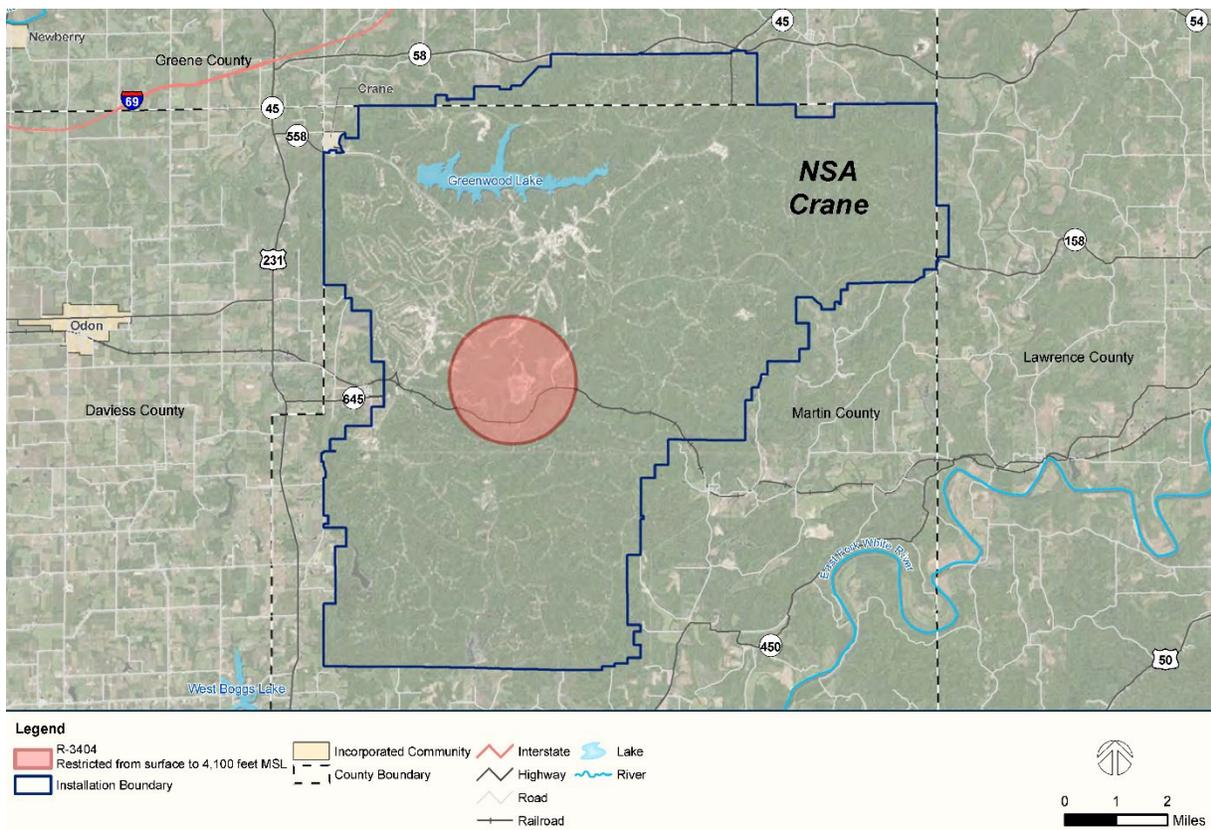
2.3.8.4. Managed Airspace

Special Use Airspace

Restricted Airspace

While NSA Crane does not have an airfield, the FAA has established restricted airspace over the demolition range to protect aircraft from blast fragments generated during demilitarization. Restricted Area R-3404, restricts airspace above the CAAA Demolition Range at NSA Crane. The restricted area covers a 2-mile diameter from the center of the blast area and extends from the surface up to and including 4,100 Mean Sea Level (MSL). This area is depicted on Figure 2-20.

Additionally, NSA Crane has a separate Certificate of Authorization from the FAA to operate small unmanned aircraft systems (sUAS) within shared airspace within/above the entire installation up to 1,200 feet AGL.



2.3.9. Naval Support Activity (NSA) Crane – Lake Glendora Test Facility

As at NSA Crane, operations at the Lake Glendora Test Facility can impact areas outside the installation and affect public health, safety, and welfare or be impacted by nearby civilian development. LGTF's mission footprint is primarily associated with underwater detonations and includes explosives safety areas, noise contours, as well as Special Use Airspace.

Underwater Detonations at Lake Glendora are anticipated to increase in frequency for OPTEMP increase of Platform/Shock Testing within the current approvals of the North Range limits supporting DoD and Fleet Testing requirements.

2.3.9.1. Live Fire/Explosives Safety Areas

Explosive Safety Quantity Distance Arcs

ESQD arcs at the LGTF are associated with the storage of ammunition that is used in underwater detonations. All ESQD arcs are contained within the installation boundaries.

2.3.9.2. Noise Zones

CDNL Noise Contours

CDNL Noise Zones have not been delineated for the LGTF due to the infrequency of detonations (averaging only 8-10 per year) and the low net explosive weight (NEW) of the charges used at the facility. The depth of water in which detonations occur also greatly diminishes noise impacts and concomitantly reduces the risk of noise complaints.

PK15 (met) Noise Contours

PK15 (met) noise level data that were extrapolated from the impact measurements of significantly larger NEW charges than routinely used at the LGTF¹⁶ indicate land uses within 0.5 miles of the LGTF could be exposed to noise levels near 109 dB PK15 (met) from charge weights of 7.5 lbs. This is consistent with the lack of noise complaints from underwater detonations.

The extrapolated noise levels further indicate that the minimum PK12 (met) noise level associated with a moderate risk of complaint, would only be experienced 0.5 miles from the LGTF with 30 lb. charges; noise levels associated with a moderate risk of complaints would only be experienced one (1) mile from the LGTF with 60 lb. charges. The area within a half mile of the LGTF is mostly forested with some agricultural uses and scattered residential properties. The area within one (1) mile is similar but includes residences along the eastern shore of Lake Sullivan.

2.3.9.3. Noise Zone Compatibility

The following noise zone compatibility assessment and maps are provided "as is" from the 2017 Joint Land Use Study for NSA Crane.

¹⁶ Operational Noise Assessment for Naval Support Activity Crane, 2013

Noise From Lake Glendora Test Facility

The Lake Glendora Test Facility (LGTF) is located approximately 30 miles northwest of NSA Crane focused on a 100-foot deep 100-acre lake used for on or above the surface and underwater testing. Most of the land surrounding the facility is forest or agriculture, but there is scattered residential development nearby, and the City of Sullivan is approximately two miles to the west. The preponderance of noise generated at the LGTF is generated from underwater testing. Underwater detonations at the LGTF are conducted approximately eight to ten times per year. However, the Net Explosive Weight (NEW) is generally five lbs. and below. The minimum depth for all explosive events is ten feet. The depth capabilities at the lake ensure higher charge weights can be detonated well below the required depths to contain blast and fragmentation hazards. This in turn diminishes audible noise or disturbance to the public. Detonations are also conducted at the LGTF on or just above the surface of the lake. These events on average occur four times per year and may include multiple tests typically of 3 lbs. NEW. Due to this infrequency in events, CDNL noise contours have not been established. Using estimates for peak noise levels at certain distances from a noise source, estimated noise contours for 123 dB (at half a mile) and 117 dB (at one mile) based on information provided in the 2013 NSA Crane Noise Consultation.

Existing Land Use

Within half a mile of the LGTF, agriculture is the predominant existing land use, as illustrated on Figure 5.18-7, which is generally compatible with the predicted 123 dB noise contour. Agricultural land may allow for development of residential units, which would possibly be incompatible if not constructed with sound attenuation measures. There is a pocket of residential outside the northwestern boundary of the LGTF, which could be impacted by noise. Table 5.18-10 identifies the number of parcels by land use and corresponding acreage within half a mile of the LGTF.

Table 5.18-9 Existing Land Use within Noise Zone II

Existing Land Use	Number of Parcels	Number of Acres
Agriculture	87	2,053.8
Institutional	6	3.49
Residential: Unspecified	15	19.8
Residential: Single Family	23	47.6
Total	131	2,124.8

Source: Operational Noise Consultation for Naval Support Activity Crane, Indiana, September 30, 2013; State of Indiana, 2015; Matrix Design Group

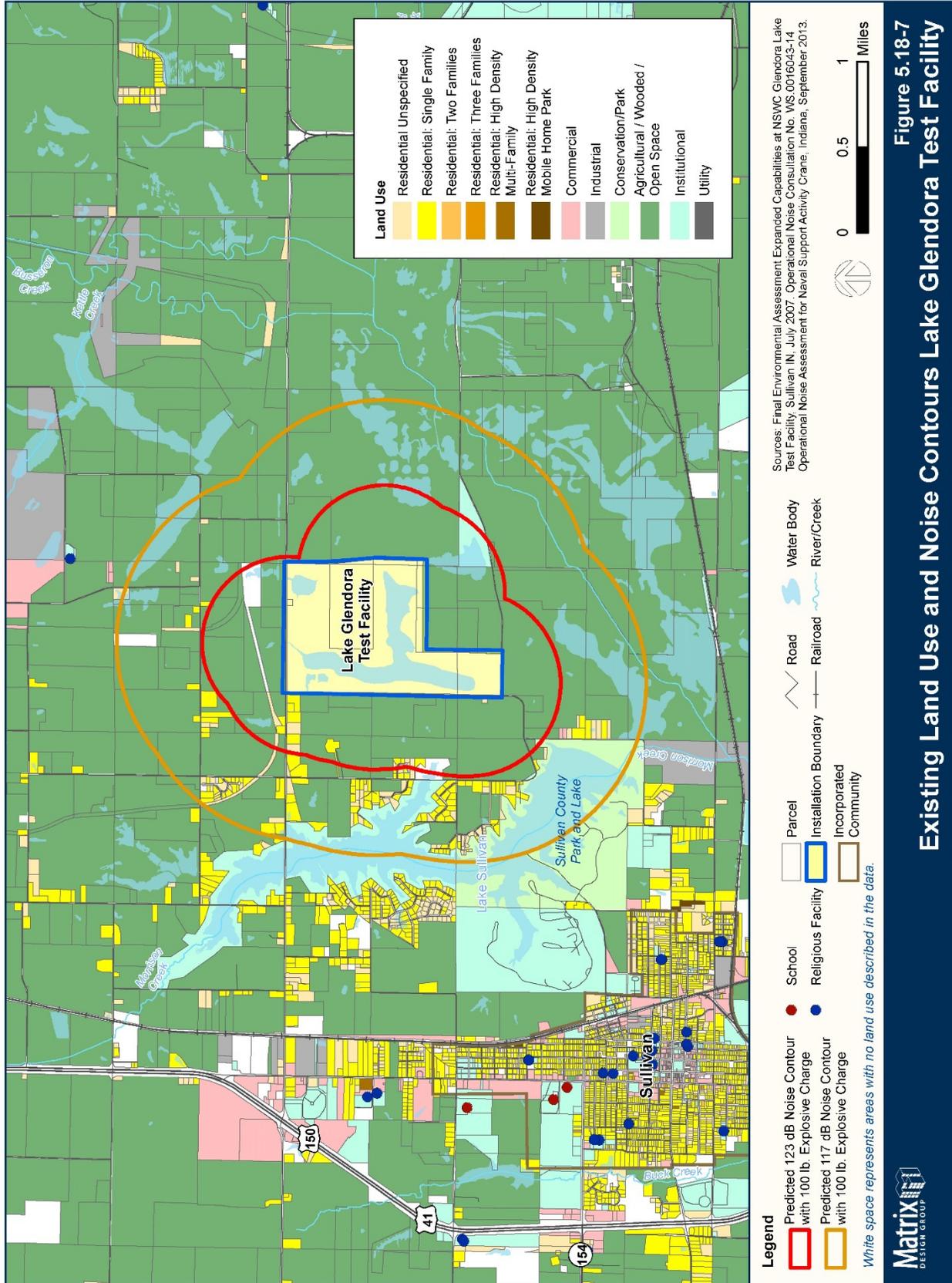


Table 5.18-10 Existing Land Use within the Predicted 123 dB Noise Contour for Lake Glendora Test Facility

Existing Land Use	Number of Parcels	Number of Acres
Agricultural	50	1067.9
Commercial	4	2.7
Institutional	1	26.6
Residential: Unspecified	12	14.0
Residential: Single Family	18	21.3

Source: Operational Noise Assessment for Naval Support Activity Crane, Indiana, September 30, 2013; State of Indiana, 2015; Matrix Design Group

Though the area from half a mile to one mile around the LGTF is primarily agricultural, single-family residential development has occurred around Sullivan Lake to the west, which could be impacted by noise events. There is some land identified as commercial to the southeast, but it is not heavily developed and not likely to be impacted by noise events. Table 5.18-11 shows the distribution of land use by acres from half a mile to one mile away from the LGTF, within the predicted 117 dB noise contour.

There are no existing schools or religious facilities within one mile of the LGTF, but there is religious facility within 1.5 miles north of the facility. This is outside of the predicted noise contours but may still be impacted from noise events depending on factors such as weather. Additionally, there are many schools and religious facilities a few miles to the west of the LGTF, in the City of Sullivan.

Table 5.18-11 Existing Land Use within the Predicted 117 dB Noise Contour for Lake Glendora Test Facility

Existing Land Use	Number of Parcels	Number of Acres
Agricultural	76	1498.0
Commercial	12	229.6
Institutional	6	135.4
Residential: Unspecified	84	131.1
Residential: Single Family	125	134.6
Unknown	3	11.8

Source: Operational Noise Assessment for Naval Support Activity Crane, Indiana, September 30, 2013; State of Indiana, 2015; Matrix Design Group

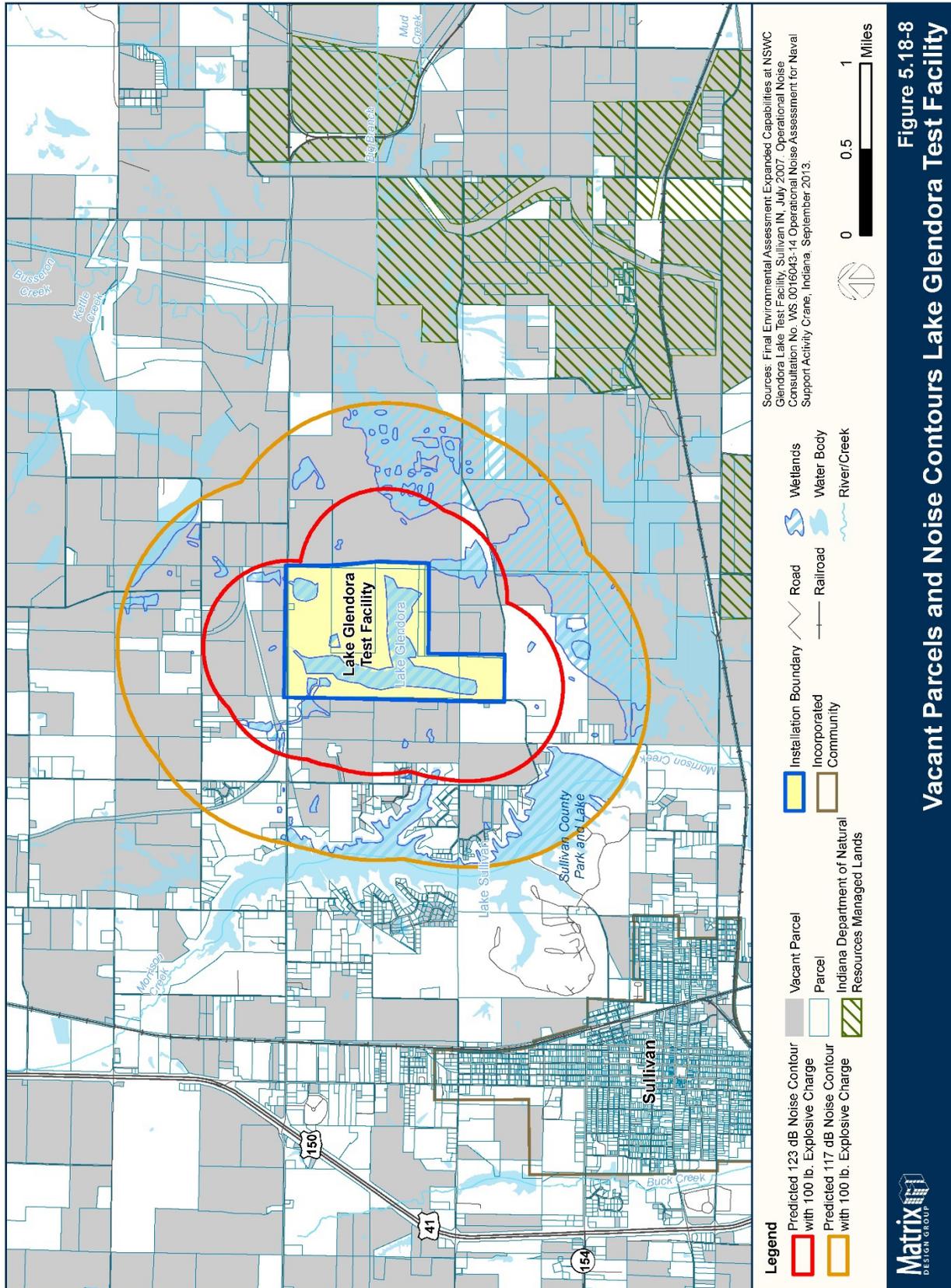
Vacant Parcels

As mentioned, most of the existing land within the predicted 117 dB and 123 dB noise contours is agricultural, which is generally compatible. Much of this land is considered vacant since there are no structural improvements on the properties. Vacant land is compatible with the noise contours, but future compatibility will be dependent on whether development occurs, and the types of uses developed. Since there is no zoning within the noise contours, predicting future land uses within this area would only be speculation. Figure 5.18-8 indicates that most of the land within the noise contours is vacant. Table 5.18-12 identifies the number of parcels and amount of vacant land within the two noise contours.

Table 5.18-12 Vacant Parcels within the predicted 117 dB and 123 dB Noise Contours for Lake Glendora Test Facility

Noise Contour	Number of Parcels	Number of Acres
117 dB	129	1,475.8
123 dB	50	854.2

Source: Operational Noise Assessment for Naval Support Activity Crane, Indiana, September 30, 2013; State of Indiana, 2015; Matrix Design Group



2.3.9.4. Managed Airspace

Special Use Airspace

Restricted Airspace

The FAA has established restricted airspace over the LGTF, with R-3405 extending from the surface of the property up to and including 1,600 feet MSL (Figure 2-21). Flight restrictions are activated a handful of times now annually for a variety of testing activities to include UAS activities and other mission testing as applicable. The capability supports critical testing of new technologies and other operations. The airspace has been used to deploy radar, cameras, and other sensor packages via a tethered aerostat balloon.

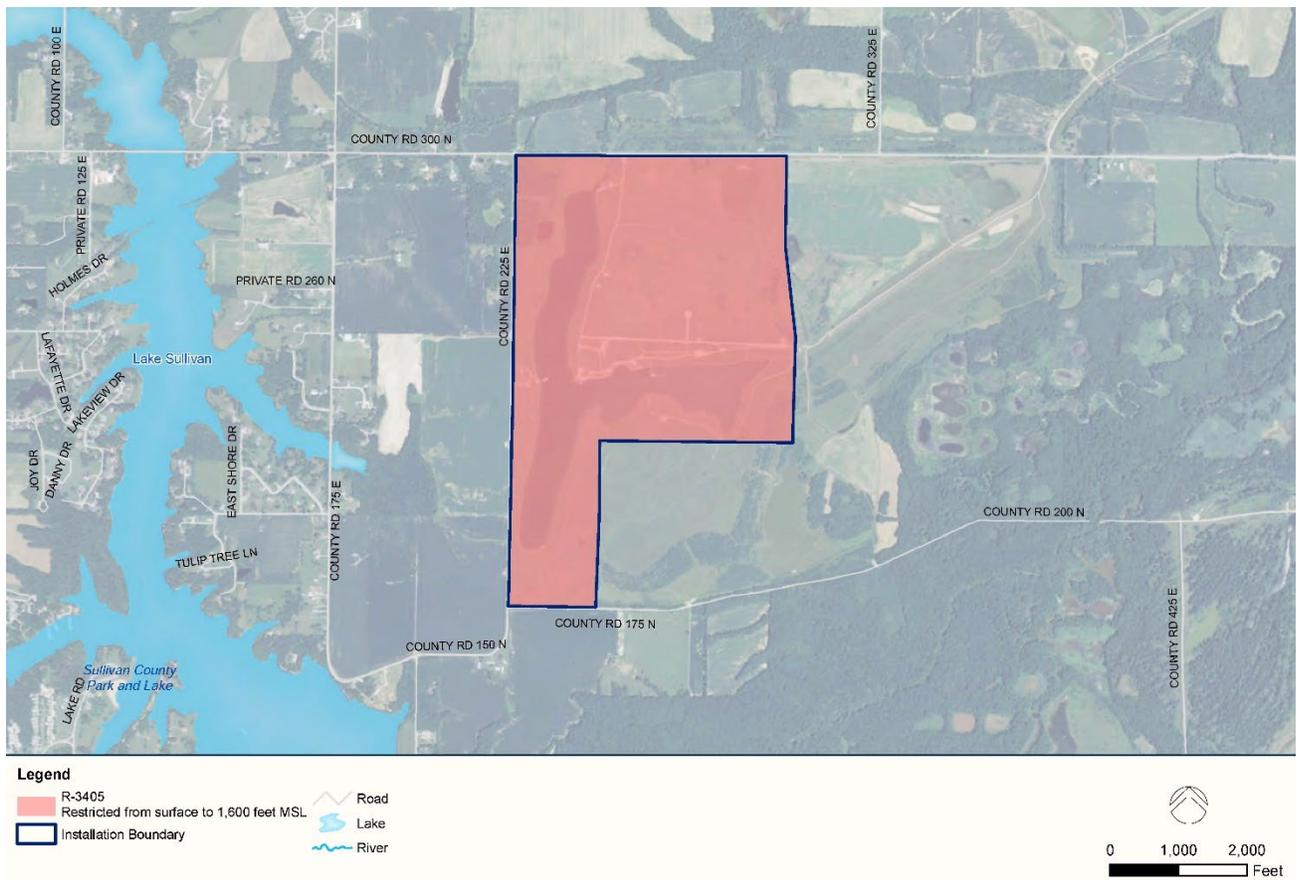


Figure 2-21 Restricted Airspace at NSA Crane – Lake Glendora Test Facility

2.3.10. Baer Field (at Fort Wayne International Airport)

2.3.10.1. Airfield Safety Zones

The Runway Protection Zones (civilian airport airfield safety zones) for Fort Wayne International Airport are not available.

2.3.10.2. Airfield Imaginary Surfaces

The Airfield Imaginary Surfaces for Fort Wayne International Airport are not available.

2.3.10.3. Live Fire/Explosives Safety Areas

There are no live fire/explosives safety areas at the Indiana National Guard at Fort Wayne International Airport.

2.3.10.4. Noise Zones

The Noise Zones for Fort Wayne International Airport are not available.

2.3.10.5. Managed Airspace

Controlled Airspace

Class C airspace has been established around Fort Wayne International Airport to manage air traffic and extends from the surface up to 4,000 feet above mean sea level (MSL) within a 10-nautical mile (NM) radius around the airport.

Special Use Airspace

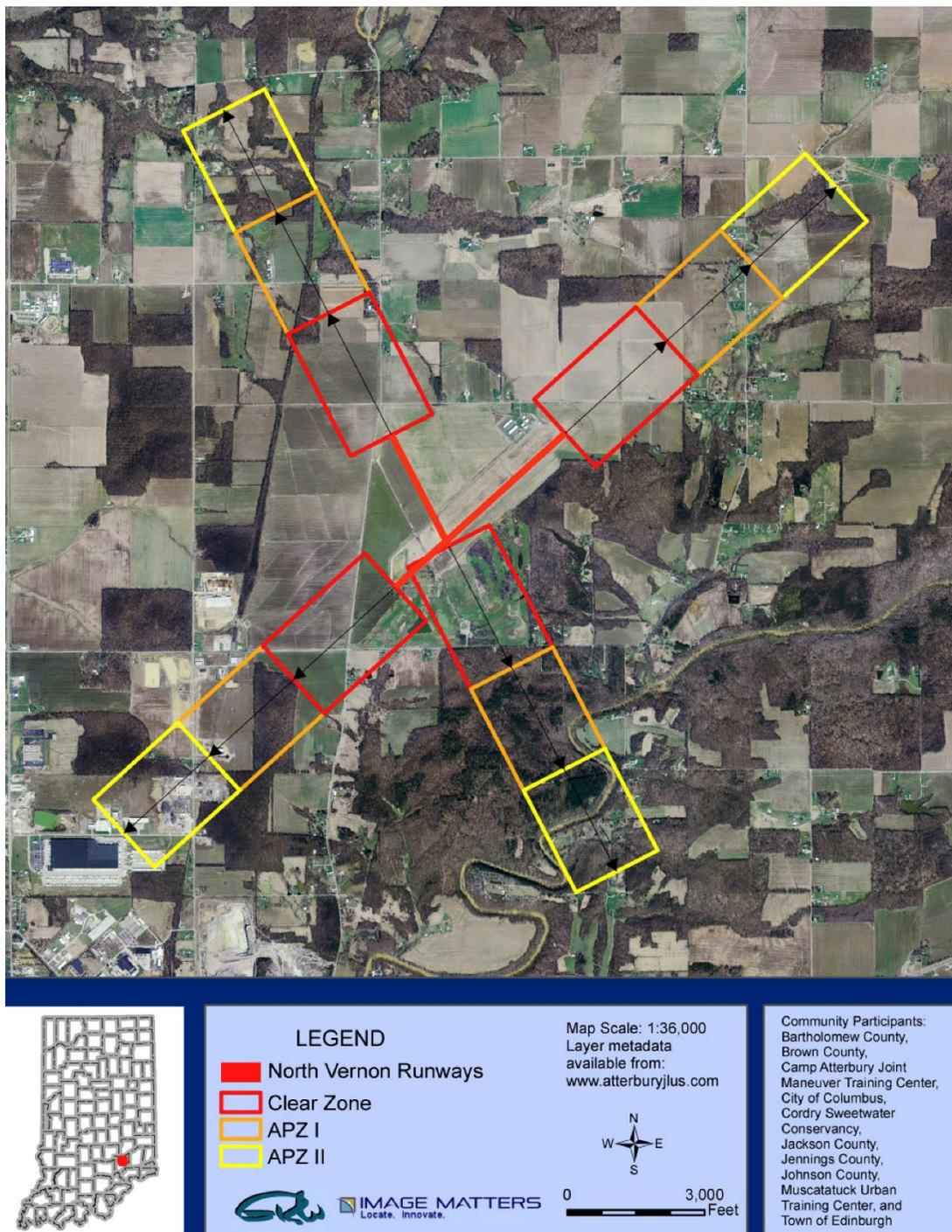
There is no Special Use Airspace for the Fort Wayne International Airport.

2.3.11. Camp Atterbury

2.3.11.1. Airfield Safety Zones

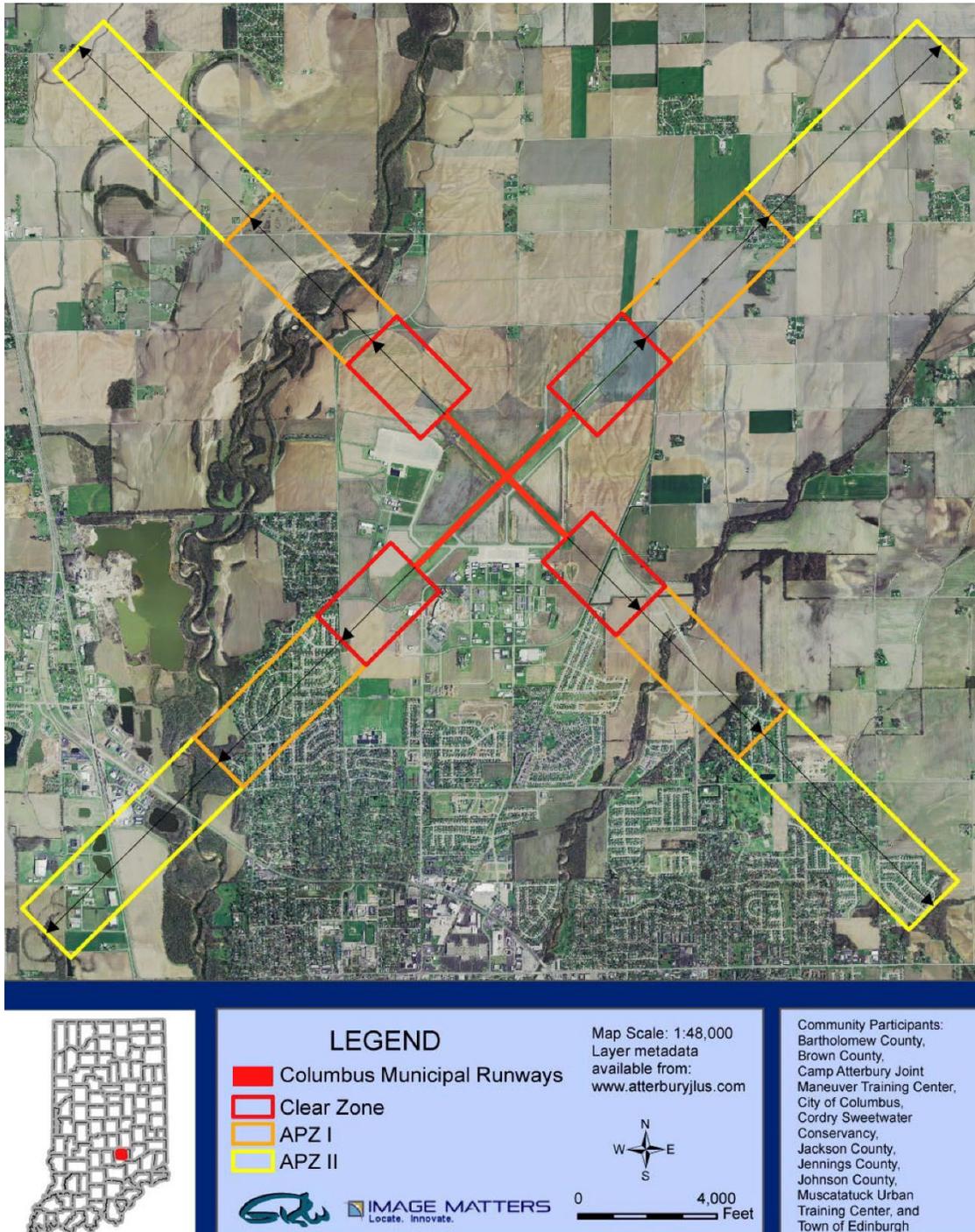
As discussed in Section 2.3.1, areas immediately beyond the ends of military runways and below approach and departure paths are where aircraft accidents are statistically most likely to occur if they occur. Consequently, defining where accident potential zones extend beyond installation perimeters is critical to mitigating existing and potential impacts associated with civilian development in higher risk areas.

Accident potential is greatest in CZs, followed by APZ and APZ II. These areas are illustrated on maps prepared from the 2009 Camp Atterbury JLUS for the North Vernon Airport, Columbus Municipal Airport, and Seymour Freeman Field Municipal Airport used by the Indiana National Guard on Figures 2-22, 2-23, and 2-24 respectively.



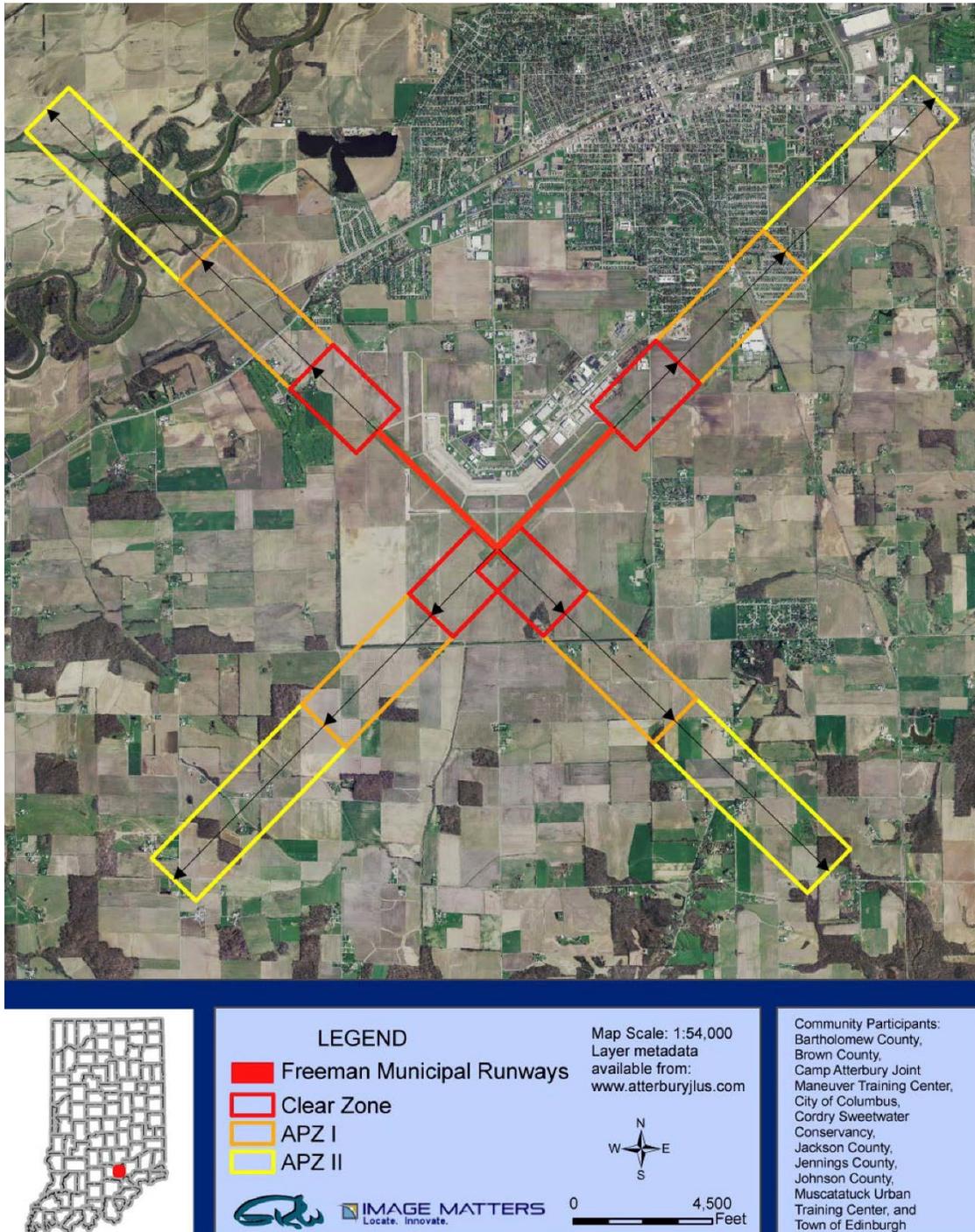
Source: Camp Atterbury and Muscatatuck Urban Training Center Joint Land Use Study August 2009

Figure 2-22 Airfield Safety Zones – North Vernon Airport



Source: Camp Atterbury and Muscatatuck Urban Training Center Joint Land Use Study August 2009

Figure 2-23 Airfield Safety Zones – Columbus Municipal Airport



Source: Camp Atterbury and Muscatatuck Urban Training Center Joint Land Use Study August 2009

Figure 2-24 Airfield Safety Zones – Seymour Freeman Field Municipal Airport

2.3.11.2. Airfield Safety Zone Compatibility

The following airfield safety zone compatibility assessment and maps are provided “as is” from the 2009 Joint Land Use Study for Camp Atterbury and MUTC.

Local Airports, as discussed previously, are used in several military capacities. To address the compatibility of land uses in and around local airports, the study determines the air safety zones based on military air safety zone standards. Clear zones and accident potential zones are defined below followed by an analysis of current and potential incompatibilities. Maps 4-1-3-2, 4-1-3-4 and 4-1-3-6 show each airport, Columbus, North Vernon, and Seymour, with safety zones overlaid with the land cover.

Clear Zone (CZ). The CZ for a Class A runway is an area 1,000 feet wide by 3,000 feet long at the immediate end of the runway. The CZ for a Class B runway is an area 1,000 feet wide by 3,000 feet long at the immediate end of the runway.

Accident Potential Zone I (APZ I). APZ I is less critical than the Clear Zone but still possesses significant potential for accidents. The APZ I is just beyond the CZ, forming an area that is 1,000 feet wide by 2,500 feet long for a Class A runway and 1,000 feet wide by 5,000 feet long for a class B runway. A wide variety of industrial, manufacturing, transportation, open space and agricultural uses can exist safely in this zone, though activities that concentrate people are not compatible.

Accident Potential Zone II (APZ II). APZ II is the least critical of the three air safety zones, but still carries some risk of an accident. APZ II is 1,000 feet wide and extends 2,500 feet beyond APZ I for a Class A runway and is 1,000 feet wide by 7,000 feet long for a Class B runway. Compatible land uses include those of APZ I, as well as low density single family residential, and lower intensity commercial activities. High density functions such as multi-story buildings and places of assembly, however, raise compatibility issues.

The following table, Table 4-1-3-1, outlines the guidelines established by The Department of Defense that show the recommendations for land uses within each safety zone. Land uses within a specific safety zone may be compatible, conditionally compatible, or incompatible. The information is meant to assist local communities to promote compatible development with airfield operations.

Table 4-1-3-1: Safety Zone Land Use Compatibility

Land Use	APZ II	APZ I	Clear Zone
Rural, single-family residential (less than one dwelling unit per acre)	○	●	●
Urban and suburban residential (one or more dwelling unit per acre)	●	●	●
Public rights-of-way	○	○	▲
Assembly areas: schools, churches, libraries, auditoriums, sports arenas, preschools, nurseries, and restaurants	●	●	●
Hospitals and nursing homes	●	●	●
Office, retail (high concentrations of people are more likely to be considered incompatible)	▲	▲	●
Wholesale stores/manufacturing/industrial	○	▲	●
Outdoor uses: playgrounds, neighborhood parks, golf courses, riding stables (spectator sports are usually considered incompatible)	○	▲	●

○ Compatible	▲ Conditionally Compatible	● Incompatible
--------------	----------------------------	----------------

Source: “What are Accident Potential Zones?” <http://chppm-www.apgea.army.mil>

Indiana || Military Compatible Planning Advisory Handbook

As shown in Maps 4-1-3-2, 4-1-3-4 and 4-1-3-6, the safety zones at the airports, Columbus Municipal, North Vernon Municipal, and Freeman Municipal Airports extend into the surrounding communities. Areas of concern are:

Columbus Municipal

- The safety zone extending to the southwest includes uses that are incompatible, including single family residential in both the CZ and APZ I.
- Developed land exists in APZ II of the same safety zone. It appears to be light industrial and is therefore compatible.
- The safety zone extending to the southeast includes uses that are incompatible, including a small development of single-family homes in APZ I.
- The safety zone extending to the northeast includes the Town of Clifford, which contains land uses that are conditionally compatible, including rural residential in both APZ I and II.

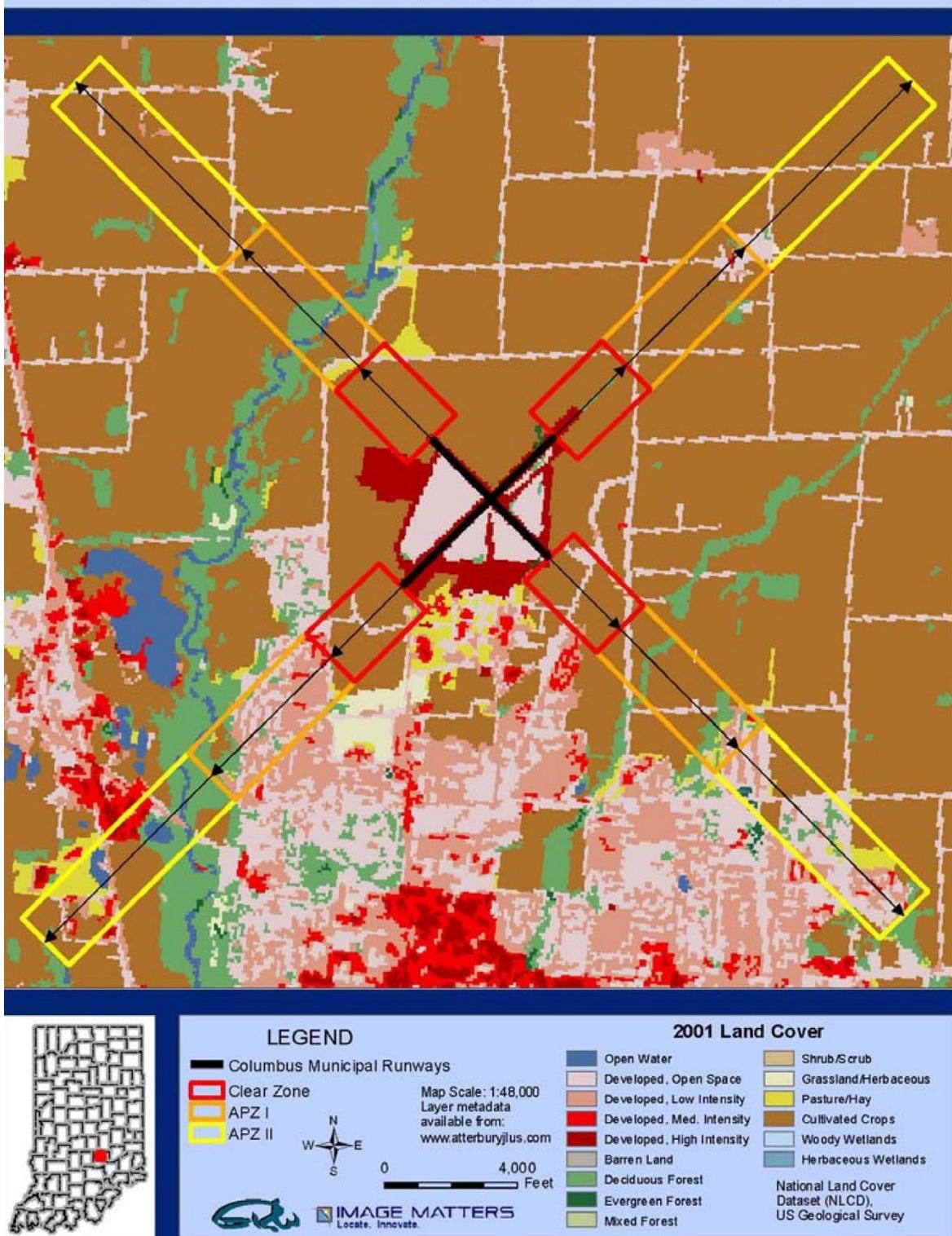
North Vernon Municipal

- The safety zone extending to the northeast includes uses that are incompatible, including rural residential in APZ I.

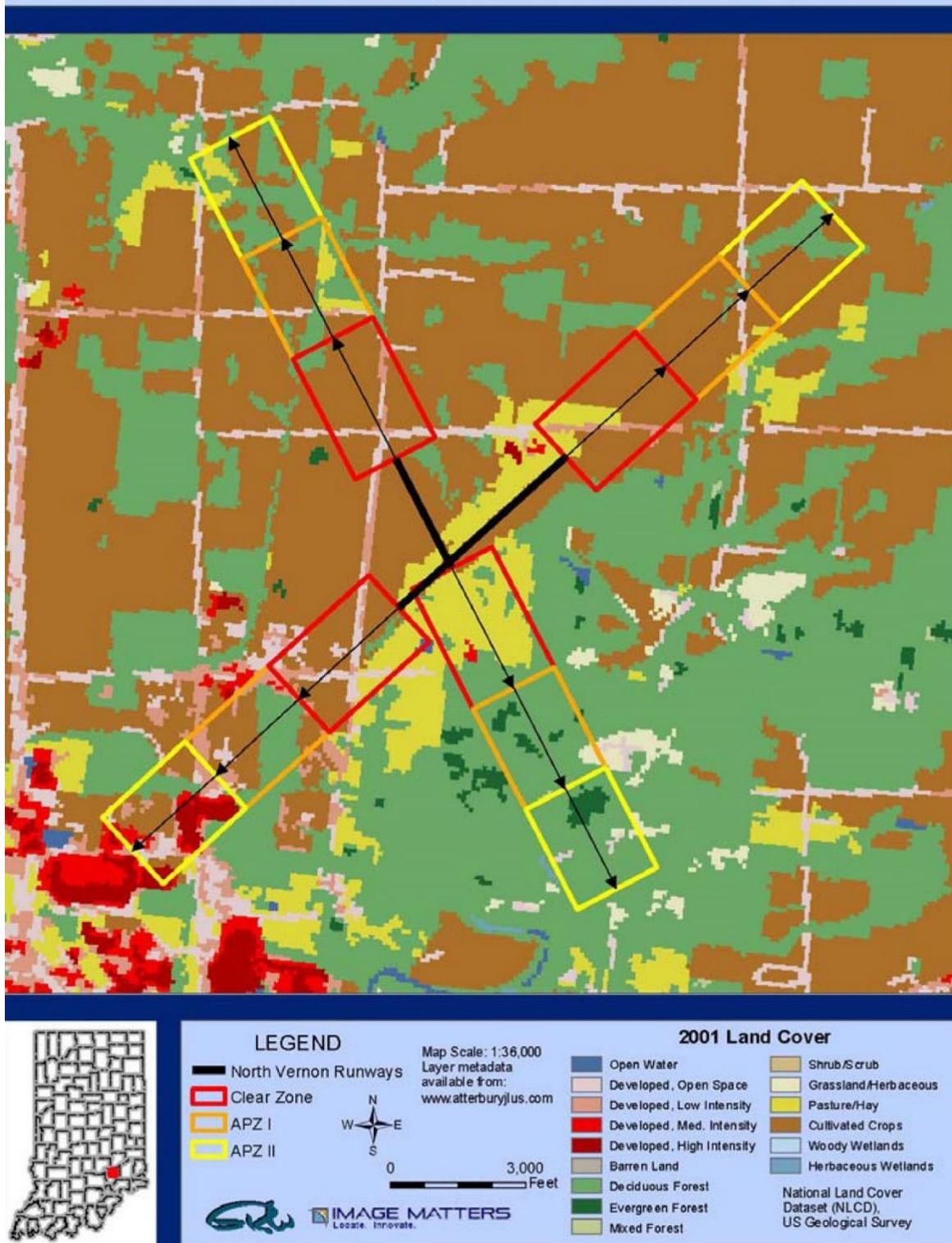
Freeman Municipal

- The safety zone extending to the northwest includes a potentially incompatible proposed housing development that has been approved in the clear zone on a parcel that was formerly a golf course. It shows as a green area on Map 3-4-4 northwest of the airport runway.
- The safety zone extending to the northeast includes uses that are incompatible, including suburban, single family residential in both APZ I and APZ II, and development in the CZ.
- The same safety zone (northeast) includes a public right of way that is conditionally compatible as it passes through the CZ.

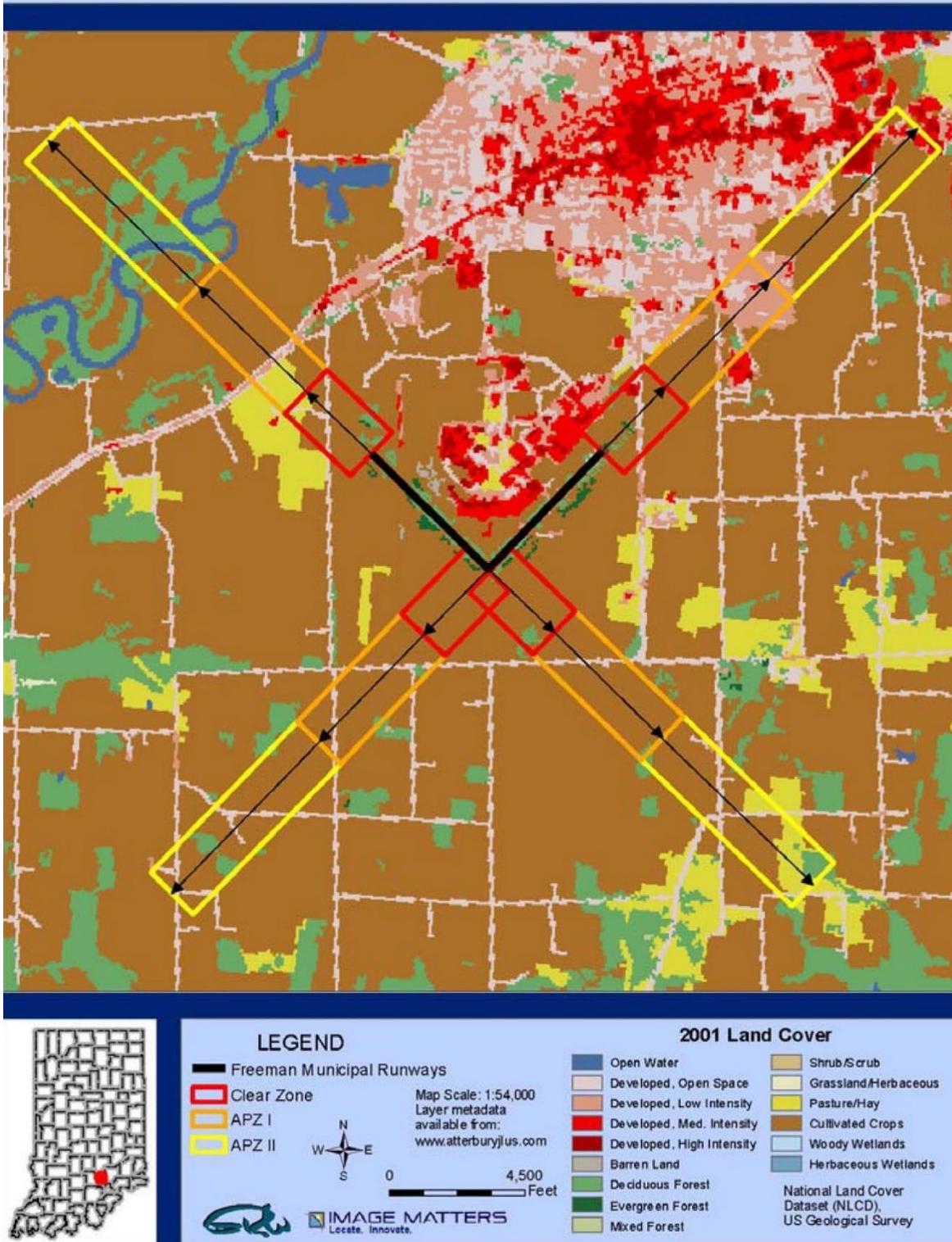
Map 4-1-3-2: Columbus Municipal Airport (BAK) Land Use, Atterbury JLUS



Map 4-1-3-4: North Vernon Municipal Airport (OVO) Land Use, Atterbury JLUS



Map 4-1-3-6: Seymour Freeman Municipal Airport (SER) Land Use, Atterbury JLUS



2.3.11.3. Airfield Imaginary Surfaces

The Airfield Imaginary Surfaces for the North Vernon Airport, Columbus Municipal Airport, and Seymour Freeman Field Municipal Airport are not available.

2.3.11.4. Live Fire/Explosives Safety Areas

There are no live fire/explosives safety areas at Camp Atterbury.

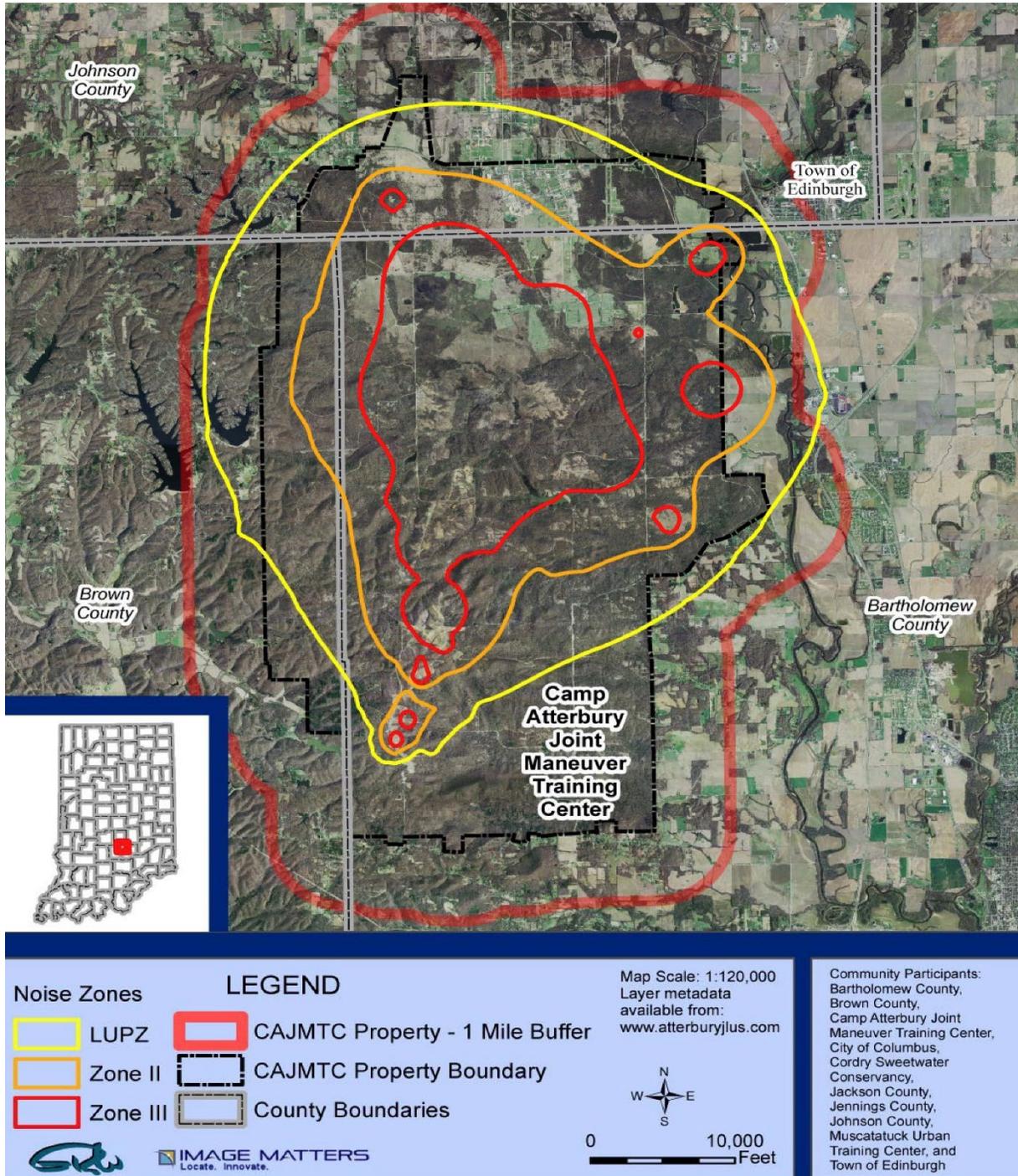
2.3.11.5. Noise Zones

The military utilizes a methodology for analyzing exposure to noise hazards associated with military operations and provides land use guidelines for achieving compatibility between the military installations and surrounding communities. The noise impact on the community is translated into noise zones. There are four noise zones:

- Land Use Planning Zone (LUPZ). Compatible for noise-sensitive land uses and can be used to better predict noise impacts when levels of operations are above average.
- Noise Zone I. Conditionally compatible for noise sensitive land uses but not considered in the 2009 JLUS because the LUPZ incorporates significant elements of Noise Zone I.
- Noise Zone II. Normally incompatible for noise-sensitive land uses.
- Noise Zone III. Incompatible for noise-sensitive land uses.

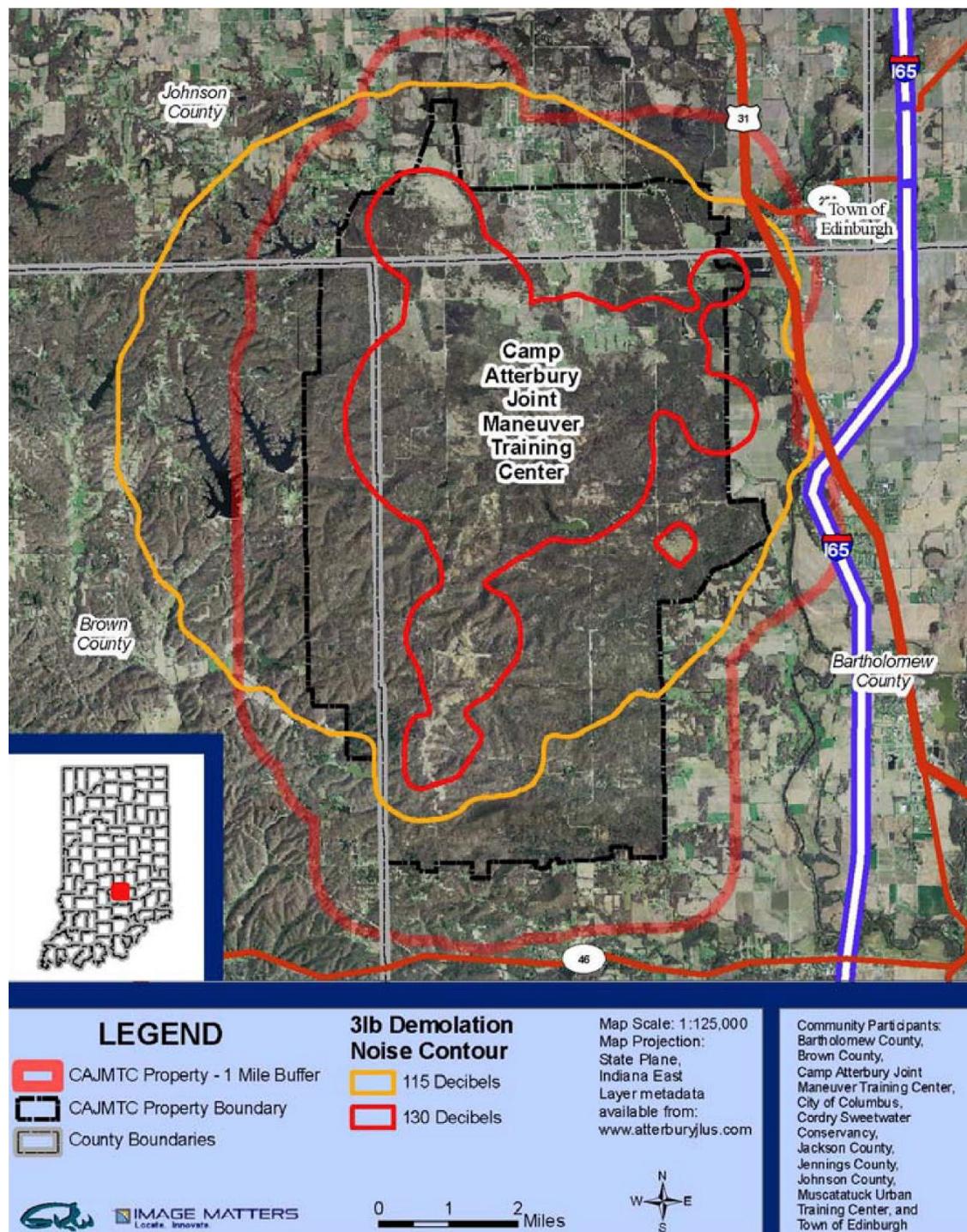
The noise zones at Camp Atterbury are shown on Figures 2-25 and 2-26.

The Noise Zones for the North Vernon Airport, Columbus Municipal Airport, and Seymour Freeman Field Municipal Airport are not available.



Source: Camp Atterbury and Muscatatuck Urban Training Center Joint Land Use Study August 2009

Figure 2-25 Camp Atterbury CDNL Noise Zones



Source: Camp Atterbury and Muscatatuck Urban Training Center Joint Land Use Study August 2009

Figure 2-26 Camp Atterbury PK 15(met) Noise Zones

2.3.11.6. Noise Zone Compatibility

The following noise zone compatibility assessment and maps are provided “as is” from the 2009 Joint Land Use Study for Camp Atterbury and MUTC.

Noise from military operations (including aircraft, small arms fire, ordnance detonation, manufacturing and industrial noise) has an impact on the surrounding communities. To get a better understanding of how noise affects people, the Indiana Army National Guard (INARNG) studied the likelihood of annoyance and complaint from noise. For example, Table 4-1-4-1 are the results of a study done in determining what sound level, measured in decibels (dB), is annoying to what percentage of the population.

Table 4-1-4-1: Noise Annoyance Likelihood

Maximum Level (dB)	Percentage Highly Annoyed
70	5
75	13
80	20
85	28
90	35

The Indiana Army National Guard (INARNG) has established a Statewide Operational Noise Management Plan (SONMP). The plan provides a system for analyzing exposures to noise hazards associated with military operations. Noise is separated into three noise zones, each representing an area of increasing noise. Similar to safety zones, noise zones are compared against land use guidelines in order to assist the military and surrounding communities in achieving compatibility by considering noise in land use planning. The following information includes definitions of terms.

Land Use Planning Zone (LUPZ) is an informal zone at the upper end of the NZ I and is defined by a CDNL of 57-62 or an ADNL of 60-65. It accounts for the fact that some installations have seasonal variability in their operations (or several unusually busy days during certain times of the year) and that averaging those busier days over the course of a year (as with the DNL) effectively dilutes their impact. Showing this extra zone creates one more added buffer layer to encroachment and it signals to planners that encroachment into this area is the beginning of where complaints may become an issue, and that extra care should be taken when approving plans. The Land Use Planning Zone (LUPZ) is compatible for noise-sensitive land uses and can be used to better predict noise impacts when levels of operations are above average.

Noise Zone I (NZ I) is all areas in which the CDNL is less than 62 (for large arms and explosions), the ADNL is less than 65 dB, or the PK15 (met) is less than 87 dB. NZ I is usually the furthest zone from the noise source and is basically all areas not in either of the next two zones. As a rule, this area is suitable for all types of land use. Noise Zone I is conditionally compatible for noise-sensitive land uses and is not considered in this study because conditions associated with the LUPZ incorporate significant elements of Noise Zone I.

Indiana || Military Compatible Planning Advisory Handbook

Noise Zone II (NZII) is the area where the CDNL is between 62 and 70 dB, the ADNL is 65-75 dB, or the PK15(met) is 87-104 dB. The noise exposure here is considered significant and the use of land in this zone should generally be limited to activities such as manufacturing, warehousing, transportation, and resource protection. Residential use is strongly discouraged; however, if the community determines that this land must be used for houses, then the integration of Noise Level Reduction (NLR) features into the design and construction should be required. Noise Zone II is normally incompatible for noise sensitive land uses.

Noise Zone III (NZ III) is the area closest to the source of the noise where the CDNL is greater than 70, the ADNL is greater than 75 dB, or the PK15(met) is greater than 104 dB. The noise level in this area is such that no noise-sensitive uses should be considered inside the zone. Noise Zone III is incompatible for noise-sensitive land uses.

The Federal Interagency Committee on Urban Noise (FICUN) has established Land Use Compatibility Guidelines. Table 4-1-4-4 is a simplification of these guidelines and shows the recommendation for land uses within each noise zone. Land uses within a specific noise zone may be compatible, conditionally compatible, or incompatible. The information is meant to assist local communities to promote compatible development in accordance with noise from military operations. Detailed land use guidelines, provided by the FICUN, are found in: "Guidelines for Considering Noise in Land Use Planning and Control" (<http://www.wylelabs.com/content/global/documents/FICUN13.pdf>).

Table 4-1-4-4: FICUN Land Use Guidelines by Army Noise Zones

Land Use	LUPZ		Zone II		Zone III	
	55 dB	60 dB	65 dB	70 dB	75 dB	80 dB
Households	○	▲	▲	▲	●	●
Manufacturing	○	○	○	▲	▲	▲
Retail – General	○	○	○	▲	▲	●
Restaurants	○	○	○	▲	▲	●
Personal Services	○	○	○	▲	▲	●
Hospitals	○	▲	▲	▲	●	●
Government	○	▲	▲	▲	▲	●
Education	○	▲	▲	▲	●	●
Public Assembly	○	○	○	●	●	●
Parks	○	▲	▲	▲	●	●
Agriculture	○	○	▲	▲	▲	▲

○ Compatible	▲ Conditionally Compatible	● Incompatible
--------------	----------------------------	----------------

Source: FICUN "Guidelines for Considering Noise in Land Use Planning and Control"

○ Compatible - identifies uses that are compatible at certain decibel levels without incorporating additional noise reduction measures.

▲ Conditionally Compatible - suggests uses at certain decibel levels incorporate noise reduction measures in site planning and design, and indoor and outdoor noise mitigation.

● Incompatible - identifies uses that are incompatible at certain decibel levels.

The following table shows the number of acres outside Camp Atterbury that are within Zones II and III and the LUPZ. Notice that 566 acres of Bartholomew County are within Zone II, and 80 acres are within Zone III. One acre of Johnson County is within Zone II.

Table 4-1-4-5: Acreage Extent of Army Noise Zones

Region	Zone III	Zone II	LUPZ
Camp Atterbury	8,704	10,028	8,784
Off-Site: Bartholomew County	80	566	2,268
Off-Site: Brown County	0	0	1,860
Off-Site: Johnson County	0	1	1,942
Total Area	8,784	10,594	14,854

Camp Atterbury notifies the public of training practices in “Local Community Advisories,” an example is shown below:

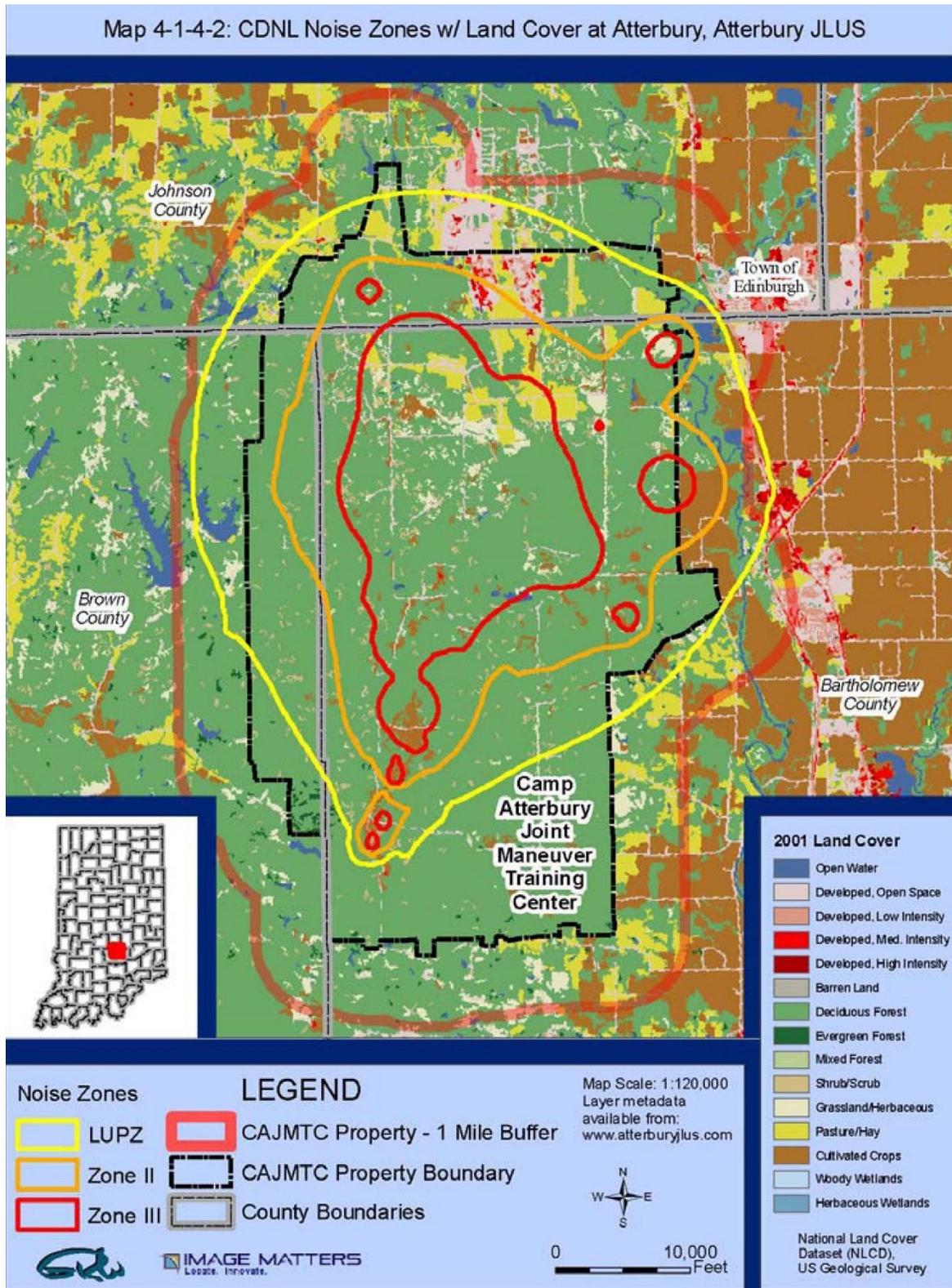
Various units training at Camp Atterbury Joint Maneuver Training Center will be conducting day and night training on small arms ranges and in training areas. The Air National Guard will also be conducting heavy equipment drops, day and evening bombing and strafing runs toward designated ground targets. We are committed to building positive relationships with the communities surrounding our installations, as we too are members of this community.

In general, local governments already consider noise compatibility when discussing commercial, industrial, and residential development within the community, particularly in relation to local airports. These guidelines, along with the noise levels provided by the installations, will help in expanding local government efforts also to consider military operation noise when considering development. Noise sources associated with the noise contours are shown on the following map.

Noise zones at Camp Atterbury extend into the surrounding community. Areas of concern are:

- The LUPZ extends beyond the eastern boundary and includes suburban single-family residential land use; this is conditionally compatible – FICUN suggests uses at certain decibel levels incorporate noise reduction measures in site planning and design, and indoor and outdoor noise mitigation.
- The LUPZ extends beyond all but the southern boundary and extends into land that is zoned residential in both Edinburgh and Prince’s Lakes.
- The residential zoning in the area surrounding Edinburgh within the 1-mile buffer around Atterbury is potentially incompatible with military operations.
- A small portion of Noise Zones II and III from larger caliber weapons/demolition activity extends beyond the eastern boundary into Bartholomew County.
- Under weather conditions, which favor sound propagation, peak noise levels from artillery and demolition training can reach levels associated with a moderate risk of complaints two to three miles from the installation.

Map 4-1-4-2: CDNL Noise Zones w/ Land Cover at Atterbury, Atterbury JLUS



2.3.11.7. Managed Airspace

Controlled Airspace

Class E airspace has been established around North Vernon Airport, Columbus Municipal Airport, and Seymour Freeman Field Municipal Airport. The Class E airspace is a width of 8-nautical miles (4-nautical miles on either side of the runway centerline).

Special Use Airspace

Restricted Area

The Atterbury Restricted Area, R-3401A/B, is located approximately 20 nautical miles south-southeast of Indianapolis. R-3401A is located over approximately 33,000 acres of federally owned land. The Air National Guard has joint use of 650 acres of Atterbury for use as the Air-to-Ground Gunnery Range, while the Army uses the balance of the training area for infantry, artillery, air cavalry and engineering training. The Restricted Airspace used by Camp Atterbury is depicted on Figure 2-27.

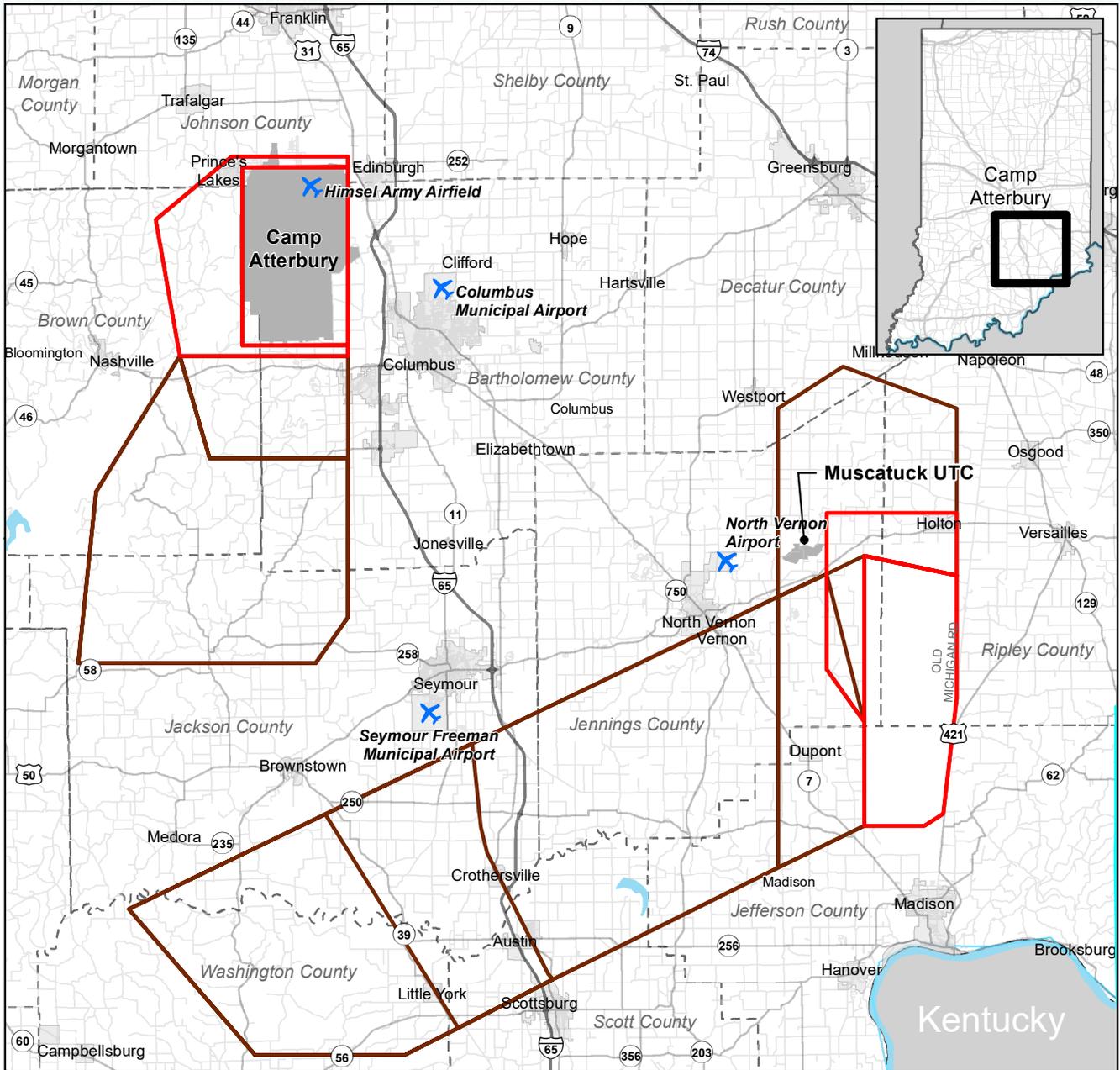
- R-3401A: Surface (Ground) – Flight Level (FL) 400
- R-3401B: 1,200 ft. AGL – 14,000 ft. MSL
- R-3403A: Surface – FL430
- R-3403B: 1,200 ft. AGL to FL180

Military Operations Areas (MOAs)

The MOAs that are used by Camp Atterbury are depicted on Figure 2-27.

- Racer ATCAA: FL180 – FL250
- Racer MOA "A": 500 ft. AGL – 3,999 ft. MSL
- Racer MOA "B": 4,000 ft. MSL – 8,000 ft. MSL
- Racer MOA "C": 500 ft. AGL – 17,999 ft. MSL
- Racer MOA "D": 14,000 ft. AGL – 17,999 ft. MSL

Indiana || Military Compatible Planning Advisory Handbook



Source: US Census, 2020. DoD, 2020. ESRI, 2020.

- | | |
|-------------------------------|-----------------------|
| Military Use Airfield | Military Installation |
| Restricted Area | City Boundary |
| Military Operation Area (MOA) | County Boundary |
| | Interstate |
| | US / State Hwy |
| | Local Road |
| | River |
| | Water Body |

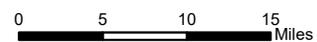


Figure 2-27
Camp Atterbury/MUTC Special Use Airspace

2.3.12. Indiana National Guard at Hulman Field (at Terre Haute Regional Airport)

2.3.12.1. Airfield Safety Zones

The Airport Safety Zones for the Terre Haute Regional Airport are not available but not anticipated to be a military/community compatibility issue.

2.3.12.2. Airfield Imaginary Surfaces

The Airport Imaginary Surfaces for the Terre Haute Regional Airport are not available.

2.3.12.3. Live Fire/Explosives Safety Areas

There are no live fire/explosives safety areas at the Indiana National Guard at Hulman Field.

2.3.12.4. Noise Contours

The Noise Contours for the Terre Haute Regional Airport are not available but are not anticipated to be a military/community compatibility issue.

2.3.12.5. Managed Airspace

Controlled Airspace

Class D airspace has been established around Terre Haute Regional Airport to manage air traffic and extends from the surface up to 2,500 feet above mean sea level (MSL) within a 5-nautical mile (NM) radius.

Special Use Airspace

There is no Special Use Airspace for the Terre Haute Regional Airport.

2.3.13. Indiana Intelligence Center (INIC)

Military activities at the Indiana Intelligence Center do not extend beyond the facility to impact or be impacted by civilian land uses and other activities.

2.3.14. Muscatatuck Urban Training Center (MUTC)

2.3.14.1. Airfield Safety Zones

The MUTC is part of the Indiana Air Range Complex with the Jefferson Proving Ground adjacent to the MUTC. There is no airfield or heliport at the MUTC. The safety zones for the public airports used by the Indiana National Guard – North Vernon Airport, Columbus Municipal Airport, and Seymour Freeman Field Municipal Airport are illustrated on Figures 2-22, 2-23, and 2-24 respectively, in Section 2.3.11.1 Airfield Safety Zones for Camp Atterbury, as provided in the 2009 Camp Atterbury JLUS.

2.3.14.2. Airfield Imaginary Surfaces

The Airfield Imaginary Surfaces for the North Vernon Airport, Columbus Municipal Airport, and Seymour Freeman Field Municipal Airport are not available.

2.3.14.3. Live Fire/Explosives Safety Areas

All live fire/explosives safety areas are contained within the MUTC.

2.3.14.4. Noise Zones

According to the 2009 Camp Atterbury and Muscatatuck Urban Training Center Joint Land Use Study, operations at MUTC are not loud/frequent enough to generate Noise Zones. However, noise levels from artillery and demolition can reach levels associated with a moderate risk of complaints two to three miles from the installation. Additionally, explosive ordnance disposal training may be heard beyond the boundary of the MUTC with a high risk of complaint 0.5 miles from the demolition site and a moderate risk of complaint two miles from the site. If training devices, such as artillery and grenade simulators are used in the eastern portion of the MUTC, noise levels may be significant enough to generate complaints.

The noise zones at the MUTC are shown on Figure 2-28.



Source: Camp Atterbury and Muscatatuck Urban Training Center Joint Land Use Study August 2009

Figure 2-28 Muscatatuck Urban Training Center PK 15(met) Noise Zones

2.3.14.5. Noise Zone Compatibility

The following noise zone compatibility assessment and maps are provided “as is” from the 2009 Joint Land Use Study for Camp Atterbury and MUTC. The background on the noise assessment is in Section 2.3.11.6 Noise Zone Compatibility for Camp Atterbury.

Noise at Muscatatuck:

- To date, operations are neither loud enough nor frequent enough to generate NZ II or NZ III levels.
- Explosive Ordnance Disposal training may be heard beyond the installation. Under weather conditions which favor sound propagation, the high risk of complaint area will extend over 0.5 miles from the demolition site; the moderate risk of complaint area will extend just less than 2 miles.
- If training devices, such as artillery and grenade simulators are used in the eastern portion of the training center, noise levels may be loud enough to generate complaints from neighbors.
- Helicopters have generated noise concerns with the neighbors.

2.3.14.6. Managed Airspace

Controlled Airspace

Class E airspace has been established around North Vernon Airport, Columbus Municipal Airport, and Seymour Freeman Field Municipal Airport. The Class E airspace is a width of 8-nautical miles (4-nautical miles on either side of the runway centerline).

Special Use Airspace

Restricted Airspace

- R-3401A: Surface (Ground) – Flight Level (FL) 400
- R-3401B: 1,200 ft. AGL – 14,000 ft. MSL
- R-3403A: Surface – FL430
- R-3403B: 1,200 ft. AGL to FL180

The Atterbury Restricted Area, R-3401A/B, is located approximately 20 nautical miles south-southeast of Indianapolis. R-3401A (SFC-FL250) is located over approximately 33,000 acres of federally owned land. The Air National Guard has joint use of 650 acres of Atterbury for use as the Air-to-Ground Gunnery Range, while the Army uses the balance of the training area for infantry, artillery, air cavalry and engineering training.

Military Operations Areas (MOAs)

- Racer ATCAA: FL180 – FL250
- Racer MOA “A”: 500 ft. AGL – 3,999 ft. MSL
- Racer MOA “B”: 4,000 ft. MSL – 8,000 ft. MSL
- Racer MOA “C”: 500 ft. AGL – 17,999 ft. MSL

Indiana || Military Compatible Planning Advisory Handbook

- Racer MOA "D": 14,000 ft. AGL - 17,999 ft. MSL

The Restricted Area and Military Operations Areas by the MUTC is depicted on Figure 2-27.

2.3.15. State Aviation Facility (at Shelbyville Municipal Airport)

2.3.15.1. Heliport Safety Zones

The Heliport Safety Zones for the State Aviation Facility are not available.

2.3.15.2. Heliport Imaginary Surfaces

The Heliport Imaginary Surfaces for the State Aviation Facility are not available.

2.3.15.3. Noise Zones

The Noise Zones for the State Aviation Facility are not available.

2.3.15.4. Managed Airspace

Controlled Airspace

Class E airspace has been established around Shelbyville Municipal Airport. The Class E airspace is a width of 8-nautical miles (4-nautical miles on either side of the runway centerline).

Special Use Airspace

There is no Special Use Airspace at the State Aviation Facility.

2.3.16. U.S. Coast Guard Station Michigan City

The footprint of U.S. Coast Guard Station Michigan City is on a small parcel (0.71 acres) and collocated with the Michigan City Marina, a local café and other civic city facilities. Due to the nature of the Coast Guard activities on the open waters of Lake Michigan, there are no known footprints of the U.S. Coast Guard Station outside of the property.

2.4. Indiana Statewide Military Use Airspace

In addition to the military footprints associated with military installations, there is widespread military use airspace through the State of Indiana. This airspace comprises Military Training Routes and Special Use Airspace.

2.4.1. Military Training Routes

An MTR is a designated corridor of airspace with defined vertical and lateral dimensions used for military flight training. MTRs can be characterized as a complex network of interrelated and interdependent highways in the sky to conduct low-altitude navigation and tactical training. As such, these highways have associated rules for conducting operations.

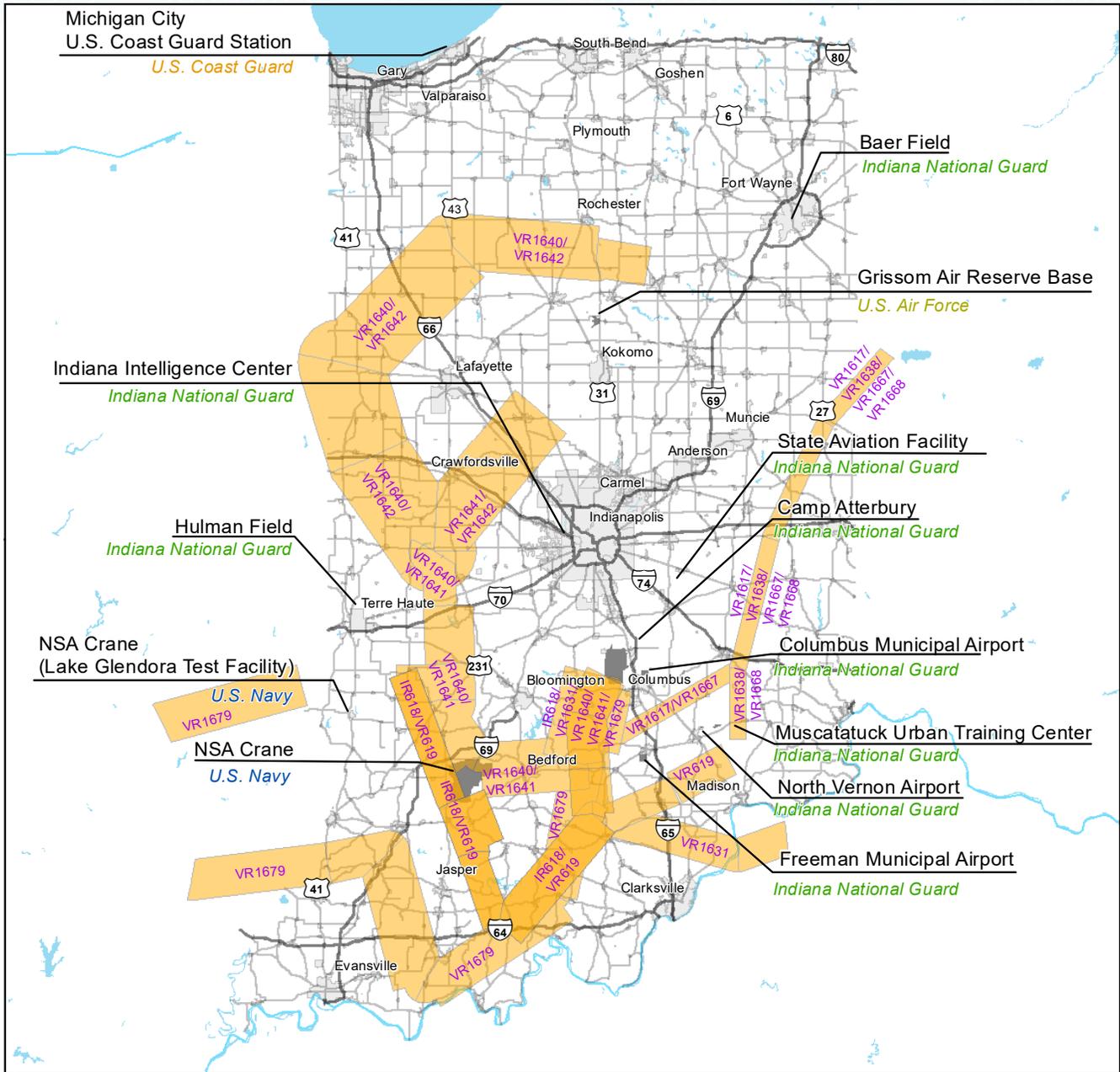
- Instrument Flight Rules (IFR) refer to flying, using instruments on an aircraft where navigation is accomplished by electronic signals, regardless of the weather.
- Visual Flight Rules (VFR) mean the aircraft is intended to operate in visual conditions, i.e., nice, and clear weather so that a pilot can see where they are flying. Clouds, heavy precipitation, low visibility, and otherwise adverse weather conditions are not conducive to flying under VFR.

MTRs are comprised of segments that can have different minimum and maximum flight altitudes. MTRs also are characterized by type, described as follows:

- **Instrument Route (IR):** Aircraft operations conducted in accordance with Instrument Flight Rules at a maximum ceiling (altitude) of 1,000 feet Above Ground Level (AGL), and/or with visibility less than 3 miles.
- **Visual Route (VR):** Aircraft operations conducted in accordance with VFR where visibility must be ≥ 5 statute miles and with flight occurring above 300 feet AGL.

The MTRs that traverse Indiana are identified in Figure 2-29 and Table 2-1. The MTRs are organized by the minimum flight altitude (or how low an aircraft can fly) AGL. The MTRs are classified by their type, i.e., IR and VR, and controlling authority. It should be noted that some MTRs are controlled by military installations outside the state including the 445 Air Wing at Wright-Patterson AFB in Ohio and 180th Fighter Wing of the Ohio Air National Guard. MTRs may be used by any branch of the U.S. Armed Forces, provided they coordinate flight operations with the controller of that MTR.

Indiana || Military Compatible Planning Advisory Handbook



Source: US Census, 2020. DoD, 2020. ESRI, 2020.

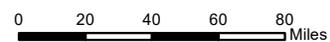


Figure 2-16
Military Training Routes

Table 2-1 Military Training Routes (MTRs) in Indiana

Route Name	Kind of Route	Minimum Altitude	Maximum Altitude	Route Width (Nautical Miles)	Controller	Controller Public Phone Number
IR-618 ²	Instrument Route	500 ft. AGL to all segments	From 3,000 ft. to 6,000 ft MSL	7 to 12 NM	ING, Atterbury Range	(812) 526-1114
VR-619 ⁵	Visual Route	Variable segments starting at 300 ft. AGL	From 3,000 ft. to 6,000 ft MSL	7 to 12 NM	ING, Jefferson Range	(812) 689-7295
VR-1617 ¹¹	Visual Route	Variable segments starting at 500 ft. AGL	1,500 ft. AGL for all segments	4 NM for all segments	180th FW, OH Air National Guard	(419) 868-4036
VR-1631 ⁹	Visual Route	Variable segments starting at 300 ft. AGL	1,500 ft. AGL for all segments	8 NM for all segments	445 AW, Wright-Patterson AFB	(937) 257-3551
VR-1640 ³	Visual Route	500 ft. AGL for all segments	1,500 ft. AGL for all segments	8 to 20 NM	ING, Atterbury Range	(812) 526-1114
VR-16414	Visual Route	500 ft. AGL for all segments	1,500 ft. AGL for all segments	8 to 19 NM	ING, Atterbury Range	(812) 526-1114
VR-1642 ¹	Visual Route	500 ft. AGL for all segments	1,500 ft. AGL for all segments	9 to 20 NM	ING, Atterbury Range	(812) 526-1114
VR-1667 ⁶	Visual Route	Variable segments starting at 500 ft. AGL	1,500 ft. AGL for all segments	4 NM for all segments	180th FW, OH Air National Guard	(419) 868-4036
VR-1668 ⁷	Visual Route	Variable segments starting at 500 ft. AGL	1,500 ft. AGL for all segments	4 NM for all segments	180th FW, OH Air National Guard	(419) 868-4036
VR-1679 ⁸	Visual Route	Variable segments starting at 500 ft. AGL	1,500 ft. AGL for all segments	9 to 14 NM	ING, Atterbury Range	(812) 526-1114
VR-1638 ¹⁰	Visual Route	Variable segments starting at 500 ft. AGL	1,500 ft. AGL for all segments	4 NM for all segments	180th FW, OH Air National Guard	(419) 868-4036

¹ Terrain-following operations authorized for entire route

² Contour flying authorized for entire route in visual meteorological conditions

³ Terrain-following operations authorized for entire route

⁴ Terrain-following operations authorized for entire route

⁵ Contour flying authorized for entire route in visual meteorological conditions

⁶ Terrain-following operations authorized from Segments A to E

⁷ Terrain-following operations authorized from Segments A to D

⁸ Terrain-following operations authorized for entire route

⁹ Terrain-following operations authorized for entire route

¹⁰ Terrain-following operations authorized from Segments C to F

¹¹ Terrain-following operations Authorized from Segments C to G

2.4.2. Special Use Airspace

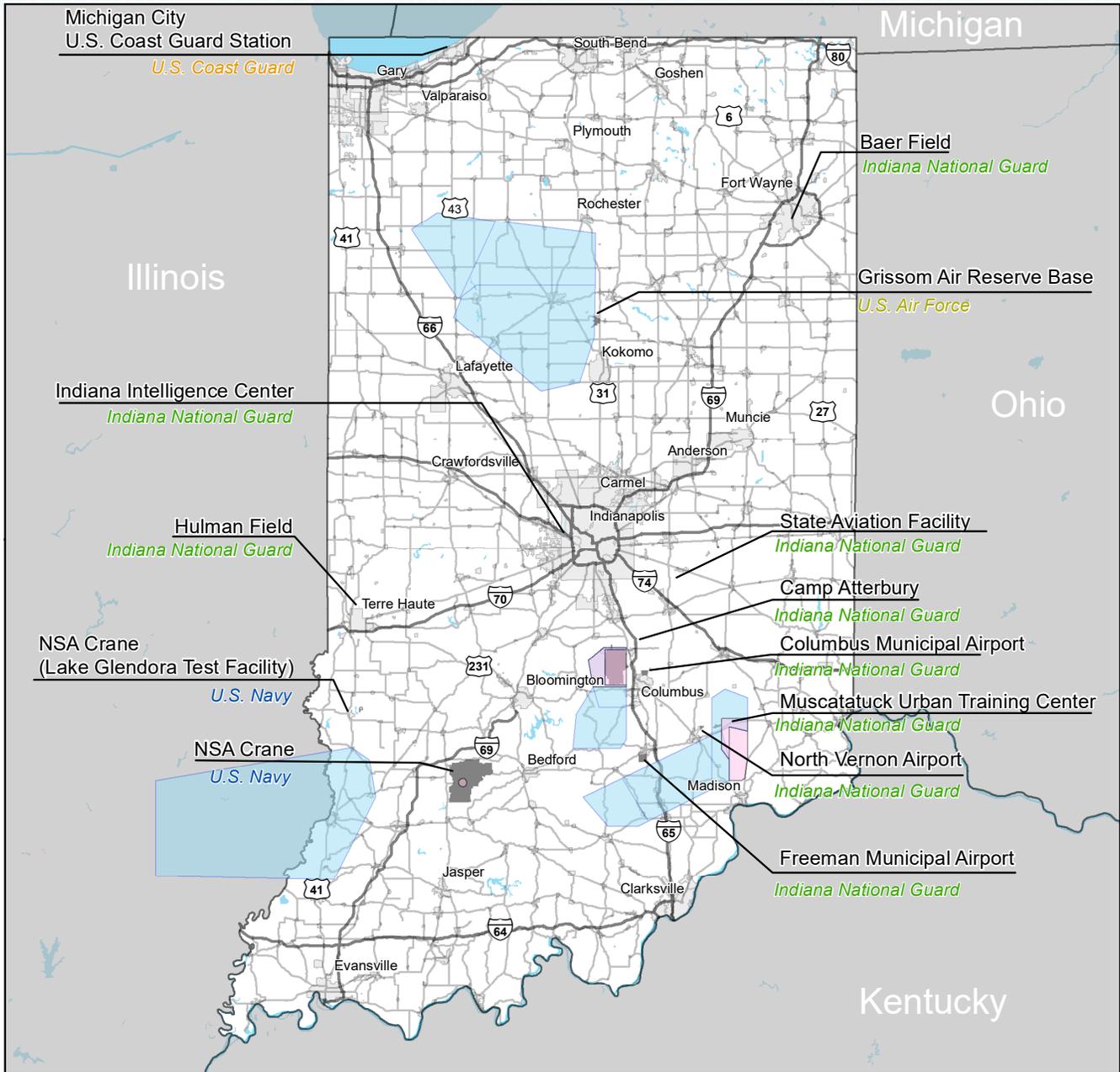
Special Use Airspace (SUA) is where activities need to be confined due to their nature, where limitations are imposed upon aircraft operations that are not included in those activities, or both. The SUA designation serves to alert nonparticipating aircraft (civilian or military) to the possible presence of these activities. Entering SUA without authorization from the controlling agency can be extremely hazardous to aircraft. There are two types of SUAs within Maryland – Restricted Areas and Military Operations Areas. These areas are identified on Figure 2-30 and in Table 2-2.

2.4.2.1. Restricted Areas

A Restricted Area is airspace where aircraft flight, while not solely prohibited, is subject to restriction. Within a Restricted Area, activities must be confined, limitations must be set on all aircraft that are not participating in such activities, or both. A Restricted Area denotes the existence of unusual hazards to aircraft, either on the ground or in the air, such as live fire or weapons discharge, or flight operations. Each Restricted Area within Maryland and the owner or controlling agency is identified in Table 2, organized by minimum altitude shown as AGL, above mean sea level (MSL), or flight level (FL), with “Surface” being on the ground, MSL referring to altitude relative to the average sea level regardless of the elevation of the ground, and FL referring to the altitude at the standard air pressure, expressed in hundreds of feet.

2.4.2.2. Military Operations Areas

Military Operations Areas consist of airspace to separate certain non-hazardous flight activities from Instrument Flight Rules (IFR) traffic and to identify Visual Flight Rules (VFR) traffic. Within these areas, the military conducts flight activities, such as flight maneuvers, intercepts, air combat maneuvering missions, and aerial refueling. These areas are used to maintain military readiness in the air and train pilots. MOAs can have altitudes ranging from the surface (ground) up to 18,000 feet above mean sea level (MSL).



- Military Operation Area (MOA)
- Restricted Area
- Military Installation
- State Boundary
- City Boundary
- Interstate
- US / State Hwy
- River
- Water Body

Source: US Census, 2020. DoD, 2020. ESRI, 2020.

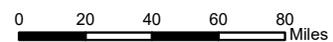


Figure 2-30
Special Use Airspace

Indiana || Military Compatible Planning Advisory Handbook

Table 2-2 Special Use Airspace in Indiana

Airspace Type	SUA Name	Minimum Altitude	Maximum Altitude	Controller	Controller Public Phone Number
Restricted Area	R-3401A	Surface	FL 400	ING, Atterbury Maneuver Training Area	(812) 526-1138
Restricted Area	R-3401B	1,200 ft. AGL	14,000 ft. MSL	ING, Atterbury Maneuver Training Area	(812) 526-1138
Restricted Area	R-3403A	Surface	FL 430	ING, Atterbury Maneuver Training Area	(812) 526-1138
Restricted Area	R-3403B	1,200 ft. AGL	FL 180	ING, Atterbury Maneuver Training Area	(812) 526-1138
Restricted Area	R-3404	Surface	4,100 ft. MSL	NSA Crane, Crane Ammunition Activity	-
Restricted Area	R-3405	Surface	1,600 ft. MSL	NSA Crane, Naval Surface Warfare Center - Crane Division	-
MOA	Hill Top	10,000 MSL	18,000 MSL	ING, 122nd FW, Fort Wayne	-
MOA	Racer A	500 ft. AGL	5,000 ft. MSL	ING, Camp Atterbury	-
MOA	Racer B	4,000 ft. MSL	8,000 ft. MSL	ING, Camp Atterbury	-
MOA	Racer C	500 ft. AGL	18,000 ft. MSL	ING, Camp Atterbury	-
MOA	Racer D	14,000 ft. MSL	18,000 ft. MSL	ING, Camp Atterbury	-
MOA	Twelve Mile East	500 ft. AGL	9,999 ft. MSL	ING, 122nd FW, Fort Wayne	-
MOA	Twelve Mile West	500 ft. AGL	5,999 ft. MSL	ING, 122nd FW, Fort Wayne	-

2.5. Military Readiness

Maintaining the ability of military installations and ranges to carry out their missions is vital to the preservation of national security. The Chairman of the Joint Chiefs of Staff defines military readiness as the ability of the United States (U.S.) military forces to meet the demands of the National Military Strategy (NMS) from a strategic, operational, and tactical perspective.

- Strategic perspective means the ability of a joint force to perform the desired missions by providing capabilities to achieve the strategic or global perspective by accounting for the demands between regional and functional responsibilities.
- Operational perspective means the ability of the joint force to perform and execute the assigned mission in an integrated, synchronized, and ready unit(s).
- Tactical perspective means the ability of the joint force to execute the assigned mission.

The report *Strengthening National Defense: Countering Encroachment through Military-Community Collaboration* by the Panel of the National Academy of Public Administration notes that the nation's military forces face serious training and readiness challenges that have the potential to reduce mission readiness and adversely impact national security because of incompatible community development near military facilities and the expansion of military operations into community areas. This interface which affects both installations and training ranges is increasingly reducing the military's ability to train and execute missions. Studies from military installations throughout the country have quantified this impact on mission readiness. The report identifies both actual and potential effects of military operations on communities and the effects of civilian communities on military readiness:

- Effect of military activities on civilian communities
 - Creating noise that extends into communities
 - Increased risks of airplane crashes or exposure to unexploded ordnance
 - Contamination of the environment and damage to ecosystems
 - Endangering protected species
 - Stressing public infrastructure and services
 - Generating citizen complaints
- Effect of civilian communities on military training
 - Expanding development or other activities in ways that constrict the use of military training areas
 - Permitting development that can present obstacles to low-flying aircraft
 - Interfering with night-time training through light pollution
 - Degrading electronic navigation and communication frequencies used by the military
- Neglecting support for needed public infrastructure for DoD activities

Indiana || Military Compatible Planning Advisory Handbook

- Migration of endangered species onto military property resulting from increased development

Strong obstacles were cited as preventing effective collaboration between the military and civilian communities such as the lack of resources in both the DoD and communities and the lack of mutual understanding of goals, needs, and processes.

The report concluded that states and local communities share, with the federal government, an inherent responsibility to support national defense and should be more extensively involved in supporting encroachment mitigation and prevention efforts through compatibility planning in support of military readiness.

The Compatibility Factors in Chapter 4 provide the foundation for understanding the range of compatibility factors that military operations can have on communities and that communities can have on military operations. When this information is leveraged with the Implementation Strategies in Chapter 5, local communities and the military can be empowered to collaborate to prevent and mitigate compatibility issues before they become mission critical encroachment obstacles.



3 || Military Communities

Inside Chapter 3...

3.1. Introduction.....	3-2
3.2. Indiana Military Compatibility Planning Framework.....	3-2
3.3. Existing Defense Community Compatibility Tools.....	3-3
3.4. Grissom Air Reserve Base (ARB) Surrounding Communities.....	3-8
3.5. Naval Support Activity (NSA) Crane Surrounding Communities.....	3-37
3.6. NSA Crane – Lake Glendora Test Facility Surrounding Communities.....	3-55
3.7. Baer Field (at Fort Wayne International Airport) Surrounding Communities.....	3-59
3.8. Camp Atterbury Surrounding Communities.....	3-70
3.9. Indiana National Guard at Hulman Field (at Terre Haute Regional Airport)..... Surrounding Communities.....	3-87
3.10. Indiana Intelligence Center (INIC) Surrounding Communities.....	3-95
3.11. Muscatatuck Urban Training Center (MUTC) Surrounding Communities.....	3-97
3.12. State Aviation Facility (at Shelbyville Municipal Airport) Surrounding Communities	3-104
3.13. U.S. Coast Guard Station Michigan City Surrounding Communities.....	3-113

3.1. Introduction

This chapter provides information about the surrounding communities of Indiana’s Military Installations. First, this chapter explores both Community Enabling and Military Compatibility Legislation for the state of Indiana. Second, there is an extensive table that provides an overview into which communities surrounding Indiana’s Military Installations have compatibility tools as well as whether their specific general plans and regulations address land use issue(s) related to Military Compatibility. Lastly, and for the bulk of this chapter, there is an overview of each relevant surrounding county, locality, or community for each Indiana Military Installation as well as a more detailed write up of their existing compatibility tools followed by a description of how that pertains to the local installation or land use issue(s) related to Military Compatibility as a whole.

Capturing and describing certain demographic characteristics of these communities provides a baseline context from which informed decisions can be made when assessing compatibility strategies. The goal is to provide information that enables stakeholders to understand population and development trends that have the potential to affect the future of each Military Installation. This information is intended to be considered with other factors to help decision makers generate coherent, informed, planning policies and make decisions about future development and economic growth to mitigate compatibility issues. The objective of this chapter is to foster an understanding about the types of activities occurring “outside the fence” when considering future missions and operations.

3.2. Indiana Military Compatibility Planning Framework



Existing state law constitutes the fundamental legislative framework that provides for and guides local growth and development and, as such, also constitutes a set of tools that enable communities to support mission needs and defense readiness while realizing their vision for the future.

This section briefly summarizes key state legislation that supports compatibility planning and sustainable growth at the local level, as well as laws that directly protect military operations and so mission and installation viability.

3.2.1. Community Enabling Legislation

3.2.1.1. Indiana Home Rule Act

The State of Indiana has adopted legislative home rule (§36-1-3), whereby some autonomy is granted local governments. Within this framework, local governments may exercise all powers that the State could legally grant them, even if a specific authority has not been formally delegated to them. Home rule also allows the State to grant authority with restrictions on how that authority is exercised, as well as limit or take away power from local governments.

The General Assembly, comprising the Indiana Senate and House of Representatives, is responsible for creating, drafting, and enacting legislation and for implementing home rule relative to specific powers. It has enacted several laws that establish guidelines for counties and local municipalities to regulate land use, plan for their future, and

ensure sustainable growth, with the nature of authority to regulate land use dependent on local jurisdictions' form of government.

3.2.1.2. Planning & Zoning

Pursuant to §36-7-4-601, Indiana law requires local jurisdictions adopt Comprehensive Plans prior to exercising the zoning powers granted them. Comprehensive Plans are guiding documents that serve as the foundation of all decision-making pertaining to the physical development of the area within specific jurisdictional boundaries. Local Zoning Ordinances then divide jurisdiction into specific districts with associated regulations that define allowable land uses and control the size, placement, spacing, and design of improvements therein. Zoning – and by extension, Comprehensive Plans – are critical to maximizing and realizing development potential while preventing activities on one property from negatively impacting others.

3.2.2. Military Compatibility Legislation

3.2.2.1. Notification Requirements

Indiana law (IC §36-7-30.1-2) requires jurisdictions surrounding NSA Crane and the Lake Glendora Test Facility to notify the military base commander before platting, subdividing, planning, regulating, developing, and/or maintaining real property within three (3) miles of military installations. The commander is, in turn, obligated to respond to such notifications if restrictions to activities are warranted. Jurisdictions may not take action within three (3) miles of NSA Crane and the Lake Glendora Test Facility under any circumstances if the action could adversely impact operations at the facility. The legislation does not apply to any other military installations in the State of Indiana.

3.2.2.2. Civil Immunity

State law grants immunity to NSA Crane and the Lake Glendora Test Facility relative to the creation of noise pollution and telecommunications interference under IC §34-30-21. Installations, their employees, and authorized base personnel are not liable for civil damages due to noise pollution that issues from normal operations or use and occurs within two (2) miles of the installation, nor due to telecommunications interference that issues from normal operations or use and occurs within two (5) miles of the base. Immunity does not pertain in cases of negligence, willful misconduct, or the violation of federal law(s). The legislation does not apply to any other military installations in the State of Indiana.

3.3. Existing Defense Community Compatibility Tools

In Indiana, counties and municipalities have the authority to regulate land uses. Counties and cities regulate land uses through various regulations and planning efforts. One such planning effort are cities' and counties' general plans, which set the land use framework for the jurisdiction in the future. General plans also contain policies for jurisdictions to achieve the vision planned for the community. Some of these policies include recommendations for land uses associated with the military. In addition, cities and counties also employ land use regulations through zoning and subdivision regulations. Table 3-1 below lists which communities surrounding Indiana's Military Installations have these

Indiana || Military Compatible Planning Advisory Handbook

compatibility tools as well as whether their specific general plans and regulations address land use issue(s) related to Military Compatibility.

Table 3-1. Existing Defense Community Compatibility Tools Table

Installation / Jurisdiction	Comprehensive Plan	Zoning Regulations										Subdivision Regulations
		Zoning Ordinance	Formalized Coordination (Codified)	Noise Regulations / Sound Attenuation	Height Restrictions (Imaginary Surfaces)	Renewable Energy Regulations (Solar/Wind)	Overlay Districts	Noxious Pollution (Odor/Gases)	Density	Outdoor Lighting	Stormwater Regulations	
Grissom ARB Communities												
Cass County	■	■	■	■	■	■	■	■	■	■	■	■
Howard County	■	■	■	■	■	■	■	■	■	■	■	■
Miami County	■	■	■	■	■	■	■	■	■	■	■	■
Wabash County	■	■	■	■	■	■	■	■	■	■	■	■
City of Kokomo	■	■	■	■	■	■	■	■	■	■	■	■
City of Logansport	■	■	■	■	■	■	■	■	■	■	■	■
City of Peru	■	■	■	■	■	■	■	■	■	■	■	■
City of Wabash	■	■	■	■	■	■	■	■	■	■	■	■
Town of Galveston	■	■	■	■	■	■	■	■	■	■	■	■
Town of Walton	■	■	■	■	■	■	■	■	■	■	■	■
Town of Bunker Hill	■	■	■	■	■	■	■	■	■	■	■	■
Town of Converse	■	■	■	■	■	■	■	■	■	■	■	■
Town of Onward	■	Operates under Cass County Zoning and Subdivision Regulations										

Legend:

- = The tool exists but does not address land use issue(s) related to Military Compatibility.
- = The tool exists but only partially addresses land use issue(s) related to Military Compatibility.
- = The tool exists and addresses land use issue(s) related to Military Compatibility.
- = The tool exists but does not affect land use issue(s) related to Military Compatibility as adopted.
- = The jurisdiction does not employ this tool.

Table 3-1. Existing Defense Community Compatibility Tools Table contined

Installation / Jurisdiction	Comprehensive Plan	Zoning Regulations										Subdivision Regulations
		Zoning Ordinance	Formalized Coordination (Codified)	Noise Regulations / Sound Attenuation	Height Restrictions (Imaginary Surfaces)	Renewable Energy Regulations (Solar/Wind)	Overlay Districts	Noxious Pollution (Odor/ Gases)	Density	Outdoor Lighting	Stormwater Regulations	
NSA Crane and Lake Glendora Test Facility Communities												
NSA Crane												
Davies County	Yellow	Red	Black	Grey	Grey	Black	Black	Black	Grey	Grey	Red	Red
Greene County	Yellow	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black
Lawrence County	Yellow	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black
Martin County	Yellow	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black
City of Bedford	Yellow	Red	Black	Red	Red	Black	Black	Black	Black	Black	Red	Black
City of Loogootee	Yellow	Red	Black	Red	Red	Black	Grey	Red	Black	Black	Red	Black
City of Washington	Red	Red	Black	Red	Red	Black	Red	Black	Black	Black	Red	Black
Town of Bloomfield	Black	Red	Black	Black	Black	Black	Black	Red	Black	Black	Red	Red
Town of Crane	Black											
Town of Odon	Black	Operates under Davies County Zoning and Subdivision Regulations										
Community of Burns City	Black											
Lake Glendora Test Facility												
Sullivan County	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black
City of Sullivan	Yellow	Red	Black	Red	Black	Black	Black	Red	Black	Black	Red	Black

Legend:

- = The tool exists but does not address land use issue(s) related to Military Compatibility.
- = The tool exists but only partially addresses land use issue(s) related to Military Compatibility.
- = The tool exists and addresses land use issue(s) related to Military Compatibility.
- = The tool exists but does not affect land use issue(s) related to Military Compatibility as adopted.
- = The jurisdiction does not employ this tool.

Indiana || Military Compatible Planning Advisory Handbook

Table 3-1. Existing Defense Community Compatibility Tools Table contined

Installation / Jurisdiction	Comprehensive Plan	Zoning Regulations										Subdivision Regulations
		Zoning Ordinance	Formalized Coordination (Codified)	Noise Regulations / Sound Attenuation	Height Restrictions (Imaginary Surfaces)	Renewable Energy Regulations (Solar/Wind)	Overlay Districts	Noxious Pollution (Odor/ Gases)	Density	Outdoor Lighting	Stormwater Regulations	
Indiana National Guard Communities												
Baer Field												
Allen County	■	■	■	■	■	■	■	■	■	■	■	■
Wells County	■	■	■	■	■	■	■	■	■	■	■	■
City of Fort Wayne	■	■	■	■	■	■	■	■	■	■	■	■
Town of Ossian	■	■	■	■	■	■	■	■	■	■	■	■
Town of Zanesville	■	Operates under Wells County Zoning and Subdivision Regulations										
Camp Atterbury												
Bartholomew County	■	■	■	■	■	■	■	■	■	■	■	■
Brown County	■	■	■	■	■	■	■	■	■	■	■	■
Jackson County	■	■	■	■	■	■	■	■	■	■	■	■
Johnson County	■	■	■	■	■	■	■	■	■	■	■	■
Shelby County	■	■	■	■	■	■	■	■	■	■	■	■
City of Columbus	■	■	■	■	■	■	■	■	■	■	■	■
City of Seymour	■	■	■	■	■	■	■	■	■	■	■	■
Town of Edinburgh	■	■	■	■	■	■	■	■	■	■	■	■
Town of Prince's Lakes	■	■	■	■	■	■	■	■	■	■	■	■

Legend:

- = The tool exists but does not address land use issue(s) related to Military Compatibility.
- = The tool exists but only partially addresses land use issue(s) related to Military Compatibility.
- = The tool exists and addresses land use issue(s) related to Military Compatibility.
- = The tool exists but does not affect land use issue(s) related to Military Compatibility as adopted.
- = The jurisdiction does not employ this tool.

Table 3-1. Existing Defense Community Compatibility Tools Table contined

Installation / Jurisdiction	Comprehensive Plan	Zoning Regulations									Subdivision Regulations	
		Zoning Ordinance	Formalized Coordination (Codified)	Noise Regulations / Sound Attenuation	Height Restrictions (Imaginary Surfaces)	Renewable Energy Regulations (Solar/Wind)	Overlay Districts	Noxious Pollution (Odor/ Gases)	Density	Outdoor Lighting		Stormwater Regulations
Hulman Field (Terre Haute Regional Airport)												
Vigo County	Yellow	Yellow	Black	Green	Green	Black	Green	Green	Red	Green	Red	Red
City of Terre Haute	Yellow	Yellow	Black	Green	Green	Black	Black	Black	Black	Black	Red	Red
Town of Seelyville	Black	Operates under Vigo County Zoning and Subdivision Regulations										
Indiana Intelligence Center												
City of Indianapolis	Grey	Grey	Black	Grey	Red	Grey	Grey	Grey	Grey	Grey	Grey	Grey
Muscatatuck Urban Training Center												
Jennings County	Green	Yellow	Black	Green	Green	Black	Black	Green	Black	Red	Red	Red
City of North Vernon	Green	Red	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black
Community of Butlerville	Black	Operates under Jennings County Zoning and Subdivision Regulations										
State Aviation Facility												
Shelby County	Yellow	Yellow	Black	Green	Green	Red	Green	Yellow	Black	Yellow	Red	Black
City of Shelbyville	Yellow	Yellow	Black	Green	Green	Black	Green	Black	Red	Red	Red	Red
Town of Fairland	Black	Operates under Shelby County Zoning and Subdivision Regulations										
U.S. Coast Guard Station Michigan City												
City of Michigan City	Yellow	Red	Black	Red	Red	Red	Red	Red	Red	Red	Red	Red

Legend:

- = The tool exists but does not address land use issue(s) related to Military Compatibility.
- = The tool exists but only partially addresses land use issue(s) related to Military Compatibility.
- = The tool exists and addresses land use issue(s) related to Military Compatibility.
- = The tool exists but does not affect land use issue(s) related to Military Compatibility as adopted.
- = The jurisdiction does not employ this tool.

3.4. Grissom Air Reserve Base (ARB) Surrounding Communities

3.4.1. Cass County



Cass County encompasses 414.85 square miles in north central Indiana, bounded by Fulton County to the north, Miami County to the east, Howard and Carroll Counties to the south and southeast, and White and Pulaski Counties to the west and northwest. The jurisdiction was formed in 1828 with the City of Logansport the designated county seat and remains predominantly rural with the southward flowing Wabash River and associated riverine environments crossing through the middle of the county from east to west.

The county is divided into 14 townships with a population of approximately 37,870 residents¹ and includes the City of Logansport, four (4) small towns, and 19 unincorporated communities. The runway at Grissom ARB also extends from Miami County into Cass County approximately ¼ mile, with operations potentially affecting residents and businesses.

Cass County is well-connected to the broader region with the northwest-southeast-aligned US 35, the east-west-aligned US 24, and the southwest-northeast aligned SR 24 all crossing into the county in different areas to intersect in, or just south of, Logansport. Five (5) other state roads also cross the jurisdiction. The Norfolk Southern Railway, Winamac Southern Railroad, the Logansport and Eel River Shortline Company, and the Toledo, Peoria and Western Railway further serve transport needs.

Cass County offers a range of recreational and cultural opportunities, including museums, theater, and seasonal festivals. It is also a primary business center in north central Indiana with a skilled and educated workforce. The top industries by employment in 2019 were Manufacturing, Health Care & Social Assistance, and Retail Trade. Construction also employed over 1,000 people.² Cass County's real GDP in 2021 was \$586,425.³

The Cass County Economic Development organization strives to bring further growth and development to the region, and county officials have adopted a collaborative approach to streamline the processes required of businesses to relocate in the area, particularly zoning, permitting, and tax abatement processes.⁴ The County's Comprehensive Plan also includes the explicit objective of promoting development of the Grissom Aeroplex. The Cass County Planning Department helps facilitate this by writing and updating ordinances and plans for community development.

Cass County is governed by a county council that serves as the legislative branch of county government and controls regular and special spending and revenue collection. The Cass County Council also has the authority to impose local income and property taxes if granted state approval, as well as excise and service taxes. Members are elected to four-year terms from county districts.

The Cass County Board of Commissioners is responsible for executive functions, including executing legislation, collecting revenues, and managing the day-to-day operations of the county government. The Commissioners are elected county-wide to staggered four-year terms.

¹ U.S. Census Bureau, 2021

² <https://datausa.io/profile/geo/cass-county-in#economy>; accessed October 2021

³ <https://fred.stlouisfed.org/series/REALGDPALL19029>; accessed October 2021

⁴ <http://casscountyed.co.cass.in.us/>; accessed October 2021

Other elected officials include a court judge and clerk, a county recorder, treasurer, auditor, as well as a sheriff and coroner. Cass County also has a Planning Department staffed by a professional planner.

Existing Compatibility Tool	Tool Description
<h3>Comprehensive Plan Compatibility Policies</h3>	
<p>The 2009 Cass County Comprehensive Plan includes an economic development objective to promote development of the Grissom Aeroplex, with associated action items including supporting Grissom committees and boards, ensuring regional participation in marketing Grissom Aeroplex, marketing the Aeroplex as part of the region, and building support for regional approaches to economic development. Cass County is one of the jurisdictions most affected by Grissom ARB operations.</p>	
<h3>Zoning Code Compatibility Regulations</h3>	
<p>Cass County has a Zoning Ordinance that includes a variety of tools to facilitate compatibility with Grissom ARB and the military.</p>	
<h3>Formalized Military Coordination</h3>	<p>Cass County has formalized military coordination in their zoning code (Section 406.02). For the Grissom Air Reserve Overlay District, the Encroachment Committee, created by the Grissom Air Force Reserve Base, will provide information on how possible development and planting may affect the Base. It adds that members will include Grissom Air Force Reserve Base members with their consultants as well as regional officials and departments.</p>
<h3>Noise Regulations/Sound Attenuation</h3>	<p>Cass County regulates noise but not related to Grissom ARB or military compatibility (Section 309.02).</p>
<h3>Height Regulations</h3>	<p>Cass County regulates height in the Grissom Air Reserve Overlay District (see below), which establishes height limitations (manmade and natural) for its Clear Zone (no structures or vegetation other than agricultural crops approved by BZA), APZ I (structures 35ft max, vegetation 50ft max), APZ II (structures 50ft max, vegetation 100ft max), Inner Conical Surface (structures 150ft), and Outer Conical Surface (structures 500ft).</p>

Renewable Energy Regulations

Cass County established regulations for Wind Energy Conversion Systems (WECS) in Section 523, applying to Commercial, Non-commercial, and Micro WECS. If located in the Grissom ARB Overlay District and the underlying zoning is AG, Commercial WECS are only allowed with special exception approval – provided they are in the Inner or Outer Conical Surface and meet the height limits (150 ft and 500 ft, respectively). If they are in the CZ, APZ I, or APZ II, a use variance (but not a special exception) must be approved. Cass County regulates solar in Section 524.01 regarding Commercial Solar Energy System (CSES) and Section 524.02 regarding Solar Energy System – Accessory (ASES), but these are not related to Grissom ARB or military compatibility.

Overlay Districts

The Grissom Air Reserve Overlay District (Cass County Zoning Ordinance Article 4, Section 406), established in 2016, regulated the height of man-made structures and objects of natural growth; and otherwise regulates the land use and development of property around the Grissom Air Reserve Base by providing boundaries with standards within this overlay. In addition to these standards, all uses and structures shall comply with Federal Aviation Regulation (FAR) 14 CFR 77 and all other applicable State and Federal regulations. See details below.

In Section 406.01, the code states that staff is given the authority to approve or deny Improvement Location Permits based on items, such as height, density, dust, glare, bird hazards, or radio/electrometric interference that effect the operations of the Grissom Air Force Reserve. Staff will inform the Encroachment Committee of all developments or plantings that will be occurring within this overlay. The Committee will have two days to inform staff if there will be an effect on Base operations, if there is they will have one week to provide those effects in writing. All Board of Zoning Appeals cases within this overlay will go through the same process.

In Section 406.02, the code lists definitions of the Air Installation Compatible Use Zone (ACUZ), the Accident Potential Zone I (APZ I), the Accident Potential Zone II (APZ II), the Clear Zone (CZ), the Conical Surface, the Encroachment Committee, the Inner Conical Surface, and the Outer Conical Surface.

In Section 406.03, the code lists five districts as follows:

A. Clear Zone

1. Permitted Uses: cropland not to include orchards
2. Height Limitations (manmade and natural): no structures shall be constructed and no vegetation other than agricultural crops may be planted unless they have been approved by the Board of Zoning Appeals as a Special Exception.

B. APZ I

1. Permitted Uses: cropland not to include orchards, pasture and grazing livestock not including confined feed, and agricultural buildings
2. Height Limitations (manmade and natural): structures shall not exceed 35 feet in height to the peak of the structure. Vegetation may be planted if full growth will not exceed 50 feet in height.

C. APZ II

1. Permitted Uses: cropland and orchards, pasture and grazing livestock not including confined feed, agricultural buildings, and all residential uses allowed within the AG, Agricultural Zoning District.
2. Height Limitations (manmade and natural): structures shall not exceed 50 feet in height. Vegetation may be planted if full growth will not exceed 100 feet in height.

D. Inner Conical Surface

1. Permitted Uses: All uses allowed in the AG zoning district are permitted. Any such use that would create dust, glare, bird hazards, or that would create radio or electrometric interference is prohibited within this district.
2. Height Limitations: structures shall not exceed 150 feet in height.

E. Outer Conical Surface

1. Permitted Uses: All uses of the underlining zoning district are allowed. Any such uses that would create dust, glare, bird hazards, or that would create radio or electrometric interference are prohibited within this district.
2. Height Limitations: structures may not exceed 500 feet in height.

Noxious Pollution Regulations

Cass County regulates noxious pollution but not related to Grissom ARB or military compatibility.

Density Regulations

Cass County regulates density in the Grissom Air Reserve Overlay District in Section 406.01 (see above).

Outdoor Lighting Regulations

Cass County has general outdoor lighting regulations associated with off-street parking, off-premises signs, and development within the Gateway Overlay District, but these are not related to Grissom ARB or military compatibility.

Stormwater Regulations

Cass County regulates stormwater but not related to Grissom ARB or military compatibility.

Subdivision Regulations

Cass County regulates noise but not related to Grissom ARB or military compatibility (Section 309.02).

3.4.2. City of Logansport



The City of Logansport spans 10.72 miles at the confluence of the Wabash and Eel Rivers in Eel Township in the center of Cass County. It is the county seat and had a reported population of 18,366 people in 2020, including over 1,000 veterans.⁵

The city was incorporated in 1838 as “Logansport,” with “port” referencing the community’s early role along the Wabash and Erie Canals and foreshadowing its diverse transportation heritage. One of the state’s first roads, US 29 (Historic Michigan Road) transects the city, and several passenger and freight train routes also served Logansport. The city still has two (2) active rail lines and switch yard. Logansport/Cass County Airport, a public-use airport and home of the Air Indiana Skydiving Center, is approximately two (2) miles south of the city.

Transportation remains integral to Logansport’s economy and is among the highest paying industries in the area. In addition to transport and materials moving businesses, Logansport is home to Kaufman Engineering, Mathew Warren, Inc. and A. Raymond Tinnerman Manufacturing, Inc. Peru-based Logan Stampings has also relocated to the Cass-Logansport Industrial Park in Logansport, which has additional shovel-ready sites promoted by the Logansport-Cass Economic Foundation. Top industries in terms of employment numbers include Manufacturing, Health Care & Social Assistance, and Retail Trade.⁶

The City’s 2016 Comprehensive Plan reflects the municipality’s commitment to targeting businesses and industries that support strong wages and that have minimal environmental impact through the strategic revitalization of neighborhoods, the consolidation of economic development resources, and the securing of shovel-ready development sites. The city is cautious about placing overwhelming zoning requirements that can undermine its competitive position in the region.

Logansport has a mayor-council form of government. The mayor is elected to four-year terms to serve in both a legislative and functional capacity, leading the city council and overseeing day-to-day government operations. The Logansport City Council consists in seven (7) members; five (5) are elected to serve specific wards, and two (2) are elected at-large.

The government also maintains a number of boards and commissions, including the Board of Public Works and Safety, Board of Zoning Appeals, Industrial Park Board, Plan Commission, and the Cass Logansport Economic Development Commission.

⁵ U.S. Census Bureau, 2021

⁶ <https://datausa.io/profile/geo/logansport-in#economy>
<https://datausa.io/profile/geo/logansport-in#economy>; accessed October 2021

Indiana || Military Compatible Planning Advisory Handbook

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
The City of Logansport updated its Comprehensive Plan in 2016, but it doesn't include Grissom ARB or military related compatibility.	
Zoning Code Compatibility Regulations	
The City of Logansport exercises zoning powers in its extraterritorial jurisdiction, but the zoning code doesn't address Grissom ARB or military related compatibility.	
Formalized Military Coordination	The City of Logansport does not have formalized military coordination in their zoning code.
Noise Regulations/Sound Attenuation	The City of Logansport regulates noise, but not related to Grissom ARB or military compatibility.
Height Regulations	The City of Logansport does not regulate height.
Renewable Energy Regulations	The City of Logansport regulates Wind Energy Conversion Systems, but not related to Grissom ARB or military compatibility.
Overlay Districts	The City of Logansport adopted the Logansport/Cass County Airport Overlay District with Cass County, but this is not related to Grissom ARB or military compatibility.
Noxious Pollution Regulations	The City of Logansport does not regulate noxious pollution.
Density Regulations	The City of Logansport does not regulate density.
Outdoor Lighting Regulations	The City of Logansport regulates outdoor lighting for the purposes of safety and minimization of potential negative impacts on adjacent properties, but these regulations are not driven by Grissom ARB's needs or military compatibility.
Stormwater Regulations	The City of Logansport regulates stormwater but not related to Grissom ARB or military compatibility.
Subdivision Regulations	
The City of Logansport does not have subdivision regulations.	

3.4.3. Town of Galveston

The Town of Galveston spans 0.57 miles in Jackson Township in the far southeastern corner of Cass County. The community is seven (7) miles north of downtown Kokomo and less than four (4) miles west of the Grissom ARB runway and associated aviation operations.

Galveston’s estimated 1,259 residents⁷ are connected to other areas via US 35 that runs northwest-southeast through the community and via SR 18 that runs east-west, also through the town. Galveston Airport is situated approximately three (3) miles northwest of the town and is open for public use. The privately owned Rockey’s Air Strip is east of Galveston.

Commerce in Galveston is mostly local, with top industries by employment in 2019 being Manufacturing, Healthcare & Social Assistance, and Retail Trade.⁸ The community is currently working to identify growth and development objectives. The town was one (1) of seven (7) Indiana communities recently awarded a planning grant from the Office of Community and Rural Affairs (OCRA) to support these efforts.⁹

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	The Galveston Comprehensive Plan was adopted in 1992 but doesn’t include items related to military compatibility.
Zoning Code Compatibility Regulations	The Town of Galveston does not exercise extraterritorial jurisdiction but exercises zoning authority within its municipal limits. There are no zoning regulations directly related to Grissom ARB or military compatibility.
Formalized Military Coordination	The Town of Galveston does not have formalized military coordination in their zoning code.
Noise Regulations/Sound Attenuation	The Town of Galveston does not regulate noise.
Height Regulations	The Town of Galveston does not regulate height.
Renewable Energy Regulations	The Town of Galveston does not regulate renewable energy.
Overlay Districts	The Town of Galveston does not have an overlay district.
Noxious Pollution Regulations	The Town of Galveston does not regulate noxious pollution.
Density Regulations	The Town of Galveston does not regulate density.

⁷ U.S. Census Bureau, 2021

⁸ <https://datausa.io/profile/geo/galveston-in#economy>; accessed October 2021

⁹ <https://www.casscountyonline.com/2021/09/galveston-among-7-communities-awarded-ocra-planning-grants/>; accessed October 2021

Outdoor Lighting Regulations

The Town of Galveston regulates outdoor lighting associated with temporary uses, off-street parking areas, and signs but this is not related to Grissom ARB or military compatibility.

Stormwater Regulations

The Town of Galveston does not regulate stormwater.

Subdivision Regulations

The Town of Galveston does exercise subdivision authority within its municipal limits but not related to Grissom ARB or military compatibility.

3.4.4. Town of Onward



The Town of Onward was platted in 1869 as part of Tipton Township in southern Cass County. The small community encompasses a .10-square-mile area surrounded by agricultural lands and home to an estimated 98 people.¹⁰

Equidistant from major roadways, Onward is approximately 3.5 miles from U.S. 35 to the west and from US 31 to the east and just 1.5-2.0 miles north of SR 218. The community is only two (2) miles northwest of Grissom ARB and can be impacted by operations there.

Onward’s workforce includes an estimated 49 people, with Manufacturing, Healthcare & Social Assistance, and Construction the top employment industries.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
The Town of Onward has not adopted a Comprehensive Plan.	
Zoning Code Compatibility Regulations	
The Town of Onward has not adopted a Zoning Ordinance but operates under Cass County.	
Subdivision Regulations	
The Town of Onward does not have subdivision regulations of property but operates under Cass County.	

¹⁰ U.S. Census Bureau, 2021

3.4.5. Town of Walton



The Town of Walton in Tipton Township, southern Cass County, was first settled in 1852 with the building of the railroad through the area; the post office was established four (4) years later. The community had an estimated 1,049 residents in 2019.¹¹

Walton spans .43 square miles, roughly centered on the intersection of US 35 and SR 218 and surrounded by agricultural lands. Logansport is approximately eight (8) miles to the northeast, while Grissom ARB is approximately four (4) miles due east. Walton is among the communities closest to the installation.

Despite its small size, the town is home to Helena Chemical Company, Mara-Mart, Unabiker, and Ironmonger Spring Division, as well as petroleum suppliers, with most of Walton’s workforce employed in construction and extraction jobs. The top industries in terms of employment include Construction, Manufacturing, and Retail Trade.¹²

The Town of Walton is a member of the Logansport/Cass County Planning Department, with growth and development addressed in the Cass County Comprehensive Plan. The existing plan includes the specific objective of promoting development at Grissom Aeroplex by supporting Grissom committees and boards and through other actions (Cass County Comprehensive Plan, p. 11-3).

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
The Town of Walton is included in the Cass County Comprehensive Plan.	
Zoning Code Compatibility Regulations	
The Town of Walton regulates zoning within its municipal limits and extraterritorial jurisdiction, but not related to Grissom ARB or military compatibility.	
Formalized Military Coordination	The Town of Walton does not have formalized military coordination in their zoning code.
Noise Regulations/Sound Attenuation	The Town of Walton does not regulate noise.
Height Regulations	The Town of Walton does not regulate height.
Renewable Energy Regulations	The Town of Walton does not regulate renewable energy.
Overlay Districts	The Town of Walton does not have an overlay district.
Noxious Pollution Regulations	The Town of Walton does not regulate noxious pollution.
Density Regulations	The Town of Walton does not regulate density.
Outdoor Lighting Regulations	The Town of Walton does not regulate outdoor lighting.

¹¹ U.S. Census Bureau, 2021

¹² <https://datausa.io/profile/geo/walton-in#economy>; accessed October 2021

Stormwater Regulations

The Town of Walton regulates stormwater but not related to Grissom ARB or military compatibility.

Subdivision Regulations

The Town of Walton does have subdivision regulations within its municipal limits and extraterritorial jurisdiction, but not related to Grissom ARB or military compatibility.

3.4.6. Howard County



Howard County spans 293.92 square miles in north central Indiana, bordered by Miami County to the north, Grant County to the east, Tipton and Clinton Counties to the south and southwest, and Carroll and Cass Counties to the west and northwest. The county was organized in 1844 with the City of Kokomo the county seat and 11 townships now encompassing one (1) city, two (2) towns, and eight (8) unincorporated communities. Howard County’s total reported population was 83,658 in 2020.¹³

Excepting the City of Kokomo, Howard County is characterized by a rural landscape crisscrossed by several major roadways providing easy access to larger communities. The roughly north-south aligned US 31 crosses through the middle of the county, as does US 35 as it enters from the north and turns east at Kokomo. SR 22 and SR 26 cross through from west to east in the central and southern part of the county. Logansport is approximately 22 miles northwest of the jurisdiction, and Grissom ARB is approximately nine (9) miles due north.

Howard County has two (2) public use airports – Kokomo Municipal Airport and Glenndale Airport – and several private airfields.

Top industries in terms of employment in Howard County are Manufacturing, Healthcare & Social Assistance, and Retail Trade, with 7.59% of the workforce holding management positions in 2019.¹⁴ Howard County’s GDP was \$3.7 million in 2020.¹⁵

Businesses in Howard County are predominantly local; however, the County’s draft Comprehensive Plan identifies the promotion of economic growth and stability and the further diversification of industry as explicit goals.

The county is governed by a county council that serves as the legislative branch and controls spending and revenue collection. The Council has limited authority to impose local income and property tax, subject to state-level approval, as well as excise and service taxes. Council members are elected from county districts every four (4) years.

The Howard County Board of Commissioners performs executive functions, implementing acts legislated by the council, collecting revenues, and managing the day-to-day operations of the government. The Board of Commissioners is also an elected body, with commissioners serving staggered four-year terms. Other elected county officials include a Circuit Court judge and clerk, county recorder, treasurer, auditor, surveyor, coroner, and sheriff.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
	The Howard County Comprehensive Plan does not discuss Grissom ARB or military compatibility. It does address the Kokomo Municipal Airport.
Zoning Code Compatibility Regulations	
	Howard County has a Zoning Ordinance but not related to Grissom ARB or military compatibility.

¹³ U.S. Census Bureau, 2021
¹⁴ <https://datausa.io/profile/geo/howard-county-in>; accessed October 2021
¹⁵ <https://fred.stlouisfed.org/series/REALGDPALL18067>; accessed October 2021

Formalized Military Coordination	Howard County does not have formalized military coordination in their zoning code.
Noise Regulations/Sound Attenuation	Howard County regulates noise by encouraging structures to be built with soundproofing techniques to minimize aircraft noise experiences within the building in the AH-OL. This is not related to Grissom ARB or military compatibility.
Height Regulations	Howard County regulates height but not specific to imaginary surfaces related to Grissom ARB or military compatibility.
Renewable Energy Regulations	Howard County regulates renewable energy for Wind to Energy Facilities by size and permits them as utility uses in most zoning districts. This is not related to Grissom ARB or military compatibility.
Overlay Districts	Howard County established the Airport Hazard Area Overlay (AH-OL) District, intended to minimize incompatibilities between the Kokomo Municipal Airport and adjacent land uses. This is not related to Grissom ARB or military compatibility.
Noxious Pollution Regulations	Howard County does not regulate noxious pollution.
Density Regulations	Howard County does not regulate density.
Outdoor Lighting Regulations	Howard County regulates outdoor lighting in all zoning districts to eliminate glare and light trespass onto adjacent properties but not related to Grissom ARB or military compatibility.
Stormwater Regulations	Howard County regulates stormwater but not related to Grissom ARB or military compatibility.
Subdivision Regulations	Howard County has subdivision regulations but not related to military compatibility.

3.4.7. City of Kokomo



The City of Kokomo is located in Center Township in the middle of Howard County. Encompassing 36.79 square miles and with 59,604 residents in 2020¹⁶, it is the largest municipality in the county, in both area and population. The city is 61.1 miles north of Indianapolis and 32 miles southeast of Logansport. Grissom ARB is approximately 12 miles due north of Kokomo.

Incorporated in 1865, Kokomo experienced early growth with the advent of several rail lines and has become the cultural and economic center of the county. Businesses, residents, and visitors have ready access to major highways and the Kokomo Municipal.

The U.S. Rail Corporation and Winamac Southern Railway also operate freight lines to transport grain to various Indiana communities and to interchanges with interstate lines.

Top industries in terms of employment in the City of Kokomo include Manufacturing, Healthcare & Social Assistance, and Retail Trade, with 18% of the workforce working in production jobs.¹⁷ The City's Real GDP was 3.8 million in 2020, accounting for most economic activity in the county.¹⁸

The city is promoting and guiding economic development through its Comprehensive Plan, 2017 Kokomo Comprehensive Plan: Keep Kokomo Current, that includes specific recommendations for annexation, planned growth, and revitalization. The City, County, and Greater Kokomo Economic Development Alliance are currently partnering to establish a new TIF district as the first phase in the development of a new industrial park to further attract and diversify business in the area.

The City of Kokomo is governed by an elected mayor, common council, and city clerk. All elected officials serve four-year terms. As chief executive officer, the mayor is responsible for overseeing city departments and the enforcement of legislation passed by the common council.

The City of Kokomo Common Council consists in seven (9) members, five (6) of whom are elected by specific districts, while three (3) are elected at-large. The Council is the legislative and fiscal governing body and is responsible for developing and approving city ordinances and approving departmental budgets.

The clerk serves as the chief financial officer for the City and as record keeper for the Council and various boards and commissions.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	The City of Kokomo updated its Comprehensive Plan in 2017 but does not discuss Grissom ARB or military compatibility.
Zoning Code Compatibility Regulations	The City of Kokomo has a Zoning Ordinance but not related to Grissom ARB or military compatibility.

¹⁶ U.S. Census Bureau, 2021

¹⁷ <https://datausa.io/profile/geo/kokomo-in>; accessed October 2021

¹⁸ <https://fred.stlouisfed.org/series/RGMP29020>; accessed October 2021

Formalized Military Coordination	The City of Kokomo does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	The City of Kokomo encourages soundproofing techniques to be utilized in the construction of structures in the AH-OL district but not related to Grissom ARB or military compatibility.
Height Regulations	The City of Kokomo regulates structure height in the vicinity of the airport but not related to Grissom ARB or military compatibility.
Renewable Energy Regulations	The City of Kokomo regulates Wind to Energy Systems based on size, but this is not related to Grissom ARB or military compatibility.
Overlay Districts	The City of Kokomo has an Airport Hazard Overlay District, which mirrors Howard County's AH-OL District, but this is not related to Grissom ARB or military compatibility.
Noxious Pollution Regulations	The City of Kokomo does not regulate noxious pollution.
Density Regulations	The City of Kokomo does not regulate density.
Outdoor Lighting Regulations	The City of Kokomo regulates outdoor lighting in all districts but not related to Grissom ARB or military compatibility.
Stormwater Regulations	The City of Kokomo regulates stormwater but not related to Grissom ARB or military compatibility.
Subdivision Regulations	The City of Kokomo does not have subdivision regulations.

3.4.8. Miami County

Miami County spans 377.39 square miles in north central Indiana, surrounded by Fulton County to the north, Wabash and Grant Counties to the east and southeast, Howard County to the south, and Cass County to the west. The jurisdiction was formed in 1832 from portions of Cass County and unorganized lands and with the City of Peru county seat. The county is divided into 14 townships, the City of Peru, five (5) towns, and 28 census-designated places and unincorporated communities, including Grissom ARB. The installation is situated in the southwest portion of Miami County.

The largely rural jurisdiction had a total population of 35,962 in 2020, including approximately 3,117 veterans.¹⁹

Miami County is served by US 31 and SR 19 as they transect the county from north to south, as well as by the generally east-west aligned US 24, SR 18, and SR 124. Three public airports can be easily accessed, including Peru Municipal Airport in Miami County, Logansport/Cass Municipal Airport in Cass County, and Wabash Municipal Airport in Wabash County. Norfolk Southern Railroad also services Miami County, shipping freight across the nation.

Miami County assets and quality of life support several large businesses, including Ferrellgas, Schneider Electric, and Snavelly Machine and Manufacturing. Primary industries in terms of employment include Manufacturing, Healthcare & Social Assistance, and Retail Trade²⁰, with the county's Real GDP totaling \$8.6 million in 2020.²¹

The Miami County Planning Department serves as the main coordinating agency in the development, adoption, and implementation of the county's land use plans and policies. Future economic development across the county is fostered and guided by the Miami County Planning Commission and Planning Department through the county's 2015 Comprehensive Plan, land use maps, and Zoning Ordinance. The County also engages with the Miami County Economic Development Alliance (MCEDA), a public/private partnership that coordinates local efforts to attract jobs and new business investment, assists current businesses, and fosters growth and retention.

Miami County government consists in a county council and board of commissioners. The Miami County Council serves as the jurisdiction's legislative branch and controls all spending and revenue collection. The Council has some authority to impose local income and property taxes, given approval from the State, as well as excise and service taxes. It also establishes priorities for funding allocations. Representatives are elected from county districts to serve four-year terms.

The Miami County Board of Commissioners is the jurisdiction's executive body charged with implementing the legislative acts of the Council. Commissioners are elected county-wide and serve four-year staggered terms. The commissioners also collect revenue and manage the day-to-day functions of the government. Other elected officials include a judge, county recorder, treasurer, auditor, coroner, and sheriff.

¹⁹ U.S. Census Bureau, 2021

²⁰ <https://datausa.io/profile/geo/miami-county-in>; accessed October 2021

²¹ <https://fred.stlouisfed.org/series/REALGDPALL18103>; accessed October 2021

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
<p>The Miami County Comprehensive Plan provides extensive background information on Grissom ARB and the Grissom Aeroplex (Community Profile Section), as well as general land use policies related to Grissom. Access to the installation is located within Miami County, so the Comprehensive Plan discussion of transportation infrastructure and population shifts in the county to changes at Grissom ARB are particularly highlighted.</p>	
Zoning Code Compatibility Regulations	
<p>Miami County has a Zoning Ordinance but not related to Grissom ARB or military compatibility.</p>	
Formalized Military Coordination	<p>Miami County does not have formalized military coordination in its zoning code.</p>
Noise Regulations/Sound Attenuation	<p>Miami County regulates noise but not related to Grissom ARB or military compatibility.</p>
Height Regulations	<p>Miami County regulates height but not specific to imaginary surfaces related to Grissom ARB or military compatibility. The max building height is 100 feet and shall not affect any FAA regulations. The Com. Tower max height is 250 feet.</p>
Renewable Energy Regulations	<p>Miami County adopted its Wins Energy Conversion Systems Siting Ordinance in 2011. It governs the approval of wind energy turbines in the unincorporated county and regulates wind facilities according to their size, use, and FAA compliance. For solar, there's an extensive ordinance that addresses glare and interference with electronic equipment. These are not related to Grissom ARB or military compatibility.</p>
Overlay Districts	<p>Miami County does not have an overlay district. The County was considering an overlay district, which included additional height restrictions and requirements for Grissom ARB with respect to wind turbines and other structures in closer proximity to the airbase, but this was never adopted.</p>
Noxious Pollution Regulations	<p>Miami County does not regulate noxious pollution.</p>
Density Regulations	<p>Miami County does not regulate density.</p>

Outdoor Lighting Regulations

Miami County does not explicitly regulate outdoor lighting, but it includes requirements related to certain uses such as limiting the amount of light spillover into residential districts as well as requirements related to off-street parking areas affecting adjacent areas. These are not related to Grissom ARB or military compatibility.

Stormwater Regulations

Miami County does not regulate stormwater.

Subdivision Regulations

Miami County has subdivision regulations but not related to Grissom ARB or military compatibility.

3.4.9. City of Peru



Founded in 1834, the City of Peru now spans 5.65 square miles in Peru Township in the center of Miami County. It is the largest community and county seat, adjacent to the Wabash River and surrounded by agricultural lands and scattered development. The City of Wabash is 14.1 miles east of Peru, while Logansport is 16.7 miles west. Grissom ARB is located approximately eight (8) miles southwest of the city.

Both north-south-aligned US Business Route 31 and east-west-aligned US Business Route 24 run through town, providing access to the county and state road network. Commerce in Peru is further supported by interstate carriers with terminals in Peru and Miami County, more generally, as well as by Norfolk Southern Railroad that maintains service in the city. Burns Harbor/Portage and global ship and barge connections are approximately two (2) hours away.

Leading industries relative to employment in Peru in 2019 included Manufacturing, Healthcare & Social Assistance, and Retail Trade. The local economy employed 499,000, with 21.7% holding production jobs.²² Industry expansion and economic growth are fostered and guided by the City of Peru Planning Commission and Planning & Zoning Department, in collaboration with the MCEDA.

Development efforts include a new industrial park and at several Grissom Aeroplex sites.²³

Peru has a mayor-council government structure that served an estimated population of 11,023 in 2019. Peru’s mayor serves as the chief executive officer and oversees department operations and the enforcement of legislation enacted by the council.²⁴

The Peru City Council serves as both the legislative and fiscal bodies of the government. The council is responsible for passing ordinances, orders, motions, and resolutions and for managing City finances and the appropriation of money. The Council consists in one (1) representative from each of five (5) districts and two (2) at-large members. City Council members are not subject to term limits.

Peru’s government further includes a number of appointed boards and commissions, including the Planning Commission and Rediscover Downtown.

Existing Compatibility Tool	Tool Description
<p>Comprehensive Plan Compatibility Policies</p> <p>The City of Peru’s Master Plan can be found in Chapter 150 of the Municipal Code of Ordinances but not does discuss Grissom ARB or military related compatibility.</p>	
<p>Zoning Code Compatibility Regulations</p> <p>The City of Peru has a Zoning Ordinance and exercises zoning powers in its extraterritorial jurisdiction but does not have special provisions pertaining to Grissom ARB or military related compatibility.</p>	

²² <https://datausa.io/profile/geo/peru-in#economy>; accessed October 2021

²³ <https://www.miamicountyeda.com/available-sites-buildings.php>; accessed February 2022

²⁴ U.S. Census Bureau, 2021

Indiana || Military Compatible Planning Advisory Handbook

Formalized Military Coordination	The City of Peru does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	The City of Peru does not regulate noise.
Height Regulations	The City of Peru does not regulate height.
Renewable Energy Regulations	The City of Peru does not regulate renewable energy.
Overlay Districts	The City of Peru does not have an overlay district.
Noxious Pollution Regulations	The City of Peru does not regulate noxious pollution.
Density Regulations	The City of Peru does not regulate density.
Outdoor Lighting Regulations	The City of Peru regulates outdoor lighting, primarily to limit light spillage onto adjacent properties, but not related to Grissom ARB or military compatibility.
Stormwater Regulations	The City of Peru regulates stormwater but not related to Grissom ARB or military compatibility.
Subdivision Regulations	
The City of Peru has subdivision regulations but not related to military compatibility.	

3.4.10. Town of Bunker Hill



The Town of Bunker Hill is located in Pipe Creek Township in the southwestern part of Miami County. The small community encompasses .42 square miles that was home to an estimated 851 people in 2019.²⁵

Bunker Hill was platted in 1851, followed by the opening of the town’s post office in 1859 and the arrival of the Pan Handle Railroad in 1868. The town is currently served by SR 218, which transects the community. Bunker Hill is 20.2 miles south of Peru and 3.0 miles east of Grissom ARB, with the potential to experience impacts from operations there.

Business in Bunker Hill is predominantly local, and top employers in 2019 included Manufacturing, Healthcare & Social Assistance, and Retail Trade.²⁶

The town is governed by an elected five-member council that serves the community at-large. Bunker Hill also has an elected clerk-treasurer responsible for administrative and financial functions, including managing and reporting financial information. The town is further supported by the Bunker Hill Main Street Committee.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	

The Town of Bunker is included in the Miami County Comprehensive Plan. However, The Town of Bunker Hill adopted a Growth Management Plan in 1997. The plan includes background information on Grissom ARB and the changes resulting from the 1991 Base Realignment and Closure process. The plan references Grissom’s Air Installation Compatible Use Zone Study and establishes a policy to consider Clear Zones, Accident Potential Zones, and Noise Zones when the Town considers changes to land use and development patterns. The plan recognizes economic development opportunities available because of the base realignment and subsequent development of the Grissom Aeroplex.

Zoning Code Compatibility Regulations	
--	--

The Town of Bunker Hill regulates zoning within Town limits and within the municipal fringe area, but not related to Grissom ARB or military compatibility.

Formalized Military Coordination	The Town of Bunker Hill does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	The Town of Bunker Hill does not regulate sound.
Height Regulations	The Town of Bunker Hill does not regulate height.
Renewable Energy Regulations	The Town of Bunker Hill does not regulate renewable energy.

²⁵ U.S. Census Bureau, 2021

²⁶ <https://datausa.io/profile/geo/bunker-hill-in#economy>; accessed October 2021

Overlay Districts	The Town of Bunker Hill does not have an overlay district. However, there was consideration of an overlay zoning district regulating height and land use in Grissom ARB impact areas for both the current KC-135 operations and potential KC-46, but this was not adopted.
Noxious Pollution Regulations	The Town of Bunker Hill does not regulate noxious pollution.
Density Regulations	The Town of Bunker Hill does not regulate density.
Outdoor Lighting Regulations	The Town of Bunker Hill regulates outdoor lighting, in a general sense, for off-street parking areas and special exception uses to protect adjacent properties and streets, but these aren't related to Grissom ARB or military compatibility.
Stormwater Regulations	The Town of Bunker Hill does not regulate stormwater.
Subdivision Regulations	
The Town of Bunker Hill has subdivision regulations within Town limits and within the municipal fringe area but not related to Grissom ARB or military compatibility.	

3.4.11. Town of Converse

Converse, Indiana, spans .99 square miles on either side of SR 19 in Richland Township, Grant County, and in Jackson Township, Miami County. Most of the community falls within Miami County, with the center approximately 18 miles southeast of Peru and approximately 20 miles east of Grissom ARB.

Converse was laid out in 1849, with an addition platted in 1867. The development of a depot for the Pennsylvania Railroad spurred early settlement and the community now boasts a public-use airport approximately 1.0 miles southwest of the town. The area has nevertheless remained rural. The community's estimated population was 1,222 in 2019.²⁷

Converse's workforce includes roughly 499 people, with most having jobs in production. Leading industries in terms of employment in 2019 were Manufacturing, Retail Trade, and Finance & Insurance.

The town's government consists in a six-member town council and clerk-treasurer responsible for administrative and financial functions. Community planning and growth and development efforts are supported by the Converse Economic Development Corporation and the Converse Redevelopment Commission, which oversees a TIF district that positions the town for attracting businesses to the area.

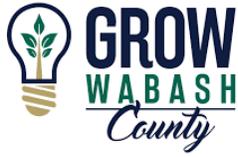
Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	The Town of Converse is included in the Miami County Comprehensive Plan.
Zoning Code Compatibility Regulations	The Town of Converse regulates zoning, but its codes are found in Miami County's Code of Ordinances, and these are not related to Grissom ARB or military compatibility.
Formalized Military Coordination	The Town of Converse does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	The Town of Converse does not regulate noise.
Height Regulations	The Town of Converse does not regulate height.
Renewable Energy Regulations	The Town of Converse does not regulate renewable energy.
Overlay Districts	The Town of Converse does not have an overlay district.
Noxious Pollution Regulations	The Town of Converse does not regulate noxious pollution.
Density Regulations	The Town of Converse does not regulate density.
Outdoor Lighting Regulations	The Town of Converse does not regulate outdoor lighting.
Stormwater Regulations	The Town of Converse does not regulate stormwater.

²⁷ U.S. Census Bureau, 2021

Subdivision Regulations

The Town of Converse does not have subdivision regulations but operates under Miami County.

3.4.12. Wabash County



Wabash County encompasses 420.98 square miles in north central Indiana and is bordered by Kosciusko and Whitley Counties to the north and northeast, Huntington County to the east, Grant County to the south, and Miami and Fulton Counties to the west and northwest. The county was first established in 1820 and ultimately organized in 1835 with the City of Wabash and seven (7) townships designated. Wabash County includes one (1) city, four (4) towns, and 21 census-designated places and other unincorporated communities. The reported population of Wabash County in 2020 was 30,976, including approximately 1,837 veterans.²⁸

The area is predominantly rural and characterized by agricultural land uses. The county is nevertheless served by an extensive road network, including US 24, SR 15, SR 115, SR 13, which all converge in the City of Wabash. State Routes 114, 16, and 124 transect the county west to east, north and south of the city. The county is further served by Wabash Municipal Airport and by Fort Wayne International Airport, approximately 40 miles northwest from the middle of the county. The far southwest corner of Wabash County is approximately 25 miles due east of Grissom ARB.

The county economy employed an estimated 14,700 people in 2019, with the top industries in Manufacturing, Health Care & Social Assistance, and Retail Trade. Occupations were diverse, with 13.6% involved in production.²⁹ The county's Real GDP was \$1.2 million in 2020.³⁰

Economic development is fostered and guided by the County Advisory Plan Commission, Grow Wabash County, and the Northwest Indiana Regional Development Authority. Targeted industries include food, beverage, and other Manufacturing, AgriBusiness, Distribution, and Medical Engineering (Devices). The five (5) incorporated municipalities in Wabash County will be further guided by Imagine One 85, the county's Comprehensive Plan update currently being drafted.

Wabash County is governed by a county council that serves as the government's legislative branch and control spending and revenue collection. The Wabash County Council has limited authority to impose local income and property tax with state-level approval, as well as excise and service taxes. Council members are elected from county districts to serve four-year terms.

The Wabash County Board of Commissioners is the executive body of the county government. Commissioners are elected county-wide to serve four-year, staggered terms. They are responsible for implementing the legislative acts of the County Council, collecting revenue, and managing the day-to-day functions of the government.

The county has several other elected offices, including a court judge, clerk, and prosecutor, a county recorder, treasurer, and auditor, and assessor, as well as a coroner and sheriff.

²⁸ U.S. Census Bureau, 2021

²⁹ <https://datausa.io/profile/geo/wabash-county-in#economy>; accessed October 2021

³⁰ <https://fred.stlouisfed.org/series/GDPALL18169>; accessed November 2021

Indiana || Military Compatible Planning Advisory Handbook

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
<p>The Wabash County Comprehensive Plan, adopted in 2012, recognizes land use patterns can have a positive or negative impact on a community and stresses the importance of adhering to the “right” pattern for the long-term benefit of the community (see e.g., Vision and Land Use Introduction, pp. 71-72). The plan does not provide military-related planning policies; however, Wabash County is located outside of Grissom ARB’s impact areas.</p>	
Zoning Code Compatibility Regulations	
<p>Wabash County has adopted a Zoning Ordinance but not related to Grissom ARB or military compatibility.</p>	
Formalized Military Coordination	<p>Wabash County does not have formalized military coordination in its zoning code.</p>
Noise Regulations/Sound Attenuation	<p>Wabash County regulates noise but not related to Grissom ARB or military compatibility.</p>
Height Regulations	<p>Wabash County does not regulate height.</p>
Renewable Energy Regulations	<p>Wabash County regulates renewable energy such as solar but not related to Grissom ARB or military compatibility.</p>
Overlay Districts	<p>Wabash County does not have an overlay district.</p>
Noxious Pollution Regulations	<p>Wabash County does not regulate noxious pollution.</p>
Density Regulations	<p>Wabash County does not regulate density.</p>
Outdoor Lighting Regulations	<p>Wabash County regulates outdoor lighting but not related to Grissom ARB or military compatibility. This includes safety, shielding, height and location at solar facilities.</p>
Stormwater Regulations	<p>Wabash County regulates stormwater but not related to Grissom ARB or military compatibility.</p>
Subdivision Regulations	
<p>Wabash County has subdivision regulations but not related to Grissom ARB or military compatibility.</p>	

3.4.13. City of Wabash



The City of Wabash is in Noble Township in central Wabash County. The city encompasses 9.87 square miles, and with 10,400 reported residents in 2020³¹, is the largest community in the county in terms of geographic expanse and population. Wabash is 45.8 miles southwest of Fort Wayne, 79.2 miles north of Indianapolis, 30.1 miles west of Logansport, and approximately 20 miles “as the crow flies” from Grissom ARB.

Platted in 1834 along the Wabash River, the city is the county seat and center of cultural and economic activity for the area. Residents, businesses, and visitors benefit from access to US 24 and multiple state routes as they cross through the city. Norfolk Southern offers north-south and east-west mainlines that intersect in downtown Wabash and ultimately reach the eastern United States and parts of Canada. Wabash Municipal Airport, a general aviation, public-use airport is located 3.2 miles south of downtown.

This infrastructure supports an array of cultural attractions and events, recreational opportunities, commerce, and industry. The City of Wabash is home to digital company FFW, Thermafiber, G&S Metal Consultants, Owens Corning, and Ford Meter Box Company. The local economy employs approximately 4,860 people, with top industries including Manufacturing, Healthcare & Social Assistance, and Retail Trade.³²

The City of Wabash, including the Plan Commission and Redevelopment Commission, collaborates with Grow Wabash County, and the Northwest Indiana Regional Development Authority to continue economic diversification, business attraction and retention, and support strategic growth.

Wabash is governed by an elected mayor, city council, and clerk treasurer. The Mayor of Wabash performs the executive and administrative functions pertaining to daily operations and holds veto power over Council acts.

The City Council of Wabash serves as the legislative and fiscal branches of government. The Council is comprised of seven members (7), including one member from each of five (5) districts and two (2) at-large representatives. As the legislative body, the Council is responsible for passing and modifying ordinances, resolutions, orders, and motions. The Council has further authority to impose local income and property taxes, pending State approval, as well as other taxes.

The Wabash Clerk Treasurer upholds all fiscal responsibilities on behalf of the city.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
<p>The City of Wabash’s Comprehensive Plan establishes policies related to growth and development, including an objective to prohibit or buffer incompatible business and industrial land uses adjacent to residential uses. The City’s Comprehensive Economic Development Plan (2013 CED Plan), adopted in 2013, is incorporated by reference into the Comprehensive Plan. The Plans do not address Grissom ARB or military related compatibility.</p>	

³¹ U.S. Census Bureau, 2021

³² <https://datausa.io/profile/geo/wabash-in#economy>; accessed October 2021

Zoning Code Compatibility Regulations

The City of Wabash exercises zoning authority within its municipal limits and two-mile extraterritorial jurisdiction, established in Chapter 10 of the Wabash City Code, but does not address issues related to Grissom ARB or military compatibility.

Formalized Military Coordination

The City of Wabash does not have formalized military coordination in its zoning code.

Noise Regulations/Sound Attenuation

The City of Wabash does not regulate noise.

Height Regulations

The City of Wabash does not regulate height.

Renewable Energy Regulations

The City of Wabash regulates Wind Energy Conversion Systems but not related to Grissom ARB or military compatibility.

Overlay Districts

The City of Wabash does not have an overlay district.

Noxious Pollution Regulations

The City of Wabash does not regulate noxious pollution.

Density Regulations

The City of Wabash does not regulate density.

Outdoor Lighting Regulations

The City of Wabash does not regulate outdoor lighting.

Stormwater Regulations

The City of Wabash regulates stormwater but not related to Grissom ARB or military compatibility.

Subdivision Regulations

The City of Wabash has subdivision regulations but not related to Grissom ARB or military compatibility.

3.5. Naval Support Activity (NSA) Crane Surrounding Communities

3.5.1. Greene County



Greene County is in southwestern Indiana and is bounded by Clay and Owen Counties to the north, Monroe and Lawrence Counties to the south and southeast, Martin and Daviess County to the south, and Knox and Sullivan Counties to the southwest and west. The jurisdiction comprises 545.92 square miles of mostly undeveloped, agricultural, and forest lands divided into 15 townships. The county seat is Bloomfield, approximately 10 miles north of NSA Crane. The county’s reported population was 30,803 in 2020 and included 2,090 veterans.³³

The county was established in 1820, with development following the jurisdictions mining heritage from pick and shovel mining of coal shafts in the late 1880s to the strip mining that occurs today. The primary industries today in Greene County are Healthcare and Social Assistance, Retail, Education, and Manufacturing.³⁴ The GDP was 652,190 in Thousands of U.S. Dollars in 2020.³⁵

Greene County is part of the Greene County Economic Development Corporation (GCEDC), which works to foster an environment that will create and retain jobs, increase tax revenues, and promote economic growth in the region. The County and GCEDC have, in turn, collaborated with the Indiana Development Corporation to develop incentive portfolios to stimulate growth. Greene County has also been a collaborator in the tri-county area initiative for the WestGate@Crane Technology Park and in bringing solar energy to the Greene, Davies, and Martin Counties.

Greene County is governed by a county council that serves as the jurisdiction’s legislative branch and controls all spending and revenue collection. The Council has some authority to impose local income and property taxes, given approval from the State, as well as excise and service taxes. It also establishes priorities for funding allocations. The Council consists in seven (7) elected members, with four (4) serving specific districts and three (3) serving at large.

The Greene County Board of Commissioners is the jurisdiction’s executive body charged with implementing the legislative acts of the Council. Three (3) commissioners are elected, county-wide, to serve four-year staggered terms. The commissioners also collect revenue and manage the day-to-day functions of the government. Other elected officials include a claims court judge, county recorder, treasurer, auditor, coroner, and sheriff.

Existing Compatibility Tool	Tool Description
<p>Comprehensive Plan Compatibility Policies</p> <p>The Greene County Comprehensive Plan is the policy document that guides the long-range development plans for the county and established criteria and guidelines for land use regulation and growth policies for the unincorporated areas of the county. The Comprehensive Plan, which was approved in July 2009, contains elements outlining economy, land use, natural resources protection, transportation, and implementation and evaluation of the plan. The Comprehensive Plan only partially addresses land use issues related to NSA Crane or military compatibility.</p>	

³³ U.S. Census Bureau, 2021

³⁴ http://www.city-data.com/county/Greene_County-IN.html; accessed December 2021

³⁵ <https://fred.stlouisfed.org/series/GDPALL18055>; accessed December 2021

Zoning Code Compatibility Regulations

Greene County has not adopted a Zoning Ordinance.

Subdivision Regulations

Greene County has not adopted a Subdivision Ordinance.

3.5.2. Town of Bloomfield

Bloomfield spans 1.41 miles in Richland Township in the middle of Greene County, Indiana. With a population of approximately 2,300³⁶, it is the second largest community in the county and the county seat. The town is accessed via US 231 and SR 157.

Despite its small size, Bloomfield boasts several cultural attractions, including seasonal festivals and parades, one of the state’s best-preserved covered bridges, a turn-of-the-century band stand, and the world’s largest hi-lift jack.

The economy is driven by local businesses and some manufacturing, with top industries being Public Administration, Education, Construction, and Metal Production.³⁷

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
The Town of Bloomfield does not have a Comprehensive Plan.	
Zoning Code Compatibility Regulations	
The Town of Bloomfield has a Zoning Ordinance but not related to military compatibility.	
Formalized Military Coordination	The Town of Bloomfield does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	The Town of Bloomfield does not regulate noise.
Height Regulations	The Town of Bloomfield does not regulate height.
Renewable Energy Regulations	The Town of Bloomfield does not regulate renewable energy.
Overlay Districts	The Town of Bloomfield does not have overlay districts.
Noxious Pollution Regulations	The Town of Bloomfield does regulate noxious pollution such as odor and toxic/malodorous gases for public and private sewers and drains, but this is not related to NSA Crane or military compatibility.
Density Regulations	The Town of Bloomfield does not regulate density.
Outdoor Lighting Regulations	The Town of Bloomfield does not regulate outdoor lighting.
Stormwater Regulations	The Town of Bloomfield regulates stormwater but not related to NSA Crane or military compatibility.
Subdivision Regulations	
The Town of Bloomfield has subdivision regulations but not related to NSA Crane or military compatibility.	

³⁶ <http://www.city-data.com/city/Bloomfield-Indiana.html>; accessed November 2021

³⁷ <http://www.city-data.com/city/Bloomfield-Indiana.html>; accessed November 2021

3.5.3. Daviess County

Daviess County was established in 1818, with the City of Washington as county seat. The 436.87-square-mile jurisdiction is in southwestern Indiana and is surrounded by Greene County to the north, Martin County and Dubois Counties to the east and southeast, and Pike and Knox County to the southwest and west. It is mostly rural, with lands undeveloped or given over to agricultural uses.

Daviess County is divided into 10 townships and encompasses the City of Washington, six (6) towns, and 14 census-designated places and unincorporated communities. The population was 3,381 in 2020³⁸ and includes a large Old Order Amish settlement that comprises more than 10% of county residents. The community also has many veterans.

The top industries in Daviess County in 2019 were Manufacturing, Healthcare & Social Assistance, and Construction. Retail Trade is also important to the economy.³⁹

Recent industrial development is largely centered at WestGate@Crane Technology Park, a tri-county initiative for Daviess, Martin, and Greene Counties supported by NSA Crane. Current tenants include NAVSEA Warfare Center, Booz | Allen | Hamilton, Lucid Services Group, Indiana Innovation Institute, and others. Ultimately, the technology park could employ up to 3,000 people with nearly 2,100 jobs based in Daviess County.⁴⁰

Economic growth and development in the area is also supported by the Daviess County Economic Development Corporation and guided by various planning documents, including the Daviess County Comprehensive Plan (2009), the Westgate Strategic Plan Vision (2012), Proposed Business 50 Corridor Improvements (2016), and the Southern Indiana Development Commission Comprehensive Economic Development Strategy (CEDS)(2019).

The Daviess County Council serves as the legislative branch of the county government and controls spending and revenue collection. The council also has limited authority to impose local income and property taxes, subject to State approval, as well as excise and service taxes. It is further responsible for the annual budget, and special spending. The council's seven (7) representatives are elected from county districts to serve four-year terms.

The Board of Commissioners constitutes the Daviess County's executive body and is responsible for executing the Council's legislative acts, collecting revenue, and managing day-to-day operations. The Commissioners are elected county-wide to staggered, four-year terms. Additional elected positions include a small claims court judge, court clerk, county recorder, treasurer auditor, coroner, and sheriff.

Existing Compatibility Tool

Tool Description

Comprehensive Plan Compatibility Policies

The Daviess County Comprehensive Plan is the policy document that guides the long-range development plans for the county and established criteria and guidelines for land use regulation and growth policies for the unincorporated areas of the county. The Comprehensive Plan, which was approved in December 2009, contains elements outlining the community setting, an assessment of existing conditions, community issues, a future vision, and recommendations. The Comprehensive Plan only partially addresses land use issues related to NSA Crane or military compatibility.

Zoning Code Compatibility Regulations

³⁸ U.S. Census Bureau, 2021

³⁹ <https://datausa.io/profile/geo/daviess-county-in#economy>; accessed November 2021

⁴⁰ <https://westgatecrane.com/>; accessed November 2021

Daviess County has a Zoning Ordinance, but NSA Crane or military related compatibility is not specifically identified.

Formalized Military Coordination

Daviess County does not have formalized military coordination in its zoning code.

Noise Regulations/Sound Attenuation

Daviess County regulates noise, but this doesn't affect land use issues related to NSA Crane or military compatibility.

Height Regulations

Daviess County regulates height such as 35 feet for buildings with agricultural uses allowed to be higher, but this doesn't affect land use issues or imaginary surfaces related to NSA Crane or military compatibility.

Renewable Energy Regulations

Daviess County does not regulate renewable energy.

Overlay Districts

Daviess County does not have an overlay district.

Noxious Pollution Regulations

Daviess County does not regulate noxious pollution.

Density Regulations

Daviess County regulates density, but this doesn't affect land use issues related to NSA Crane or military compatibility.

Outdoor Lighting Regulations

Daviess County regulates outdoor lighting, but this doesn't affect land use issues related to NSA Crane or military compatibility.

Stormwater Regulations

Daviess County regulates stormwater but not related to NSA Crane or military compatibility.

Subdivision Regulations

Daviess County has a Subdivision Ordinance but not related to NSA Crane or military compatibility.

3.5.4. City of Washington



The City of Washington is in the southwestern portion of Daviess County. Spanning 6.67 square miles, it is the largest municipality in the county in terms of area and population. Approximately 12,017 people, including 856 veterans, live in the city.⁴¹

Washington was platted in 1815 and quickly became a major railroad depot and economic hub. It remains the center of activity in rural Daviess County and the principal city of the Washington Indiana Micropolitan Statistical Area. City residents and businesses have easy access to I-69 and US 150, which skirt the community to the east, and to SR 57, which runs north-south through the heart of the city.

The city's top industries in terms employment are Healthcare, Accommodation & Food Services, Food, Education Services, and Construction. Business is predominantly local.⁴²

Washington engages with the Daviess County EDC and guides local efforts through several planning documents, including the City of Washington Comprehensive Plan (2009) and I69 Land Use Plan (2013).

The City of Washington is governed by an elected mayor, common council, and clerk-treasurer. All elected officials serve four-year terms.

As chief executive officer, the mayor is responsible for overseeing city departments and the enforcement of legislation passed by the common council.

The City of Washington Common Council consists in seven (7) members, five (5) of whom are elected by specific districts, while two (2) are elected at-large. The Council is the legislative and fiscal governing body and is responsible for developing and approving city ordinances and approving departmental budgets.

The clerk-treasurer serves as the chief financial officer for the City and as record keeper for the Council and various boards and commissions, including the Board of Public Works & Safety, the Plan Commission, Board of Zoning Appeals, Economic Development Commission, Redevelopment Commission, and others.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	The City of Washington has a Comprehensive Plan but is not related to NSA Crane or military compatibility.
Zoning Code Compatibility Regulations	The City of Washington has a Zoning Ordinance but not related to NSA Crane or military compatibility.
Formalized Military Coordination	The City of Washington does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	The City of Washington regulates noise in Section 94.01, but this is not related to NSA Crane or military compatibility.

⁴¹ U.S. Census Bureau, 2021

⁴² <http://www.city-data.com/city/Washington-Indiana.html>; accessed November 2021

Height Regulations	The City of Washington regulates height in Section 155.036, but this is not related to NSA Crane or military compatibility.
Renewable Energy Regulations	The City of Washington does not regulate renewable energy.
Overlay Districts	The City of Washington has an overlay district concerning economic development and highway corridors, but this is not related to NSA Crane or military compatibility.
Noxious Pollution Regulations	The City of Washington does not regulate noxious pollution.
Density Regulations	The City of Washington does not regulate density.
Outdoor Lighting Regulations	The City of Washington does not regulate outdoor lighting.
Stormwater Regulations	The City of Washington regulates stormwater but not related to NSA Crane or military compatibility.
Subdivision Regulations	The City of Washington does not have subdivision regulations.

3.5.5. Town of Odon

The Town of Odon was incorporated as part of Madison Township, Daviess County, in 1885. The small community is just under one (1) square mile in total area and home to 1,397 people.⁴³ It is likely the first Amish in Daviess County settled east of the town in the late 1860s, and many Amish still reside and own businesses in the area.⁴⁴

Odon is equidistant between I-69 and US 231 and is accessible via SR 58 as it crosses east-west between the major roadways and through the community. Naval Support Activity Crane is approximately eight (8) miles east of the town.

Business in Oden is predominantly local, with the recently expanded Berry Global plastic fabrication facilities southeast of town a notable exception. Top industries by employment include Manufacturing, Retail Trade, and Healthcare & Social Assistance.⁴⁵

The Town of Odon has a three-member town council and clerk-treasurer. The clerk-treasurer is responsible for clerical and record-keeping duties and fiscal and administrative functions.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
	The Town of Odon does not have a Comprehensive Plan.
Zoning Code Compatibility Regulations	
	The Town of Odon does not have a Zoning Ordinance but operates under Daviess County.
Subdivision Regulations	
	The Town of Odon does not have subdivision regulations but operates under Daviess County.

⁴³ U.S. Census Bureau, 2021

⁴⁴ <https://www.daviesscounty.net/our-county/history/>; accessed November 2021

⁴⁵ <https://datausa.io/profile/geo/odon-in#economy>; accessed December 2021

3.5.6. Martin County



Martin County was formed in southwestern Indiana with Shoals as county seat in 1820. It is bordered by Greene County to the north, Lawrence and Orange Counties to the east and southeast, Dubois County to the south, and Daviess County to the west. Martin County encompasses 340.41 square miles, with 28% of it comprising NSA Crane since its establishment in 1940 as part of the nation’s preparation for World War II. The remaining area is dominated by Hoosier National Forest, Martin State Forest, and agricultural lands.

Developed areas include Shoals, the City of Loogootee, the Town of Crane, and 22 unincorporated communities and census-designated places in 6 townships. Most communities cluster along US 231 as it travels north-south along Martin County’s western border or along the roughly east-west aligned US 150 and SR 55 as they cross the middle of the county.

Martin County’s population was 9,812 and included 988 veterans in 2020.⁴⁶ Most residents were employed in production or administrative support positions in 2019⁴⁷, reflecting the county’s shift away from its agricultural heritage. The primary industries in Martin County are defense, mining, agriculture, and small business. Its primary employment hub is NSA Crane.⁴⁸ The County’s GDP was \$1.05 million in 2020.⁴⁹

Martin County is governed by a county council that serves as the legislative branch and controls spending and revenue collection. The Council has limited authority to impose local income and property tax, subject to state-level approval, as well as excise and service taxes. Council members are elected from county districts every four (4) years.

County executive functions are performed by the Martin County Board of Commissioners, also an elected body that implements council legislation, collects revenues, and manages the government. Commissioners serve staggered four-year terms. Other elected county officials include a judge and court clerk, a county recorder, treasurer, auditor, surveyor, coroner, and sheriff.

Growth and development in Martin County, and particularly in agriculture, defense, mining, and small business, is promoted by the Martin County Alliance. Martin County is also a partner in the tri-county WestGate@Crane Technology Park, home to the Battery Innovation Center, the WestGate Academy Conferencing & Training Center, and many defense contractors.

⁴⁶ U.S. Census Bureau, 2020

⁴⁷ http://www.city-data.com/county/Martin_County-IN.html

⁴⁸ Martin County Alliance, 2022

⁴⁹ <https://fred.stlouisfed.org/series/REALGDPALL18101>

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
<p>The Martin County Comprehensive Plan adopted in July 2009 contains elements partially related to NSA Crane and military compatibility including:</p> <p>A predominance of forestlands in NSA Crane and east of the East Fork of the White River covers 62 percent of the total county.</p> <p>Forty percent of managed land (NSA Crane, Hoosier National Forest and Martin State Forest) is exempt from property taxes. Federal and state payments in lieu of property taxes to the county fluctuate over time.</p> <p>Endangered species and high-quality natural communities are presently protected by publicly managed land areas, such as NSA Crane.</p> <p>The WestGate@Crane Technology Park is projected to add 340 jobs, add 92 acres of land for residential and other nonindustrial uses, require 238 additional housing units, and add 594 people to the county's population by 2030.</p> <p>Most sanitary sewer systems are at capacity during storm events with significant storm water inflow/infiltration problems, and sanitary sewers must be extended to accommodate growth.</p> <p>Locations for future land use opportunities in Martin County are focused on the City of Loogootee, along US Route 231 north of West Boggs Lake and north of the Town of Crane.</p>	
Zoning Code Compatibility Regulations	
<p>Martin County has not adopted a Zoning Ordinance.</p>	
Subdivision Regulations	
<p>Martin County does not have subdivision regulations.</p>	

3.5.7. City of Loogootee

The City of Loogootee spans 1.5 square miles in Perry Township, Martin County. The community was founded in 1853 and had a recorded population of 2,575 in 2019.⁵⁰ Loogootee may be best known as home of the 4,000-seat Jack Butcher Arena. The small city also boasts a municipal pool, park, and public library. West Boggs Park is four (4) miles north of the community and offers camping, fishing, boating, and other outdoor recreation opportunities. NSA Crane is 15.5 miles northeast.

Businesses in Loogootee are predominantly local, with many residents employed by the federal government and government contractors serving NSA.⁵¹ Top industries include Manufacturing, Retail Trade, and Healthcare & Social Assistance.⁵²

The Southern Indiana Development Commission and WorkOne Martin County are both located in and support growth and development in Loogootee. The city also engages with the Martin County Alliance development agency.

Loogootee is governed by a mayor that serves as the City’s chief executive officer who oversees department operations and the enforcement of ordinances passed by the Common Council. The Council serves as the legislative and fiscal bodies of the community. Members are responsible for passing city ordinances, approving department budgets, and other duties.

Loogootee’s government further includes a clerk-treasurer who serves as the chief financial officer and record keeper for the Council and various boards and commissions, including the Board of Public Works, the Zoning Advisory Board, and other government entities.

All representatives are elected and serve four-year terms.

Existing Compatibility Tool	Tool Description
<p>Comprehensive Plan Compatibility Policies</p> <p>The City of Loogootee Comprehensive Plan was updated in 2014 and contains elements partially related to NSA Crane and military compatibility. The plan acknowledges the value of NSA Crane as the largest employer in Martin County, providing high quality jobs and drawing innovative entrepreneurs alongside the WestGate@Crane Technology Park. Moreover, the existing and potential land use map shows land uses within the city and within a two-mile extraterritorial jurisdiction boundary. While the city corporate limits are beyond NSA Crane’s direct influence, the two-mile area falls within the three-mile area surrounding NSA Crane in which notification of community efforts to plat, subdivide, plan, regulate, develop, and/or maintain real property is required by state law. Land uses in the extraterritorial area is predominantly parks and recreation, with small pockets of existing single-family residential development.</p>	
<p>Zoning Code Compatibility Regulations</p> <p>The City of Loogootee has a Zoning Ordinance but not related to NSA Crane or military compatibility.</p>	
<p>Formalized Military Coordination</p>	<p>The City of Loogootee does not have formalized military coordination in its zoning code.</p>

⁵⁰ <https://datausa.io/profile/geo/loogootee-in#economy>; accessed November 2021
⁵¹ https://en.wikipedia.org/wiki/Loogootee,_Indiana; accessed November 2021
⁵² <https://datausa.io/profile/geo/loogootee-in#economy>; accessed November 2021

Indiana || Military Compatible Planning Advisory Handbook

Noise Regulations/Sound Attenuation	The City of Loogootee regulates noise in Sections 16.04.270 and 16.04.350, but these are not related to NSA Crane or military compatibility.
Height Regulations	The City of Loogootee regulates height such as 35 feet for buildings with agricultural uses allowed to be higher, but this is not related to NSA Crane or military compatibility.
Renewable Energy Regulations	The City of Loogootee does not regulate renewable energy.
Overlay Districts	The City of Loogootee has an overlay district, but this does not affect land use issues related to NSA Crane or military compatibility as adopted.
Noxious Pollution Regulations	The City of Loogootee regulates noxious pollution such as limiting smoke/emissions from heavy industrial uses (Section 16.04.270), but this is not related to NSA Crane or military compatibility.
Density Regulations	The City of Loogootee does not regulate density.
Outdoor Lighting Regulations	The City of Loogootee does not regulate outdoor lighting.
Stormwater Regulations	The City of Loogootee regulates stormwater but not related to NSA Crane or military compatibility.
Subdivision Regulations	The City of Loogootee does not have subdivision regulations.

3.5.8. The Town of Crane

The Town of Crane comprises 0.12 square miles immediately adjacent to the northwest corner of NSA Crane in Perry Township, Martin County. The NSA Crane Visitors Center is located directly adjacent to the Town of Crane on Federal Land and accounts for most visitors to the community. The town is connected to other areas in the county and beyond via SR 558, which passes through the southern part of the town before joining US 231 and, ultimately, I-69, approximately one mile to the west.

The town was originally founded as Burns City Ammunition Depot in 1940 and renamed for William M. Crane, the first chief of the Navy Bureau of Ordnance in 1943. Crane’s estimated population in 2019 was 179 people.⁵³

The largest industries in the town are Manufacturing, Public Administration, and Construction.⁵⁴

The Town of Crane is connected to the wastewater treatment plant at NSA Crane which treats wastewater from NSA Crane and the town since the town does not have its own wastewater treatment facility. During periods of significant rain, stormwater from the town infiltrates into the town wastewater conveyance system to the NSA Crane wastewater treatment system, exceeding the service area’s life station and infrastructure capacity. When runoff volumes overwhelm the wastewater treatment plant, they can discharge untreated sewage into receiving waters creating the potential for environmental violations. The town has initiated a stormwater improvement project including a new 60-inch reinforced concrete pipe storm sewer with inlets and replaced a portion of the existing storm sewer to remedy the infiltration into the town’s sewer conveyance infrastructure. Greene County recently constructed a new wastewater treatment plant to serve the WestGate@Crane area with capacity to also serve the town. The Greene County Regional Sewer District has expressed interest in the town tying into the Greene County treatment plant and the city has expressed interest in doing so.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	The Town of Crane has not adopted a Comprehensive Plan.
Zoning Code Compatibility Regulations	The Town of Crane has not adopted a zoning code but operates under Martin County.
Subdivision Regulations	The Town of Crane does not have subdivision regulations but operates under Martin County.

⁵³ U.S. Census Bureau, 2021

⁵⁴ <https://datausa.io/profile/geo/crane-in#economy>; accessed November 2021

3.5.9. Community of Burns City

Burns City is an unincorporated, census-designated place just north of SR 645 and immediately adjacent to NSA Crane’s western boundary. The post office was opened in 1849, with the community now encompassing approximately 475 acres. The estimated population about 117 people.⁵⁵

The Burns City workforce is roughly 52 people with the largest industries Manufacturing, Public Administration, and Agriculture, Forestry, Fishing & Hunting.⁵⁶

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	Burns City has not adopted a Comprehensive Plan.
Zoning Code Compatibility Regulations	Burns City has not adopted a zoning code but operates under Martin County.
Subdivision Regulations	Burns City does not have subdivision regulations but operates under Martin County.

⁵⁵ U.S. Census Bureau, 2021

⁵⁶ <https://datausa.io/profile/geo/burns-city-in/#economy>; accessed November 2021

3.5.10. Lawrence County



Lawrence County is in southern Indiana, surrounded by Monroe County to the north, Jackson and Washington Counties to the east and southeast, Orange County to the south, and Martin and Greene Counties to the west and northwest. The City of Bedford serves as the county seat and is the center of cultural and economic activity. Bedford is approximately 15 miles east of NSA Crane, while the county's westernmost boundary is approximately eight (8) miles from the naval facility.

Founded in 1818, Lawrence County now has 45,011 residents, including approximately 3,654 veterans dispersed across 451.93 square miles.⁵⁷ Most residents live in Bedford, the City of Mitchell, or the Town of Oolitic, but the county also encompasses 43 unincorporated communities and census-designated places in nine (9) townships. Lawrence County also encompasses approximately 16,000 acres of Hoosier National Forest.⁵⁸ Spring Mill State Park is near the City of Mitchell.

Lawrence was once known as "Limestone County," due to limestone formation in the area and the stone quarrying and carving that was the foundation of the local economy. Limestone extraction has remained important as the economy has diversified to embrace Manufacturing, Healthcare & Social Assistance, Retail Trade, and Education Services.⁵⁹ Tourism also supports jobs in Lawrence County. The county's GDP was \$1.4 million dollars in 2020.⁶⁰

Lawrence County is governed by a seven-member council that is responsible for fiscal affairs, including the allocation and spending of county funds. They have limited authority to impose local income and property taxes subject to State approval, as well as excise taxes, and service taxes. Council members are elected to four-year terms, with four (4) elected from county districts and three elected at large.

The Board of Commissioners includes four members who are elected from each of the county districts and serve four-year terms. The Board serves as the executive and administrative arms of the county government and is charged with implementing legislation, collecting revenues, and managing day-to-day government functions. They have the authority to pass ordinances pertaining to the maintenance of county property, to supervise infrastructure projects, and create economic development programs.

The County engages with SIDC, Radius Indiana, and Lawrence County Economic Growth Council, a non-profit organization that promotes business development, investment, and growth with a focus on automobile manufacturing, mining, and the defense industry. The county has many development opportunities, including at the East Gate Business Park in Bedford.

⁵⁷ U.S. Census Bureau, 2021

⁵⁸ <https://limestonecountry.com/attraction/the-hoosier-national-forest-and-district-office/#:~:text=Spread%20across%20nine%20counties%2C%20including,forest%20offers%20outstanding%20outdoor%20recreation;> accessed November 2021

⁵⁹ <https://datausa.io/profile/geo/lawrence-county-in;> accessed November 2021

⁶⁰ [https://fred.stlouisfed.org/series/GDPALL18093;](https://fred.stlouisfed.org/series/GDPALL18093) accessed November 2021

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	<p>The Bedford/Lawrence County 2020 Strategic Plan was funded by a grant from the Indiana Department of Transportation’s I-69 Community Planning Program and was published in 2009. The plan recognizes that NSA Crane has remained a powerful economic engine for the county and highlights the need to work together to ensure NSA Crane remains a stable employer to local residents. Objective Land Use-6 involves capitalizing on existing businesses and resources including taking advantage of the county’s proximity to NSA Crane. Objective Public Facilities-6 includes providing high tech infrastructure throughout the county which could potentially spur economic development that supports NSA Crane.</p>
Zoning Code Compatibility Regulations	<p>Lawrence County has not adopted a Zoning Ordinance.</p>
Subdivision Regulations	<p>Lawrence County does not have subdivision regulations.</p>

3.5.11. City of Bedford



The City of Bedford was first platted and designated county seat in the 1820s and now spans 12.6 square miles in Shawswick Township in the middle of Lawrence County. Bedford is connected to Seymour and Vincennes to the east and west, respectively via US 50 as it transects the city, as well as to Bloomington and Mitchell to the north and south via SR 37. NSA Crane is 26.5 miles west of Bedford.

The city had a reported population of 13,792 in 2020, including approximately 1,195 veterans.⁶¹

Bedford is surrounded by limestone quarries and known as the “Limestone Capital of the World.” Bedford limestone was used in the construction of several monuments in Washington D.C., as well as in the Empire State Building in New York City and the Saint Sava Serbian Orthodox Church in Merrillville, Indiana. Manufacturing nevertheless employs 23.2% of the city’s workforce. The top industries in Bedford by employment are Manufacturing, Healthcare & Social Assistance, and Retail Trade.⁶²

The defense industry is also critical to the local economy and a target industry for the East Gate Business Center (EGBTC) on the west side of town nearest NSA Crane. The facility offers extensive space for manufacturing, warehousing, and research and development and is EGBTC is located within a HUB Zone, Military Enhanced Area, and Enterprise Zone that offers many business and tax incentives. Other development opportunities include the 43-acre Vision Group Site adjacent to the EGBT.

Industry growth and economic development are fostered in partnership with the Lawrence County Economic Development Council and guided by community planning documents, including the Better Bedford Comprehensive Plan (2019) and City of Bedford Downtown Plan (2019). The City was named a Stellar Community in 2013, bringing \$19 million in state, local, and private funds for planned improvements. The State of Indiana Stellar Communities program pools resources to help municipalities meet their long-term comprehensive strategic goals for targeted areas.

The community has a mayor-council structure of government, with the Mayor of Bedford serving as chief executive officer and overseeing departments and the enforcement of legislation. The Bedford Common Council consists in seven (7) members, five (5) of whom are elected by specific districts, while two serve at-large. The Council is the legislative and fiscal governing body responsible for passing resolutions and ordinances that provide a budget and operating authority and for establishing laws that control community growth and development.

A clerk-treasurer performs the functions of chief financial officer, including managing the financial systems and records that support daily operations. The clerk-treasurer is Bedford’s only other elected official.

⁶¹ U.S. Census Bureau, 2021

⁶² <https://datausa.io/profile/geo/bedford-in#economy>; accessed November 2021

Indiana || Military Compatible Planning Advisory Handbook

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
<p>The City of Bedford Comprehensive Plan approved in July 2010 has many elements that partially address NSA Crane and military compatibility, including its vision statement: “Bedford will capitalize on its strengths while focusing on promoting healthier lifestyle opportunities for all ages, promoting economic development opportunities provided by Crane NSWC and the new interstate and revitalizing the downtown to showcase the unique heritage and character of the community.”</p> <p>A plan policy more specifically encourages exploring the development or expansion of affordable public transportation options that offer service between the city, neighboring communities, and NSA Crane.</p> <p>The Lawrence County Economic Growth Council (LCEGC) and Bedford Chamber of Commerce (BCC) are working to develop more industries associated with NSA Crane and the future I-69.</p>	
Zoning Code Compatibility Regulations	
<p>The City of Bedford has a Zoning Ordinance but not related to NSA Crane or military compatibility.</p>	
Formalized Military Coordination	<p>The City of Bedford does not have formalized military coordination in its zoning code.</p>
Noise Regulations/Sound Attenuation	<p>The City of Bedford regulates noise in Section 131.08, but this is not related to NSA Crane or military compatibility.</p>
Height Regulations	<p>The City of Bedford regulates height such as 60 feet maximum for industrial uses, but this is not specific to imaginary surfaces nor related to NSA Crane or military compatibility.</p>
Renewable Energy Regulations	<p>The City of Bedford does not regulate renewable energy.</p>
Overlay Districts	<p>The City of Bedford does not have an overlay district.</p>
Noxious Pollution Regulations	<p>The City of Bedford does not regulate noxious pollution.</p>
Density Regulations	<p>The City of Bedford does not regulate density.</p>
Outdoor Lighting Regulations	<p>The City of Bedford does not regulate outdoor lighting.</p>
Stormwater Regulations	<p>The City of Bedford regulates stormwater but not related to NSA Crane or military compatibility.</p>
Subdivision Regulations	
<p>The City of Bedford does not have subdivision regulations.</p>	

3.6. NSA Crane – Lake Glendora Test Facility Surrounding Communities

3.6.1. Sullivan County

Founded in 1817 as one of the first counties recognized in the state, Sullivan County spans 454.12 square miles in southwestern Indiana. It is bordered by Vigo County to the north, Clay and Greene Counties to the northeast and east, Knox County to the south and southwest, and the State of Illinois to the west.

The City of Sullivan is the county seat, as well as the only incorporated city in the county. The jurisdiction is otherwise divided into nine (9) townships with six (6) towns, 30 unincorporated towns, and portions of two (2) additional unincorporated communities. The total population was 20,817 in 2020, including approximately 1,304 veterans⁶³, largely congregated in the City of Sullivan.

The Lake Glendora Test Facility is northeast of the City of Sullivan in the center of the county.

Sullivan County is served by US 150, which runs north-south through the county, as well as the east-west-aligned SR 48, SR 154, SR 54, and other state roads. Sullivan County Airport provides the only public-use airport, approximately eight (8) miles northwest of the City of Sullivan.

The county is also home to the largest land mine in the eastern United States, with owner Peabody Energy Corporation being a significant employer preceding the decline in coal demand. A more diversified economy is reflected in the other businesses that have moved to the area, including Kohls, Ideal Snacks, Nonni's Foods, Metcar, ASA Precision, and Alumatech.

Top employment industries currently range from Health Care & Social Assistance and Manufacturing to Retail Trade.⁶⁴ Sullivan County's GDP was 817,463 in 2021.⁶⁵

The Sullivan County Redevelopment Commission was established to attract new businesses, retain and expand existing businesses, and improve infrastructure. They foster growth in tandem with the Sullivan County Partnership for Economic Development. Opportunities includes a new 40-acre business park approximately 2.5 miles north of the City of Sullivan.

Sullivan County is governed by the Sullivan County Council, which serves as the legislative branch of government with limited authority to impose local income and property taxes with State approval, as well as excise and service taxes. The Council sets policy and controls all spending and revenue collection. Three (3) members serve at large, while four (4) are elected by district; all serve four-year terms.

The Sullivan County Board of Commissioners is the executive body of the government and executes legislative acts of the council. The Board also collects revenues and manages the county government. Commissioners are elected county-wide to staggered, four-year terms.

Other elected officials include a judge, constable, and court clerk, a county recorder, treasurer, and auditor, and a sheriff, coroner, and surveyor.

⁶³ U.S. Census Bureau, 2021

⁶⁴ <https://datausa.io/profile/geo/sullivan-county-in#economy>; accessed November 2021

⁶⁵ <https://fred.stlouisfed.org/series/REALGDPALL18153>; accessed November 2021

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
Sullivan County has not adopted a Comprehensive Plan.	
Zoning Code Compatibility Regulations	
Sullivan County has not adopted a Zoning Ordinance.	
Subdivision Regulations	
Sullivan County has not adopted a subdivision ordinance.	

3.6.2. City of Sullivan



The City of Sullivan is in the middle of Sullivan County. Dated to the founding of the post office in 1943, the city spans 1.88 miles in Hamilton Township and had an estimated 4,249 residents in 2019.⁶⁶

Sullivan is connected to the rest of the county, Indiana, and other states via US 150, SR 154, and State Road 54 as they skirt the city. Lake Glendora Test Facility is only 3.6 miles northeast of the city center.

Sullivan’s urban amenities and quality of life hold promise for corporations and can be guided by local planning documents in partnership with the Sullivan County Partnership for Economic Development. Currently, the largest industries in terms of employment are Healthcare & Social Assistance, Manufacturing, and Public Administration.⁶⁷

The City of Sullivan has a mayor-council form of government, with the mayor fulfilling executive functions. The Sullivan City Council has the authority to pass laws and ordinances and are also responsible for the jurisdiction’s finances. The five (5) members are variously elected at-large or by voting district and have no term limits.

Boards and commissions include the Board of Public Works & Safety, Park Board, Plan Commission, Redevelopment Commission, and the Board of Zoning Appeals. The Plan Commission is responsible for creating plans for the development of the City of Sullivan, including clear objective in land use patterns and policy for the development of public ways, places, lands, structures, and utilities.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
	The City of Sullivan Comprehensive Plan approved in November 2013 focuses on directing future growth including reacquiring the two-mile fringe and creating design standards and a review and overhaul of the city’s zoning code and subdivision control ordinance. The city has a future zoning map that would zone areas currently within the unincorporated county and proximate to the LGTF as Lake Residence, though there are no development standards for this district.
Zoning Code Compatibility Regulations	
	The City of Sullivan has a Zoning Ordinance but unrelated to the LGTF and military compatibility.
Formalized Military Coordination	The City of Sullivan does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	The City of Sullivan has a general noise ordinance unrelated to NSA Crane Lake Glendora Test Facility and military compatibility.
Height Regulations	The City of Sullivan does not regulate development height.
Renewable Energy Regulations	The City of Sullivan does not regulate renewable energy.

⁶⁶ U.S. Census Bureau, 2021

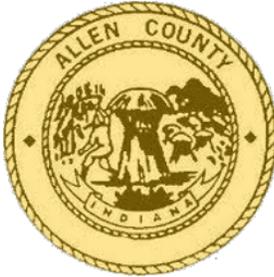
⁶⁷ <https://datausa.io/profile/geo/sullivan-in#economy>; accessed online November 2021

Indiana || Military Compatible Planning Advisory Handbook

Overlay Districts	The City of Sullivan does not have overlay districts.
Noxious Pollution Regulations	The City of Sullivan regulates noxious pollution but not specifically as it relates to the LGTF or to military compatibility.
Density Regulations	The City of Sullivan does not regulate density.
Outdoor Lighting Regulations	The City of Sullivan does not regulate outdoor lighting.
Stormwater Regulations	The City of Sullivan regulates stormwater but not related to the LGTF or military compatibility.
Subdivision Regulations	The City of Sullivan does not have subdivision regulations.

3.7. Baer Field (at Fort Wayne International Airport) Surrounding Communities

3.7.1. Allen County



Allen County is in northeastern Indiana, bordered by the State of Ohio to the east, Adams and Wells Counties to the West and Noble and DeKalb Counties to the North. Allen County was formed in April 1824, with the City of Fort Wayne designated County Seat shortly thereafter. It now comprises approximately 660 square miles, including Fort Wayne and the much smaller cities of New Haven and Woodburn near the Indiana/Ohio border. Allen County is within 200 miles of Chicago, Cincinnati, Cleveland, Columbus, Detroit, Indianapolis, Milwaukee, and Louisville and has emerged as the cultural and economic center of northeastern Indiana.

The County is divided into 20 townships that provide municipal support for several towns, census designated places, and 40 unincorporated communities. The County itself is governed by a seven-member council that is responsible for fiscal affairs and controls all spending and revenue collection in Allen County. They are further responsible for annual budgeting and special spending and have limited authority to impose local income and property taxes subject to State approval, as well as excise taxes, and service taxes. Council members are elected to four-year terms, with four (4) elected from county districts and three elected at large.

The three-member Allen County Board of Commissioners are elected from throughout the county and serve four-year terms. The Board serves as the executive and administrative arms of the county government and is charged with enacting and executing legislation, collecting revenues, and managing day-to-day government functions. Other elected officials include the treasurer, county recorder and court clerk, auditor, sheriff, and coroner.

In 2020, approximately 385,410 people lived in Allen County, with approximately 68% residing in Fort Wayne.⁶⁸ Roughly 3,200 Amish live in New Haven and the Town of Grabill, including members of the Old Order Amish Community that has called Allen County home since 1852. The County is also home to at least 12,000 Burmese⁶⁹, with some estimates as high as 20,000.⁷⁰

The County's economy has long been tied to manufacturing, and as with most in the Rust Belt, suffered from plant disclosures and job losses as production trends changed in the second half of the 20th Century. While manufacturing is still the top employer, diversification has brought robust healthcare, insurance, and defense and security industries to the area, and agricultural and freight transport remain important economic drivers. Four (4) railroad companies operate throughout the County.

The County's 2020 Gross Domestic Product (GDP) was \$21.6 million, representing a decline likely tied to the COVID-19 pandemic.⁷¹

⁶⁸ U.S. Census Bureau, 2021

⁶⁹ L. Caggiano, Bridging the news gap in Fort Wayne: COVID-19 reveals the importance of cross-cultural communication, Input Fort Wayne, October 2021; accessed December 2021: <https://www.inputfortwayne.com/features/news-gap.aspx>

⁷⁰ D. Stockman, Seeking Refuge: Fitting in without losing cultural roots, Global Sisters Report, July 2018; accessed January 2022: <https://www.globalsistersreport.org/news/migration/seeking-refuge-fitting-without-losing-cultural-roots-burmese-refuges-advance-indiana>

⁷¹ Federal Reserve Economic Data; accessed December 2021: <https://fred.stlouisfed.org/series/GDPALL18003>

Indiana || Military Compatible Planning Advisory Handbook

Allen County collaborates with the Northeastern Indiana Regional Partnership as part of their eleven-county regional development plan, Vision 2030, “to ensure the best possible business climate is available for new and existing businesses in Fort Wayne and Northeast Indiana.”⁷² In late 2021, the State awarded the Partnership’s Redevelopment Authority (RDA) \$50 million dollars to pursuit three (3) primary plan goals: workforce growth, downtown vibrancy in Fort Wayne, and entrepreneurship and innovation.⁷³

The County is also working with the Partnership to actively address the needs of corporations interested in relocating or expanding in the region, with Distribution and E-commerce, medical, specialty insurance, food and agriculture, and defense and aerospace targeted industries.⁷⁴

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
Allen County has a Comprehensive Plan but not related to Baer Feld or military compatibility.	
Zoning Code Compatibility Regulations	
Allen County has a Zoning Ordinance that includes a variety of tools to facilitate compatibility with Baer Field and the military. The specific tools are discussed in the following sections.	
Formalized Military Coordination	Allen County does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	Allen County regulates noise in the airport overlay district.
Height Regulations	Allen County regulates height such as a maximum height of 75 feet for intensive industry (Section 3-2-24-5) and in the airport overlay district.
Renewable Energy Regulations	Allen County regulates renewable energy but not related to Baer Field or military compatibility. Approval must go through BZA for wind and solar and they are allowed in most zoning areas.

⁷² <https://neindiana.com/the-partnership/regional-vision>; accessed January 2022
⁷³ <https://neindiana.com/news/2021-readi-funding>; accessed January 2022
⁷⁴ <https://neindiana.com/business-made-better/target-industries>; accessed January 2022

Overlay Districts

Allen County has an Airport Overlay District outlined in Section 3-4-11-1, which outlines the purpose and intent of the Airport Overlay Districts (AODs) including: (e) regulate and restrict the height of structures and objects of natural growth, concentrations of people (density), visual obstructions (such as dust, smoke, and steam), electrical navigational interference, noise sensitive land uses, and wildfire and bird attractants & (h) regulate and restrict building sites, placement of structures, and land uses by separating conflicting land uses and prohibiting certain land uses that would be detrimental to airport operations, and navigable airspace. Section 3-4-11-4 outlines the areas to be regulated including the six buffer zones: Area 1 (Inner Safety Area), Area 2 (Horizontal Area), Area 3 (Outer Conical Area), Area 4 (Outer Conical Area), Area 5 (Extended Conical Area), and Area 6 (Extended Approach Area).

Noxious Pollution Regulations

Allen County regulates noxious pollution in the airport overlay district.

Density Regulations

Allen County regulates density in the airport overlay district.

Outdoor Lighting Regulations

Allen County regulates outdoor lighting but not related to Baer Field or military compatibility.

Stormwater Regulations

Allen County regulates stormwater but not related to Baer Field or military compatibility.

Subdivision Regulations

Allen County has subdivision regulations but not related to Baer Field or military compatibility.

3.7.2. City of Fort Wayne



The City of Fort Wayne comprises 110.79 square miles at the confluence of the St. Joseph, St. Marys, and Maumee Rivers in northeastern Indiana, 18 miles west of the Ohio border and 15.5 miles south of the Michigan border. It is the seat of Allen County and extends into Abiote, Adams, Perry, Pleasant, St. Joseph, Washington, and Wayne Townships.

Fort Wayne was initially established in 1794 by the United States Army and served as a trading post for European-American settlers, explorers, trappers, and others. Platted in 1823, the community now boasts 263,886 residents, including roughly 14,200 veterans. It is the most populous municipality in the county and the second most populous in the state

Fort Wayne has a mayor-council style of government, with the mayor, city clerk, and city council members all serving four-year terms. The Fort Wayne City Council comprises nine (9) elected members, including one representative from each of the city's six council districts and three at-large members. The City has been named an All-American City four (4) times from 1983–2021 for its inclusive approach to public engagement in addressing critical community issues and creating stronger connections among government leaders, businesses, non-profit organizations, and residents.⁷⁵ Fort Wayne also received the U.S. Conference of Mayors' Outstanding Achievement City Livability Award in 1999. The award honors mayors and city governments for programs that enhance quality of life in urban environments.⁷⁶

Fort Wayne's economic history has been deeply rooted in manufacturing since the community's early role as a trade stop along the Wabash and Erie Canals and subsequent rail lines. The city's economy is now significantly more diverse, with distribution, transportation and logistics, healthcare, professional and business services, financial services, and leisure and hospitality among its top industries.

Major companies headquartered in Fort Wayne include Fortune 500 company, Steel Dynamics, Franklin Electric, Frontier Communications (Central Region), Genteq, Indiana Michigan Power, MedPro Group, North American Van Lines, Rea Magnet Wire, and Sweetwater Sound. The city is also a center for the defense industry, which employs thousands through BAE Systems, Harris Corporation, Raytheon Systems, and other companies.

In addition to being the economic hub for all of northeastern Indiana, Fort Wayne hosts the University Fort Wayne (UFW), UFW's Center for Medical Education, and Purdue University-Fort Wayne and has many cultural attractions. The city is home to one of the nation's premier children's zoos, a botanical garden, science center, and several museums, including the Greater Fort Wayne Aviation Museum and Baer Field Heritage Air Park. Numerous festivals, sporting events, and marathons bring lots of visitors to the city every year.

Supportive infrastructure includes For Wayne International Airport (FWA) – the city's primary commercial airport, and Smith Field, which is primarily used for general aviation. Freight service is also provided through Norfolk Southern Railway and its Fort Wayne-headquartered subsidiary, Triple Crown Services, the largest roadway and top intermodal shipping company in the United States. Direct rail service in Fort Wayne does not include passenger lines.

⁷⁵ Fort Wayne again chosen 'All-America,' The Journal Gazette, June 2021; accessed December 2022: <https://journalgazette.net/news/local/20210610/city-again-chosen-all-america>

⁷⁶ Fort Wayne, Indiana, Wikipedia; accessed December 2021: https://en.wikipedia.org/wiki/Fort_Wayne,_Indiana#cite_note-20; Programs, United States Conference of Mayors; accessed December 2021: <https://www.usmayors.org/programs/city-livability>

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
The City of Fort Wayne has a Comprehensive Plan but it doesn't address issues related to Baer Field or military compatibility.	
Zoning Code Compatibility Regulations	
The City of Fort Wayne has a Zoning Ordinance that includes a variety of tools to facilitate compatibility with Baer Field and the military. The specific tools are discussed in the following sections.	
Formalized Military Coordination	The City of Fort Wayne does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	The City of Fort Wayne regulates noise in its airport noise disclosure statement and compatibility planning, and in the airport overlay districts.
Height Regulations	The City of Fort Wayne regulates height in the airport overlay districts.
Renewable Energy Regulations	The City of Fort Wayne regulates renewable energy but not related to Baer Field or military compatibility. Solar may be building mounted in all zoning district and wind is allowed with SUP on all uses over 5 acres.
Overlay Districts	The City of Fort Wayne has Airport Overlay Districts in Section 157.411, which outlines the purpose (A) and intent of the Airport Overlay Districts (AODs) including: (5) regulate and restrict the height of structures and objects of natural growth, concentrations of people (density), visual obstructions (such as dust, smoke, and steam), electrical navigational interference, noise sensitive land uses, and wildfire and bird attractants & (8) regulate and restrict building sites, placement of structures, and land uses by separating conflicting land uses and prohibiting certain land uses that would be detrimental to airport operations, and navigable airspace. Section (D)(1) of 157.411 outlines the areas to be regulated including the six buffer zones: Area 1 (Inner Safety Area), Area 2 (Horizontal Area), Area 3 (Outer Conical Area), Area 4 (Outer Conical Area), Area 5 (Extended Conical Area), and Area 6 (Extended Approach Area).
Noxious Pollution Regulations	The City of Fort Wayne does not regulate noxious pollution.

Indiana || Military Compatible Planning Advisory Handbook

Density Regulations

The City of Fort Wayne regulates density in the airport overlay districts.

Outdoor Lighting Regulations

The City of Fort Wayne regulates outdoor lighting but not related to Baer Field or military compatibility.

Stormwater Regulations

The City of Fort Wayne regulates stormwater but not related to Baer Field or military compatibility.

Subdivision Regulations

The City of Fort Wayne has subdivision regulations but not related to Baer Field military compatibility.

3.7.3. Wells County

Wells County is in northeastern Indiana, bounded by Allen County to the north, Adams and Jay Counties to the east and southeast, Blackford County to the south, and Grant and Huntington Counties to the west and northwest. It covers approximately 370 square miles characterized by low, rolling hills transected by the Wabash River in the northern half of the county and the Salamonie River in the southern half.

Originally part of Allen County, Wells County was approved as an independent jurisdiction in 1837, with the City of Bluffton designated county seat one year later. The county now encompasses five (5) cities and towns, parts of Poneto and Zanesville, and nine (9) unincorporated communities comprising nine (9) townships. Interstate 69 (I-69), U.S. Route 224 (US 224), and several state roads provide connectivity within and the county and to points beyond.

Wells County is governed by a county council that serves as the legislative branch and controls spending and revenue collection. The Council has limited authority to impose local income and property tax, subject to state-level approval, as well as excise and service taxes. Council members are elected from county districts every four (4) years.

County executive functions are performed by the Wells County Board of Commissioners, also an elected body that executes council legislation, collects revenues, and manages the government. Commissioners serve staggered four-year terms. Other elected county officials include a Circuit Court judge and clerk, a county recorder, treasurer, auditor, surveyor, coroner, and sheriff.

The Wells County government serves an estimated 28,180 people⁷⁷, including nearly 1800 veterans.⁷⁸

The county promotes and guides economic development through their Comprehensive Plan, Wells County Vision 2035, and in collaboration with both the Wells County Economic Development and the Northeast Indiana Regional Partnerships.

The Wells County Economic Development is a non-profit organization committed to facilitating economic growth through coordinated community-wide efforts to retain and attract jobs and foster entrepreneurship. Their target industries compliment the Partnership's and include advanced manufacturing, food and beverage, and transportation and logistics.⁷⁹

Wells County's GDP was 1.1 million in 2020, also a small decline.⁸⁰

In addition to economic opportunities, Wells County offers many educational, cultural, and recreational assets that enhance quality of life, including the Wabash Nature Preserve, Ouabache State Park, the Wells County Fair, and the Zanesville Lion's Club Summer Festival.

⁷⁷ U.S. Census Bureau, 2021

⁷⁸ U.S. Census Bureau, 2021

⁷⁹ <http://www.wellsedc.com/content/target-industries>

⁸⁰ Federal Reserve Economic Data; accessed December 2021: <https://fred.stlouisfed.org/series/GDPALL18179>

Indiana || Military Compatible Planning Advisory Handbook

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
Wells County has a Comprehensive Plan but it doesn't address issues related to Baer Field or military compatibility.	
Zoning Code Compatibility Regulations	
Wells County has a Zoning Ordinance but not related to Baer Field or military compatibility.	
Formalized Military Coordination	Wells County does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	Wells County regulates noise with a noise generating equipment setback (Section 14-08: (C)(e)), but this is not related to Baer Field or military compatibility.
Height Regulations	Wells County regulates height with a 100-foot maximum (Table 9-16) and in Sections 14-07: (A)(i), 14-07: (A)(h) & 14-08: (D). These are not related to Baer Field or military compatibility.
Renewable Energy Regulations	Wells County regulates renewable energy partially related to military compatibility. Section 14-08: (F) explains Interference with Reception: A SES Facility shall be constructed and operated so that it does not interfere with television, microwave, GPS, military defense radar, navigational, or radio reception to neighboring areas.
Overlay Districts	Wells County does not have an overlay district.
Noxious Pollution Regulations	Wells County does not regulate noxious pollution.
Density Regulations	Wells County regulates density but not related to Baer Field or military compatibility.
Outdoor Lighting Regulations	Wells County regulates outdoor lighting but not related to Baer Field or military compatibility.
Stormwater Regulations	Wells County regulates stormwater but not related to Baer Field or military compatibility.
Subdivision Regulations	
Wells County has subdivision regulations but not related to Baer Field or military compatibility.	

3.7.4. Town of Zanesville



Zanesville occupies .83 square miles just north of Eight Mile Creek, approximately 4.5 miles southwest of Baer Field at Fort Wayne International Airport and roughly 15 miles from the city’s downtown area. Although predominantly in Wells County, the town extends north into Allen County and similarly from Union into Lafayette Township. Zanesville had 580 residents in 2020⁸¹, including a number of Vietnam and Gulf War veterans.⁸²

The community was founded with the opening of a post office in 1854 and remains a rural enclave with a town hall, several churches, and a small commercial area surrounded by agricultural fields.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
The Town of Zanesville does not have a Comprehensive Plan but is in the process of creating a Master Plan Called Thrive Zanesville 2022.	
Zoning Code Compatibility Regulations	
The Town of Zanesville does not have a Zoning Ordinance but operates under Wells County.	
Subdivision Regulations	
The Town of Zanesville does not have subdivision regulations but operates under Wells County.	

⁸¹ U.S. Census Bureau, 2021

⁸² <https://datausa.io/profile/geo/zanesville-in>; accessed December 2021

3.7.5. Town of Ossian

Ossian encompasses 1.44 square miles on either side of Eight Mile Creek in Jefferson Township, Wells County, just seven (7) miles south of Fort Wayne International Airport and Indiana National Guard Facilities at Baer Field. The community is accessed via State Road 1.

The town was formally established in 1846, and the subsequent completion of the Fort Wayne, Cincinnati & Louisville Railroad that runs through the community prompted some expansion. The rail line is now a significant north-south route for the Norfolk Southern Corporation, which provides Ossian spur access for shipping freight.

The Town of Ossian’s reported population was 3,266 in 2020⁸³, including 185 veterans.⁸⁴

The Town of Ossian has a town manager, as well as a town council consisting of five (5) members who directly represent three (3) districts and two at large members. Ossian’s clerk treasurer is an elected official responsible for billing and collecting water and sewer utility fees. The clerk treasurer serves for four (4) years. Ossian has a parks and recreation department, as well as police and fire departments.

Ossian boasts an industrial heritage, modernized to sustain the community in today’s socioeconomic environment. It is home to the Ossian Industrial Park, which spans 106 contiguous acres within 6 miles of I-469 and access to the rail spur. The industrial park was designed for both heavy and light manufacturing pursuits, warehousing and distribution, and engineering and manufacturing research and development. Zoning falls under the Wells County Area Planning Commission, with developers benefitting from tax increment financing.⁸⁵

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	The Town of Ossian updated its Comprehensive Plan in 2014 in collaboration with Wells County, but it doesn’t address Baer Field or military compatibility.
Zoning Code Compatibility Regulations	The Town of Ossian has a Zoning Ordinance but not related to Baer Field or military compatibility.
Formalized Military Coordination	The Town of Ossian does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	The Town of Ossian regulates noise but not related to Baer Field or military compatibility.
Height Regulations	The Town of Ossian regulates height but not related to Baer Field or military compatibility.
Renewable Energy Regulations	The Town of Ossian does not regulate renewable energy.
Overlay Districts	The Town of Ossian does not have an overlay district.

⁸³ U.S. Census Bureau, 2021
⁸⁴ U.S. Census Bureau, 2021
⁸⁵ <http://www.wellsedc.com/content/sites-buildings>; accessed December 2021

Noxious Pollution Regulations

The Town of Ossian regulates noxious pollution but not related to Baer Field or military compatibility.

Density Regulations

The Town of Ossian does not regulate density.

Outdoor Lighting Regulations

The Town of Ossian regulates outdoor lighting but not related to Baer Field or military compatibility.

Stormwater Regulations

The Town of Ossian regulates stormwater but not related to Baer Field or military compatibility.

Subdivision Regulations

The Town of Ossian has subdivision regulations but not related to Baer Field or military compatibility.

3.8. Camp Atterbury Surrounding Communities

3.8.1. Bartholomew County



Bartholomew County in south central Indiana was established in 1821 with the City of Columbus as county seat. The roughly 409-square-mile jurisdiction is surrounded by Shelby County to the northeast, Decatur County to the east, Jennings and Jackson Counties to the southeast and south, and Brown and Johnson Counties to the west and northwest. The landscape is rural, with several rivers and more than 25 man-made reservoirs and natural lakes.

Columbus is the largest urban area in the county and renowned for its architectural heritage and vision and was recently ranked by the Pew Charitable Trust as the top metropolitan area in the United States for affordability, education, and growth among young professionals.⁸⁶ Its vital socioeconomic contributions to the region are facilitated by easy access to multiple interstate highways, proximity to three (3) international airports, and short-line rail service to shipping ports.⁸⁷

Outside of the City of Columbus, Bartholomew County further encompasses six (6) small towns and 32 unincorporated communities in 12 Townships. The reported population was 82,208 in 2020.⁸⁸ Approximately 3,808 residents are veterans, with just over 1,500 having served in the Vietnam War.⁸⁹

Bartholomew County is governed by a county council that is responsible for the annual budget and controls all spending and revenue collected. The legislative body has further authority to impose state-approved local taxes, as well as excise and service taxes. The council's seven (7) representatives are elected every four (4) years from county districts.

A board of commissioners is elected county-wide, with three (3) members serving the executive branch in staggered, 4-year terms. Members execute the County Council's legislative acts, collect revenue, and manage the day-to-day operations of the county government. Other elected offices include a small claims court judge, constable, and clerk and a county recorder, treasurer, auditor, coroner, and sheriff.

The Bartholomew County Council created an economic development commission in early 2021 to market vacant lands available for development and specifically at the "Northern Gateway," or I-65/US 31 interchange northwest of Taylorsville. The area is approximately 7 miles southeast of Camp Atterbury. The efforts are in keeping with County's Northern Gateway Land Use & Transportation Plan adopted by the Board of Commissioners in 2012.

The Greater Columbus Indiana Economic Development Corporation (EDC) is focused on expanding and attracting high value, community-minded businesses by supporting marketing and recruitment to the area. The EDC has targeted research and development (R&D) and engineering services, aerospace, cyber security, and pharmaceutical manufacturing.

⁸⁶ <https://www.columbusin.org/business-climate/rankings/>; accessed December 2021

⁸⁷ <https://www.columbusin.org/business-climate/location-advantages/>; accessed December 2021

⁸⁸ U.S. Census Bureau, 2021

⁸⁹ U.S. Census Bureau, 2022

Already home to six (6) R&D centers: Cummins, Inc., Faurecia, Toyota Material Handling, Dorel, Enkei, and PMG Indiana, Bartholomew County is among the top 2% U.S. counties for manufacturing employment.⁹⁰

Top industries in terms of employment include Manufacturing, Healthcare & Social Assistance, Educational Services, and Retail Trade.⁹¹ Bartholomew County's GDP in 2020 was \$6.6 million.⁹²

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
Bartholomew County has a Comprehensive Plan, but it doesn't address issues related to Camp Atterbury or military compatibility.	
Zoning Code Compatibility Regulations	
Bartholomew County has a Zoning Ordinance but not related to Camp Atterbury or military compatibility.	
Formalized Military Coordination	Bartholomew County does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	Bartholomew County does not regulate noise.
Height Regulations	Bartholomew County does not regulate height.
Renewable Energy Regulations	Bartholomew County does not regulate renewable energy.
Overlay Districts	Bartholomew County has an overlay district but not related to Camp Atterbury military compatibility.
Noxious Pollution Regulations	Bartholomew County does not regulate noxious pollution.
Density Regulations	Bartholomew County regulates density but not related to Camp Atterbury or military compatibility.
Outdoor Lighting Regulations	Bartholomew County regulates outdoor lighting but not related to Camp Atterbury or military compatibility.
Stormwater Regulations	Bartholomew County regulates stormwater but not related to Camp Atterbury or military compatibility.
Subdivision Regulations	
Bartholomew County has subdivision regulations but not related to Camp Atterbury or military compatibility.	

3.8.2.

⁹⁰ <https://www.columbusin.org/site-selection/existing-industry-strengths/>; accessed December 2021

⁹¹ U.S. Census Bureau, 2021

⁹² Federal Reserve Economic Data; accessed December 2021: <https://fred.stlouisfed.org/series/GDPALL18005>

3.8.3. City of Columbus



The City of Columbus comprises 28.44 discontinuous square miles on either side of I-65 in Columbus Township, central Bartholomew County. It is 16.3 miles south of Indianapolis and 36.9 miles east of Bloomington, placing the community just 14.4 miles southeast of Camp Atterbury and 28.3 miles northwest of the Muscatatuck Urban Training Center.

Columbus was designated county seat in 1821 and with a population of 50,474⁹³ is also the largest city and economic hub of Bartholomew County, and principal city of the Columbus, Indiana, Metropolitan Statistical Area (MSA). Columbus is also known as a mecca of historic buildings, Modern architecture, and public art and is home to the oldest theater in the state.

The municipality is served by a transportation system that has supported a strong manufacturing heritage, as well as current industry. Interstate 65 is adjacent to Columbus, while both US 31 and SR 46 cross through it. Freight rail service is provided by the Louisville and Indiana Railroad, which runs north-south along the western edge of the city. Columbus Municipal Airport is approximately 2.5 miles north of the city center in the northern part of the community.

Columbus is currently home to Toyota Material Handling, USA, Inc., the world’s largest forklift manufacturer, additional Toyota divisions, as well as Fuel Systems Cummins, Faurecia Gladstone, Ntn Driveshaft, Inc., and other international and national corporations with room to grow.

Top industries include Manufacturing, Healthcare & Social Assistance, and Retail Trade, with approximately 36.5% of the workforce employed in manufacturing jobs.⁹⁴ The total Columbus MSA Real GDP was \$5.6 million in 2020.⁹⁵

Future growth and development in Columbus is facilitated and guided by the City’s planning, redevelopment, and community development departments and commissions, the Greater Columbus Economic Development Corporation, and the IEDC. Target industries include R&D and Engineering Services, Pharmaceutical Manufacturing, Aerospace, and Cybersecurity.⁹⁶

Columbus is governed by an elected mayor, seven-member representational city council, and elected county clerk-treasurer. Five (5) of the council members are elected by district, while two (2) serve at-large. All elected officials have four-year terms. Columbus is further supported by numerous appointed boards and commissions.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	

The City of Columbus has a Comprehensive Plan, but it does address land use issues related to Camp Atterbury and military compatibility.

⁹³ U.S. Census Bureau, 2022

⁹⁴ <https://datausa.io/profile/geo/columbus-in#economy>; accessed February 2022

⁹⁵ <https://fred.stlouisfed.org/series/RGMP18020>

⁹⁶ <https://www.columbusin.org/site-selection/targets/>; accessed February 2022

Zoning Code Compatibility Regulations

The City of Columbus has a Zoning Ordinance but not related to Camp Atterbury or military compatibility.

Formalized Military Coordination

The City of Columbus does not have formalized military coordination in its zoning code.

Noise Regulations/Sound Attenuation

The City of Columbus does not regulate noise.

Height Regulations

The City of Columbus does not regulate height.

Renewable Energy Regulations

The City of Columbus does not regulate renewable energy.

Overlay Districts

The City of Columbus has an overlay district but not related to Camp Atterbury or military compatibility.

Noxious Pollution Regulations

The City of Columbus does not regulate noxious pollution.

Density Regulations

The City of Columbus regulates density but not related to Camp Atterbury or military compatibility.

Outdoor Lighting Regulations

The City of Columbus regulates outdoor lighting but not related to Camp Atterbury or military compatibility.

Stormwater Regulations

The City of Columbus regulates stormwater but not related to Camp Atterbury or military compatibility.

Subdivision Regulations

The City of Columbus has subdivision regulations but not related to Camp Atterbury or military compatibility.

3.8.4. Johnson County



Located in central Indiana, Johnson County is surrounded by Marion County to the north, Shelby County to the east, Bartholomew and Brown Counties to the southeast and southwest, and Morgan County to the west. The jurisdiction is divided into nine (9) townships, with the City of Franklin serving as the county seat. First established in 1823, Johnson County now spans 32.79 miles with a mix of urban, suburban, and rural environments, including two (2) cities, six (6) towns, and large unincorporated areas. The County population was an estimated 161,765 people in 2020.⁹⁷

The City of Franklin is the largest community in Johnson County and best known as the home of Franklin College, which attracts sports fans from throughout the region to college events. Franklin is also nationally known for its preservation efforts and landmark buildings. The City of Greenwood shares a border with Indianapolis and is one of the most populous suburban municipalities in the state. It is known for its 17 parks comprising roughly 400 acres with a 20-mile trail system. Called Festival Country, both communities and the county at large attract visitors from across the nation nearly every summer weekend for special events. The southwestern portion of the county is transected by Sugar Creek, with its riverine environments an additional draw to residents and tourists alike.

Residents, tourists, and business have easy access to I-65 and US 31 as they cross through Franklin, Greenwood, and smaller communities to the south, while the Louisville & Indiana Railroad travels through a nearly parallel corridor. Additional major roadways include SR 135, which runs north-south through the western half of the county, and SR 44 and SR 135/252, which run east-west through the southern half. Johnson County hosts two airports: Indy South Greenwood Airport, owned by the City of Greenwood and used primarily for general aviation, and Franklin Flying Field, a privately owned, public-use airport approximately three (3) miles south of the City of Franklin.

This infrastructure supports the diverse, international companies that help drive Johnson County's economy, including Koenig, Energizer, Radwell International, Berry Global, and seven (7) Japanese corporations. Sunbeam, Cooper Tire, and others are also developing facilities at a new industrial park, Greenwood's second. Tourism-driven jobs and revenue are also a critical component of the county's economy.⁹⁸

The County's GDP was \$5.1 million in 2020⁹⁹, and top industries by employment are Retail, Health Care & Social Assistance, Accommodation & Food Services, and Manufacturing.¹⁰⁰

Johnson County is governed by a county council that serves as the legislative branch and controls spending and revenue collection. The council can impose local income and property tax, subject to State approval, as well as excise and service taxes. Council members are elected from county districts every four (4) years.

The Johnson County Board of Commissioners, also an elected body, executes council legislation, collects revenues, and generally manages the government. Commissioners serve staggered four-year terms. Other elected county officials include Circuit and Superior Court judges and clerk, a county recorder, treasurer, auditor, surveyor, coroner, and sheriff.

⁹⁷ U.S. Census Bureau, 2021

⁹⁸ <https://www.aspirejohnsoncounty.com/planning-helped-tourism-fare-better-than-other-counties/>; accessed January 2022

⁹⁹ <https://fred.stlouisfed.org/series/REALGDPALL18081>; accessed January 2022

¹⁰⁰ <https://www.aspirejohnsoncounty.com/>; accessed January 2022

Johnson County is among the fastest growing counties in the state¹⁰¹, and the County Board of Commissioners is advised by a planning commission that reviews development proposals and conducts comprehensive land use planning in conjunction with the County's Department of Planning and Zoning.

Growth and development are also guided by the County's Comprehensive Plan, Plan the Land 2030, and through partnership with Aspire Economic Development + Chamber Alliance, an economic development organization that works to drive growth and business success in Johnson County and southern Indianapolis. The Alliance's target industries build on and expand current drivers and include advanced manufacturing, health and life science, logistics, and defense – and specifically as part of the Southern Indiana Defense Network, an economic development initiative with Camp Atterbury-Muscatatuck Center for Complex Operations (CAMCCO) that supports projects related to cyber-defense, unmanned systems, and robotics.¹⁰²

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
Johnson County has a Comprehensive Plan and does address land use issues related to Camp Atterbury and military compatibility.	
Zoning Code Compatibility Regulations	
Johnson County has a Zoning Ordinance but not related to Camp Atterbury or military compatibility.	
Formalized Military Coordination	Johnson County does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	Johnson County does not regulate noise.
Height Regulations	Johnson County does not regulate height.
Renewable Energy Regulations	Johnson County does not regulate renewable energy.
Overlay Districts	Johnson County does not have an overlay district.
Noxious Pollution Regulations	Johnson County does not regulate noxious pollution.
Density Regulations	Johnson County regulates density but not related to Camp Atterbury or military compatibility.
Outdoor Lighting Regulations	Johnson County regulates outdoor lighting but not related to Camp Atterbury or military compatibility.
Stormwater Regulations	Johnson County does not regulate stormwater.
Subdivision Regulations	
Johnson County does not have subdivision regulations.	

¹⁰¹ G. Vlahakis, Indiana's Census 2020 Results; accessed January 2022: <https://blog.kelley.iu.edu/2021/08/12/indianas-census-2020-results-metro-areas-and-minority-populations-fuel-states-growth/>

¹⁰² <https://www.aspirejohnsoncounty.com/targeted-sectors>; accessed January 2022

3.8.5. Town of Edinburgh

The Town of Edinburgh was platted in the 1820's and currently extends a total of 3.1 square miles into Johnson, Bartholomew, and Shelby Counties. It similarly extends into German, Blue River, and Jackson Townships. The community sits just east of the Big Blue River as it joins Sugar Creek only four (4) miles east of Camp Atterbury.

Edinburgh has approximately 4,435 residents¹⁰³ an historic business district, a number of parks, a golf course, and other amenities – predominantly in Johnson County. As with other noted Indiana communities, Edinburgh has a relatively large percentage of Vietnam War veterans and roughly 147 total residents who served.¹⁰⁴

Edinburgh's government is comprised of a town manager, a five-member town council, and clerk treasurer. The Town Manager serves as the Chief Executive Officer, responsible for carrying out council policy directives, overseeing economic development, town projects, and facilities, and managing day-to-day operations. The manager also serves as spokesperson for the community and liaison to residents, the town council, boards, and county, state, and federal entities.

Edinburgh Town Council members are elected at-large for four-year terms and collectively serve as the executive and legislative branches of the government. The council passes ordinances and resolutions, establishes salaries for town employees, establishes the annual budget, and sets utility rates. The Clerk Treasurer is also elected and works with the Town Manager and Council regarding budgetary concerns and the collection of revenues. The town provides its own utilities.

The Edinburgh Town Council has established an economic development board that partners with the Bartholomew County Economic Development Corporation, the Shelby County Development Corporation, and the Greater Columbus Indiana Economic Development Corporation. The community is already experiencing growth in the North Gateway area near the I-65/US 31 interchange in Bartholomew County with Swiss manufacturing firm, Georg Utz, Inc., planning a major expansion¹⁰⁵ and development at Meadow Lawn Industrial Park suited for manufacturing and distribution underway.

Leading, non-governmental employment sectors include Manufacturing, Transportation & Warehousing, Accommodation & Food Service, Retail Trade, and Educational and Healthcare Services.¹⁰⁶

¹⁰³ U.S. Census Bureau, 2022

¹⁰⁴ U.S. Census Bureau, 2022

¹⁰⁵ <https://www.columbusin.org/swiss-firm-georg-utz-plans-expansion-near-edinburgh-indiana/>; accessed January 2021

¹⁰⁶ <https://datausa.io/profile/geo/edinburgh-in>

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
The Town of Edinburgh has a Comprehensive Plan and does address land use issues related to Camp Atterbury and military compatibility.	
Zoning Code Compatibility Regulations	
The Town of Edinburgh has a Zoning Ordinance but not related to Camp Atterbury or military compatibility.	
Formalized Military Coordination	The Town of Edinburgh does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	The Town of Edinburgh regulates noise in Chapter 98, but this is not related to Camp Atterbury or military compatibility.
Height Regulations	The Town of Edinburgh regulates height for buildings and signage, but this is not related to Camp Atterbury or military compatibility.
Renewable Energy Regulations	The Town of Edinburgh does not regulate renewable energy.
Overlay Districts	The Town of Edinburgh does not have an overlay district.
Noxious Pollution Regulations	The Town of Edinburgh does not regulate noxious pollution.
Density Regulations	The Town of Edinburgh does not regulate density.
Outdoor Lighting Regulations	The Town of Edinburgh regulates outdoor lighting but not related to Camp Atterbury or military compatibility.
Stormwater Regulations	The Town of Edinburgh regulates stormwater but not related to Camp Atterbury or military compatibility.
Subdivision Regulations	
The Town of Edinburgh has subdivision regulations but not related to Camp Atterbury or military compatibility.	

3.8.6. Town of Prince's Lakes

The Town of Prince's Lakes is in Nineveh Township, Johnson County. It was named after four (4) lakes in the area that were developed by James H. Prince and incorporated in 1956. The town now encompasses 14 privately owned lakes that comprise 11% of its 1.51 square mile area.

The community of 1,372¹⁰⁷ is known for its small-town values, natural and cultural heritage, recreational opportunities, and guided growth. Businesses are limited and without major industries. Prince's Lake is within commuting distance of several larger municipalities, including Columbus, Franklin, Greenwood, and Edinburgh, which offer employment and education opportunities, as well as goods and services. Camp Atterbury is 5.3 miles east of Prince's Lakes.

The Town's government consists in an elected 5-member town council that performs legislative functions relating to land use, infrastructure improvements, community growth, and strategic planning and a clerk-treasurer responsible for administrative duties. The clerk treasurer is also responsible for community engagement and is an elected official.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	The Town of Prince's Lakes has not adopted a Comprehensive Plan.
Zoning Code Compatibility Regulations	The Town of Prince's Lakes has not adopted a Zoning Ordinance.
Subdivision Regulations	The Town of Prince's Lakes has not adopted a Subdivision Ordinance.

¹⁰⁷ U.S. Census Bureau, 2021

3.8.7. Shelby County

Shelby County was established in 1822 with Shelbyville as the county seat shortly after Indiana was admitted into the Union in 1816. The 412.75 square mile jurisdiction is in the central part of the state, bounded by Hancock County to the north, Rush and Decatur Counties to the east and southeast, Johnson County to the west, and Marion County to the northwest. Camp Atterbury is approximately four (4) miles from Shelby County's westernmost border.

The county is characterized by low, rolling hills cut by Sugar Creek and the Flatrock and Blue Rivers and largely given over to agricultural uses with some urban development. Communities include the City of Shelbyville, the Towns of Fairland and Morrison, parts of Edinburgh and St. Paul, and 38 unincorporated and census-designated places. The recorded population of Shelby County was 45,055 in 2020 and included nearly 3000 veterans.¹⁰⁸

Most cultural and economic activity occurs in Shelbyville, in the center of the county. The city offers an historic commercial district, performing arts center and exotic animal center, and many outdoor recreational opportunities. The City of Indianapolis is just northwest of the jurisdiction and easily accessed via I-75, running northwest-southeast through the county. Other areas can be accessed using the east-west aligned SR 44 and the north-south aligned SR 9. The Shelbyville Municipal Airport provides additional, broader connectivity.

Industry is relatively limited in Shelby County, with top employment sectors including Manufacturing, Healthcare & Social Assistance, Construction, and Retail Trade.¹⁰⁹ These sectors, as well as agricultural production, are supported by the Central Railroad Company of Indiana's short-line freight service that begins southeast of Shelbyville. The county's GDP was \$1.8 million in 2020.¹¹⁰

Further economic growth and development are supported by the Shelby County Indiana Economic Development Corporation that focuses on workforce readiness, higher education, and international relations in the region. The corporation promotes development at individual sites, including at two (2) new business parks in the City of Shelbyville. Target industries build on the county's manufacturing and agricultural heritage and include food and beverage, manufacturing, and distribution and logistics.

The County government includes a seven-member, elected county council that includes both district and at-large representatives who serve four-year terms. A three-member Shelby County Board of Commissioners represent each of three (3) districts and serve four-year, staggered terms. The Board serves as the executive and legislative arms of the government and has the authority to pass ordinances pertaining to some municipal concerns, including economic growth and development and land use planning.¹¹¹

Shelby County has a planning commission as the main professional, technical, and administrative staff responsible for zoning efforts and appeals in unincorporated areas. In incorporated areas, land use and zoning are regulated the municipality where properties and potential developments are located.

¹⁰⁸ U.S. Census Bureau, 2022

¹⁰⁹ <https://datausa.io/profile/geo/shelby-county-in#economy>; accessed January 2022

¹¹⁰ <https://fred.stlouisfed.org/series/REALGDPALL18145>; accessed January 2022

¹¹¹ <https://www.co.shelby.in.us/commissioners/>; accessed January 2022

Indiana || Military Compatible Planning Advisory Handbook

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
Shelby County has a Comprehensive Plan that partially addresses land use issues related to military compatibility (see 2.5.12.1 Shelby County under State Aviation Facility). However, the plan does not mention Camp Atterbury.	
Zoning Code Compatibility Regulations	
Shelby County has a Zoning Ordinance that includes a variety of tools to facilitate military compatibility (see 2.5.12.1 Shelby County under State Aviation Facility). However, the Zoning Ordinance is not related to Camp Atterbury.	
Formalized Military Coordination	Shelby County does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	Shelby County regulates noise in the Airport Compatibility Overlay (ACO) District (see 2.5.12.1 Shelby County under State Aviation Facility). However, this is not related to Camp Atterbury.
Height Regulations	Shelby County regulates height related to imaginary surfaces around runways in the Airport Compatibility Overlay (ACO) District (see 2.5.12.1 Shelby County under State Aviation Facility). However, this is not related to Camp Atterbury.
Renewable Energy Regulations	Shelby County regulates Commercial Solar Energy Systems but not related to Camp Atterbury or military compatibility.
Overlay Districts	Shelby County has an Airport Compatibility Overlay (ACO) District related to military compatibility (see 2.5.12.1 Shelby County under State Aviation Facility). However, this is not related to Camp Atterbury.
Noxious Pollution Regulations	Shelby County regulates noxious pollution in Section 5.64 regarding (F) Odor, (G) Air Pollution, and (H) Heat and Glare among others. However, these are not specifically related to Camp Atterbury or military compatibility.
Density Regulations	Shelby County does not regulate density.
Outdoor Lighting Regulations	Shelby County does not regulate outdoor lighting.
Stormwater Regulations	Shelby County regulates stormwater but not related to Camp Atterbury or military compatibility.
Subdivision Regulations	
Shelby County does not have subdivision regulations.	

3.8.8. Brown County



Located in central Indiana, Brown County is bordered by Johnson County to the northeast, Bartholomew County to the east, Jackson County to the south, Monroe County to the west, and Morgan County to the northwest. The jurisdiction is divided into four (4) townships, with the Town of Nashville serving as the county seat. First established in 1836, Brown County encompasses 316.22 square miles of mostly undeveloped lands that include the Town of Nashville, 2 unincorporated communities, one (1) census-designated place, and five (5) protected areas: Brown County State Park, Yellowwood State Forest, Cordry Sweetwater Conservancy District, T.C. Steele State Historic Site, and part of Hoosier National Forest. Portions of Camp Atterbury also fall within the northeast corner of the county.

The County population was an estimated 15,475 people in 2020¹¹² and largely dispersed throughout the jurisdiction. Communities are connected via SR 135 as it runs from north to south through the middle of the county and SR 46 as it traverses west to east. Nashville – at the center of the jurisdiction – is 18.5 miles west of Columbus and 18.8 miles east of Bloomington. Martinsville is approximately 20 miles north. The nearest airport is Columbus Municipal Airport.

Brown County’s workforce included roughly 7,000 people, with the top industries in terms of employment including Manufacturing, Retail Trade, and Healthcare & Social Assistance.¹¹³ The county’s Real GDP was \$245,676 in 2020.¹¹⁴

Brown County residents are governed by a county council that serves as the legislative branch of the government and a board of commissioners that serves as the executive body. The Brown County Council consists in seven (7) representatives who are elected to serve four-year terms for the purpose of establishing an annual budget and managing spending and revenues. The Council also has limited authority to impose local income and property taxes, pending state-level approval, as well as excise and service taxes.

Brown County commissioners are elected to four-year, staggered terms and are responsible for executing acts legislated by the Council and for managing the day-to-day operations of the government. The Board consists in three (3) members. Other elected representatives include a judge and court clerk, a county recorder, treasurer, and auditor, a coroner, and sheriff. All are elected to four-year terms.

The County further maintains an Area Planning Commission and County Redevelopment Board to guide growth and development, along with other boards and commissions.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	Brown County has a Comprehensive Plan, but it does not address land use issues related to Camp Atterbury and military compatibility.
Zoning Code Compatibility Regulations	Brown County has a Zoning Ordinance but not related to Camp Atterbury or military compatibility.

¹¹² U.S. Census Bureau, 2022

¹¹³ <https://datausa.io/profile/geo/brown-county-in#economy>; accessed February 2022

¹¹⁴ <https://fred.stlouisfed.org/series/REALGDPALL18013>; accessed February 2022

Indiana || Military Compatible Planning Advisory Handbook

Formalized Military Coordination	Brown County does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	Brown County regulates noise but not related to Camp Atterbury or military compatibility.
Height Regulations	Brown County regulates height but not related to Camp Atterbury or military compatibility.
Renewable Energy Regulations	Brown County does not regulate renewable energy.
Overlay Districts	Brown County does not have an overlay district.
Noxious Pollution Regulations	Brown County regulates noxious pollution but not related to Camp Atterbury or military compatibility.
Density Regulations	Brown County does not regulate density.
Outdoor Lighting Regulations	Brown County regulates outdoor lighting but not related to Camp Atterbury military compatibility.
Stormwater Regulations	Brown County does not regulate stormwater.
Subdivision Regulations	Brown County has subdivision regulations but not related to Camp Atterbury or military compatibility.

3.8.9. Jackson County



Jackson County spans 513.91 square miles in south central Indiana and is bordered by Bartholomew County to the north-northeast, Jennings and Scott Counties to the east and southeast, Washington and Lawrence Counties to the south and west, Monroe County to the northwest, and Brown County to the north-northwest. The jurisdiction was formed in 1816 with 12 townships and the Town of Brownstown designed county seat.

Jackson County currently encompasses one (1) city, (3) towns, and six (6) unincorporated and census-designated places. The county is transected by the East Fork White River running northeast-southwest and characterized by agricultural and undeveloped lands, including parts of both Hoosier National Forest and Muscatatuck National Wildlife Refuge.

The reported population of Jackson County was 46,428 in 2020¹¹⁵, with residents served by a number of major roadways. Interstate 65 and US 31 run north-south through the far eastern part of the jurisdiction, while SR 50 and runs roughly east to west through the middle of the county. Many State Routes transect the area. Jackson County may be best known for a feature of this transportation network – the Medora Covered Bridge – the second longest 3-span covered bridge in the world.

The county is also home to Freeman Municipal Airport in the City of Seymour, which supports civilian travel and transport needs, as well as training operations out of Camp Atterbury and Muscatatuck Urban Training Center.

Jackson County's transportation infrastructure and proximity to Indianapolis, Louisville, and Cincinnati serves a growing industrial base, with Valeo North America, Inc. and Aisin USA among major employers. The top industries in 2019 were Manufacturing, Retail Trade, and Healthcare & Social Assistance.¹¹⁶ Jackson County's Real GDP was \$2.5 million in 2020.¹¹⁷

The county has a council system of government with the Jackson County Council serving as the legislative branch and financial power of the government and the Jackson County Board of Commissioners serving as the executive body. The Council consists in seven (7) representatives, four (4) of whom are elected from county districts and three (of whom) serve at large. They are responsible for passing legislation such as ordinances, as well as financial functions, including establishing an annual budget and managing spending and revenues. The Council also has limited authority to impose local income and property taxes, pending state-level approval, as well as excise and service taxes.

Commissioners are elected to four-year, staggered terms and are responsible for executing acts legislated by the Council and for managing the day-to-day operations of the government. The Board consists in three (3) members elected by and serving the County's three (3) districts. Other elected representatives include a judge and court clerk, a county recorder, treasurer, and auditor, a coroner, and sheriff. All officials are elected to four-year terms.

Residents of Brownstown and Crothersville and all unincorporated areas are further supported by the Jackson County Planning & Zoning Department and Plan Commission, with growth and economic development guided by the Jackson County Comprehensive Plan (2006).

The County also collaborates with the Jackson County Industrial Development Corporation and the South Central Indiana Economic Development group to facilitate industry expansions and relocations to the area. Moreover, as

¹¹⁵ U.S. Census Bureau, 2022

¹¹⁶ <https://datausa.io/profile/geo/jackson-county-in#economy>; accessed February 2022

¹¹⁷ <https://fred.stlouisfed.org/series/GDPALL18071>; accessed February 2022

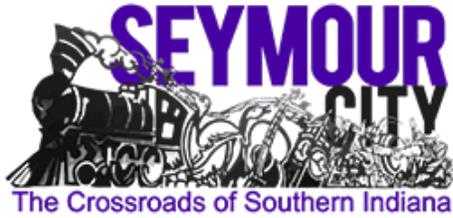
Indiana || Military Compatible Planning Advisory Handbook

members of the South Central Indiana Talent Region that includes Jackson, Bartholomew, and Jennings Counties and the Town of Edinburgh, the County was recently awarded Regional Economic Acceleration and Development Initiative (READI) funds by the IEDC for a possible \$7.4 million dollars in workforce development/training, infrastructure, housing, medical, and destination projects.¹¹⁸

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
	Jackson County has a Comprehensive Plan but it does not address land use issues related to Camp Atterbury and military compatibility.
Zoning Code Compatibility Regulations	
	Jackson County has a Zoning Ordinance but not related to Camp Atterbury or military compatibility.
Formalized Military Coordination	Jackson County does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	Jackson County does not regulate noise.
Height Regulations	Jackson County regulates height but not related to Camp Atterbury or military compatibility.
Renewable Energy Regulations	Jackson County does not regulate renewable energy.
Overlay Districts	Jackson County has an overlay district but not related to Camp Atterbury or military compatibility.
Noxious Pollution Regulations	Jackson County does not regulate noxious pollution.
Density Regulations	Jackson County regulates density but not related to Camp Atterbury or military compatibility.
Outdoor Lighting Regulations	Jackson County regulates outdoor lighting but not related to Camp Atterbury or military compatibility.
Stormwater Regulations	Jackson County regulates stormwater but not related to Camp Atterbury or military compatibility.
Subdivision Regulations	
	Jackson County has subdivision regulations but not related to Camp Atterbury or military compatibility.

¹¹⁸ <https://jcidc.com/2021/12/15/region-awarded-30-million/>; accessed February 2022

3.8.10. The City of Seymour



The City of Seymour is in Jackson, Redding, and Rockford Townships in northeast Jackson County and is the largest municipality in the jurisdiction. Platted in 1852, the community consists in 12.14 square miles and is home to approximately 21,569 people¹¹⁹ and most economic activity in the region.

The city is just 31.7 miles from Camp Atterbury and 22 miles from Muscatatuck Urban Training Center, with Seymour Freeman Field Municipal Airport in the southwest part of town among the network of assets comprising the Indiana Air Range Complex.

Seymour is well-connected to the rest of county and beyond via US 50, which transects the middle of the community, as well as US 31 and I-65, which cross through its eastern end. State Route 258 and SR 11 also run through Seymour. The city is further notable in its location at the intersection of major north-south and east-west rail lines that converge in the downtown area and for additional transport opportunities through the municipal airport and international airports in Indianapolis and Louisville, approximately one (1) hour away.

Known as the “Crossroads of Southern Indiana,” Seymour’s location and infrastructure supports and facilitates current and future development. Both Aisin USA and Rose Acre Farms are headquartered in Seymour, and Cummins, Inc., Valeo North America, Inc., Lannett Company, Inc., and other international, national, and regional companies operate facilities there. The top industries in terms of employment in Seymour in 2019 were Manufacturing, Retail Trade, and Accommodation & Food Services, with 17.6% of the workforce involved in production.¹²⁰

Further industry growth and diversification is facilitated through the City’s partnership with Jackson County Industrial Development Corporation, with an emphasis on promoting investment in distressed census tracts, or Opportunity Zones, and specifically areas adjacent to Seymour Freeman Field Municipal Airport.¹²¹ Seymour Main Street is also a Main Street America Affiliate, with a commitment to creating high-quality places and building stronger communities through preservation-based economic development.

The City of Seymour has an elected mayor-council government, with the nine-member council including both district representatives and at-large members. The Seymour City Council is responsible for passing or changing local ordinances, resolutions, orders, and motions and the authority to levy certain taxes. Seymour’s clerk-treasurer is responsible for clerical and record-keeping duties and fiscal and administrative functions. All elected officials serve four-year terms.

¹¹⁹ U.S. Census Bureau, 2022

¹²⁰ <https://datausa.io/profile/geo/seymour-in#economy>; accessed February 2022

¹²¹ <http://jcidc.com/pdf/SeymourOZ.pdf>; accessed February 2022

Indiana || Military Compatible Planning Advisory Handbook

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
The City of Seymour has not adopted a Comprehensive Plan.	
Zoning Code Compatibility Regulations	
The City of Seymour has a Zoning Ordinance but not related to Camp Atterbury or military compatibility.	
Formalized Military Coordination	The City of Seymour does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	The City of Seymour regulates noise but not related to Camp Atterbury or military compatibility.
Height Regulations	The City of Seymour regulates height but not related to Camp Atterbury or military compatibility.
Renewable Energy Regulations	The City of Seymour does not regulate renewable energy.
Overlay Districts	The City of Seymour does not have an overlay district.
Noxious Pollution Regulations	The City of Seymour does not regulate noxious pollution.
Density Regulations	The City of Seymour does not regulate density.
Outdoor Lighting Regulations	The City of Seymour does not regulate outdoor lighting.
Stormwater Regulations	The City of Seymour regulates stormwater but not related to Camp Atterbury or military compatibility.
Subdivision Regulations	
The City of Seymour does not have subdivision regulations.	

3.9. Indiana National Guard at Hulman Field (at Terre Haute Regional Airport) Surrounding Communities

3.9.1. Vigo County



Vigo County comprises 410.45 square miles along the Indiana/Illinois border in the central part of the state. It is bounded by the State of Illinois to the west, Vermillion and Parke Counties to the north, Clay County to the east, and Sullivan County to the south. Vigo County is characterized by low hill country bisected by the Wabash River that flows from the county's northern reaches, south southwestward, to form its westernmost boundary at its southern extent. Land use is mostly agricultural with some urban development – primarily, the City of Terre Haute.

The county's current boundaries were defined in 1873 and encompass 12 townships that provide services to area residents. County-wide, 106,153 people resided in four (4) incorporated and several unincorporated communities in 2020. Roughly 6,794 Vigo County residents were veterans at that time.¹²²

Vigo County's government is comprised of three (3) branches, with the Vigo County Board of Commissioners serving as the executive and legislative branches and a county council serving as the fiscal arm. The Board includes three (3) elected commissioners who are empowered to set policy, adopt and implement law, and carry-out day-to-day operations under their purview. The Board may also enter into mutually beneficial interlocal agreements in order to provide more efficient, less costly public services to municipalities.

The Vigo County Council has limited authority to impose some kinds of local taxes if approved by the State. There are seven (7) elected council members.

Vigo is the largest of seven (7) counties in the West Central Indiana Economic Development Region, by population, and the transportation, employment, retail, healthcare, entertainment/culture, and education hub for the area. With several universities, colleges, community colleges, and technical schools, employers have access to a large, skilled, and trainable workforce. Vigo County's top five (5) industries reflect wide-ranging employment opportunities and a diverse economy based in Manufacturing, Healthcare & Social Assistance, Retail, Education Services, and Hospitality.¹²³ Vigo County's GDP declined slightly in 2020 to \$4.7 million.¹²⁴

The Vigo County Redevelopment Department administers various economic development initiatives through the six-member, appointed Vigo County Redevelopment Commission to attract and retain companies. The incentive and assistance programs provide tailored packages to meet specific business needs and often connect private and public partners to enhance development and other economic opportunities and employee mentoring/training. The Commission is the owner and developer of the Vigo County Industrial Park I and II in Terre Haute.

¹²² U.S. Census Bureau, 2021

¹²³ Hoosier Data, Indiana Department of Workforce Development; accessed December 2021: www.hoosierdata.in.gov/region7.asp

¹²⁴ Federal Reserve Economic Data; accessed December 2021: <https://fred.stlouisfed.org/series/GDPALL18167>

Indiana || Military Compatible Planning Advisory Handbook

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
<p>The Thrive 2025: Terre Haute Vigo County Comprehensive Plan does not acknowledge the Indiana National Guard but does acknowledge the Terre Haute Regional Airport. It discourages development that would encroach on or interfere with airport operations as a matter of policy and recommends a sub area plan for guiding development.</p>	
Zoning Code Compatibility Regulations	
<p>The Unified Zoning Ordinance for Vigo County does not promote coordination with the Indiana National Guard for planning purposes; however, it does require coordination with the Hulman Regional Airport Authority for development within the Noise Overlay District (Section 12.03.K Permit Review).</p>	
Formalized Military Coordination	<p>Vigo County does not have formalized military coordination in its zoning code.</p>
Noise Regulations/Sound Attenuation	<p>Although the Indiana National Guard does not have aircraft stationed at Terre Haute Regional Airport, Vigo County has established noise regulations through the Hulman Regional Airport Noise Overlay District discussed below.</p>
Height Regulations	<p>Although the Indiana National Guard does not have aircraft stationed at Terre Haute Regional Airport, Vigo County has established height regulations through the Hulman Regional Airport Overlay District discussed below.</p>
Renewable Energy Regulations	<p>Vigo County does not regulate wind or solar energy development.</p>
Overlay Districts	<p>Vigo County has adopted the Human Regional Airport District (HRA), the Hulman Regional Airport Noise Overlay District (ANO), and the Hulman Regional Airport Airspace Overlay District (AAO). See details below.</p>

Human Regional Airport District (HRA):

The purpose of this district as defined in Section 12.2 of the Unified Zoning Ordinance is to ensure harmonious development in and around Hulman Regional Airport through the encouragement of land uses that are most compatible with aircraft operations, the discouragement of encroachment from incompatible uses, and the promotion and protection of the airport's public utility.

The HRA specifies what land uses are allowed within the airport district, including primary, accessory, temporary, and special exception uses, as well as design and building standards. The HRA defines setback and landscaping requirements, height limitations, and coverage allowances.

Unless otherwise specified in the Hulman Regional Airport Airspace Overlay District, principal use building may be up to 85' tall, provided, any structure over 35' has setbacks/yards increased by 1' for every 2' over the 35' limit. The height of accessory use structures is restricted to 25'.

Hulman Regional Airport Noise Overlay District (ANO):

As defined in Section 12.03 of the Unified Zoning Ordinance, the ANO regulates development and land use in noise sensitive areas surrounding Hulman Regional Airport while yet encouraging land uses of maximum compatibility with aircraft operations, discouraging the encroachment of incompatible uses, and promoting the airport's public utility.

The ANO defines development restrictions and building standards, including allowable and prohibited land uses and sound-attenuation requirements relative to three (3) distinct compatibility noise zones. The regulations pertain to all permanent, temporary, and mobile objects, including, but not limited to buildings, towers, cranes, smokestacks, natural and man made land formations, transmission lines, flagpoles, and ship masts. ANO regulations are nevertheless supplemental to all other applicable underlying or overlay zoning district regulations. In the case of conflicting standards and requirements, the more stringent standards and requirements apply.

The ANO compatibility noise zones and corresponding Noise Overlay Zoning Map(s) are based on the most recently approved 14 CFR Part 150 Noise Exposure Maps and presented in Unified Zoning Ordinance, Attachment 2A-2B; in County zoning maps. The zones reflect anticipated noise levels (DNL) associated with four (4) types of aircraft during various operating conditions and include the following:

- DNL 65-70 Noise Compatibility Overlay Zone N-1 generally corresponds to the area between the DNL 65 and 70 contours, as shown on the overlay maps. Prohibited uses include mobile homes; hospitals, nursing homes, and other medical facilities; schools and other educational services; religious uses; and uses that congregate large numbers of people such as music venues, arenas, and resorts and camps. Sound proofing of permitted uses is required.
- DNL 70-75 Noise Compatibility Overlay Zone N-2 generally corresponds to the area between the DNL 70 and 75 contours, as shown on the overlay maps. Prohibited uses include all uses prohibited in Zone N-1, as well as single and multifamily dwellings; residential hotels; and other dwellings of any type. Sound proofing of permitted uses is required.
- DNL 75+ Noise Compatibility Overlay Zone N-3 generally corresponds to the area within the DNL 75 contour, as shown on the overlay maps. Prohibited uses include all uses prohibited in Zones N-1 and N-2, as well as transient lodging such as hotels and motels, and facilities for public assembly. Sound proofing of permitted uses is required.

Indiana || Military Compatible Planning Advisory Handbook

Moreover, noise sensitive uses are not permitted within 1,500 feet of either side of the extended centerline of a runway for a distance of one (1) nautical mile from the airport boundary, unless first permitted by the Indiana Department of Transportation (Indiana code 21-8-10-3).

Any use that is not prohibited in the ANO is subject to county review and permitting, relative to use type and location and associated sound attenuation requirements. Development applications must also be forwarded to the Airport of Authority within three (3) days of submission to the County. If the Authority does not provide written recommendations, does not request additional information, and/or does not object to proposals within seven (7) days of receipt of applications and they otherwise conform to ANO requirements, uses will be permitted.

Hulman Regional Airport Airspace Overlay District (AAO):

The purpose of the AAO district is to prevent the new development of obstructions that are hazardous to air operations; to ensure the removal, alteration, or other mitigation of existing obstructions that are hazardous; and to promote lighting or other marking of persistent obstructions. The AAO further encourages land uses of maximum compatibility with air navigation; protects the airport and its operations from the encroachment of incompatible uses; and protects and promotes the airport’s public utility.

The AAO is based on the most recently approved Airport Layout Plan and is integrated into the County’s official ordinances and zoning maps, as defined in Attachment I of the Unified Zoning Ordinance for Vigo County.

All AAO regulations and standards apply to all lands within the overlay district as additional and supplementary to all other applicable regulations and include both height restrictions and performance standards. Height restrictions apply to both structures and vegetation, with structures defined as any object constructed or installed by man, including but not limited to buildings, towers, smokestacks, and overhead transmission lines.

Height restrictions vary across six (6) types of imaginary surface areas based on the applicable runway elevation or airport elevation as defined on the AAO zoning map.

Noxious Pollution Regulations

Vigo County has regulations pertaining to smoke, dust, and particulate matter relative to aircraft operations at the Terre Haute Regional Airport, as defined in the Hulman Regional Airport Overlay District discussed above.

Density Regulations

Vigo County regulates density but not related to Hulman Field or military compatibility.

Outdoor Lighting Regulations

Vigo County regulates outdoor lighting pertaining to glare through the marking and lighting of airspace hazards, as defined in the Hulman Regional Airport Overlay District discussed above.

Stormwater Regulations

Vigo County regulates stormwater but not related to Hulman Field or military compatibility.

Subdivision Regulations

Vigo County has subdivision regulations but not related to Hulman Field or military compatibility.

3.9.2. City of Terre Haute



The City of Terre Haute encompasses 35.8 square miles in Hamilton Township in north central Vigo County, approximately five (5) miles east of the Indiana/Illinois border. The city was formally platted in 1816 and designated county seat two (2) years later.

Terre Haute is one of the largest cities in the Wabash River Valley, anchor of the Terre Haute Metropolitan Statistical Area, and center of cultural and economic activity in Vigo County.

The city is well-connected to the rest of the county and the eastern United States via I-70 and US 150. Terre Haute is also served by several CSX Transportation rail lines, as well as an Indiana Rail Road line. The city is home to Terre Haute Regional Airport and Hulman Field at the far eastern end of the city, as well as Sky King Airport, a public airport in North Terre Haute.

Indiana State University, Rose-Hulman Institute of Technology, Ivy Tech Community College call Terre Haute home, making for an educated and skilled local workforce. The city hosts a number of national and international firms, including, but not limited to, Sony DADC, Templeton Coal, Steel Dynamics, Nexstar Media Group, MAES, SRS Distribution, and Wiese USA.

The top industries in terms of employment in Terre Haute include Healthcare & Social Assistance, Educational Services, and Manufacturing.¹²⁵ The city's Real GDP was \$6.8 million dollars in 2020.¹²⁶

The city has a long history of partnering with public, private, and nonprofit organizations to support development efforts, including special tax districting, relocation incentives, funding initiatives. The municipality is currently collaborating with the Terre Haute Economic Development Corporation and Vigo County Redevelopment Commission in the development of the Vigo County Industrial Parks that will offer more than 2400 acres in the city limits for relocating businesses.

Growth and development and Terre Haute are guided by Terre Haute Vigo County Comprehensive Plan Thrive 2025 and city and county planning officials.

Terre Haute is governed by a mayor-council form of government, with the nine-member council including representatives of each district and at-large members. The mayor and council serve as the executive and legislative branches of the city government. The city clerk is responsible for maintaining council and court records, as well as performing financial functions on behalf of the city. All elected officials serve four-year terms.

¹²⁵ <https://datausa.io/profile/geo/terre-haute-in#economy>; accessed December 2021

¹²⁶ <https://fred.stlouisfed.org/series/RGMP45460>; accessed December 2021

Indiana || Military Compatible Planning Advisory Handbook

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
<p>The Thrive 2025: Terre Haute Vigo County Comprehensive Plan does not acknowledge the Indiana National Guard but does acknowledge the Terre Haute Regional Airport. It discourages development that would encroach on or interfere with airport operations as a matter of policy and recommends a sub area plan for guiding development.</p>	
Zoning Code Compatibility Regulations	
<p>The City of Terre Haute has a Zoning Ordinance that includes a variety of tools to facilitate compatibility with Hulman Field and the military. The specific tools are discussed in the following sections.</p>	
Formalized Military Coordination	<p>The City of Terre Haute does not have formalized military coordination in its zoning code.</p>
Noise Regulations/Sound Attenuation	<p>The City of Terre Haute regulates noise under Light and Noise Nuisance in Section 6-123. It states that it shall be a violation of this Section for any person to cause or permit any nuisance or annoyance to any person in the City of Terre Haute, Indiana by use of noise or light, or any sound or light emitting device, mechanism, or thing.</p> <p>In addition, Section 10-351 states: For subdivisions located within any noise overlay zone as established by the Zoning Ordinance or noise contour maps as adopted by the Terre Haute International Airport F.A.R. PART 150 NOISE COMPATIBILITY STUDY NOISE EXPOSURE MAPS a notice of potentially high aircraft noise levels shall be affixed to and recorded with secondary plat. The notice shall be worded as follows:</p> <p>“NOTE: All or part of this subdivision is located in an area potentially subject to aircraft noise levels high enough to annoy users of the property and interfere with its unrestricted use. Contact the Vigo County Area Planning Commission or the Terre Haute International Airport for information regarding the most recently calculated levels of current and forecast aircraft noise levels on the property.”</p>
Height Regulations	<p>The City of Terre Haute regulates height related to military compatibility in Section 10-138 regarding height regulations and use restrictions near the airport. See details below.</p>

a. General Height Limitations.

A maximum height of one hundred twenty-five feet (125') is established for all buildings. Elevator penthouses, water towers and coolers, radio and television aerials and similar appurtenances not commonly recognized as habitable areas are exempt from the aforesaid limitations.

b. Special Height and Use Limitations.

The following special height limitations shall apply to areas within two (2) miles of the boundary lines of Terre Haute International Airport exclusive of the buildings and structures contained within the boundaries of said Terre Haute International Airport.

(1) Within two thousand five hundred feet (2,500') from the nearest airport boundary, no building, structure, or portion thereof shall exceed a height above U.S. geodetic elevations five hundred eighty-five (585) of twenty-five feet (25'), or one foot (1') for each fifty feet (50') that such building or structure is distance from such nearest boundary, whichever is greater.

(2) Between two thousand five hundred feet (2,500') and two (2) miles from the nearest airport-boundary, no building structure, or portion thereof shall exceed a height above U.S. geodetic elevation five hundred eighty-five (585) of one hundred fifty feet (150').

(3) Notwithstanding any other provisions of this Article, no use shall be made of land or water within the corporate boundaries of that part of the City known as "Terre Haute International Airport", or within one (1) mile outside of said boundaries, in such a manner as to create or cause electrical interference with navigational signals or cause glare in the eyes of the pilots using said Hulman Regional Airport, impair visibility for pilots in immediate vicinity of said Hulman Regional Airport or to create a hazard to the landing, take off and maneuvering of aircraft using or intending to use said Hulman Regional Airport.

Renewable Energy Regulations

The City of Terre Haute does not regulate renewable energy.

Overlay Districts

The City of Terre Haute does not have an overlay district.

Noxious Pollution Regulations

The City of Terre Haute does not regulate noxious pollution.

Density Regulations

The City of Terre Haute does not regulate density.

Outdoor Lighting Regulations

The City of Terre Haute does not regulate outdoor lighting.

Stormwater Regulations

The City of Terre Haute regulates stormwater but not related to Hulman Field or military compatibility.

Subdivision Regulations

The City of Terre Haute has subdivision regulations but not related to Hulman Field or military compatibility.

3.9.3. Town of Seelyville

The Town of Seelyville encompasses 0.91 square miles in Lost Creek Township in Vigo County, approximately 8 miles east of downtown Terre Haute and less than 5 miles east of Hulman Field. The town was platted in the 1870s as a whistle stop station for the Terre Haute and Eastern Railroad lines that run along the south side of the community and grew with the opening of the McKeen coal shaft – one of the first coal mines in the nation.

Today, the town is notable for having an unusually high number of utilities and companies specializing in mining, quarrying, and oil and gas extraction. The top employment industries for Seelyville’s workforce of approximately 400 people include Manufacturing, Retail Trade, and Healthcare & Social Assistance.¹²⁷

Seelyville’s 1,029 residents¹²⁸ are governed by an elected town council that serves as the community’s legislative branch and policy-making body. The Seelyville Town Council also acts as the Seelyville Utilities’ Board of Control, as well as appoints the town manager as chief administrator and the town clerk/treasurer.

The Town and Vigo County signed an interlocal cooperation agreement in December 2021, with the County now enforcing ordinances in areas where the town had previously asserted jurisdiction.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	The Town of Seelyville is included in the Vigo County Comprehensive Plan.
Zoning Code Compatibility Regulations	The Town of Seelyville has not adopted a Zoning Ordinance but operates under Vigo County.
Subdivision Regulations	The Town of Seelyville does not have subdivision regulations but operates under Vigo County.

¹²⁷ <https://datausa.io/profile/geo/seelyville-in#economy>; accessed December 2021

¹²⁸ U.S. Census Bureau, 2021

3.10. Indiana Intelligence Center (INIC) Surrounding Communities

3.10.1. City of Indianapolis



Colloquially known as “Indy,” the City of Indianapolis encompasses 368.2 square miles on either side of the White River, nearly coterminous with Marion County. The city was founded in 1821 as a planned municipality and the center of state government. It is both the state capital and county seat, as well as the most populous city in Indiana with 887,642 residents estimated in 2020.¹²⁹

Indianapolis emerged quickly as a manufacturing and transportation hub with the completion of early rail lines and thoroughfares at the turn of the 19th Century. This history is still evident in Indianapolis’ location at the intersection of several interstate highways and connectivity to major cities and ports through the region, including St. Louis, Missouri, Chicago, Illinois, Detroit, Michigan, and Columbus, Ohio.

Indy is further connected via Indianapolis International Airport (IND), located on 7,700 acres approximately five (5) miles southwest of the Indiana Intelligence Center. The airport supports both passenger and cargo flights. It is the second-largest FedEx hub in the world and, in terms of cargo traffic, the 6th busiest airport in the United States. Fifteen hundred truck, air, and rail distribution firms employ approximately 100,000 people across the city.

The Indianapolis Metropolitan Area had a Total GDP of \$134 billion in 2015¹³⁰ and anchors the 29th largest economic region in the U.S. Top industries within the city limits reflect a shift away from its industrial roots and include Healthcare & Social Assistance, Retail Trade, and Manufacturing.¹³¹ Eli Lilly now the largest single employer with 11,000 workers. Indy is also among the fastest high-tech job growth areas in the country.

Indianapolis is currently governed by a consolidated city-county-government under Indiana Code’s Unigov provision that dates to 1970 and combines many civil functions. Others remain independent and are administrated by the city’s mayor-council government. The council serves as the legislative body and consists of 25 members, all of whom represent geographic districts. The mayor and council members are elected to unlimited four-year terms.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	The City of Indianapolis has adopted a Comprehensive Plan, but it does not affect land use issues related to the Indiana Intelligence Center or military compatibility as adopted.
Zoning Code Compatibility Regulations	The City of Indianapolis has adopted a Zoning Ordinance, but it does not affect land use issues related to the Indiana Intelligence Center or military compatibility as adopted.

¹²⁹ U.S. Census Bureau, 2021

¹³⁰ https://en.wikipedia.org/wiki/Economy_of_Indianapolis; accessed December 2021

¹³¹ <https://datausa.io/profile/geo/indianapolis-city-balance-in#economy>; accessed December 2021

Indiana || Military Compatible Planning Advisory Handbook

Formalized Military Coordination	The City of Indianapolis does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	The City of Indianapolis regulates noise in Section 391-301 as public policy, but this does not affect land use issues related to the Indiana Intelligence Center or military compatibility as adopted.
Height Regulations	The City of Indianapolis regulates height in Section 742-205 regarding the Airspace Secondary Zoning District, normal building height maximum limits per zoning development regulations, and limits around helipads. However, these are not specifically related to the Indiana Intelligence Center or military compatibility.
Renewable Energy Regulations	The City of Indianapolis regulates renewable energy, but it does not affect land use issues related to the Indiana Intelligence Center or military compatibility as adopted. It's regulated and allowed in Development Plan Districts and must go through a Zoning approval process.
Overlay Districts	The City of Indianapolis has an overlay district with airspace overlays and other spec. zones, but these do not affect land use issues specifically related to the Indiana Intelligence Center or military compatibility as adopted.
Noxious Pollution Regulations	The City of Indianapolis regulates noxious pollution regarding performance standards with smoke, dust or particulate matter in Section 740-401, but this does not affect land use issues related to the Indiana Intelligence Center or military compatibility as adopted.
Density Regulations	The City of Indianapolis regulates density, but it does not affect land use issues related to the Indiana Intelligence Center or military compatibility as adopted.
Outdoor Lighting Regulations	The City of Indianapolis regulates outdoor lighting, but it does not affect land use issues related to the Indiana Intelligence Center or military compatibility as adopted.
Stormwater Regulations	The City of Indianapolis regulates stormwater, but it does not affect land use issues related to the Indiana Intelligence Center or military compatibility as adopted.

Subdivision Regulations

The City of Indianapolis has subdivision regulations, but it does not affect land use issues related to the Indiana Intelligence Center or military compatibility as adopted.

3.11. Muscatatuck Urban Training Center (MUTC) Surrounding Communities

3.11.1. Jennings County



Jennings County was organized in 1817 shortly after the Indiana Territory achieved statehood with the Town of Vernon designated county seat. The jurisdiction spans 378.34 square miles in the southeastern part of the state, bordered by six (6) other counties: Decatur County to the north, Ripley and Jefferson Counties to the east and southeast, Scott County to the south, and Jackson County to the northwest.

The county is divided into 11 townships characterized by a predominantly rural and often forested landscape. Big Oaks National Wildlife Refuge is centered just east of Jennings County and extends into the jurisdiction along the southern half of its eastern border. The County encompasses the Town of Vernon and City of North Vernon (discussed below) and 16 unincorporated and census-designated places. Jennings County's total population was 27,613 in 2020 and included approximately 1,969 veterans.¹³²

The county is also home to the 2,430-acre Southeast Purdue Agricultural Center 1.0 mile west of census-designated Butlerville (discussed below), as well as the 1,000-acre Muscatatuck Urban Training Center 1.7 miles north of that community and just south of the Muscatatuck River.

Commercial and industrial development is mostly located in North Vernon and ranges from small, local businesses to international manufacturing firms supporting the county's total GDP of \$716,252 in 2020.¹³³ The top industries in terms of employment for county residents include Manufacturing, Retail Trade, and Healthcare & Social Assistance.¹³⁴

Jennings County's high quality of life, affordable housing, low taxes, excellent schools, and natural resources can be a draw for corporations and are promoted by Jennings County Economic Development Commission (EDC) in tandem with county, local governments, and other entities to encourage industry expansions and relocation to the area.

The County and EDC are collaborating with other communities, non-profit organizations, and employers as part of the South Central Indiana Talent Region focused on strategic projects that will stimulate housing, regional amenities, workforce training, and innovation. Communities in Bartholomew and Johnson are part of these efforts.¹³⁵

MUTC is also eager to work with local companies as a resource for training and partner in both commercial and military research and development.

Current and future development in Jennings County has easy access to I-65; CSX, Louisville & Indiana Railroad Company, and Norfolk Southern rail lines, including short lines directly to industrial sites; as well as Louisville International Airport, approximately 70 miles to the south, and Indianapolis International Airport, approximately 80 miles northwest.

¹³² U.S. Census Bureau, 2022

¹³³ <https://fred.stlouisfed.org/series/REALGDPALL18079>; accessed January 2022

¹³⁴ <https://datausa.io/profile/geo/jennings-county-in#economy>; accessed January 2022

¹³⁵ <https://jenningsedc.com/region-partners-on-378-million-in-projects-seeks-49-5-million-from-indiana-readi-fund/>; accessed January 2022

Indiana || Military Compatible Planning Advisory Handbook

The county is governed by a county council that serves as the legislative branch and controls spending and revenue collection. The Council has limited authority to impose local income and property tax, subject to state-level approval, as well as excise and service taxes. Council members are elected from county districts every four (4) years.

The Jennings County Board of Commissioners performs executive functions, implementing acts legislated by the council, collecting revenues, and managing the day-to-day operations of the government. The Board of Commissioners is also an elected body, with commissioners serving staggered four-year terms. Other elected county officials include a Circuit Court judge and clerk, county recorder, treasurer, auditor, surveyor, coroner, and sheriff.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
<p>Jennings County adopted a Comprehensive Plan in December 2012, and it addresses land use issues related to Muscatatuck Urban Training Center (MUTC) and military compatibility. It states that the North Vernon Municipal Airport is an important resource for Jennings County residents and business and adds that this asset has also been identified as an important factor in the continued and expanded operations of the Muscatatuck Urban Training Center. There’s a land use chapter and MUTC Impact CSA, which discusses development of land around the North Vernon Municipal Airport. One of their short-term goals is to continue working with officials to fully integrate the MUTC into the local economy. In addition, there’s an entire section on MUTC Compatible Use Area, which provides background, key issues and trends, economic impacts, housing impacts, transportation impacts, and most importantly, recommendations from the 2009 JLUS to successfully achieve military compatibility with MUTC.</p>	
Zoning Code Compatibility Regulations	
<p>Jennings County has a Zoning Ordinance that includes a variety of tools to facilitate compatibility with Muscatatuck Urban Training Center and the military. The specific tools are discussed in the following sections.</p>	
Formalized Military Coordination	Jennings County does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	Jennings County regulates noise related to the North Vernon Municipal Airport including a disclosure statement for airport noise.
Height Regulations	Jennings County regulates height related to the North Vernon Municipal Airport.
Renewable Energy Regulations	Jennings County does not regulate renewable energy.
Overlay Districts	Jennings County does not have an overlay district.
Noxious Pollution Regulations	Jennings County regulates noxious pollution related to the North Vernon Municipal Airport. Section 92.02 (A) covers Electrical disturbance, (D) Odor, (E) Air pollution & (F) Heat and glare.
Density Regulations	Jennings County does not regulate density.

Outdoor Lighting Regulations

Jennings County regulates outdoor lighting but not related to MUTC or military compatibility.

Stormwater Regulations

Jennings County regulates stormwater but not related to MUTC or military compatibility.

Subdivision Regulations

Jennings County has subdivision regulations but not related to MUTC or military compatibility.

3.11.2. City of North Vernon



The City of North Vernon was founded in 1854 as part of Center Township in the middle of Jennings County, 15.6 miles east of I-65 and the Town of Seymour on US 50. It is 6.5 miles west/southwest of the MUTC. At approximately 7.68 square miles with a reported population of 6,608 in 2020¹³⁶, it is the largest community in the county, both in geographic expanse and number of residents.

North Vernon is at the center of economic activity in the county, offering an historic downtown currently the focus of a multiphase, \$13.8-million-dollar revitalization initiative under Indiana's Stellar Communities Pilot Program to encourage local investment and commerce.¹³⁷ The city is also the first of its kind in the state to produce its own power through solar investment to fuel city buildings, streetlights, and traffic signals.

Most large industry is located in the northern and eastern part of the community and includes Biehle Electric, Biehle Systems, CEW Enterprises Inc./Plasfino, Decatur Mold, Decatur Plastics, Erler Industries, Kromet America, Metaldyne, Montrow Group, North Vernon Industry Corporation, and others, both national and international.

These and future businesses benefit from Madison Railroad's 22.7-mile mainline to its major industrial park and storage facility. North Vernon Municipal Airport, three (3) miles northeast of the city, also plays a vital role in transportation and economic development in the region. The airport can accommodate aircraft ranging from business jets to some heavy military transport and supports Indiana National Guard training. The airport also hosts a very active flight school.¹³⁸

The community's top industries in terms of employment in 2020 were Manufacturing, Health Care & Social Assistance, and Retail Trade.¹³⁹

North Vernon is governed by an elected mayor and city council, with five (5) council members representing four (4) districts and one representing the community at large. A clerk treasurer serves as the community's secretary and record keeper and is responsible for managing the City's finances.

North Vernon is currently updating its 2009 Comprehensive Plan to guide leaders, residents, and business owners through decision-making processes as they make real their vision for the future. The city also collaborated with the Jennings County Economic Development Commission.

¹³⁶ U.S. Census Bureau, 2022

¹³⁷ <https://jenningsedc.com/community/downtown-revitalization/>; accessed January 2022

¹³⁸ <https://www.northvernon-in.gov/departments/airport.php>; accessed January 2022

¹³⁹ <https://datausa.io/profile/geo/north-vernon-in#economy>; accessed January 2022

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
<p>The City of North Vernon adopted a Comprehensive Plan in 2009, which addresses land use issues related to Muscatatuck Urban Training Center and military compatibility. The city has partnered with HWC Engineering to facilitate a new North Vernon Comprehensive Plan soon. In the 2009 Plan, it states in the Executive Summary that the steering committee agreed that fully integrating the Muscatatuck Urban Training Center into the local economy was one of the city's top priorities. They have a development policy for accommodations for the training center including environmental, utility, and transportation objectives.</p>	
Zoning Code Compatibility Regulations	
<p>The City of North Vernon has adopted a Zoning Ordinance but not related to Muscatatuck Urban Training Center or military compatibility.</p>	
Formalized Military Coordination	The City of North Vernon does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	The City of North Vernon does not regulate noise.
Height Regulations	The City of North Vernon does not regulate height.
Renewable Energy Regulations	The City of North Vernon does not regulate renewable energy.
Overlay Districts	The City of North Vernon does not have an overlay district.
Noxious Pollution Regulations	The City of North Vernon does not regulate noxious pollution.
Density Regulations	The City of North Vernon does not regulate density.
Outdoor Lighting Regulations	The City of North Vernon does not regulate outdoor lighting.
Stormwater Regulations	The City of North Vernon does not regulate stormwater.
Subdivision Regulations	
<p>The City of North Vernon does not have subdivision regulations.</p>	

3.11.3. Community of Butlerville

Butlerville is a small, unincorporated, census-designated place spanning .38 square miles along US 50 in Campbell Township, Jennings County. It is approximately seven (7) miles southeast from Vernon and North Vernon and only 1.7 miles southeast of the MUTC. The community is due east of the Southeastern Purdue Agricultural Center.

The Butlerville post office was established in 1851, and the community legally platted in 1853. Today, Butlerville includes a handful of local businesses, an elementary school and church, and homes surrounded by agricultural lands, The reported population was 181 in 2019.¹⁴⁰

Over half of Butlerville’s workforce holds jobs in management or administrative support, with the top industries by employment Manufacturing, Healthcare & Social Assistance, Administration, and Accommodations & Food Services.¹⁴¹

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
	The Community of Butlerville has not adopted a Comprehensive Plan.
Zoning Code Compatibility Regulations	
	The Community of Butlerville has not adopted a Zoning Ordinance but operates under Jennings County.
Subdivision Regulations	
	The Community of Butlerville does not have subdivision regulations but operates under Jennings County.

¹⁴⁰ <https://datausa.io/profile/geo/butlerville-in>; accessed January 2022

¹⁴¹ <https://datausa.io/profile/geo/butlerville-in>; accessed January 2022

3.11.4. Southeast Purdue Agricultural Center

Southeast Purdue Agricultural Center (SEPAC) is situated due west of Butlerville on US 50 and 0.7-miles due south of MUTC. The 2,430-acre facility is one of eight (8) Purdue Agricultural Centers (PAC) in the state that conducts applied crop and animal research and demonstrates cutting-edge agricultural practices and technology.

SEPAC was established in 1977 and has become the largest of the Purdue centers. It is distinctive in its work on conservation tillage, including no-till approaches; it also maintains a timber base for agroforestry. Infrastructure includes a 1,100-square foot conference room, farm shop, agricultural processing facilities, and water-quality and weather stations. The Center hosts regular field and training days.

Purdue is renowned for its multidisciplinary research and world-changing discoveries in agriculture and the life sciences.

3.12. State Aviation Facility (at Shelbyville Municipal Airport) Surrounding Communities

3.12.1. Shelby County

Shelby County was established in 1822 as one of the first counties to be designated after the Indiana Territory was admitted into the Union in 1816. The City of Shelbyville serves as County seat. The 412.75 square mile jurisdiction is in the central part of the state, bounded by Hancock County to the north, Rush and Decatur Counties to the east and southeast, Johnson County to the west, and Marion County to the northwest.

Shelby County is characterized by low, rolling hills cut by Sugar Creek and the Flatrock and Blue Rivers and given over to agricultural land uses and some urban development. Communities include the City of Shelbyville – home to the National Guard Armory Army Aviation Support Facility at Shelbyville Municipal Airport – the Towns of Fairland and Morrison, parts of Edinburgh and St. Paul, and 38 unincorporated and census-designated places. The recorded population of Shelby County was 45,055 in 2020 and included nearly 3000 veterans.¹⁴²

Shelbyville is the cultural and economic center of the county and offers an historic commercial district, a performing arts center and exotic animal center, and many outdoor recreational opportunities. The City of Indianapolis is just north of the jurisdiction and easily accessed via I-75, which runs northwest-southeast through the county. Other areas can be accessed using the east-west aligned SR 44 and the north-south aligned SR 9, as they transect the center of the county. The Shelbyville Municipal Airport provides additional, broader connectivity.

Industry is relatively limited in Shelby County, with top employment sectors including Manufacturing, Healthcare & Social Assistance, Construction, and Retail Trade.¹⁴³ These sectors, as well as agricultural production, are supported by the Central Railroad Company of Indiana's short-line freight service that begins southeast of Shelbyville. The county's GDP was \$1.8 million in 2020.¹⁴⁴

Further economic growth and development are supported by the Shelby County Indiana Economic Development Corporation that focuses on workforce readiness, higher education, and international relations in the region. The corporation promotes development at individual sites, including at two (2) new business parks in the City of Shelbyville. Target industries build on the county's manufacturing and agricultural heritage and include food and beverage, manufacturing, and distribution and logistics.

The County government includes a seven-member, elected county council that is responsible for fiscal affairs and controls all spending and revenue collection. They are further responsible for annual budgeting and special spending and have limited authority to impose local income and property taxes subject to State approval, as well as excise taxes, and service taxes. Council members are elected to four-year terms and include both district and at-large representatives.

The three-member Shelby County Board of Commissioners are elected from each of three (3) districts and serve four-year, staggered terms. The Board serves as the executive and legislative arms of the government and has the authority

¹⁴² U.S. Census Bureau, 2022

¹⁴³ <https://datausa.io/profile/geo/shelby-county-in#economy>; accessed January 2022

¹⁴⁴ <https://fred.stlouisfed.org/series/REALGDPALL18145>; accessed January 2022

to pass ordinances pertaining to some municipal concerns, including economic growth and development and land use planning.¹⁴⁵ Other elected officials include the Circuit and Superior Court judges, a court clerk, treasurer, county recorder, auditor, sheriff, and coroner.

Shelby County has a planning commission that serves as the main professional, technical, and administrative staff responsible for zoning efforts and appeals in unincorporated areas. In incorporated areas, land use and zoning are regulated the municipality where properties and potential developments are located.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
Shelby County has a Comprehensive Plan that briefly mentions Shelbyville Municipal Airport as an important community asset. The plan also notes the airport safe zones/protection boundaries limit development potential north and south of the facility and thereby poses a challenge to development goals for Focus Area #3, or the Fairland Road/I-74 area.	
Zoning Code Compatibility Regulations	
Shelby County has a Zoning Ordinance that includes a variety of tools to facilitate compatibility with the State Aviation Facility and the military. The specific tools are discussed in the following sections.	
Formalized Military Coordination	Shelby County does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	Shelby County regulates noise in the Airport Compatibility Overlay (ACO) District. The ACO District Development Standards state that, "All structures located in the runway clear zone should be adequately sound proofed per FAA regulations to ensure the health and general welfare of occupants."
Height Regulations	Shelby County regulates height related to imaginary surfaces around runways in the Airport Compatibility Overlay District. Under ACO District Development Standards in Section 3.04, the following height restrictions apply within the ACO District. See details below.

¹⁴⁵ <https://www.co.shelby.in.us/commissioners/>; accessed January 2022

Indiana || Military Compatible Planning Advisory Handbook

Horizontal or Conical Surface: Proposed buildings or structures shall not be of a height greater than the horizontal surface or conical surface (see diagram below). The horizontal surface is an imaginary surface that is 200 feet above the active runway and extends outward for a horizontal distance of 13,200 feet. The conical surface extends upward from the ends of the horizontal surface at a slope of one foot (1') vertical rise to 100 feet horizontal run, outward to a height of 500 feet.

The following uses and structures are exempt from these height restrictions.

- a. A structure or object that is shielded by existing permanent structures or by natural terrain or topographic features of equal or greater height and is located in an area of established development where it is evident that the shielded structure would not adversely affect aircraft navigation.
- b. Any air navigation facility, airport visual approach or landing aid, aircraft arresting device, or meteorological device of a type approved by the FAA and the height of which is fixed by its functional purpose.
- c. Any structures owned or maintained by the airport or any branch of government for utility purposes.

Renewable Energy Regulations

Shelby County regulates commercial solar energy systems but not related to the State Aviation Facility or military compatibility.

Overlay Districts

Shelby County has an Airport Compatibility Overlay District (Sections 3.01-05) related to the State Aviation Facility and military compatibility. See details below.

It states that the intent of the ACO District is to:

Establish specific zoning requirements for the area around the Shelbyville Municipal Airport in order to maintain the vitality and functionality of the airport, protect persons on the ground and traveling by air from hazards associated with airplane flight, and reduce land use conflicts in the area of the airport. The area of the airport presents unique considerations for the height of structures, the presence of factors that interfere with safe flight, and large gatherings of the public that require the establishment of additional development standards (Section 3.01).

The ACO District Development Standards in Section 3.04 include general use restrictions, height restrictions, noise protection requirements, and runway clear zone regulations. The general use restrictions state that no land use within the ACO District shall:

1. Create electrical interference with radio communication between the airport and aircraft or create interferences with navigational aids employed by aircraft;
2. Make it difficult for pilots to distinguish between airport lights and other lights;
3. Result in glare in the eyes of pilots using the airport;
4. Create pollution or other conditions that would impair visibility in the vicinity of the airport; or
5. Otherwise endanger the landing, taking-off, or maneuvering of aircraft.

The ACO District Use Standards in Section 3.05 state a runway clear zone shall be established at each end of every active runway. The clear zones should be 500 feet wide at a distance of 200 feet beyond each end of the runway and uniformly widen thereafter to a width of 2,500 feet at a distance of 10,200 feet beyond each runway with its centerline being a continuation of the runway centerline. The ACO District use standards also identify the following Prohibited Uses within runway clear zones:

1. Waste disposal, solid waste transfer station, recycling facility, and other uses that attracts migratory birds;
2. Educational facilities including schools (P-12), colleges and universities, day care homes, and day care centers;
3. Churches and other places of worship;
4. Nursing homes, retirement centers, and assisted living facilities;
5. Residential uses; and
6. Stadiums, theaters, and similar places where the public is assembled.

The Standards (Section 3.05) also identify the following Special Exception Uses:

1. Trade and business schools;
2. Hospitals and medical centers and clinics;
3. Hotels; and
4. Any uses involving the sales, storage, manufacture, and/or distribution of gasoline, propane, or other flammable, toxic, explosive, radioactive, bio-hazardous materials of a quantity and type that would further jeopardize the health of passengers, bystanders, and emergency personnel in the event of an aircraft accident.

Noxious Pollution Regulations

Shelby County partially regulates noxious pollution related to the State Aviation Facility and military compatibility in the ACO District General Use Restrictions. They state that no land use within the ACO District shall, “create pollution or other conditions that would impair visibility in the vicinity of the airport.”

Section 5.64 of the code regulates noxious pollution, including odor, air pollution, heat and glare, and more, but the regulation does not specifically address the State Aviation Facility or military compatibility.

Density Regulations

Shelby County does not regulate density.

Outdoor Lighting Regulations

Shelby County partially regulates outdoor lighting related to the State Aviation Facility and military compatibility in the ACO District General Use Restrictions. The restriction state that no land use within the ACO District shall, “make it difficult for pilots to distinguish between airport lights and other lights” and/or “result in glare in the eyes of pilots using the airport.”

Stormwater Regulations

Shelby County regulates stormwater but not related to the State Aviation Facility or military compatibility.

Subdivision Regulations

Shelby County does not have subdivision regulations.

3.12.2. City of Shelbyville

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
<p>The Shelbyville Comprehensive Plan partially addresses land use issues related to the State Aviation Facility and military compatibility. The Shelbyville Municipal Airport is listed as a community asset that enhances quality of life. Under Community & Society (CS) Objective #4, the Plan directs the city to, “Collaborate with the Shelbyville Municipal Airport on plans for expansion and marketing to benefit the city’s tourism and attractions.” In addition, the plan identifies the Fairland Road/I-74 Gateway as its Focus Area #1 and includes a map showing Shelbyville Municipal Airport’s proximity.</p>	
Zoning Code Compatibility Regulations	
<p>The City of Shelbyville’s Zoning Ordinance includes a Municipal Airport Zoning Code with a variety of tools that facilitate compatibility with the State Aviation Facility and the military, more generally. These tools are discussed below.</p>	
Formalized Military Coordination	<p>The City of Shelbyville’s zoning code does not formalize military coordination.</p>
Noise Regulations/Sound Attenuation	<p>Section 157.05 of the City’s code regulates noise related to Shelbyville Municipal Airport operations in establishing Noise-Sensitive Areas around airfields where residential and other noise-sensitive land uses are prohibited. These areas extend 1,500 feet on either side of the extended centerline of the runway for a distance of one (1) nautical mile from the boundaries of any public use airport.</p>
Height Regulations	<p>Section 157.04 of the Municipal Airport Zoning Code regulates the height of development and natural features relative to the airfield imaginary surfaces at Shelbyville Municipal Airport. See Overlay District below for details.</p>
Renewable Energy Regulations	<p>The City of Shelbyville does not regulate renewable energy development.</p>
Overlay Districts	<p>The City of Shelbyville has Airport Zones related to Shelbyville Municipal Airport in Section 157 which include all the land lying within the approach zones, transitional zones, horizontal zones, and conical zones as they apply to a particular airport. See details below, which combines information from Sections 157.03 and 157.04.</p>

The various zones are established and defined as follows:

1) Utility runway visual approach zone. The inner edge of this approach zone coincides with the width of the primary surface and is 250 feet wide. The approach zone expands outward uniformly to a width of 1,250 feet at a horizontal distance of 5,000 feet from the primary surface. Its centerline is the continuation of the centerline of the runway.

Slopes upward 20 feet horizontally for each foot vertically, beginning at the end of, and at the same elevation as the primary surface and extending to a horizontal distance of 5,000 feet along the extended runway centerline.

(2) Runway larger than utility with a visibility minimum greater than $\frac{3}{4}$ mile non-precision instrument approach zone. The inner edge of this approach zone coincides with the width of the primary surface and is 500 feet wide. The approach zone expands outward uniformly to a width of 3,500 feet at a horizontal distance of 10,000 feet from the primary surface. Its centerline is the continuation of the centerline of the runway.

Slopes upward 34 feet horizontally for each foot vertically, beginning at the end of, and at the same elevation as the primary surface and extending to a horizontal distance of 10,000 feet along the extended runway centerline.

(3) Transitional zones. These zones are established as the area beneath the transitional surfaces. These surfaces extend outward and upward to 90-degree angles to the runway centerline, with the runway centerline extended at a slope of seven feet horizontally for each foot vertically from the sides of the primary and approach surfaces to where they intersect the horizontal and conical surfaces. Transitional zones for those portions of the precision approach zones which project through and beyond the limits of the conical surface, extend a distance of 5,000 feet measured horizontally from the edge of the approach zones and at 90-degree angles to the extended runway centerline.

Slopes upward and outward seven feet horizontally for each foot vertically, beginning at the sides of, and at the same elevation as the primary surface and the approach zones and extending to a height of 150 feet above the airport elevation which is 804 feet above mean sea level. In addition to the foregoing, there are established height limits sloping upward and outward seven feet horizontally for each foot vertically, beginning at the sides of, and at the same elevation as the approach zones, and extending to where they intersect the conical surface.

(4) Horizontal zone. This zone is established by swinging arcs of 10,000 feet radii from the center of each end of the primary surface of each runway and connecting the adjacent arcs by drawing lines tangent to those arcs. The horizontal zone does not include the approach and transitional zones.

The height limitation is 150 feet above the airport elevation, or a height of 954 feet above mean sea level.

(5) Conical zone. This zone is established as the area that commences at the periphery of the horizontal zone and extends outward therefrom a horizontal distance.

Slopes upward and outward 20 feet horizontally for each foot vertically, beginning at the periphery of the horizontal zone and at 150 feet above the airport elevation and extending to a height of 350 feet above the airport elevation, as shown on the hazard map. This conical zone shall continue to slope outward and upward 20 feet horizontally for each foot vertically for a distance of 13,000 feet beyond the 350-foot contour to an elevation of 1,000 feet above airport elevation.

The airport code also states that nothing in the code shall be construed as prohibiting the growth, construction, or maintenance of any tree or structure to a height as per the limitations established in this section.

Noxious Pollution Regulations

The City of Shelbyville does not regulate noxious pollution.

Density Regulations

The City of Shelbyville regulates density but without reference to the State Aviation Facility or military compatibility.

Outdoor Lighting Regulations

The City of Shelbyville regulates outdoor lighting but unrelated to the State Aviation Facility or military compatibility.

Stormwater Regulations

The City of Shelbyville regulates stormwater but not related to the State Aviation Facility or military compatibility.

Subdivision Regulations

The City of Shelbyville has subdivision regulations but not related to the State Aviation Facility or military compatibility.

3.12.3. Town of Fairland



The Town of Fairland is in Brandywine Township in Shelby County. The community was platted in 1852 as part of rail line development in the 19th Century and encompasses 1.16 square miles southwest of US 421. Shelbyville Municipal Airport and the State Aviation Facility are less than one (1) mile east of the town.

Fairlands estimated population was 579 residents in 2019¹⁴⁶, with a workforce of approximately 268 people. The top employment industries for the community include Manufacturing, Healthcare & Social Assistance, and Construction.¹⁴⁷ The community is home to MPL Company and Penske Logistics.

Fairland is governed by a three-member town board and town clerk-treasurer. The Shelby County Plan Commission also serves the community.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	The Town of Fairland has not adopted a Comprehensive Plan but is included as a focus area in Shelby County's Comprehensive Plan.
Zoning Code Compatibility Regulations	The Town of Fairland has not adopted a Zoning Ordinance but operates under Shelby County's ordinance.
Subdivision Regulations	The Town of Fairland does not have subdivision regulations but operates under Shelby County's regulations.

¹⁴⁶ U.S. Census Bureau, 2021

¹⁴⁷ <https://datausa.io/profile/geo/fairland-in#economy>; accessed December 2021

3.13. U.S. Coast Guard Station Michigan City Surrounding Communities

3.13.1. City of Michigan City

Michigan City is a city in LaPorte County, Indiana located on the south shore of Lake Michigan. It was established in 1836 and has a population of around 32,000. Michigan City has a total area of 20.59 sq miles. Popular neighboring cities include La Porte, Valparaiso, Chesterton, Portage, and Long Beach. The Illinois boarder is about 42 miles away, with Chicago, IL being roughly 58 miles from the station. The Michigan boarder is only 7 miles away with the popular town of New Buffalo, MI being about 10 miles from the station.

The Lighthouse Premium Outlets is a popular outdoor shopping mall less than a mile away from the station. Franklin St is full of businesses and eateries both local and nationwide and arguably, serves as the hub of Michigan City. Many nature preserves and hiking trails surround Michigan City. The Indiana Dunes State Park and the Indiana Dunes National Park offer recreation and tourism for the region.

Existing Compatibility Tool	Tool Description
Comprehensive Plan Compatibility Policies	
	The City of Michigan City has a Comprehensive Plan called the 2017-2021 Master Plan that partially addresses military compatibility by periodically referencing the Coast Guard facility.
Zoning Code Compatibility Regulations	
	The City of Michigan City has adopted a Zoning Ordinance but not related to Station Michigan City or military compatibility.
Formalized Military Coordination	The City of Michigan City does not have formalized military coordination in its zoning code.
Noise Regulations/Sound Attenuation	The City of Michigan City regulates noise but not related to Station Michigan City or military compatibility.
Height Regulations	The City of Michigan City regulates height but not related to Station Michigan City or military compatibility.
Renewable Energy Regulations	The City of Michigan City regulates renewable energy but not related to Station Michigan City or military compatibility.
Overlay Districts	The City of Michigan City has an overlay district but not related to Station Michigan City or military compatibility.
Noxious Pollution Regulations	The City of Michigan City regulated noxious pollution but not related to Station Michigan City or military compatibility.

Density Regulations

The City of Michigan City regulates density but not related to Station Michigan City or military compatibility.

Outdoor Lighting Regulations

The City of Michigan City regulates outdoor lighting but not related to Station Michigan City or military compatibility.

Stormwater Regulations

The City of Michigan City regulates stormwater but not related to Station Michigan City or military compatibility.

Subdivision Regulations

The City of Michigan City has subdivision regulations but not related to Station Michigan City or military compatibility.



4 || Compatibility Assessment

Inside Chapter 4...

4.1. Introduction.....	4-1
4.2. Compatibility Factors.....	4-2
4.3. Compatibility Factor Definitions.....	4-4

4.1. Introduction

Compatibility, in relation to military readiness, can be defined as the balance or compromise between community needs and interests and military needs and interests. The goal of compatibility planning is to promote an environment where both community and military entities communicate, coordinate, and implement mutually supportive actions that allow both to achieve their respective objectives. An action undertaken by either the military or community that minimizes, hinders, or presents an obstacle to the action of the other is characterized as an issue. The following factors characterize the range of compatibility factors between the military and communities. These factors are applicable not only in areas surrounding military installations but also those areas within operational military footprints that extend across the rural areas of Indiana.

4.2. Compatibility Factors

Several variables determine whether military and community plans, programs, and activities are compatible or in conflict. For Indiana's Military Installations, 24 compatibility factors, or general types of compatibility problems were used to identify, assess, and establish the specific set of compatibility factors that are occurring for each installation. They cover social, resource, and development factors. This unique set of compatibility factors are listed in Table 4-1 below.

Table 4-1 Compatibility Factors for Indiana Military Installations

	Grissom Air Reserve Base	Naval Support Activity (NSA) Crane	NSA Crane – Lake Glendora Test Facility	Baer Field (Fort Wayne International Airport)	Camp Atterbury	Columbus Municipal Airport	Seymour Freeman Field Municipal Airport	Human Field (Terre Haute Regional Airport)	Indiana Intelligence Center	Muscatatuck Urban Training Center	North Vernon Municipal Airport	State Aviation Facility (Shelbyville Municipal Airport)	U.S. Coast Guard Station Michigan City
Air Quality		PF			■					PF			
Antiterrorism	■	■	■										
Biological Resources		■	■		■					■			
Coordination / Communication	■	■	■	■	■	■	■	■	■	■	■	■	■
Dust / Smoke / Steam	■	■	■					■				■	
Energy Development	■	PF	PF	■				■		■	■	■	
Frequency Spectrum Capacity	■												
Frequency Spectrum Impedance / Interference	■	■	■					■				■	
Housing Availability		■	■		PF	PF							
Infrastructure and Information Security	■	■	■	■	■			■	■	■		■	■
Infrastructure Extensions	■	■											
Land / Air / Sea Spaces	■		■										
Land Use	■	■	■	■	■	■		■		■	■	■	
Legislative Initiatives	■	■	■	■	■			■		■		■	
Light and Glare	■	■		■								■	
Noise	■	■	■	PF	■					■	■		
Public Trespassing		■	■										
Resiliency	■	■	■	■	■	■	■	■	■	■	■	■	■
Roadway Capacity	■	■								■	■		
Safety Zones	■	■	■		■	■	■	■		■	■		
Stormwater		■											
Vertical Obstructions	■			■		■	■	■			■	■	
Vibration		■	■										
Water Quality / Quantity	■	PF	■		PF					PF			

PF = Potential Future Concern

4.3. Compatibility Factor Definitions

4.3.1. Air Quality

Air quality is defined by numerous components regulated at the federal and state level. For compatibility, the primary concerns are pollutants that limit visibility, such as particulates, ozone, etc. and potential non-attainment of air quality standards that may limit future changes in operations at an installation or the surrounding region.

Several factors can influence air quality in a region. These include a variety of sources and types of pollutants, topographic conditions, weather, and other factors. Community sources of dust, car emissions and air pollutants can also create adverse impacts on the environment and can potentially limit military operations. Permits and funding for important infrastructure projects can be delayed or denied in non-attainment areas, or projects may be subject to mitigation measures that increase the capital cost of projects.

Under the Clean Air Act, the US Environmental Protection Agency (EPA) established NAAQS for air pollutants. The NAAQS have been set for the six criteria air pollutants. Air quality control regions (AQCR) are classified either "attainment" or "nonattainment," according to whether the concentrations of criteria pollutants exceed the NAAQS. Nonattainment designation categories are Marginal, Moderate, Serious, Severe, and Extreme.

The Indiana Department of Environmental Management (IDEM) works to protect and improve the state's air quality through programs for monitoring air quality, permitting and inspecting air emissions sources, developing plans for improving air quality, and educating and informing the public about air quality issues.

State and federal regulations may limit military installation activities and require a permit to operate. If any of the counties with a military installation are designated nonattainment, the installation could be required to operate under a permit or obtain a higher-level permit. Increased requirements for environmental compliance could result in the need of new equipment and technologies to reduce emissions, impacting costs and possibly limiting operations. Currently, most of Indiana's counties are classified as attainment areas for the six criteria pollutants regulated by the Clean Air Act. However, there are a few counties such as Lake and Porter counties in the northwest corner of the state that were classified as "serious" nonattainment areas for the 2008 8-Hour Ozone Standard (0.075 ppm). In addition, the Huntington Township was classified as a nonattainment area for the 2010 1-Hour Sulfur Dioxide Standard. These are both not in areas that affect compatibility issues with the Military Installations outlined in this handbook.

4.3.2. Antiterrorism

Antiterrorism relates to the safety of personnel, facilities, and information on an installation from outside threats. Security concerns and trespassing can present immediate compatibility concerns for installations. Due to current global conditions and recent events, military installations are required to implement more restrictive standards to address antiterrorism concerns. These measures include increased security checks at installation gates and physical changes such as new gate / entry designs.

The DoD antiterrorism standards require all DoD components to adhere to design / planning criteria and minimum construction standards to mitigate vulnerabilities and threats to an installation and its occupants. Additional

antiterrorism considerations include clearances on both sides of an installation perimeter fence to ensure visibility for security monitoring and reducing direct line-of-sight into installations.

4.3.2.1. Line-of-Sight

Effective antiterrorism is necessary to ensure operations are protected from observation by unauthorized parties outside of the installation. While it is important for the military to maintain clear lines-of-sight outside the facility for surveilling potential security risks, lines-of-sight that allow viewing and vantage points into the facility create a security concern. The height and proximity of future development adjacent to an installation could also create encroachment issues.

The Unified Facilities Criteria (UFC) program, initiated by the DoD provides standards for military facilities. Section 2-4.1.3 of UFC 4-010-01 states that the fire of weapons from a terrorist is predicated on direct lines-of-sight and the assumption that weapons could be fired from vantage points outside the control of an installation or facility.

4.3.3. Biological Resources

Biological resources include federal, and state listed species (threatened and endangered) and their habitats. These resources may also include areas such as wetlands and migratory corridors that are critical to the overall health and productivity of an ecosystem. The presence of sensitive biological resources may require special development considerations and should be included early in the planning process.

Some restrictions are imposed on the military mission due to natural resources needs. Restrictions are generally those associated with regulatory and legal compliance, such as the Endangered Species Act (ESA), the Clean Water Act (CWA), and the National Environmental Policy Act (NEPA), and include managing operations around habitat areas. These regulations can limit the expansion of missions and ability to accommodate potential future missions. However, habitat areas such as wetlands immediately outside an installation can have a positive benefit on the military by discouraging or preventing community development that could generate compatibility issues.

4.3.3.1. Endangered and Threatened Species

As of July 2016, 25 federally threatened and endangered species are known to occur in Indiana. The Endangered Species Act (ESA) prohibits any action that causes a taking of any listed species of endangered fish or wildlife. The ESA provides a platform for the protection of critical habitat and species that may be at risk of extinction.

Installations across the State are located in various areas with different types of habitats that support a variety of species. The presence of these species on installations can limit operations as they are protected by the federal ESA. Many of the areas utilized by endangered and threatened species are threatened by fragmentation or loss of habitat due to urbanization and agriculture. With a narrowing or fragmented habitat, many species take refuge at military installations and surrounding areas which has the potential to impose mission constraints. Protection of habitat for endangered and threatened species limits available area for future development and mission expansion within an installation.

4.3.3.2. Wetlands

Wetlands cover about 813,000 acres of Indiana – about 3.5 percent of the State. They have the potential to limit additional land use capacity for installations. If it is determined that wetland impacts are unavoidable when pursuing additional land use development, mitigation through the creation of wetlands, or the restoration or enhancement of previously degraded ones, may be required federal permits. Section 404 of the Clean Water Act requires a permit from the Army Corps of Engineers to fill in wetlands.

Ensuring there is no net loss of wetlands has the potential to decrease the availability of land for future development. Wetlands increase land use constraints and may prevent future mission expansion and plans for additional land use capacity. For every permitted project, the adverse impacts on wetlands must be avoided and minimized to the extent practicable. For unavoidable impacts, compensatory mitigation is required to replace the loss of wetland and aquatic resource functions in the watershed. Methods of compensatory mitigation include restoration, establishment, enhancement, and preservation.

4.3.4. Coordination / Communication

This factor refers to the programs and plans that promote interagency coordination. Interagency communication serves the general welfare by promoting a more comprehensive planning process inclusive of all affected stakeholders. Interagency coordination also seeks to develop and include mutually beneficial policies for both communities and the military in local planning documents, such as comprehensive plans and regional planning efforts.

4.3.4.1. Communication and Coordination between Installations and Jurisdictions

Coordinated planning and communication between the military and communities within military operational footprints is vital to ensure information is shared. Mutual information sharing provides decision makers with the necessary information to make informed decisions in the interest of mutual compatibility – community activities that support military missions and military operations that support the quality of life within communities. Facilitating integrated, coordinated communication and planning can enable both the military and communities to successfully coexist – protecting the economic viability of communities and the health, safety and welfare of communities and military personnel at installations, ranges, in the air and on the water.

While some counties and municipalities may engage in formal or informal in-person and electronic communication with military installations on certain matters, other counties and municipalities lack the framework to facilitate consistent ongoing communication. In rural areas that are impacted by military operations but not proximate to an installation, communication mechanisms may be non-existent, particularly if the community cannot distinguish which branch of the Armed Forces they are impacted by, and which installation is generating the activity. Because local planning, planning processes and planning authority varies across the state, the proper jurisdiction points of contact for coordinating planning matters may not be known.

The absence of formalized coordination and communication protocols can create an unreliable, disjointed communication network and result in land use and development approvals that could be detrimental to the military mission and costly for both the military and communities if incompatible development is not mitigated or addressed early in the development review process.

Due to limited planning requirements, many rural jurisdictions do not employ planning staff or resources to facilitate the planning process. Local economic development organizations may play a pivotal role in attracting and retaining businesses in counties by promoting assets and facilitating business growth. Most planning is conducted and authorized by a county board of commissioners or city / town council – a group of elected officials charged with government administration including oversight for the provision of public services such as septic systems and roads.

4.3.4.2. Installation Community Communication Outreach

Communities often recognize the importance of military installations and the role they play in national strategic defense and enhancing the economy of the surrounding areas. However, in rural areas new residents, visitors, and tourists may not be aware there is an active military installation in the area, or they are located under a military influence area. This can generate quality of life issues and complaints to the military. This is usually a major issue with new property owners located within a military footprint and experience impacts that they were unaware of prior to purchase.

4.3.4.3. Mutual Aid

Mutual aid is a critical resource multiplier for first responders in emergencies and disasters in Indiana. In many rural areas of the state, it is not feasible for each jurisdiction to maintain and staff all the resources that might be needed to respond to significant natural events. In the event of a natural disaster or other man-made emergency, the lack of adequate resources to respond to an event could mean lost hours of training and / or greater loss and cost due to limited resources.

4.3.5. Dust / Smoke / Steam

Dust results from the suspension of particulate matter in the air. Dust and smoke can be created by fire (controlled or prescribed burns, agricultural burning, and artillery exercises), ground disturbance (agricultural activities, military operations, grading), industrial activities, or other similar processes. Dust, smoke, and steam are compatibility issues if sufficient in quantity to impact flight operations (such as reduced visibility or cause equipment damage).

While a temporary nuisance, the primary concern with the control of fugitive dust is that dust and particulate matter (PM) can adversely impact the health of people in the surrounding communities. When inhaled, fine particles can accumulate in the respiratory system causing various respiratory problems including persistent coughs, wheezing and physical discomfort. Additionally, breathing these fine particles can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases such as asthma and chronic bronchitis. Agricultural crop activities such as harvesting and plowing at the end of harvesting can generate fugitive dust particularly during dry conditions. Dust from field operations can comprise airborne grain dust, pesticides, feed additives, fertilizers and biological aerosols from plant or animal matter. Harmful effects of agricultural dust can be prevented or minimized by applying appropriate control measures to reduce exposure.

Prescribed burns are often conducted within communities and on military installations as a common forest management tool. Farmers also conduct prescribed burns to rid the land of excess straw and stubble in preparation for a new crop. Prescribed fires emit smoke into the air and dispersed throughout the surrounding community with variations in natural weather conditions, i.e., wind and low cloud cover. This can cause temporary breathing and vision impairments in people with sensitivity to these conditions if precautions are not taken. Similar to dust, smoke can

adversely impact the health of people, especially people in special age groups or are susceptible to respiratory issues. The biggest health risk from smoke comes from fine particles which can get into the eyes and respiratory system, where they can cause temporary burning and illnesses such as bronchitis. Fine particles also can aggravate chronic heart and lung diseases.

Smoke also has the potential to impact pilots flying through military airspace. When flying at low altitudes, smoke from controlled burns may impede pilot visibility.

4.3.6. Energy Development

Development of energy sources, including alternative energy sources (such as solar, wind, geothermal, or biofuels) could pose compatibility issues related to glare as in the case of solar energy projects, vertical obstructions as is the case with wind generation, or water quality / quantity.

The moving blades of a wind turbine create a Doppler effect that can interfere with radio transmissions between air traffic controllers and aircraft and other types of communications, such as satellites. Recent studies indicate that large numbers of wind turbines located between five and eight miles from a radar system can have a negative impact on the system and interfere with readings. The impacts on radar are increased with the height, number, and clustering of turbines. The greatest impact is caused by their location proximate to the radar system. Although research is still being conducted, it is not fully known how tall, large, or how many wind turbines must be present to compromise radar operations. Wind turbines can also impact air-to-ground radars for pilots during training exercises.

Solar energy facilities can cause substantial amounts of glare depending on their type, location, angle, and direction, resulting in a temporary impairment of a pilot's view, even at a very high altitude.

Future commercial wind energy development presents a potential threat to military installations despite its clean energy benefits. The presence of large, commercial wind farms present challenges to aviation operations such as communication radio frequency (RF) interference, clutter, or screening. The RF clutter sources, such as wind turbines, have the potential to interfere with the accuracy of radar signals. There are two main impacts of large utility-scale wind farms: screening and false readings of other aircraft in the area when no other aircraft actually exist. This can potentially cause hazardous aircraft incidents or create communication issues between a pilot and ground control.

4.3.7. Frequency Spectrum Capacity

Frequency spectrum refers to the range of electromagnetic waves capable of carrying signals for point-to-point wireless communications. In a defined area, the frequency spectrum is limited and increasing demand for frequency bandwidth from commercial applications such as cellular phones, computer networking, GPS units, and mobile radios, is in direct competition with the capacity necessary for maintaining existing and future missions and communications on installations.

Frequency for radio spectrum has intensified in recent years, particularly in bands that are optimal for mobile systems (approximately 200MHz-4GHz). This factor has had an impact on the perceived (and actual) value of spectrum. Spectrum allocation heavily favors the private sector where bandwidth is being reallocated from the federal government to the commercial industry, threatening the DOD-allocated capacity to conduct secure communications

missions. As the demand for wireless applications grows, so does the complexity of the management and regulation of RF.

4.3.7.1. Federal Communications Commission

The FCC is the agency responsible for regulating non-governmental interstate and international (which originate or terminate within the US) radio, television, wire, satellite, and cable communications within all 50 states, Washington D.C. and all US territories. It is the entity that licenses non-Federal use of the frequency spectrum through a public process.

4.3.7.2. National Telecommunications and Information Administration, Office of Spectrum Management

The Office of Spectrum Management (OSM) is a branch of the National Telecommunications and Information Administration (NTIA) that is responsible for managing how the Federal government uses the RF spectrum. Some of the tasks of the OSM are to assist in managing the use of the RF spectrum and include assigning frequencies to government agencies, maintaining spectrum use databases, planning peacetime and wartime use of the spectrum, and participating in Federal government communications regarding emergency readiness. Approximately 70 Federal agencies and departments use the RF spectrum for communications, broadcasting, navigation and other purposes that are crucial to their continued operations. The NTIA maintains a Government Master File of the more than 40 specific radio services and frequency assignments that these agencies and departments use.

The FCC and NTIA executed a Memorandum of Understanding (MOU) on spectrum coordination in January 2003. The MOU established procedures relating to frequency coordination, spectrum planning provisions, and a framework for compliance with the statutory requirements. The Communications Act assigned joint jurisdiction for spectrum management to the FCC and the NTIA. The FCC is responsible for non-federal users and NTIA is responsible for federal users. Because the majority of spectrum is shared between federal and non-federal users, the FCC and NTIA must coordinate spectrum policy.

4.3.8. Frequency Spectrum Impedance / Interference

Frequency spectrum is the entire range of electromagnetic frequencies used for communications and other transmissions, which includes communication channels for radio, cellular phones, and television. In the performance of typical operations, the military relies on a range of frequencies for communications and support systems. Similarly, public, and private users rely on a range of frequencies in the use of cellular telephones and other wireless devices daily.

The military relies on a range of frequencies for communications and support systems. The Department is challenged to assure and maintain access, use, and maneuver within the electromagnetic spectrum to sense, command, control, communicate, test, train, protect, and project force effectively. Without the capabilities to assert EMS superiority, the nation's economic and national security will be exposed to undue and significant risk.

Since 1993, Congress has been selling federal spectrum bands for reallocation to the private sector, promoting the development of new telecommunications technologies, products, and services. The expanding public and commercial use of the frequency spectrum from wireless transmitters to consumer electronics can encroach on the military's use of the frequency spectrum. Increasing community and DoD demands for this important resource can create conflicts for all users.

The military's uninterrupted use of its assigned radio frequency is required for secure and effective operations. The military's frequency spectrum needs are generally increasing, while the spectrum available for DoD use is generally decreasing. The DoD has been allocated a portion of the spectrum as are all federal agencies. However, due to the sale or auctioning off spectrum from other federal agencies to commercial industry for wireless and telecommunications operations, the availability has decreased for some important military use on all frequencies including electronic warfare testing and operations for electromagnetic energy, directed energy, or anti-radiation weapons to attack personnel, facilities, or equipment with the intent of degrading, neutralizing, or destroying enemy combat capability.

Frequency interference is related to other transmission sources. Interference can result from a number of factors, including:

- Using a new transmission frequency that is near an existing frequency;
- Reducing the distance between two antennas transmitting on a similar frequency;
- Increasing the power of a similar transmission signal;
- Using poorly adjusted transmission devices that transmit outside their assigned frequency or produce an electromagnetic signal that interferes with a signal transmission; and
- Existing electronic sources and uses created by portable systems affecting entire communities utilizing Wi-Fi broadband systems and industrial sources that produce electronic noise by-product.

4.3.8.1. Part 15 Rules

Radio Frequency is a valuable resource requiring its use to be regulated by the government; however, not all equipment that uses RF energy is required to have a license or assignment. Part 15 is the portion of the FCC rules that regulates unlicensed RF devices, referred to as "Part 15 devices." Because of their limited, ultra-low power outputs, they are conditionally permitted to operate in almost all RF bands, including those dominated and heavily utilized by the DoD.

Part 15 devices include common commercial items such as baby monitors, cordless telephones, laptop computers, wireless computer mice, remote keys, wireless headsets, garage door openers, low-powered walkie-talkies, and wireless modems. Part 15 devices use the same RF resources as the licensed users of the electromagnetic spectrum, including the DOD, fire stations, hospitals, and police forces. As such, civilian use of Part 15 devices can interfere with military equipment and military equipment can interfere with Part 15 devices owned by private individuals.

4.3.9. Housing Availability

Housing availability addresses the supply and demand for housing in a region, the competition for housing that may result from changes in the population of military personnel, and the supply of military family and bachelor housing provided by the installation.

Housing for military personnel is an important part of the military quality of life standards for its service men and women. According to the Office of the Deputy Undersecretary of Defense, Installations and Environment Division, there has been a decrease in military housing conditions (adequate space, construction quality and required quality of life amenities), increase in length of deployment and family separations, and increase in out-of-pocket expenses for service members commuting. This puts a strain on service men and women and could have adverse impacts on military morale and readiness.

Because most military personnel may live in the community and they have large range in housing allowance from low to high depending on one's rank in the military, a diversity of housing types is required to serve them including affordable family housing and rental housing that is affordable and available monthly. Unless counties and municipalities quantify and plan for meeting military housing needs, housing availability will continue to be a quality-of-life issue for the military.

4.3.10. Infrastructure and Information Security

The Nation's critical utility, communications, and transportation infrastructure provides essential services that underpin our society and the national safety and security provided by our military. Communities and the military rely on this complex and diverse set of distributed networks, varied organizational structures and operating models (including multinational ownership), interdependent functions and systems in both physical space and cyberspace, governed by multi-level authorities and regulations. Because military installations do not exist in a vacuum, at risk infrastructure in civilian communities can adversely impact military operations and readiness, particularly when military installations are dependent on infrastructure networks under the authority of others. Critical infrastructure must be secure and able to withstand and rapidly recover from all hazards. Achieving this requires integration with the national preparedness system across prevention, protection, mitigation, response, and recovery.

Proactive and coordinated efforts are necessary to strengthen and maintain secure, functioning, and resilient critical infrastructure – including assets, networks, and systems – that are vital to public confidence and the Nation's safety, prosperity, and well-being. Critical infrastructure owners and operators are uniquely positioned to manage risks to their individual operations and assets, and to determine effective strategies to make them more secure and resilient.

The national policy on critical infrastructure security and resilience established by Presidential Policy Directive (PPD-21) on Critical Infrastructure Security and Resilience advances a national unity of effort to strengthen and maintain secure, functioning, and resilient critical infrastructure based on a shared responsibility and collaboration among the federal, state, local, tribal, and territorial entities, and public and private owners and operators of critical infrastructure.

4.2.1.1. Foreign Investment Compatibility

A component of infrastructure and information security is the need to minimize threats from foreign nation states that infiltrate national networks, systems, and technology for the purpose of deep surveillance to gain strategic information, or technical or operational knowledge.

The evolution of the concept of 'national security' has resulted in a significant transformation of the federal government's foreign investment regime. Although reviews of foreign investment, either direct or indirect, remain the domain of the Committee for Foreign Investment (CFIUS), the Committee's role in these reviews has continuously evolved, expanded, and shifted to reflect the changes in national security priorities. Heightened national security concerns regarding foreign investment, led to the enactment of the Foreign Investment and National Security Act of 2007 (FINSAs) which significantly expanded CFIUS's authority and presence and expanded the list of national security concerns beyond the traditional defense and military activities, to include, potential foreign government control, non-proliferation, counterterrorism cooperation, transshipment or diversion risk, and energy security. Since the enactment of FINSAs, the focus of the national security discourse gradually shifted to the question of 'technology transfer' – the process of acquiring advanced technologies to enhance civilian economy and military capabilities. These methods include foreign direct investment, venture capital investment, joint ventures, licensing agreements, cyber espionage, and talent acquisition programs.

4.3.11. Infrastructure Extensions

Infrastructure refers to public facilities and services such as sewers, water, electric, and roadways that are required to support development (existing and proposed). Public facilities and services should be appropriate for the type of urban or rural development they serve, but also limited to the existing and planned needs and requirements of the area. However, infrastructure can become an encroachment issue if enhanced or expanded in areas without consideration for how future development may impact military operations. The extension or expansion of community infrastructure to a military installation or areas proximate to an installation have the potential to induce growth, potentially leading to incompatible uses and conflicts between military missions and civilian communities.

In some cases, infrastructure extensions can positively benefit the region by providing additional support services and amenities for military installations in the area. As a facilitator and incubator of growth, investment, and job creation – all positive impacts on the region – infrastructure can also improve overall quality of life.

4.3.12. Land / Air / Sea Spaces

The military manages or uses land and air space to accomplish operational missions. These resources must be available and of a sufficient size, cohesiveness, and quality to accommodate effective training and testing. Military and civilian air and sea operations can compete for limited air, land and sea space, particularly when the usage areas are proximate to each other. Use of this shared resource can impact future growth in operations for all users.

4.3.12.1. Airspace Competition

Military installations with air missions share airspace with aircraft from numerous regional and general aviation airports. Active coordination and management of the available airspace mitigates safety hazards and works to

preserve the military mission. Adequate access to air and land is critical to the ability of installations to train, operate and execute missions.

The preservation of civilian airports and airfields and their associated operations is a concern for the military which may also use these facilities for training missions in competition with a community's desire to expand general aviation access for economic development.

US airspace is subject to the FAA's regulations which regulate civil aviation activities. The FAA's Flight Standards District Office, located in Indianapolis, serves as the regulatory agency for flight safety issues in Indiana. Though the Indiana Department of Transportation does not have regulatory authority for aviation, the department still has its mission for aviation to encourage, foster, and assist in the development of aeronautics in the state while also encouraging the establishment of airports, landing fields, and other navigation facilities. Indiana is home to 188 public-use aviation facilities, which are all vital for business, agriculture, and tourism.

Military Use Airspace

Military use airspace is airspace where military activity or unusual flight conditions may occur and includes Special Use Airspace (SUA) including MOAs, Restricted Areas, Warning Areas, Alert Areas, Prohibited Areas, and Controlled Firing Areas, as well as Military Training Routes (MTRs). The designation of SUA or MTRs serves to alert a nonparticipating aircraft (civilian or military) to the possible presence of these activities. Entering SUA or MTR without authorization from the controlling agency may be extremely hazardous to the aircraft and its occupants.

Restricted Areas

Restricted Areas are designated where ongoing or intermittent activities occur that create unusual and often invisible hazards to aircraft. Restricted Areas are specifically designated where flight or ground activities must be confined because of their nature, which may be considered hazardous to nonparticipating aircraft. Restricted areas are bounded by a floor (minimum altitude a plane can fly) and a ceiling (maximum altitude a plane can fly). Restricted Areas are designated under 14 Code of Federal Regulations (CFR) Part 73 and utilized for hazardous flight activity and aircraft testing including high speed maneuvering, abrupt altitude changes, and other dynamic, non-standard aircraft activity. Depending on the type of Restricted Area, a few key factors need to be taken into consideration to determine if development below these areas is compatible including land use type, height, frequency, and noise.

For pilot training, air-to-ground weapons can only be released within a Restricted Area that has a floor surface level. When Restricted Areas are being used for military training, non-participating military, as well as all civilian aircraft, are prohibited from traversing it. When Restricted Areas are not being used for military operations, civilian and commercial access through the airspace may be requested from airspace-controlling agency for that area.

Military Operations Area

A Military Operations Area (MOA) is airspace designated to separate or segregate certain non-hazardous military activities from Instrument Flight Rules (IFR) traffic and to identify for Visual Flight Rules traffic where military activities are conducted. MOAs consist of airspace of defined vertical and lateral limits established for the purpose of separating certain military training activities from IFR traffic. Examples of activities conducted in MOAs include, but are not limited to:

- Air combat tactics
- Air intercepts

- Low-altitude tactics

Additionally, the DOD has been issued an authorization to operate aircraft at indicated airspeeds in excess of 250 knots below 10,000 feet mean sea level within active MOAs.

Military Training Routes

In combat, many aircraft will operate at altitudes as low as 100 feet and at high airspeeds to defeat ground missile radars and avoid sophisticated surface-to-air missiles, anti-aircraft artillery, and enemy fighters. Pilots must log long hours of realistic training to become skilled at low-altitude flight; and then must have many more hours of the same training to remain proficient. Low altitude flying training provides this realism and is considered one of the Air Force's highest training priorities.

The altitudes of MTRs range from surface to 10,000 feet AGL with route widths up to 10 nautical miles.

4.3.12.2. Recreational / Commercial UAVs

Use of unmanned aerial vehicles (UAVs), commonly called drones or unmanned aerial systems (UAS), has increased dramatically as they have become cheaper, smaller, and easier to use. In the US, approximately 700,000 UAVs were sold in 2015, according to the Consumer Electronics Association.

Though the FAA has a ban on flying UAVs over certain restricted areas, the FAA has documented a large increase in the number of UAVs flying too close to airports and aircraft. From August 2015 to January 2016, there were nearly 600 incidents in the US reported to the FAA, compared to 238 incidents in all of 2014. UAVs have also been spotted at dangerous operating altitudes, up to 10,000 feet above ground level. These UAVs pose a hazard to aircraft safety, creating potential mid-air collision scenarios. Technology can be utilized to limit the range of UAVs using geofencing, which uses GPS or Radio Frequency identification to create a geographic boundary that location-aware devices know to avoid. However, few manufacturers have incorporated this technology into their drones as it is not required.

In 2017, the FAA instituted airspace restrictions under Title 14 Code of Federal Regulations (CFR) Part 99.7 limited to requests based on national security interests from the Department of Defense and U.S. federal security and intelligence agencies. The FAA and the Department of Defense have agreed to restrict UAV flights up to 400 feet within the lateral boundaries of federal facilities that have requested coverage under this provision; however not all federal facilities and military installations are covered. These restrictions supplement the existing provisions applicable to the recreational use of UAVs which require either flying in accordance with the Special Rule for Model Aircraft per Public Law 112-95 Section 336 or flying under the FAA's Small UAS Rule per 14 CFR Part 107.

Operators flying under the Special Rule for Model Aircraft must:

- Fly for hobby or recreational purposes only
- Follow a community-based set of safety guidelines
- Fly the UAS within visual line-of-sight
- Give way to manned aircraft
- Provide prior notification to the airport and air traffic control tower, if one is present, when flying within 5 miles of an airport

- Fly UAS that weigh no more than 55 lbs. unless certified by a community-based organization

Operators flying under the FAA's Small UAS rule must:

- Register their UAS with the FAA as a "non-modeler"
- Obtain an FAA Remote Pilot Certificate
- Follow the operational requirements of Title 14 CFR Part 107

Operators flying for non-recreational purposes can fly UAVs in the national airspace system by following one of three ways:

- Following the requirements in the Small UAS rule, as stated above
- Obtaining a Section 333 grant of exemption and following the rules pursuant to that exemption
- Obtain an airworthiness certificate for the aircraft

4.3.13. Land Use

The basis of land use planning and regulation relates to the government's role in protecting the public's health, safety, and welfare. County and municipal comprehensive plans and land use controls can be the most effective tools for preventing or resolving land use compatibility issues such as the siting of incompatible uses (height and density and intensity for noise and safety) and uses which produce light and glare, electrical interference, or other impacts that endanger or interfere with the safe landing, take-off, or maneuvering of aircraft. In addition, range operations such as ground maneuvers, artillery activities, ordinance training / testing may require land use controls in surrounding areas to prevent incompatible land uses.

Existing and future land use surrounding a military installation is largely dependent on the local planning tools those jurisdictions employ. The absence of land use policies and land use controls has the potential to impact military operations if appropriate coordination tools are not established to communicate development changes to the military for their review of potential mission impact.

4.3.14. Legislative Initiatives

Legislative initiatives are proposed changes in relevant policies, laws, regulations, or programs which could potentially have a significant impact on one or more substantive areas of concern to both the military and communities. The focus of this compatibility issue is on initiatives with general and broad implications.

4.3.15. Light and Glare

This section refers to man-made lighting (streetlights, airfield lighting, building lights) and glare (direct or reflected light) that disrupts vision. Light sources from commercial, industrial, recreational, and residential uses at night can cause excessive glare and illumination impacting the use of military night vision devices and air operations. Conversely, high intensity light sources generated from a military area (such as ramp lighting) may have a negative impact on the adjacent community.

4.3.15.1. Light Pollution

Light pollution, the upward and outward distribution of light, either directly from fixtures or from reflection off the ground or other surfaces, can interfere with military installation mission activities such as nighttime training activities, specifically on landing and takeoff at installations with air missions.

Unshielded lighting systems, lighting systems that are not planned with minimizing sky glow or excess or wasteful light emission and LED billboards can contribute to an increased amount of ambient light in the sky. This increase in ambient light in the sky can degrade the natural environment for stargazers, observatory operations, and nighttime flying operations or nighttime training. Adverse light impacts can be experienced both on-installation and off-installation – generated from the community affecting military operations and experienced by the community generated from the installation.

It has been documented that installations and local government agencies that use efficient lighting systems accrue benefits and energy consumption savings. These benefits accrue annually, rapidly recouping costs associated with the enhanced light fixtures including the maintenance and upkeep of the fixtures that reduce the overall light emission and energy waste. In addition, light pollution is minimized and, in some cases, reduced significantly so as to preserve the natural environment and maintain the dark skies for all inhabitants.

Though the DOD does not have recommended lighting standards to reduce the impact of community lighting on night training, shielded downward facing lighting that reduces sky glow and improves the overall ambient light conditions are considered effective measures. Local jurisdictions can employ lighting regulations and dark skies ordinances to reduce the upward impact of night lighting and lighting intensity of LED billboards.

4.3.15.2. Solar Development

Reflectivity refers to light that is reflected off of surfaces. The potential impacts of reflectivity are glint and glare which can cause a brief loss of vision. The primary concern with this issue is if this loss of vision occurs when operating vehicles or other machines in the area including aircraft. This temporary vision impairment can increase the risk profile in this area for accidents. Solar energy facilities could cause substantial amounts of glare depending on their type, location, angle, and direction, resulting in a reduction of a pilot's view, even at high altitudes.

The amount of reflectivity varies greatly among solar technologies with concentrated solar power technologies being highly reflective and photo voltaic (PV) being primarily absorptive. Because solar energy projects introduce new visual surfaces to the airport setting where reflectivity could result in glare that causes flash blindness episodes on pilots or air traffic controllers, reflectivity requires study during project siting and design. The amount of analysis will depend on site-specific conditions.

Solar power in Indiana was ranked 6th among U.S. states in 2021 for installed solar power with 1,391 MW of solar installed. Growth is projected to increase to 8,741 MW over the next five years.

4.3.16. Noise

Sound that reaches unwanted levels is referred to as noise. The central issue with noise is the impact, or perceived impact, on people, animals (wild and domestic), and general land use compatibility. Exposure to high noise levels can have a significant impact on human activity, health, and safety. The decibel (dB) scale is used to quantify sound

intensity. To understand the relevance of decibels, a normal conversation often occurs at 60 dB, while an ambulance siren from 100 feet away is about 100 dB. Noise associated with military operations (arrival/departure of military aircraft, firing of weapons, etc.) may create noises in higher dB ranges.

Noise associated with aircraft is usually considered a nuisance where land uses are incompatible with the aircraft activity. Residential and other noise sensitive uses under aircraft approach and departure corridors are most likely to consider the noise associated with aircraft operations to be an annoyance.

This is of concern as numerous noise complaints resulting from land use planning decisions made by local jurisdictions can result in major encroachment issues for installations in the future. Noise complaints can result in lost revenue and economic development opportunities for the affected communities and degraded military readiness for installations.

Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Places where people live, sleep, recreate, worship and study generally are sensitive to noise because intrusive noise can be disruptive to these activities. Sensitive uses, such as residences, schools, churches, and hospitals, can be negatively impacted by the noise produced by low flying aircraft.

4.3.17. Public Trespassing

Public trespassing, either purposeful or unintentional, onto a military installation can be a concern. The potential for trespassing increases when public use areas are near an installation.

4.3.18. Resiliency

Resiliency covers a range of potential resiliency issues including climate change, utility provision (power, natural gas, potable water, wastewater, communications), transportation infrastructure, and wildfire threats. For example, resiliency can be attempting to mitigate the potential impacts caused by climate change, which is the gradual shift of global weather patterns and temperature resulting from natural factors and human activities (e.g., burning of fossil fuels) that produce long-term impacts on atmospheric conditions. The effects of climate change vary and may include fluctuations in sea levels, alterations of ecosystems, variations in weather patterns, and natural resource availability issues. The results of climate change can present operational and planning challenges for the military and communities as resources are depleted and environments altered.

In May 2014, the Center for Naval Analyses (CAN) Corporation's Military Advisory Board (MAB), comprising retired three- and four-star flag and general officers from the US Army, US Navy, US Air Force, and US Marine Corps, released the report *National Security and the Accelerating Risks of Climate Change*. Improved models, better data collection, and satellite monitoring have all increased scientific confidence in predicting the future effects of climate change. Though there continues to be political disagreement and debate regarding climate change, the risk is high enough that the MAB encourages action.

4.3.18.1. Flooding and Storm Intensity

Climate change has increased the frequency, risk, and intensity of extreme weather events, including localized flooding from intense precipitation. In addition to the change in weather events, wetlands have been lost or degraded due to an increase in development. This change has the potential to impact the risk of flooding throughout the State. Flooding at military installations has the potential to cause operational delays. Heavy rainfall

events could restrict access to installations and military operations, and other training activities and could cause damage to the installations and military equipment.

Executive Order 13693, *Planning for Federal Sustainability in the Next Decade* states that all Federal Departments and Agencies should evaluate climate change risks and vulnerabilities to manage both the short- and long-term effect of climate change on the agency's mission and operations and include an adaptation planning document as an appendix to its annual Strategic Sustainability Performance Plan.

4.3.19. Roadway Capacity

Roadway capacity relates to the ability of existing freeways, highways, arterials, and other local roads to provide adequate mobility and access between military installations and their surrounding communities.

As urban development expands into rural areas, roads once used primarily to provide access for agricultural uses and limited local traffic begin to function as urban major arterial roadways. These once rural roads often become the main transportation corridors for all types of traffic – from residential to commercial trucking – and can assist or impede access to military installations. As transportation systems grow and provide more capacity, these facilities induce and encourage growth as rural areas become more accessible.

When traffic congestion occurs, military mission activities may be delayed, resulting in lost productive hours. In addition, traffic congestion can also affect the surrounding community if vehicle queuing at the gate extends out to public roads and intersections causing traffic delays and posing risks to the health and safety of motorists. The DOD provides specific standards associated with the proper queuing and stacking of vehicles, which have been established to allow for this activity to take place largely within the property of installations.

4.3.20. Safety Zones

Safety zones are areas in which development should be more restrictive, in terms of use and concentrations of people, due to the higher risks to public safety. Issues to consider include aircraft clear zones, accident potential zones, weapons firing range safety zones, explosive safety zones, and bird/wildlife aircraft strike hazards.

Military installations often engage in activities or contain facilities that, due to public safety concerns, require special consideration by local jurisdictions when evaluating compatibility. It is important to regulate land use near military airfields to minimize damage from potential aircraft accidents and to reduce air navigation hazards. To help mitigate potential issues, the DOD has delineated Clear Zones (CZ) and APZ in the vicinity of airfield runways. The APZ is usually divided into APZ I and APZ II. Each zone was developed based on the statistical review of aircraft accidents. Studies show that most mishaps occur on or near the runway, predominately along its extended centerline.

Military airfields are associated with safety zones which consist of CZs and APZs that extend out from each runway end. Development is a concern within these zones, because statistically this is where aircraft accidents are most likely to occur. The risk to people on the ground in the event of an aircraft accident is small; however, the consequences associated with these incidents are high.

4.3.21. Stormwater

Stormwater runoff is generated from rain and snowmelt events that flow over land or impervious surfaces, such as paved streets, parking lots, and building rooftops, and does not soak into the ground. The runoff picks up pollutants like trash, chemicals, oils, and dirt/sediment that can harm our rivers, streams, lakes, and coastal waters. To protect these resources, communities, construction companies, industries, and others, use stormwater controls, known as best management practices (BMPs). These BMPs filter out pollutants and/or prevent pollution by controlling it at its source.

Population growth and the development of urban/urbanized areas are major contributors to the amount of pollutants in the runoff as well as the volume and rate of runoff from impervious surfaces. Together, they can cause changes in hydrology and water quality that result in habitat modification and loss, increased flooding, decreased aquatic biological diversity, and increased sedimentation and erosion. The benefits of effective stormwater runoff management can include protection of wetlands and aquatic ecosystems, improved quality of receiving waterbodies, conservation of water resources, protection of public health, and flood control.

There was a bill introduced in the Senate November 2021 that was referred to the Committee on Armed Services that is called "Enhancing Military Base Resiliency and Conserving Ecosystems through Stormwater Management Act." This bill authorizes the Department of Defense and each military department to implement stormwater management projects on or related to military installations. Specifically, such projects are authorized for the purpose of (1) protecting nearby waterways and stormwater-stressed ecosystems, and (2) improving military installation resilience or the resilience of a defense access road or other essential civilian infrastructure supporting the installation.

4.3.22. Vertical Obstructions

Vertical obstructions are created by buildings, trees, structures, or other features that may encroach into the navigable airspace or line of sight radar signal transmission pathways used by the military. These obstructions can be a safety hazard to both the public and military personnel and potentially impact military readiness.

Vertical obstructions can compromise the value of low-level flight training by limiting the areas where such training can occur. These obstructions can include a range of items from man-made, such as telephone poles, utility transmission towers, and radio antennas, to natural, such as tall trees and land features. Vertical obstructions can also interfere with radar transmissions, compromising the integrity of data transmission between the transmitter and receiver. Though most critical near the transmitter, the geographic area impacting the transmissions, or radar viewshed, can be broad depending on the distance between the transmitter and receivers.

Vertical obstructions can compromise the value of low-level flight training by limiting the areas where such training can occur. These obstructions can include a range of items from man-made, such as telephone poles and radio antennae, to natural, such as tall trees and land features.

In relation to flight operations from an airport (military or civilian), vertical obstructions are addressed through compliance with Federal Regulation Title 14 Part 77, which establishes standards and notification requirements for objects affecting navigable airspace. Commonly referred to as Part 77 compliance, this regulation provides details to evaluate the potential for a vertical obstruction based on the elevation of the airfield, the height and resulting elevation of the new structure or facility, and the location of the structure or facility in relation to the airfield in question.

Apart from the Part 77, the FAA has developed imaginary surfaces around runways to determine how structures and facilities are evaluated as to whether they pose a vertical obstruction relative to the surrounding airspace. The levels of imaginary surfaces build upon one another and are designed to eliminate obstructions to air navigation and operations, either natural or man-made. The dimension or size of an imaginary surface depends on the runway classification.

Jurisdictions surrounding a military installation need to be aware of the various vertical obstructions and how they can impact the installation operations and missions. General development, towers, power lines, wind energy conservation systems or any other structures that can cause incompatible development can ultimately threaten an installation's day to day activity.

4.3.22.1. Cell Towers

Reliable wireless communication is vital to communities for many reasons, including the dependence on wireless communications during emergency situations and because of the potential negative economic impacts on communities that are unable to provide this service to prospective local businesses. Uninterrupted service of the wireless telecommunications network is a valuable community service, and the telecommunication infrastructure should be managed to ensure adequate towers are available to meet the needs of the community.

Because of the impact that communication towers and antennas can have on military training activities, it is important to exercise careful and thoughtful planning when siting new telecommunications towers. Cell towers vary in height, and though notification is required to the FAA and the FCC for towers that exceed 200 feet, or are located near airports, local land use controls are required to ensure communications towers are appropriately sited and coordinated. Tower heights become a compatibility issue when the height of the tower exceeds the minimum operating altitude of military airspace which may be as low as 100 feet AGL.

4.3.23. Vibration

Vibration is an oscillation or motion that alternates in opposite directions and may occur because of an impact, explosion, noise, mechanical operation, or other change in the environment. Vibration may be caused by military and / or civilian activities.

The relationship between sound and vibration is inextricably linked since vibration is the pressure wave usually accompanied by sound (noise) and amplified in the lower frequency ranges. While numerous studies have been conducted to quantify the impacts of noise, very little research has been conducted to correlate vibration from low frequency sound and human response. One common conclusion across studies is that as the frequency decreases, the degree of annoyance or state of irritation from the noise and vibrations increases more rapidly with sound pressure level. A low-frequency signal can go from being audible, to annoying, to oppressive and vibrational with a relatively small change in level and it is not absorbed by the atmosphere or blocked by terrain and buildings as effectively as higher frequencies.

Studies have been conducted regarding the potential for structural damage resulting from vibration. Homeowners typically become concerned about structural damage due to the rattling effect when sound that causes vibration exceeds 120 dBP (unweighted peak decibels). However, structural damage is not likely to occur until a level of 150 dBP is achieved.

4.3.24. Water Quality / Quantity

Water quality / quantity concerns include the assurance that adequate water supplies of good quality are available for use by the installation and surrounding communities as an area develops. Water supply for agriculture and industrial use is also considered.

4.3.24.1. Clean Water Act

The Clean Water Act (CWA) governs the management of water resources and controls and monitors water pollution in the US. The CWA establishes the goals of eliminating the release of toxic substances and other sources of water pollution to ensure that surface waters meet high quality standards. In so doing the CWA prevents the contamination of nearshore, underground and surface water sources.

The Clean Water Act can impact military installation because a clean and reliable source of water is necessary to sustain base operations. Decreases in water supply or quality could limit or suspend some base operations, which ultimately could jeopardize military readiness.

The Department of Conservation and the Indiana Flood Control and Water Resources Commission merged in 1965 to create the Indiana Department of Natural Resources (DNR). Divisions were subsequently formed within the DNR to address specialized natural resource concerns. Water resource programs of both former agencies were assigned to the Division of Water, reflecting the dual concern for 1) resource evaluation and conservation, and 2) public safety in flood prone areas. The Division of Water tackles diverse responsibilities associated with the evaluation and use of Indiana's most vital natural resource, and development near Indiana's waterways and lakes.

This page intentionally blank.



5 || Compatibility Resources

Inside Chapter 5...

5.1. Introduction.....	5-1
5.2. Compatibility Tools	5-2

5.1. Introduction

There are existing tools that can be used to encourage, promote, and manage compatibility/recommended land use between military installations and their neighboring communities. Relative to compatibility there are several existing plans and programs which are either designed to address compatibility/recommended land use directly or which indirectly address compatibility factors through the topics they cover. This summary provides an overview of key plans and programs that impact compatibility/recommended land use planning organized into four types of tools: Communication / Coordination, Land Use, Military Planning, and Resource Conservation. This review is meant to provide an overview of applicable planning tools and determine how each may apply to compatibility factors identified for each Indiana Military Installation.

5.2. Compatibility Tools

There are 39 compatibility planning tools listed in Table 5-1 arranged by four types of tools: 6 Communication / Coordination (CC) Tools, 17 Land Use (LU) Planning Tools, 8 Military Planning (MP) Tools, and 4 Resource Conservation (RC) Tools. To the right of each tool listed reveals the responsible party (Local and/or Military) and which categories these tools can be used to address (Airspace, Environmental, Land Use, Noise, Property, and/or Land Use Controls). Below the table is an in-depth summary of each of these tools including their Roles and Responsibilities, Implementation and Maintenance, and relevant Resources/References.

Table 5-1. Summary of Compatibility Resource Tools

		Responsible Party		Airspace	Environmental	Land Use	Noise	Property	Land Use Controls
		Local	Military						
Compatibility Resource Tools by Type									
Communication / Coordination Tools									
CC-1	Coordination Checklist	●				●	●		●
CC-2	Geographic Information Systems	●	●	●	●	●	●	●	●
CC-3	Memorandum of Understanding	●	●	●		●			
CC-4	Leadership Engagement	●	●	●	●	●	●	●	●
CC-5	Community Engagement		●	●	●	●	●	●	●
CC-6	Media Outreach	●	●	●	●	●	●	●	●
CC-7	Community Partnership Tools	●	●		●	●		●	
CC-8	Community Education Partnerships	●	●						
Land Use Planning Tools									
LU-1	Acquisition	●	●		●	●		●	
LU-2	Avigation Easement	●	●	●			●	●	
LU-3	Cluster Development	●				●			●
LU-4	Code Enforcement	●							●
LU-5	Compatible Use Study (CUS)	●	●			●			
LU-6	Comprehensive Plan	●			●	●	●		
LU-7	Conditional Use Permitting	●				●			●
LU-8	Construction Standards	●	●						●
LU-9	Development Review	●	●	●	●	●	●		●
LU-10	Deed Restrictions	●	●					●	
LU-11	Hazard Mitigation Plan	●			●	●			
LU-12	Light and Glare Controls	●	●	●					●
LU-13	Military Influence Area	●		●		●	●		
LU-14	Real Estate Disclosure	●						●	
LU-15	Sound Attenuation	●					●		●

Table 5-1. Summary of Compatibility Resource Tools

Compatibility Resource Tools by Type		Responsible Party		Airspace	Environmental	Land Use	Noise	Property	Land Use Controls
		Local	Military						
Land Use Planning Tools continued									
LU-16	Subdivision Ordinance	●				●			
LU-17	Zoning / Land Use Controls	●				●	●		●
Military Planning Tools									
MP-1	Air Installations Compatible Use Zones (AICUZ)		●	●			●		●
MP-2	Bird/Wildlife Strike Hazard (BASH) Program		●		●				
MP-3	NEPA	●	●		●				
MP-4	Installation Encroachment Planning		●	●	●	●	●	●	●
MP-5	Installation Master Plan		●			●			
MP-6	Integrated Cultural Resource Management Plan		●			●			●
MP-7	Integrated Natural Resource Management Plan		●		●	●			●
MP-8	Noise Management Programs		●	●			●		●
MP-9	Range Air Installation Compatible Use Zone (RAICUZ)		●	●			●		●
MP-10	Range Compatible Use Zone (RCUZ)		●				●		●
Resource Conservation Tools									
RC-1	Conservation Easement	●	●		●	●		●	●
RC-2	Habitat Conservation Tools	●			●				
RC-3	Readiness and Environmental Protection Integration	●	●	●	●	●	●	●	●
RC-4	Sentinel Landscapes Program	●	●	●	●	●	●	●	●

5.2.1. CC-1: Coordination Checklist

Primary responsibility: Local Military

5.2.1.1. Summary

The Coordination Checklist is a tool that helps the community planner to ensure the completeness of an assessment for a project within an area that potentially impacts a military operational area. It helps effectively identify planning issues and aspects that are unique to military operations in a rural context where there may be no planning framework. It covers topics related to coordination with the military installation and public notification as applicable, as well as technical topics including:

- Land use - impacting airfield safety zones, military overflight areas, ground training areas, etc.
- Noise - impacting sensitive land use receptors, requiring noise reduction, etc.
- Frequency Spectrum - impacts to frequencies used by the military
- Vertical Obstructions - impacting pilot and citizen safety, airfield imaginary surfaces / military airspace operating areas, airfield radar systems (ARS) radar and weather radar

The Checklist should only be used as a guide; however, planners must ensure thorough coordination and communication with potentially affected organizations to ensure a complete assessment of the development / project potential impacts and possible solutions.

5.2.1.2. Roles and Responsibilities

Community Planner's Role. The local planner should assess and evaluate the proposed development / project to identify any potential impacts to military installations and / or military operating areas. By reaching out to installation staff and establishing lines of communication in advance the planning process will proceed more efficiently.

5.2.1.3. Implementation and Maintenance

Implementation. The Checklist should be implemented as a matter of course anytime a proposed development / project is in an area where there is a military installation and / or military operating area.

Maintenance. The Checklist should be reviewed periodically by the local community planner who should also reach out to the military installation for any updates that they may be able to assist with.

5.2.2. CC-2: Geographic Information Systems

Primary responsibility: ■ Local ■ Military

5.2.2.1. Summary

A geographic information system (GIS) is an IT tool that captures, stores, allows for manipulation of, assists in analysis of, and supports management / presentation of data with a spatial component. It provides planners and decision makers improved visualization of data related to local community planning and military installations / operating areas. Data is presented in an informative way that aids in the knowledgeable application of the information helping to ensure better planning and decisions. GIS can help reduce planning costs, enhance communication, improve decision making and assist with better record keeping.

While GIS is a useful tool in the hands of capable technical experts and planners, it should not be treated as a substitute for the application of sound planning practices by knowledgeable planning experts. In addition, it is critical that organizations using GIS to support planning activities work from the same data set that is maintained and shared. Lastly, GIS is best applied where there is a spatial component associated with attribute data that requires integrated analysis.

5.2.2.2. Roles and Responsibilities

Community Planner's Role. Use GIS in planning activities where there may be potential impacts to military installations / operating areas to assist in the analysis of proposed projects and support decision making. Overlay proposed development / project data with military operations data to provide full visualization of potential incompatibility and possible solutions. Share development / project GIS data with affected military organizations to assist in obtaining feedback and comments.

Military Planner's Role. Provide local communities with military land use, airfield safety zones, BASH, noise contours, vertical obstructions, etc. data sets that will assist community planners in assessing potential impacts of local development / projects on military operations. Communicate with local community planners on proposed development / projects where GIS analysis indicates a potential impact.

5.2.2.3. Implementation and Maintenance

Implementation. Local communities and military installations establish procedures by which shared GIS data sets are available to both. Planners and decision makers should require the use of GIS where it is expected the spatial analysis will improve the understanding and impacts from proposed actions.

Maintenance. GIS data sets must be maintained through regular review and updating as time and resources allow. Procedures that establish protocols of sharing the GSI data as well as analysis results should be maintained as well.

5.2.3. CC-3: Memorandum of Understanding

Primary responsibility: ■ Local ■ Military

5.2.3.1. Summary

A Memorandum of Understanding (MOU) is a contract between two or more government entities. The governing bodies of the participating public agencies must take appropriate legal actions, often adoption of an ordinance or, resolution, before such agreements become effective. These agreements are also known as a Joint Powers Agreement or Inter-local Agreement. An MOU establishes a formal framework for coordination and cooperation. These agreements may also assign roles and responsibilities for all of the agreement's signatories.

MOUs generally promote coordination and collaboration by sharing information on specific community development proposals, such as rezoning and subdivisions. They serve as joint communication between participating jurisdictions and the military ensuring that residents, developers, businesses, and local decision makers have adequate information about military operations, possible impacts on surrounding lands, procedures to submit comments, and any additional local measures to promote land use compatibility around installations. Lastly, they foster formal agreement on land use planning activities, such as implementation of a Joint Land Use Study (JLUS). Negotiating an MOU can take a considerable amount of resources and staff time. This is necessary, as parties signing the agreement will be bound by its terms.

5.2.3.2. Roles and Responsibilities

MOUs offer substantial advantages for laying out and documenting a common understanding on land use planning and information sharing.

Community Planner's Role. Communities should utilize their statutory right to enter into MOUs or joint agreements with federal installations. These agreements can be used to develop joint solutions to land use issues.

Military Planner's Role. Military planners can assist in providing communities with a better understanding of military missions, functions, and resources needed for mission accomplishment. Military planners can establish MOUs to create a long-term commitment to a common planning agreement.

5.2.3.3. Implementation and Maintenance

Implementation. To implement MOUs, local communities and military installations should work cooperatively to determine the goals, objectives, terms, roles, and responsibilities of the agreement.

Maintenance. As with any legal document, the terms and conditions of the MOU should be periodically evaluated to determine its relevance to current conditions. As conditions change, the MOU should be modified to meet the new needs. It is important to include a procedure for modifying the MOU in the text of the agreement.

5.2.4. CC-4: Leadership Engagement

Primary responsibility: ■ Local ■ Military

5.2.4.1. Summary

Leadership engagement is the direct participation by leaders in key organizational strategies, programs, projects that require a high level of support to ensure success. It includes a dynamic approach to the level of involvement depending on various factors including risk of failure, importance to organization success, value to organization culture and needs of the team. It provides support for organization activities and the employees carrying out assigned responsibilities. In the case of community and military planning, leadership engagement involves being aware of significant program needs, actively supporting requests for guidance, reaching out to other leaders whose organization is also involved in work that affects outcomes and ultimate success / failure. For local jurisdictions and military installations effective communication and coordination at the senior levels plays a critical role in how staffs work together and deal with planning and compatibility issues.

For effective engagement, leadership must establish the vision that requires communication, outreach, and coordination at all working levels. In addition, military leadership at the installation level tends to turn over quickly so it is critical to establish a process that maintains continuity over the long term. Lastly, the success of local jurisdictions and their associated military partner installations is dependent on the ability of leadership to be involved and help establish committees and workgroups that can ensure success over the long term.

5.2.4.2. Roles and Responsibilities

Community Planners. Keep their senior managers, boards, and councils up to date on critical planning activities that may need direct involvement from leadership. Develop options and alternatives that leaders can use when considering alternatives that may minimize community / military impacts.

Military Planners. Keep military leaders aware and knowledgeable on planning issues that have the potential to impact military operations and readiness. Provide technical input that aids in decision making that enable successful outcomes.

5.2.4.3. Implementation and Maintenance

Implementation. Community and installation leadership need to support establishing protocols, MOUs and committees that provide the opportunity for leadership to meet / communicate on a regular basis to discuss critical planning activities.

Maintenance. Protocols, MOUs and committee charters should be reviewed and revised regularly to ensure they meet current needs.

5.2.5. CC-5: Community Engagement

Primary responsibility: ■ Local ■ Military

5.2.5.1. Summary

Community engagement is the active and regular involvement of the local jurisdictions and installation people in the planning process to ensure their ideas and concerns are heard and acted upon as appropriate. Active community engagement ensures ideas, issues, and concerns of people living in the community, both off and on base, are surfaced early and often in the planning process. Managing community involvement and input is important in that it supports positive participation and helps avoid the consequences of a dissatisfied public and creates an open flow of ideas and innovation.

Actively managing community participation is a critical element to successful planning. In addition, not accounting for public input early and often increases the likelihood of program / project failure in the near term and a loss of credibility and trust over the long term.

5.2.5.2. Roles and Responsibilities

Community Planners. Actively support community engagement as required by applicable planning regulations and as good planning practices dictate. Get to know key members of the community and leverage them to assist in engaging with the community at large.

Military Planners. Be supportive of mandates that require community engagement and public participation. Work with community planners and assist them as needed to help ensure success of military programs / projects that may include off base implications.

5.2.5.3. Implementation and Maintenance

Implementation. The implementation of an approach for community engagement should be developed and applied in a consistent manner that provides for regulatory mandated public participation as well as engagement where it makes sense for the successful outcome of the proposed program / project.

Maintenance. Ensure regular reviews and updates to the community engagement approach / procedure.

5.2.5.4. Resources/References

Collective Impact Forum on Community Engagement Toolkit.

<https://collectiveimpactforum.org/sites/default/files/Community%20Engagement%20Toolkit.pdf>

5.2.6. CC-6: Media Outreach

Primary responsibility: ■ Local ■ Military

5.2.6.1. Summary

Media outreach is a process by which organizations involved in community / military planning engage with news outlets / organizations to distribute information and provide updates on programs / projects where informing the general public is required and / or beneficial to desired outcomes. Media outreach can help meet regulatory mandates for communicating to the public on planning programs / projects as well as help establish communication lines between planning organizations and the affected communities.

Media outreach should be handled by organizational staff authorized and trained in working with news outlets / organizations. In addition, effectively leveraging media outreach can assist in success of planning programs / projects.

5.2.6.2. Roles and Responsibilities

Community Planners. Work closely with organizational staff responsible for engaging with media. Provided accurate and complete data / information that can be provided to the media for public consumption. Review draft document before it is released to media to ensure accuracy and consistency with desired outcomes.

Military Planners. Work closely with installation public affairs office and assist with coordination with local planning organization and media staff.

5.2.6.3. Implementation and Maintenance

Implementation. The implementation of an approach for media outreach should be developed and applied in a consistent manner that supports regulatory mandated communications as well as engagement where it makes sense for the successful outcome of the proposed program / project.

Maintenance. Ensure regular reviews and updates to the media outreach approach / procedure.

5.2.7. CC-7: Community Partnership Tools

Primary responsibility: ■ Local ■ Military

5.2.7.1. Summary

Community partnership tools allow the military and military installations to engage with local communities and private developers for services that have a mutual benefit for both parties.

Types of community partnership tools include, but are not limited to the following:

- **Enhanced Use Lease.** Enhanced use leases (EUL) are a method for funding construction or renovations on federal property by allowing a private developer to lease underutilized property with rent paid by the developer in the form of cash or in-kind services. The authority for EULs is derived from Congress in the United States Code, Title 10 USC 2667 of the of the National Defense Authorization Act. In an EUL, the developer is granted a ground lease from the military and can make improvements to the property which can be leased at market rents to any interested tenants. Because the military can only issue EULs on land that is unneeded, improvements must not be directly tied to any programmatic requirements of the installation.

Advantages to a developer include prime secure convenient locations on military installations, and the opportunity to provide sole-source services and products in lieu of rent for the ground lease.

Advantages to the federal agency include the possibility of fast-tracking alterations, repairs, or new construction so that the improved space becomes available for lease. In-kind considerations or cash to no less than the fair market value of the property is provided in return by the developer.

- **Intergovernmental Support Agreement (IGSA).** IGSA are a legal instrument reflecting a collaborative partnership agreement between the Secretary of the Department of Defense (DoD) and a state or local government for services, material procurement, and mutual support that can enhance operational effectiveness. They can create better efficiencies or economies of scale while reducing costs and providing economic benefits to the community, state partners, and the military. The authority for IGSA is derived from Congress in the United States Code, Title 10 USC 2679.
- **Defense Community Infrastructure Pilot (DCIP) Program.** The Defense Community Infrastructure Pilot (DCIP) Program is designed to address deficiencies in community infrastructure, supportive of a military installation, to enhance military value, installation resilience, and military family quality of life. DCIP is authorized under Public Law 115-232 Section 2861. The program authorizes the Secretary of Defense to make grants, conclude cooperative agreements, and supplement funds available under other Federal programs in support of the program.
- **Defense Manufacturing Community Support Program (DMCSP).** The DMCSP is designed to support long-term community investments that strengthen national security innovation and expand the capabilities of the defense manufacturing industrial ecosystem. The program is authorized under Section 846 of the Fiscal Year 2019 National Defense Authorization Act, which enabled the Secretary of Defense to establish a program to designate and support consortiums as defense manufacturing communities to strengthen the national security industrial base. In cases where the landowner does not want to, or cannot make a permanent commitment, this may be a way to control land uses for a short timeframe. Leases can be obtained by government agencies or jurisdictions, non-profit organizations, land trusts, or private entities. The program is managed by the DoD Office of Local Defense Community Cooperation.
- **Industry Resilience Program.** The Industry Resilience program assists communities as they respond to defense changes, specifically a cancelled contract or the failure to proceed with a previously approved weapons system. In many cases, reductions in defense spending directly affect the defense manufacturing base and can also trigger assistance provided under this program. With Industry Resilience assistance, state and local partners can help defense manufacturers develop and manufacture new product offerings, capture new investments,

and develop new technologies. These efforts help modernize the military and maintain a technological edge against its adversaries.

In addition to assistance with economic adjustment and recovery, the Industry Resilience program helps communities strengthen the economic and cyber resiliency of local defense industry supply chains. In today's globalized marketplace, the defense industrial base is a core national security asset. By supplying military forces with the best equipment, most advanced technologies, and the highest level of service, local defense suppliers are critical to the modernization and readiness of the warfighter.

Many Industry Resilience projects deal with similar issues and common local economic development challenges. Each grantee follows its own unique strategy and implementation road map, but many Industry Resilience grantees have focused their programming and investments in similar areas. These varied strategies all share a common goal – helping local defense suppliers and their surrounding regions to become more competitive and resilient. Five common strategy areas are:

- Entrepreneurship and Small Business Development
- Export Promotion
- Industry Cluster Development
- Manufacturing and Supply Chain Resilience
- Enhancing Workforce Development

The program is managed by the DoD Office of Local Defense Community Cooperation.

- **Readiness and Environmental Protection Integration (REPI).** The DoD REPI Program protects military missions by helping remove or avoid land-use conflicts near installations and addressing regulatory restrictions that inhibit military activities by promoting compatible development and protecting valuable habitat that supports unconstrained training, testing, and operations. REPI benefits national defense and environmental stewardship through land conservation partnerships. More information can be found on REPI under Section 5.2.37.
- **Indiana Code requirements.** Indiana Code Section 36-7-30.1-3, requires a political unit (county and municipal jurisdictions) surrounding NSA Crane and Lake Glendora Test Facility that they may not take action to plan or regulate the use, improvement, and maintenance of real property; location, condition, and maintenance of structures and other improvements; or regulate the platting and subdividing of real property located within three (3) miles of the perimeter of a military base if the action will have an adverse impact on the operation of the military base.

5.2.7.2. Roles and Responsibilities

Community Planners. Work closely with military partners to develop partnerships in support of projects. In some cases, the local governments may be the project applicant and sponsor responsible for program administration. Employ early notification procedures and protocols to comply with state code requirements.

Military Planners. Work closely with community or developer partners to develop partnerships and provide information for project grant applications, provide letters of support, etc. In the case of EULs and IGSAs, military planners will be directly responsible for implementing the initiatives on behalf of the military installation.

5.2.7.3. Implementation and Maintenance

Implementation. The implementation of an approach for media outreach should be developed and applied in a consistent manner that supports regulatory mandated communications as well as engagement where it makes sense for the successful outcome of the proposed program / project.

Indiana || Military Compatible Planning Advisory Handbook

Maintenance. Ensure regular reviews and updates to the media outreach approach / procedure.

5.2.7.4. Resources/References

- **White River Military Coordination Alliance Resources on IGSA's.** <https://wrmcalliance.com/intergovernmental-support-agreements-igsa/>
- **DoD Office of Local Defense Community Cooperation, Defense Community Infrastructure Pilot (DCIP) Program.** <https://oldcc.gov/defense-community-infrastructure-program-dcip>
- **DoD Office of Local Defense Community Cooperation, Defense Manufacturing Community Support Program.** <https://oldcc.gov/defense-manufacturing-community-support-program>
- **DoD Office of Local Defense Community Cooperation, Industry Resilience.** <https://oldcc.gov/our-programs/industry-resilience>

5.2.8. CC-8: Community Education Partnerships

Primary responsibility: ■ Local ■ Military

5.2.8.1. Summary

Chapter 10 U.S. Code, Section 2194 – Education partnerships, authorizes the director of each defense “laboratory,” defined as any laboratory, product center, test center, depot, training and educational organization, or operational command under the jurisdiction of the DoD, to enter into one or more education partnership agreements with educational institutions for the purpose of encouraging and enhancing study in scientific disciplines at all levels of education. The educational institutions include local educational agency, colleges, universities, and any other nonprofit institutions that are dedicated to improving science, mathematics, business, law, technology transfer or transition and engineering education. Developing education partnerships helps inspire young talent and attraction to programs that align with future military needs and can retain a young talented workforce within the community.

Education partnership programs conducted in Indiana include:

- **Cyber Academy.** The Cyber Academy at Muscatatuck Urban Training Center (MUTC) provides the opportunity to earn an associate degree in Cyber Security in just 11 months. The program is offered by the Ivy Tech Community College Columbus Campus with students attending classes in person at MUTC, provides real-world cyber-physical training with no previous computer experience necessary. The Cyber Academy is designed to meet the growing demand for cyber security professionals. Ivy Tech’s curriculum builds the foundation to identify and fix computer security attacks. Through this nationally recognized academy, Ivy Tech students receive the education and training they need for jobs that secure our community, state and nation’s computers, networks, and critical infrastructure.
- **STARBASE Indiana.** DoD STARBASE is a premier educational program, sponsored by the Office of the Assistant Secretary of Defense for Manpower and Reserve Affairs. Students participate in challenging “hands-on, minds-on” activities in Science, Technology, Engineering, and Math (STEM), interacting with military personnel to explore careers and observe STEM applications in the “real world.” Indiana’s STARBASE program provides students with 25 hours of stimulating experiences at military installations. The goal is to motivate students to explore STEM opportunities, serving students that are historically under-represented in STEM.
- **Hoosier Youth Challenge Academy.** The Hoosier Youth Challenge Academy, established in 2007, offers military-based training to unemployed/underemployed, crime-free and drug-free at-risk youth who have not graduated from high school 16-18 years of age. The Academy trains and mentors youth to develop the values, skills, education, and self-discipline to become successful young adults. The free program is a 17.5-month commitment, including an in-depth screening process, two-week acclimation phase, five-month residential phase and a yearlong post-residential mentorship phase to help graduates with career and life goal achievements.
- **Purple Star Schools Designation.** The Indiana Purple Star School Designation honors schools that have displayed a significant commitment to service members, veterans, and students and families connected to our nation’s military. In Indiana, the program is sponsored by the Indiana Department of Education and recognizes the importance of assisting military children with school transition and developing programs that recognize the value of military service and civic responsibility. The Purple Star School Designation is valid for a three-year period. In Indiana, schools receiving the Purple Star designation must meet the following criteria:
 - Assigned point of contact for military families
 - Training requirement for point of contact
 - Dedicated webpage

Indiana || Military Compatible Planning Advisory Handbook

- Annual military program (e.g., Veterans Day, 9/11, etc.)
- Public military display
- School Board resolution publicizing support for military students and families
- Employment of military service members and their immediate family members

5.2.8.2. Roles and Responsibilities

Community Planners. Work with community organizations, community leaders, and educational institutions to identify educational partnering opportunities.

Military Planners. Work closely with community organizations, educational institutions, and civic leaders to identify opportunities, programmatic requirements, and conduct outreach for student placement in programs.

5.2.8.3. Implementation and Maintenance

Implementation. The implementation of educational programs is largely dependent on interrelationships between the military, educational institutions, and the communities they serve. Three key elements are required to develop successful educational partnerships:

- Collaboration and outreach with educational institutions to identify mutually beneficial opportunities
- Program identification to address the mutual needs of the community and the military
- Coordinated outreach between the military, community leaders, and educational institutions to solicit and obtain participation from intended target groups

Maintenance. Ensure regular reviews and updates to educational programs to ensure they continue to be well participated and stay relevant.

5.2.8.4. Resources/References

- **Ivy Tech Community College Cyber Academy.** <https://www.ivytech.edu/37079.html>
- **STARBASE Indiana.** <https://www.starbasein.org/>
- **Hoosier Youth Challenge Academy.** <https://www.in.gov/ago/hyca/>
- **Purple Star Schools Program.** <https://www.in.gov/doe/educators/purple-star-school-applications/>

5.2.9. LU-1: Acquisition

Primary responsibility: ■ Local ■ Military

5.2.9.1. Summary

As a land use planning tool, property rights can be acquired through donation, easement, or the outright purchase of property for public purposes. Types of acquisition include the following:

- **Fee Simple Acquisition.** This option involves the purchase of property and is typically the costliest method to protect open space, sensitive, or critical areas. Cost and the need for a willing seller can be constraints.
- **Fee Simple/Leaseback.** A land trust is established when a government agency purchases the full title to a property, and then the leases it back to the previous owner. The land's natural resource and open space values are protected through lease controls that restrict land uses.
- **Conservation Easement.** Conservation easements can be acquired through several mechanisms, including donation or purchase. If they are donated, the donor could qualify for a federal income tax deduction making this option more desirable to the property owner. Conservation easements are a more cost-effective method to acquire land than outright purchase. Conservation easements have been an effective tool when used in conjunction with other conservation-oriented programs such as the Readiness and Environmental Protection Integration (REPI) program discussed in Section 5.2.34. and the Sentinel Landscapes Program discussed in Section 5.2.35.
- **Lease.** In cases where the landowner does not want to, or cannot make a permanent commitment, this may be a way to control land uses for a short timeframe. Leases can be obtained by government agencies or jurisdictions, non-profit organizations, land trusts, or private entities.
- **Management Agreement.** A management agreement is a specified plan under which the landowner or the land trust (or combination thereof) will manage the land. Management agreements last for a specific amount of time making them a short-term approach to protecting land.
- **Eminent Domain.** A local government can use the power of eminent domain to appropriate private property for public use, in exchange for payment of fair market value, through the process of condemnation.

Acquisition tools eliminate land use incompatibilities through estate market transaction and the local development process. They are particularly effective because they advance the complementary goals of shifting future growth away from military installations, and preserve community assets such as agriculture, open space, rural character, or sensitive natural habitats. Land use compatibility issues can be addressed by creating a land barrier between active military installation or training facilities and local land uses, shifting future growth away from critical military lands, protecting public safety by directing incompatible uses to other locations, protecting the natural environment, maintaining, and protecting existing agriculture resources and conserving open space.

It's important to note that acquisition can be expensive for local governments without the assistance of federal, state, or non-profit organizations. Even if funds are available for the purchase of property, future maintenance costs should also be considered and factored into any acquisition decision. In addition, acquisition negotiations can be lengthy and complicated. Obtaining professional appraisals for the value of the rights to be purchased can be controversial and time consuming. Lastly, certain types of acquisition can be complex and administratively challenging, requiring the local government to make a strong commitment to administering the program and educating residents and developers on its use.

5.2.9.2. Roles and Responsibilities

Community Planners. Planners should possess a clear understanding of the areas to consider for acquisition. Community officials should work jointly with military officials to determine these areas and reach consensus on acquisition priorities. Both local entities and military installations should establish and maintain partnerships with federal, state, and non-profit agencies as potential sources of acquisition funding.

Military Planners. Military planners and officials should work with local communities to educate the community on the need for the program. Military planners and officials should actively participate in the identification of appropriate areas for protection, and subsequently, acquisition. The military should obtain information about available federal grants, programs, and partnerships with non-profit organizations and share this information with the community.

5.2.9.3. Implementation and Maintenance

Implementation. The general steps for implementing an acquisition program are as follows:

- Identify areas of concern that also have a conservation interest;
- Explore possible partnerships with non-profit conservation groups or government agencies;
- Establish funding sources for purchase;
- Determine entity to administer the program;
- Adoption of enabling legislation by local governments (if they are to purchase easements directly); and,
- Negotiate purchase with willing sellers of land and easements.

Maintenance. Programs should be reviewed every year at a minimum.

5.2.9.4. Resources/References

- **The Land & Water Conservation Fund (LWCF).** Permanently funded in 2020, the LWCF is a matching assistance program that provides grants for 50% of the cost for the acquisition and/or development of outdoor recreation sites and facilities.

<https://www.in.gov/dnr/state-parks/recreation/grants/land-and-water-conservation-fund/>

- **Indiana Trails Program.** Administered by the Department of Natural Resources Division of Outdoor Recreation, projects will be eligible if they provide public access to trails. Funds can be used for construction of trails, acquisition of easement or property for trails, development of trailheads and other support facilities, and construction of bridges, boardwalks, and crossings.

<https://www.in.gov/dnr/state-parks/recreation/grants/indiana-trails-program/>

5.2.10. LU-2: Avigation Easement

Primary responsibility: ■ Local ■ Military

5.2.10.1. Summary

An easement is a non-possessory right to use land owned by another party. An avigation easement is an easement that grants the holder one or more of the following rights: the right-of-flight; the right to cause noise, dust, or other impacts related to aircraft flight; the right to restrict or prohibit certain lights, electromagnetic signals, and bird-attracting land uses; the right to unobstructed airspace over the property above a specified height; and the right of ingress/egress upon the land to exercise those rights.

Avigation easements transfer certain property rights from the owner of the underlying property to another entity. This entity could be the owner of an airport or, in the case of military airports, to a local government agency or authorized federal agency on behalf of the military. The DoD is not authorized to accept avigation easements. Historically, if the military desires such easements, there are several ways they can be obtained. The US Army Corps of Engineers serves as the negotiator and the principle real estate agent for the Army and Air Force. The Navy and Marine Corps use the Naval Facilities Engineering Command to negotiate and acquire real property interests, including easements.

Entities acquire avigation easements to the airspace over neighboring properties in order to: (1) prevent construction of buildings and towers, planting of trees, installation of lighting, or any other development that might interfere with aircraft takeoff and landing, or (2) protect against liability for any nuisance caused by aircraft using the airport (i.e. noise, fumes, and vibration) that might impact the use and enjoyment of properties adjacent to an airfield or under its flight paths.

It's important to note that communities may view it as outside their authority to require avigation easements on behalf of a federal entity, but if public health and safety benefits can be linked, these easements may be justified. In addition, finding the appropriate entity to hold the avigation easement is critical.

5.2.10.2. Roles and Responsibilities

Community Planner's Role. Local governments should work cooperatively with military installations, developers, and property owners to determine the applicability of avigation easements on specific properties near military air operations. Local governments should ensure that developers building in hazards areas are aware of and educated about the impacts of military operations.

Local governments may decide to create a program for the voluntary offering of avigation easements within identified hazard areas (clear zone, accident potential zones, etc.). This could be tied to a conservation easements program (see Tool RC-1) or similar arrangement.

Military Planner's Role. Military planners can assist by working closely with local governments to determine areas for which avigation easements should be obtained. Many of these areas are identified through other planning efforts, such as the AICUZ program. Military installations can then work with local governments, trusts, and other federal agencies, such as the U.S. Army Corp of Engineers, to purchase easements, if desired.

5.2.10.3. Implementation and Maintenance

Implementation. The implementation of avigation easements is usually a complex undertaking. Local governments and military installations must work cooperatively, not only with each other, but with affected property owners as well. Education about the impacts of military installations on the community and of the military's need for training will be vital to ensure a thorough understanding of the reasons for avigation easements. It is generally more common for avigation

Indiana || Military Compatible Planning Advisory Handbook

easements to be acquired by the military with assistance from the US Army Corp of Engineers. However, local entities can be equally effective in using existing planning tools and the development process to seek voluntary avigation easements from developers.

There are several basic steps involved in the acquisition of avigation easements by the U.S. Government on behalf of a military installation. These steps are as follows:

- The need for the avigation easement must be clearly established and identified;
- An appraisal must be conducted to determine market value;
- Environmental documentation must be prepared to satisfy NEPA requirements, typically an Environmental Assessment (EA), for the acquisition of avigation easements;
- A written offer must be made to the landowner or authorized agent;
- The landowner, in writing, can either accept the government offer or make a counter offer;
- Once negotiations are complete, the terms are put in writing and the both entities formally accept the agreement; and,
- Parties close escrow and formally document the easement.

It is generally the policy of the military to acquire the minimal real estate easements needed to sustain military operations and force protection of critical assets.

Avigation easements are deemed a property right and to be valid and enforceable, must be recorded by the local county Register of Deeds. Recording the avigation easements generally requires preparation of a formal legal document which is then recorded against the title to the real property. This document constitutes notice of potential hazards or restrictions placed on the property to anyone checking on the title. Because this document is recorded, it binds future owners even if they are unaware of its existence at the time of the purchase. All documents affecting title, including avigation easements, are referenced in a preliminary title report issued by a title insurance company.

Maintenance. Properties affected by avigation easements should be periodically reviewed for compliance.

5.2.10.4. Resources/References

Sample Avigation Easement Developed by the FAA:

https://www.faa.gov/airports/central/airports_resources/media/RPZeasement.pdf

5.2.11. LU-3: Cluster Development

Primary responsibility: Local Military

5.2.11.1. Summary

Cluster development is a type of subdivision where dwelling units are grouped together, or attached, with the purpose of retaining open space and reducing the impacts of development on the landscape and environment. Cluster development is also referred to as open space zoning, conservation zoning, conservation subdivision, or a type of density transfer. Cluster development may be implemented using a Planned Unit Development (PUD). This provides for residential development on smaller lots than what is generally permitted under normal zoning requirements, which results in the permanent preservation of open space that would not normally be preserved under traditional development, encourages creative site planning that is sensitive to the natural characteristics of the land without sacrificing existing, permitted densities, provides for economic development, efficient provision of public services, and minimizes road and driveway construction and paving, and lastly, promotes aesthetics and other amenities. The open space preserved through this clustering can be used to protect aviation resources (airspace) or provide buffers between military operational areas and community development.

In many communities, conventional zoning and subdivision requirements can limit the application and use of cluster development. As such, developers must educate and convince local entities to approve variances for cluster developments, potentially delaying a project. Also, cluster development is generally subject to more rigorous design review than traditional neighborhood design.

5.2.11.2. Roles and Responsibilities

Communities and military planners can work together to identify areas where additional land buffers or open space may be beneficial to both the community and military installations.

Community Planner's Role. If a community decides to create a cluster development policy, community planners should work with local elected officials, community members, and landowners to adopt flexible development techniques and zoning codes that allow for this type of development. Once established, community planners are responsible for ensuring that development occurs according to local planning policy.

Military Planner's Role. Information pertaining to military training routes and other activities that could impact the general public can be provided, as appropriate, with neighboring jurisdictions (i.e., type and timing of potential impacts). This information assists in the determination of appropriate areas for cluster development and the preservation of open space.

5.2.11.3. Implementation and Maintenance

Implementation. Clustered development is usually implemented by local governments through their comprehensive plans, zoning, and subdivision ordinances. Cluster developments may be allowed by right or require a special permit, depending on the community's adopted policies. In designing and modifying cluster development provisions, the following should be considered:

- Offer incentives. Density bonuses are commonly used incentives that communities can offer to encourage cluster development; and,
- Preserve Intended Lands. It is important that cluster development provisions result in the preservation of meaningful areas. Generally, this means open space with conservation value, areas with high accident potential, historically significant areas, recreational areas, and other areas of significance. If cluster development

Indiana || Military Compatible Planning Advisory Handbook

provisions do not explicitly state the areas of intended preservation, then development could occur on valuable resource areas while preserving less valuable open space.

Maintenance. Ordinances should be reviewed and revised as determined necessary to meet community objectives and obtain consistency with the adopted Comprehensive Plan. At a minimum, evaluation of the community's cluster development policies should occur on a bi-yearly basis.

To ensure open space is properly managed, review and approval authority over these management plans should be retained by the community. Neighboring military installations could be involved in the management process through the establishment of a formal agreement (such as a Memorandum of Understanding) or informal agreement between the parties involved.

5.2.11.4. Resources/References

- **Smart Growth Online.** The Smart Growth Network is building a library of resources to assist in educating and informing communities on various smart growth techniques, including cluster development. <http://www.smartgrowth.org>
- **American Planning Association (APA).** <http://www.planning.org>
- **Randall, Arendt. *Rural by Design***(Chicago Planners Press/APA, 1999).
- Also refer to this related Handbook tool: **Conservation Easement.**

5.2.12. LU-4: Code Enforcement

Primary responsibility: Local Military

5.2.12.1. Summary

Code enforcement attempts to ensure that property owners maintain their property and bring substandard structures and conditions up to Building and Zoning Code standards. Code enforcement programs are responsible for enforcing codes that address public health and safety issues, including regulations related to garbage, specific nuisances, removal of vegetation, zoning violations, and structures. Enforcement actions are taken both proactively and in response to complaints from residents. These programs promote and maintain a safe and desirable living and working environment. Related to land use compatibility, code enforcement is a tool used by the community to ensure its rules are enforced. Issues could arise relative to structure heights, light and glare, and fire hazards.

Code enforcement programs can be targeted at specific types of issues. For instance, efforts can be made to control sources of glare, dust generators, or vertical encroachments. While more effective than responding to complaints, these focused efforts can be expensive to initiate and maintain.

5.2.12.2. Roles and Responsibilities

Community Planner's Role. As local entities are the primary implementers of code enforcement programs, community planners play a vital role in protecting the integrity of city codes and ordinances. Planners may either be directly involved in day-to-day code enforcement or indirectly involved through the provision of assistance to code enforcement officers.

Military Planner's Role. Military planners are not directly involved in the implementation of local code enforcement programs. However, military planners can assist in code enforcement by notifying neighboring jurisdictions of potential code violations that may impact the installations' ability to conduct its mission or training activities.

5.2.12.3. Implementation and Maintenance

Implementation. Code enforcement officers and building inspectors should educate local developers and residents on code compliance regulations, methods, and technologies as needed. In regard to land use compatibility with military installations, codes addressing the following areas are especially relevant:

- Excessive garbage or other activities that would attract birds or other animals potentially hazardous to military operations;
- Presence of incompatible land uses as per the Zoning Code;
- Excessive vegetation or construction of structures exceeding acceptable height standards; and,
- Light producing sources above acceptable limits for night navigation or military operations.

Maintenance. Code enforcement programs should be routinely evaluated for effectiveness. Goals should be reassessed to determine if current activities are sufficiently prioritized.

5.2.12.4. Resources/References

- **Enabling Statute for Zoning:** <https://law.justia.com/codes/indiana/2017/title-36/article-7/chapter-4/>
- **Indiana Engineering Codes and Standards:** <https://www.in.gov/dnr/engineering/codes-and-standards/>
- **American Association of Code Enforcement:** <http://www.aace1.org/>

5.2.13. LU-5: Compatible Use Study (CUS)

Primary responsibility: ■ Local ■ Military

5.2.13.1. Summary

The Department of Defense (DoD) initiated the Compatible Use Study (CUS) program under the previous titled “Joint Land Use Study” (JLUS) program in 1985 to achieve greater implementation and application of the Air Force and Navy Air Installation Compatible Use Zone (AICUZ) programs, the Navy Range Air Installation Compatible Use Zone (RAICUZ) program, and the Army’s Operational Noise Management Program (ONMP). The CUS process encourages residents, local decision makers, and installation representatives to study issues of compatibility in an open forum with the goal of balancing both military and civilian interests. The resulting recommendations are intended to guide the local governments and the military in the implementation of appropriate controls to enhance compatibility near military installations and operations areas.

A CUS is an excellent means of long-range, practical land use planning around military installations or operation areas. Three factors should be present when judging suitability for a CUS: 1) Incompatible land use or potentially incompatible land use from local development; 2) Strong support from base leadership, and 3) Good relationship between base and community.

According to the 2006 JLUS Program Manual, the primary objectives of a compatibility study are: (1) to encourage cooperative land use planning between military installations and the surrounding communities so that future community growth and development are compatible with the training or operational missions of the installation; and (2) to seek ways to reduce the operational impacts on adjacent land. The participants will review current and planned land use around a military installation and identify current or potential incompatibilities with the military mission. The study assesses both the military’s capability to adjust its mission profile to reduce impacts on the surrounding community, and the community’s capacity to revise or update its plans to be more responsive to the military mission. The following objectives for communities and military installations are also important.

Community

- Protect the health, safety, and welfare of residents and maintain quality of life.
- Manage development in the vicinity of military installations that would interfere with the continued operations of these facilities.
- Provide for new growth in an economically, environmentally, and socially sustainable manner.
- Maintain the economic vitality of the community.

Military

- Promote the health, safety, and welfare of the military and civilian personnel living and working at or near the military installation.
- Ensure the ability of the installation to achieve its mission, maintain military readiness, and support national defense objectives.

It’s important to note that a CUS defines a common policy framework for an area but is not itself a regulatory document. In addition, implementation depends on the adoption of recommended planning measures by participants, including local governments and the military. Also, a CUS is usually completed within 18 months, although the degree of coordination and complexity may substantially increase the time needed.

5.2.13.2. Roles and Responsibilities

The process of preparing a CUS involves recognition of a range of competing and complementary interests. A successful CUS depends on building consensus between local communities and the military installations in the area. Once jurisdictions agree to conduct a CUS, participants must determine who will be responsible for managing the study, also referred to as the sponsor. When one or two jurisdictions are involved, a county or municipal planning agency may be the logical sponsor. When many jurisdictions are involved, a regional planning agency, a council of governments, or the state may be the agency necessary to achieve consensus.

A CUS typically uses two primary stakeholder groups to build consensus, incorporate concerns, and develop practical solutions – a Policy Committee (or Advisory Committee) and a Working Group (or Technical Committee). The Policy Committee is responsible for the overall direction of the CUS, approval of the budget, preparation of the study design, review of draft and final written reports, consideration of policy recommendations, and monitoring the implementation of any adopted policies. The Technical Committee usually consists of area planners, city and county managers and professional staff, military planners, and representatives from natural resource protection organizations. This committee is responsible for data collection, identifying and studying technical issues, and developing recommendations for further consideration by the Policy Committee.

5.2.13.3. Implementation and Maintenance

Implementation. The first step in the implementation process is the adoption of the CUS recommendations by the Policy Committee and transmittal of the CUS report to affected local governing bodies urging implementation through incorporation of the recommendations in the jurisdiction's comprehensive plan. It is then dependent on each jurisdiction and the installation to adopt the findings of the report and agree to the implementation outlined. This agreement is often in the form of an MOU between the partners involved.

The implementation process can be institutionalized through creation of a permanent advisory board or commission, with representatives from each participating jurisdiction and the military. Recommendations may include:

- Adjusting specific military operations to reduce impacts on adjacent land
- Purchase of private land by the military or other federal agencies,
- Purchase of development rights and easements,
- Real estate disclosure requirements for safety or noise issues,
- Zoning and comprehensive plan designations to guide compatible development
- Siting criteria for specific uses such as cell towers and wind turbines,
- Building code changes for sound attenuation, and
- Local and state legislation.

As an incentive for communities to participate in a joint planning process, the Office of Local Defense Community Cooperation (OLDCC) offers matching grants for a study. The sponsoring agency is generally expected to provide a 25 percent match.

Maintenance. CUS studies should be updated or revised whenever significant changes to land uses or military operations occur.

5.2.13.4. Resources/References

- **Office of Local Defense Community Cooperation (OLDCC).** OLDCC is the primary office of the Department of Defense with responsibility for providing adjustment assistance to communities, regions, and states adversely impacted by significant Defense program changes. <http://www.oldcc.gov>
- **Joint Land Use Study, Program Guidance Manual,** November 2006. <https://www.plaqueminesparish.com/DocumentCenter/View/337/Joint-Land-Use-Study-Guidance-Manual-PDF>
- **Military Installation Sustainability.** <https://oldcc.gov/our-programs/military-installation-sustainability>
- **Cost-shared Community Planning Assistance** grants are available to state and local governments from the Office of Local Defense Community Cooperation (OLDCC). <https://oldcc.gov/our-programs/military-installation-sustainability#block2>
- **Compatible Use and Installation Resilience, Grantee Guide,** February 2022. <https://www.oldcc.gov/sites/default/files/resources/OLDCC%20CU-IR%20Grantee%20Guide%20%28FINAL%29.pdf>

5.2.14. LU-6: Comprehensive Plan

Primary responsibility: Local Military

5.2.14.1. Summary

Indiana law requires that a plan commission adopt a comprehensive plan if the municipality wants to exercise zoning powers. The Comprehensive Plan is the foundation for all decision-making in matters involving land use planning and growth management, is considered advisory, and serves as a guide for the physical development of the territory within specific jurisdictional boundaries.

Source: <http://www.in.gov/legislative/ic/2010/title36/ar7/ch4.html> (Page 758)

In general, comprehensive planning is a six-step process: 1) Recognition of a Need; 2) Direction Setting; 3) Plan Formulation; 4) Research; 5) Plan Implementation; and 6) Monitor and Revise. Comprehensive Plans are best suited to integrate all planning functions including land use, transportation, energy, housing, etc.

Voluntary land use plans in Indiana address land use, infrastructure (including utilities and transportation), economic development, community development, environmental factors, and historic preservation.

5.2.14.2. Roles and Responsibilities

Community Planner's Role. Local planners are actively engaged in all aspects of Comprehensive Plan development. The complexity of issues involved in developing a Plan may require a community to hire consultants to assist the local agency planning staff. Local planners, or their consultant team, should consult with the military early in the planning process to thoroughly understand the military's mission, the potential or existence of impacts from military operations on the community, and the impact of the local community on military installation and activities. In addition to consultation, local governments may consider inviting military representatives to serve on Comprehensive Plan steering or technical committees.

Military Planner's Role. Military planners can assist by being engaged and participating in the preparation of Comprehensive Plan that affect the military mission. Providing the following information would assist local governments in compatibility planning:

- Location of existing and proposed military aviation routes.
- Military housing needs that cannot be met by on-base facilities.
- Existing land use compatibility issues.
- Training and other vital installation areas potentially impacted by adjacent community development.
- Conservation areas and natural habitats within the installation or adjacent to the installation that could be impacted by neighboring development.
- Primary transportation corridors used by the military within the planning area.
- Safety considerations applicable to off-installation areas related to military facilities or operations.

5.2.14.3. Implementation and Maintenance

Implementation. Any comprehensive plan adopted in Indiana must contain at least the following three elements according to the 500 Series of Title 36-7-4 of the Indiana Code (IC):

- A statement of objectives for the future development of the jurisdiction;
- A statement of policy for the land use development of the jurisdiction; and
- A statement of policy for the development of public ways, public places, public lands, public structures, and public utilities.

In addition, the law provides for several optional elements, including parks and recreation, flood control, transit, natural resource protection, conservation, flood control, farmland protection, education, health and wellness, character and identity, and redevelopment of blighted areas. Most comprehensive plans in Indiana have some of these optional elements.

Maintenance. Indiana does not have a requirement for updates.

5.2.14.4. Resources/References

- **America Planning Association Indiana Chapter:** <http://indianapanning.org/>

5.2.15. LU-7: Conditional Use Permitting

Primary responsibility: Local Military

5.2.15.1. Summary

Conditional use permitting provides jurisdictions with flexibility regarding allowing a specific land use that may be compatible depending on the individual project and its location and subject to approval by the authorized agency or organization.

Some types of land uses are only allowed upon approval of a CUP also called a special use permit. Uses that might require a CUP include community facilities (i.e., hospitals or schools), public buildings or grounds (i.e., fire stations or parks), temporary or hard-to-classify uses (i.e., Christmas tree sales), or uses with potentially significant environmental impacts (i.e., hazardous chemical storage or surface mining) or uses such as telecommunications towers and alternative energy developments. The local zoning ordinance specifies the uses for which a conditional use permit is required, the zones they may be allowed in, and the public hearing procedure. When allowing a project, the CUP will impose special development requirements to ensure that the use will not be detrimental to its surroundings. Requirements might include additional landscaping, soundproofing, limited hours of operation, additional parking, or road improvements. A CUP does not rezone the land.

In the case of land use compatibility issues, the CUP could ensure a project is conditioned to avoid degrading the ability of nearby military installations to conduct training or mission critical activities.

It's important to note that CUPs do not authorize uses prohibited by the zoning ordinance. In addition, the conditions imposed on a CUP must be expressly attached to the permit and cannot be implied.

5.2.15.2. Roles and Responsibilities

Community Planner's Role. Community planners play an active role in the use of conditional and special use permits as these permits are primarily implemented by local planning departments. In addition to the land entitlement process, planners should educate the public and local developers on the use and procedures of CUPs.

Military Planner's Role. Military planners can work with local entities to determine the applicability of CUPs to help set conditions needed to protect military operations. For example, one area of consideration may involve commonly used flight paths for military aircraft. Community and military planners can work jointly to discuss the potential for conditional approval of land uses, use of lighting or radio frequencies, and structural height, all of which could impact air traffic if not conditioned properly.

5.2.15.3. Implementation and Maintenance

Implementation. Following submittal of a complete application, the local planning department will process the application. Primary activities include the development of conditions necessary to ensure the compatibility of a proposed use with surrounding land uses and the proposed site. Review of the application and development of conditions can be done in coordination with the appropriate military planners to ensure impacts to military facilities or operations are minimized.

The approval of a conditional use permit is typically acted on by a Planning Commission.

Maintenance. Projects approved under a CUP or SUP should be monitored for compliance with the attached permit conditions.

5.2.16. LU-8: Construction Standards

Primary responsibility: Local Military

5.2.16.1. Summary

Construction standards and building codes are ordinances and regulations controlling the design, construction process, materials, alteration, and occupancy of any structure to ensure human safety and welfare. They include both technical and functional standards and generally address the following:

- **Structural Safety.** Buildings should be strong enough to resist internally and externally applied forces without collapsing.
- **Fire Safety.** Includes requirements to prevent fire from spreading to and from neighboring structures, provide warning to occupants, provide for safe exit routes from the building, and provide access for fire suppression.
- **Health Requirements.** Provides for adequate plumbing and sanitation facilities for occupation of a structure.
- **Accessibility.** Requires a building to be accessible for persons in wheelchairs or having other disabilities.

Construction standards and building codes are designed to protect the health, safety, and welfare of citizens. They often vary by state, county, city, and/or town. Building and construction codes are not intended to limit the appropriate use of materials, appliances, equipment or methods of design or construction not specifically prescribed by the code, as long as the proposed alternatives are determined by the local building official to be at least equivalent to the prescribed code.

5.2.16.2. Roles and Responsibilities

Community Planner's Role. Community planners should work closely with local building officials to determine areas in proximity to military installations necessitating special building standards, such as incorporation of sound attenuation techniques.

Military Planner's Role. Military personnel can assist local entities by reviewing development in areas impacted by military operations and determining the degree of impact. This assistance would provide local entities the knowledge needed to adopt and enforce building standards as appropriate.

5.2.16.3. Implementation and Maintenance

Implementation. Implementation of construction standards and building codes are the responsibility of local governments.

Maintenance. Building codes and construction standards should be reviewed and updated as needed. Community planners can work cooperatively with military planners to ensure any change in installation activities are appropriately addressed in local construction and building codes.

5.2.16.4. Resources/References

- **Indiana Building Codes.** <https://up.codes/codes/indiana>
 - **Indiana Building Code, 2014 Edition.** <https://up.codes/viewer/indiana/ibc-2012>
 - **2020 Indiana Residential Code.** <https://up.codes/viewer/indiana/irc-2018> & <https://codes.iccsafe.org/content/INRC2020P1>
- **National Association of Homebuilders (NAHB).** <http://www.nahb.org>

5.2.17. LU-9: Development Review

Primary responsibility: Local Military

5.2.17.1. Summary

Development review is the process that proposed projects undergo to obtain approval for plans and ultimately construction. Projects may include a new building, a sub-division or other development of a property.

Always complex and often controversial, the process of reviewing plans for new buildings, subdivisions, and other developments in a community can be quite contentious. Builders want a reliable process that minimizes delays and leads to a favorable outcome. Neighbors and other citizens seek a development review process that enhances the community and protects their interests, even if these procedures are time-consuming. Understandably, local government officials want development review to be sensitive to competing interests and to address all the crucial elements accurately, usefully, and effectively.

Because the local development review process can be complicated and time consuming, a streamlined process when possible is recommended. In addition, the utilization of process management tools such as integrated project files and GIS can assist with development tracking. Also, interlocal agreements with nearby jurisdictions and / or military installations for review of proposed projects is recommended.

5.2.17.2. Roles and Responsibilities

Community Planner's Role. The community planner is typically the lead agent for the development review process. They are responsible for conducting meetings if necessary, reviewing proposals, ensuring completeness, coordinating plans with other internal offices, and providing recommendations to decision makers.

Military Planner's Role. Military planners can assist with the process by providing timely reviews when requested and ensuring concerns dealing military operations are highlighted and dealt with as necessary.

5.2.17.3. Implementation and Maintenance

Implementation. The implementation of a streamlined development review process when possible is encouraged as it tends to improve the review results and makes it easier for the customer to obtain a decision in a timely manner. A streamlined review includes a single-entry point in and out of the local review process, manages all internal reviews and comments, tracks the request from start to finish and keeps the requester apprised of status.

Maintenance. A streamlined development review process requires regular reviews and should be evaluated for changes based on external comments and internal considerations.

5.2.17.4. Resources/References

- **Development Review Process in Indiana.** <https://indianapanning.org/wp-content/uploads/2012/12/FINAL-CitizenPlannersGuide-3.20.17-Ch.10-SitePlanReview.pdf>

5.2.18. LU-10: Deed Restrictions

Primary responsibility: ■ Local ■ Military

5.2.18.1. Summary

Deed restrictions, or covenants, are written agreements that restrict or limit some of the rights associated with property ownership. These restrictions are recorded with the deed for the property and stay with the property when it is sold to a new owner (i.e., remain in effect). Deed restrictions are private agreements or contracts between an interested buyer and a seller. Deed restrictions are often established by the initial subdivider, either voluntarily or as a condition of approval on the subdivision.

Deed restrictions can cover a wide range of restrictions and can be tailored to meet specific needs. Deed restrictions can also be used to eliminate or mitigate impacts associated with local development on military installations. This is done through the incorporation of restrictions or limitations on development types or certain land uses. For instance, specifying a maximum height for trees and structures, restricting the use of motorized vehicles, limiting lighting, and so forth.

It's important to note that deed restrictions offer no tax benefits. In addition, some restrictions can be obtained during property entitlements as a condition of approval or as environmental mitigation. Lastly, they are often used for specific restrictions such as height limitations.

5.2.18.2. Roles and Responsibilities

Community Planner's Role. Local planners should work with installation planners and resource managers to identify those areas where deed restrictions would be beneficial in mitigating the effects of land use conflicts. Within these areas, the community could require new developments to include deed restrictions favorable to the continued operation of military installations.

Military Planner's Role. Military planners can assist in the identification of areas in adjacent communities or unincorporated areas where deed restrictions would benefit the installation's ability to conduct its mission and would protect public health and safety. Military agencies can utilize available resources, such as a DoD Conservation Partnering Authority, that authorizes the military to enter into agreements with eligible entities to acquire real estate interests near military installations.

5.2.18.3. Implementation and Maintenance

Implementation. Deed restrictions are usually created and imposed on lots at the time of subdivision or during development review. At that time, the restrictions are filed in the Deed Records of the County Clerk before the developer sells any lots in the subdivision. Deed restrictions can also be voluntary dedicated or purchased by the military in cooperation with non-profit organizations. Deed restrictions will typically include a variety of information including the following:

- Legal description of the restricted property and parties involved;
- Identification of the property covered by the restrictions;
- Purpose and description of the restrictions placed on property use;
- Duration of the restrictions, their renewal and maintenance, enforcement and application; and,
- Signatures of the parties entering into the agreements.

Maintenance. The length of time deed restrictions remain in effect is determined by 1) the specific timeline laid out in the documents creating the deed restrictions, and 2) whether the deed restrictions have been enforced and maintained. While some deed restrictions have specific life spans, most are drafted to remain in effect “in perpetuity” (forever) by a series of automatic renewals.

5.2.18.4. Resources/References

- Most local planning departments can provide sample deed restriction requirements made as a part of a subdivision approval.
- Also refer to these related Handbook tools: [Acquisition, Avigation Easement, and Conservation Easements](#).

5.2.19. LU-11: Hazard Mitigation Plan

Primary responsibility: Local Military

5.2.19.1. Summary

Hazard Mitigation is defined as any sustained, cost-effective action taken to reduce or eliminate long-term risk to people, property, and the environment from natural and man-made hazards and their effects. Hazard Mitigation Plans include actions that have a positive impact over an extended period. This distinguishes them from emergency planning or emergency services, which are associated with preparedness for immediate response to, and short-term recovery from, a specific event. Hazard mitigation actions, which can be used to eliminate or minimize the risk to life and property, fall into three categories: (1) those that keep the hazard away from people, property, and structures; (2) those that keep people, property, and structures away from the hazard; and (3) those that reduce the impact of the hazard, such as property insurance.

Hazard mitigation plans reduce fatalities, injuries, and property damage resulting from natural and man-made hazards. They provide guidance for hazard mitigation activities in the designated planning area. In addition, they identify hazard mitigation goals, objectives, and recommended actions that will reduce or prevent injury and damage to people and property from natural and man-made hazards. For land use compatibility planning, hazard mitigation planning applies when the actions of one group increase the hazard potential for another group. For example, when development outside an installation increases flood risk on an installation or when a natural area on an installation becomes a wildfire hazard to a nearby community due to poor management.

It's important to note that mitigation and preparedness are the primary purposes of a hazard mitigation plan and as such, these plans should not be confused with emergency management plans. In addition, communities with hazard mitigation plans in place have a priority on receiving disaster assistance from the Federal Emergency Management Agency (FEMA). This requirement gives local communities an incentive to increase regional coordination and to integrate mitigation activities into existing plans and policies.

5.2.19.2. Roles and Responsibilities

Community Planners. Community planners, public works employees, and emergency response personnel are generally involved in the preparation of hazard mitigation plans. When developing the FEMA required Hazard Mitigation Steering team, local governments should include representatives from local military installations.

Military Planners. Military planners can bring their knowledge of potential safety threats from natural and man-made hazards within the military installation to help determine the appropriate mitigation actions.

5.2.19.3. Implementation and Maintenance

Implementation. Hazard mitigation plan recommendations are generally implemented by local communities. However, military installations should take an active role in developing and implementing any necessary mitigation actions spelled out in the plan that have bearing on the installation or military operation area.

Maintenance. Federal hazard mitigation planning regulations require local plans to be reviewed, revised, and submitted for approval to the Regional Director of the FEMA every five years. The regulations require a plan maintenance process that includes an established method and schedule for monitoring, evaluating, and updating the plan; a system for monitoring implementation of mitigation measures; and a system for reviewing progress.

5.2.19.4. Resources/References

- **Federal Emergency Management Administration (FEMA).** <http://www.fema.gov/fima/>

5.2.20. LU-12: Light and Glare Controls

Primary responsibility: ■ Local ■ Military

5.2.20.1. Summary

This tool is designed to address significant light sources that can cause unwanted spillover lighting (off site illumination), increasing background light in the night sky (an issue with training and the use of night vision equipment), or glare. At the local level, light and glare can be reduced through design and placement requirements in a zoning code, a stand-alone ordinance, and/or specific development conditions. The intent of these is to establish and define permitted and prohibited lighting practices to limit the obtrusive aspects of lighting. For the military, each installation has design standards that reflect the operational and security parameters appropriate for the use. For both local and military lighting, mitigations, such as shielding, may be appropriate methods for controlling unwanted illumination and glare.

From a land use compatibility standpoint, both installation and community land uses and activities can have light and glare impacts on each other that should be considered when reviewing projects. Communities should be particularly cognizant of glare impacts on air operations. Water bodies, glass on buildings, and even vehicle windows can be a concern.

Light and glare controls allow a community to express its expectations about quality lighting. A significant amount of improvement can be achieved if the requirements are well written, implemented, and enforced. Effective shielding standards will virtually eliminate glare from a light source. They will also reduce the amount of light escaping into the sky by fifty percent or more as compared to an unshielded light source.

It's important to note that lighting should be evaluated on a case-by-case basis in areas of the community with different developed and natural conditions. Varying conditions will result in location specific lighting needs to reduce adverse impacts associated with these conditions. In addition, reduction in glare and light intrusion can be achieved through lighting codes. Lighting codes should cover overall light reduction, focused lighting, shielding, and utilizing appropriate lighting types. Some lighting conditions can be difficult or impractical to mitigate, such as lighting for athletic fields. This should be considered when siting these uses.

5.2.20.2. Roles and Responsibilities

Community Planners. In most communities, awareness of the issues and the characteristics of quality lighting must be understood by both planners and policymakers before enacting a lighting ordinance. Once the community understands the ordinance's objectives and its necessity, the process of drafting, enacting, and implementing an appropriate code can occur.

Military Planners. Military planners can assist local entities by identifying sources of light and glare that have a negative impact on the installation's mission and ability to conduct training. Military planners can assist communities by investigating installation light and glare impacts on community residents and the environment.

5.2.20.3. Implementation and Maintenance

Implementation. Implementation and enforcement of a lighting code will have impacts on planning and code enforcement staff. In addition to the time required to review materials related to lighting, and on-site follow-up to verify compliance, the staff will need to develop some familiarity with lighting terms and how to reliably evaluate the effectiveness of mitigation methods.

Maintenance. Enforcement is required to ensure conformance with the standards of the lighting code. Monitoring code compliance after the project is completed is also recommended.

5.2.20.4. Resources/References

- The best source for information on this topic is to consult with the local jurisdiction or military service on applicable design requirements.

5.2.21. LU-13: Military Influence Area

Primary responsibility: Local Military

5.2.21.1. Summary

A Military Influence Area (MIA) is a formally designated geographic planning area where military operations may impact local communities, and conversely, where local activities may affect the military's ability to carry out its mission. These areas are also referred to as: Region of Military Influence (RMI), Military Influence Planning District (MIPD), Military Influence Overlay District (MIOD), Military District Disclose District (MIDD), Airfield Influence Planning District (AIPD), Areas of Critical State Concern (ACSC), and Military Compatibility Area (MCA).

A MIA is designated to accomplish the following purposes.

- Promote an orderly transition between community and military land uses so that land uses remain compatible.
- Protect public health, safety, and welfare.
- Maintain operational capabilities of military installations and areas.
- Promote the awareness of the size and scope of military training areas to protect areas separate from the actual military installation (i.e., critical air and sea space) used for training purposes.
- Establish compatibility requirements within the designation area, such as requirements for sound attenuation, real estate disclosure, and aviation easements.

It's important to note that local entities may determine that more than one MIA is needed because each MIA will serve a distinct purpose. In addition, when determining the boundary of a MIA, the range of applicable compatibility factors listed in Section 2 should be considered. Lastly, and when appropriate, potential mission changes should be considered in determining the MIA boundary. New weapons systems can require larger noise and safety zones.

5.2.21.2. Roles and Responsibilities

Community and Military Planners' Role. Both entities should work jointly to determine the appropriate areas and purposes of a MIA. Planners should educate local officials, residents, military personnel, and other stakeholders of the benefits and ramifications resulting from the designation of MIAs.

5.2.21.3. Implementation and Maintenance

Implementation. MIAs should be incorporated into the local planning process through the community's comprehensive plan and zoning ordinance.

Communities, in conjunction with neighboring military installations, should determine the purpose, function, and boundary for a MIA. For example, if the purpose is the disclosure of the impact of military activities on real estate, the MIA may be used to require such disclosure at the time of showing, sale, or lease contract signing.

Maintenance. Periodic review of the military's mission and the boundaries of the MIA should occur to determine its effectiveness and accuracy. The MIA should reflect any changes to the military's mission and training activities.

5.2.22. LU-14: Real Estate Disclosure

Primary Responsibility: Local Military

5.2.22.1. Summary

Indiana law (IC 32-21-5) generally requires sellers of 1-4 unit residential property to complete the Seller's Residential Real Estate Sales Disclosure form regarding the known physical condition of the property. An owner must complete and sign the disclosure form and submit the form to a prospective buyer before an offer is accepted for the sale of the real estate.

The purpose of real estate disclosure is to protect the seller, buyer, and sales agent from potential litigation resulting from specified conditions (e.g., hazard areas, existing easements). Real estate disclosure can be used to inform potential buyers and renters of the possible affects from nearby military installations. This disclosure can be one of the most practical and cost-effective land use compatibility tools.

It's important to note that for information maintained by local jurisdictions, maintaining an easy-to-access source of current and accurate information for use by real estate professionals and the public. Also, for landowners, developers, and the public, an issue is having access to up-to-date information on military installations and operation areas.

5.2.22.2. Roles and Responsibilities

Community Planner's Role. Local planners should work within their communities and cooperatively with military installations and other agencies to accomplish the following tasks pertaining to real estate disclosure.

- Planners need to identify areas of disclosure for military impacts.
- Disclose compatibility issues with military installations or operations on Disclosure Statements, as appropriate to the location.
- Educate local citizens, real estate professionals, and developers of the process and benefits of real estate disclosure.

Military Planner's Role. In cooperation with local entities, military planners can assist in the real estate disclosure process by:

- Working jointly with local planners to identify areas and topics for disclosure, and
- Providing information on potential disclosure issues to the local Board of Realtors, and the local tax assessor and property records agency.

5.2.22.3. Implementation and Maintenance

Implementation. Real estate disclosure is required by Indiana's Residential Real Estate Disclosure Law. To complete the Residential Real Estate Sales Disclosure form, sellers and their agents often depend on local planning departments for the necessary information, such as general plan and zoning maps. The key to disclosure compliance is having information on military land use compatibility factors readily available for public use. The disclosure should contain the presence and proximity of a military installation, the nature of its operations, and the potential for noise and accidents affecting adjacent properties. Cooperation with local real estate professionals and developers is essential for successful implementation.

Maintenance. For disclosure to be successful, local planning departments need a system that provides up-to-date information on military operational areas. Local and military planners can work jointly to develop the processes for communication and information exchange.

5.2.22.4. Resources/References

- **Indiana Seller's Residential Real Estate Sales Disclosure:**
https://www.in.gov/pla/files/Sellers_Disclosure_Form.pdf

5.2.23. LU-15: Sound Attenuation

Primary responsibility: Local Military

5.2.23.1. Summary

Sound attenuation refers to special construction techniques and materials designed to lower the amount of noise that penetrates the windows, doors, and walls of a building.

Noise is defined as any unwanted sound. The introduction of a noise source into a given environment can be objectionable to nearby residents and potentially harmful, depending on the sound level. Excessive noise can impair hearing, and may also put stress on the heart, the circulatory system, and other parts of the body. Urbanization near military installations can be subjected to noise resulting from aircraft, training facilities and activities, and daily operations. Sound attenuation tools attempt to reduce the impact of military-related noise to nearby residents and the general public.

It's important to note the following six aspects. First, avoidance is the first choice in noise attenuation. When possible, noise sensitive uses should not be located close to military installations or noise sources. Second, some land uses are more sensitive to noise, including residential development, schools, hospitals, etc. Third, when evaluating noise impacts on sensitive receptors, remember to look at acceptable levels for outdoor spaces as well as indoor space. Fourth, noise is a cumulative condition. Programs such as the DoDs AICUZ program look at noise levels associated with typical flight operations and aircraft, but do not incorporate noise from other sound generators. Therefore, a home just outside the AICUZ 65 dBA contour may have a cumulative noise exposure of over 65 dBA when roadway noise and other local noise sources are added. Fifth, while noise is typically measured and mitigated based on a daily average noise level, some circumstances may require an evaluation of peak noise levels. Lastly, retrofitting of existing structures can be expensive and cost-prohibited in certain instances.

5.2.23.2. Roles and Responsibilities

Community Planner's Role. Local and military planners should work cooperatively to identify areas where sound attenuation regulations should be implemented. At the community level, avoiding the placement of noise sensitive land use designations in high noise environments is recommended.

Military Planner's Role. Military planners can assist local entities in determining areas appropriate for sound avoidance and attenuation.

5.2.23.3. Implementation and Maintenance

Implementation. Sound attenuation standards are generally implemented through local zoning and building codes. Local building officials, inspectors, and planners should be familiar with their use and applicability in land use compatibility situations.

Maintenance. Building codes and construction standards should be reviewed and evaluated according to community needs and goals. In addition, as technological innovations in sound attenuation become available, codes and standards can be updated to allow these advanced tools and materials to be used.

5.2.23.4. Resources/References

- **Indiana DOT Traffic Noise Analysis Procedure:** <https://www.in.gov/indot/engineering/files/2017-INDOT-Noise-Policy.pdf>
- **Guidelines for Sound Insulation of Residences Exposed to Aircraft Operations,** April 2005.
<http://www.navfac.navy.mil>

5.2.24. LU-16: Subdivision Ordinance

Primary responsibility: Local Military

5.2.24.1. Summary

A subdivision ordinance is the local legal procedure / rule that regulates the division of real property into smaller parcels. It supports and guides the proper subdivision of land within a jurisdiction in order to promote the public health, safety, and general welfare of the citizens in the jurisdiction. Subdivision regulations are used to establish adequate land records, ensure good land planning and subdivision design, ensure that subdivisions are properly equipped, and determine who will be responsible for the construction and maintenance of subdivision improvements such as streets, curbs, sidewalks, and underground utility lines.

It's important to note that adequate subdivision ordinances are required to promote good community development and that the Planning Board role in the management of the subdivision process may vary in different jurisdictions.

5.2.24.2. Roles and Responsibilities

Community Planner's Role. The Planning Department typically manages the subdivision process and makes recommendations to the decision-maker which may be the Planning Board in some jurisdictions. The planner must ensure the rights of the real property owner / developer and the community at large are met and a balance is achieved.

Military Planner's Role. The military planner is obligated to review proposed subdivisions when requested and ensure the installation and military operations concerns are addressed.

5.2.24.3. Implementation and Maintenance

Implementation. The implementation of adequate subdivision ordinances is required for communities to effectively manage growth within their jurisdictional boundaries. It is recommended that agreements be established with nearby military installations providing them an opportunity to review /comment and any subdivision proposals that have the potential to affect military operations.

Maintenance. As with all planning regulations a subdivision ordinance requires regular review and updating to the needs of the community (including nearby military installations) and potential developers are met.

5.2.24.4. Resources/References

- **APA Indiana Chapter:** <http://indianapanning.org/>

5.2.25. LU-17: Zoning and Land Use Controls

Primary responsibility: Local Military

5.2.25.1. Summary

Zoning is the division of a jurisdiction into districts (zones) within which permissible uses are prescribed and restrictions on building height, bulk, layout, and other requirements are defined. The primary purpose of zoning is the protection of public health, safety, and welfare. Refining this goal further, zoning provides opportunities for the implementation of regulations supporting land use compatibility, as shown in following examples.

- Protection against physical danger, particularly safety considerations for properties in proximity to military ranges or within military flight areas.
- Protection against nuisances associated with military operations, such as noise, vibration, air emissions, etc.
- Protection against heavy traffic flows or truck routes in residential areas.
- Protection against aesthetic nuisances impacting military installations.
- Protection against “psychological nuisances”, such as perceived and actual dangers associated with military operations.
- Protection from light and glare, air emissions, and loss of privacy.
- Provision of open space and agricultural preservation.

It’s important to note that zoning and the comprehensive plan are inexorably tied to each other. Policies recommended within the general plan should be reflected within the zoning ordinance or development code. In addition, zoning ordinances requiring rigid separation of uses or inflexible provisions can make creative solutions to land use compatibility, such as cluster development, difficult or impossible. Also, when designating military compatible use districts, the ordinance should recognize that the local community has no regulatory control over development or activities on federal property.

5.2.25.2. Roles and Responsibilities

Community Planner’s Role. Local jurisdictions possess sole responsibility for implementing their zoning ordinance, or development code. As such, local planners should be familiar with their jurisdiction’s zoning ordinance and its potential use as a tool in promoting land use compatibility with neighboring military installations. Community planners should work cooperatively with military planners to determine applicable regulations and should invite military planners to review draft ordinances prior to adoption.

Military Planner’s Role. Military planners can assist by working jointly with local jurisdictions in determining potential applications of a local jurisdiction’s zoning ordinance to resolve land use compatibility issues. Examples of collaboration include identifying areas for inclusion within various overlay zoning districts pertaining to military operations and determination of appropriate land uses and/or land use intensities in proximity to military installations.

5.2.25.3. Implementation and Maintenance

Implementation. There are several ways in which a zoning ordinance can improve land use compatibility between military installations and surrounding jurisdictions. One of the primary zoning tools includes the use of Overlay Zoning Districts.

An overlay district is an additional zoning requirement placed on a geographic area but does not change the underlying zoning. Overlay zoning is used for dealing with special situations or accomplishing special goals, such as land use compatibility with neighboring military installations. Applicable zoning overlay districts include the following types.

- **Airport Overlay District.** An Airport Overlay Zone is a zone that promotes compatible land uses for specific distances around airports. An Airport Overlay Zone applies additional conditions or restrictions to a specified area while retaining the existing base zoning classification. This zone can be highly effective in addressing a number of potential incompatibilities with airports and airport operations. For example, the Airport Overlay Zone may limit the height of objects surrounding an airport, restrict uses producing conditions that may be hazardous to air navigation (e.g., smoke, glare), and limit uses that are noise sensitive.
- **Airport Development Zoning.** This type of zoning is applied to areas around an airport identified for airport related and dependent uses. It often replaces industrial, public facility or other designations currently given to the airport site and immediate vicinity. The Airport Development Zone can also be a base zoning district that identifies outright and conditionally permitted uses on airport property. This district may be most applicable to joint use airports where local jurisdictions share facilities within a military installation.
- **Military Influence Area/District.** A military installation area/district is intended to recognize the location of military installations within or adjacent to a community. Specific uses or regulations are generally established within these areas.
- **Agricultural Overlay District.** Agricultural overlay districts exist to promote agricultural land uses, protect prime soils, and prevent non-agricultural uses from negatively impacting agriculture as the primary land use. These areas can be used to provide appropriate buffers surrounding military installations.
- **Planned Development District.** A Planned Development (PD) District can be a base district, a floating zone, or could be adopted as an overlay zone depending on city desires. PDs are designed to encourage the efficient use of land and resources, promote greater efficiency in public and utility services, and encourage innovation in the planning, design, and building of all types of development. Generally, communities can establish development standards favoring land use compatibility.
- **Maintenance.** Zoning regulations should be periodically reviewed for effectiveness and applicability. A comprehensive review of the entire zoning ordinance, or development code, should occur in conjunction with an update to the community's comprehensive plan.

5.2.25.4. Resources/References

- **Indiana Regulations for Establishing an Airport:** <https://www.in.gov/indot/multimodal/aviation/regulations-for-establishing-an-airport/>
- **A Model Zoning Ordinance to Limit Height of Objects Around Airports** (FAA Advisory Circular AC 150/5190-4A), prepared by the FAA, December 14, 1987.
- **Montgomery-Maxwell AFB Military Compatibility Use (Overlay) Districts (MCOD) Example.** <https://www.montgomeryzoo.com/home/showdocument?id=14299>

Sample Military Compatible Use District

The following provisions provide examples of regulations and/or policies for inclusion within Airport Overlay Zoning Districts.

- 1. Visual and electrical interference.** Notwithstanding any other provisions of these regulations, no use shall be made of land within the Military Airport Overlay Zones in such a manner to:
 - a. Release into the air any substance which would impair visibility or otherwise interfere with the operation of aircraft, e.g. steam, dust, smoke, etc.;
 - b. Produce light emissions, either direct or indirect (reflective) which would interfere with pilot vision;
 - c. Produce electrical emissions which would interfere with aircraft communication systems or navigational equipment; or
 - d. Attract birds or waterfowl, or in any other manner constitute an airport hazard.
- 2. Storage of flammables.** The provisions of this section shall apply throughout the Military Airport Overlay Zones.
 - a. **Solid Materials**
 - i. The storage or manufacture of flammable solid materials or products is permitted only if the flammable material or products are stored or manufactured within completely enclosed buildings having noncombustible exterior walls and protected throughout by an automatic fire extinguishing system.
 - ii. The storage or manufacture of explosive materials and of materials or products that decompose by detonation is prohibited.
 - b. **Liquid Materials**
 - i. The manufacture of flammable or combustible liquids or materials that produce flammable or combustible vapors or gases is prohibited.
 - ii. The storage of flammable and combustible liquids, or of materials that produce flammable or combustible vapors or gases, shall be permitted only in accordance with the Uniform Fire Code (or applicable regulations).
- 3. Height Regulations.**
 - a. No structure shall be constructed or maintained so that it exceeds the greater of:
 - i. Thirty-five feet above ground elevation (or applicable height limitation as set by jurisdiction in cooperation with the neighboring military installation); or
 - ii. The maximum height permitted under FAR part 77, subpart C, as depicted on any airport height zone map as adopted by the jurisdiction.
- 4. Subdivision Public Reports.** Subdivision public reports shall disclose the location of the Airport and potential aircraft overflights. The following statement shall be included in the public report: "This property, due to its proximity to (military airport), is likely to experience aircraft overflights, which could generate noise levels which may be of concern to some individuals."
- 5. Avigation Easement.** The owners of a new development within the overlay district, including mortgagees, other lien holders and easement holders, shall execute an avigation easement prior to or concurrently with the recordation of any final plat or approval of a final Design Review plan for the new project.

5.2.26. MP-1: Air Installations Compatible Use Zones (AICUZ)

Primary responsibility: Local Military

5.2.26.1. Summary

The Air Installations Compatible Use Zones (AICUZ) program is a DoD planning program that was developed in response to incompatible urban development and land use conflicts around military airfields. (Note: some Services use the singular form, Air Installation Compatible Use Zone) The AICUZ program seeks to provide information on compatibility, develop a cooperative relationship between communities and military installations, and providing land use compatibility guidelines that protect public health and safety and maintain military readiness.

The AICUZ program has two objectives: (1) to assist local, regional, state, and federal officials in protecting the public health, safety, and welfare by promoting compatible development within the AICUZ area of influence; and (2) to protect operational capabilities from the effects of land uses that are incompatible with aircraft operations. While prepared by or for a military installation, the primary users of an AICUZ study are the local communities surrounding the installation or an offsite location (such as auxiliary fields or training areas). The AICUZ study is also a tool used by the installation's community planner to evaluate proposed projects (both on and off the installation) for their compliance with the information presented in the AICUZ study.

Areas contiguous to military installations often provide attractive land development opportunities. Certain types of development are not compatible with the high noise and high potential for aircraft accidents associated with airfield activities. In the absence of compatible land use controls, inappropriate uses may occur near or adjacent to the installation causing eventual conflicts between flight operations and landowners.

It's important to note that AICUZ studies are designed to provide information and therefore, are not regulatory documents. In addition, the AICUZ study needs to reflect the current and projected operational environment and should be coordinated closely with an installation's Airfield Operations Board and its flying units. Lastly, to help with implementation, materials prepared for public distribution and use should clearly state the issues involved and the areas of concern.

5.2.26.2. Roles and Responsibilities

Community Planner's Role. Local governments should be included in the AICUZ planning process and be prepared to provide technical advice to the military in interpretation of the community's comprehensive plan, zoning ordinance, and description of existing land uses. Acceptable methods to deal with identified land use conflicts (existing or potential) should also be discussed.

Military Planner's Role. The military planner's role in the process will vary depending on whether the study is conducted in-house or if the study is being prepared using assistance from an outside source. In general, the military planner performs the following tasks:

- Monitor changes in base operations to determine potential impacts on the AICUZ study;
- Identify the need for an AICUZ update and coordinate the update and funding through the Air Force;
- Evaluate base development projects based on AICUZ criteria and requirements;
- Review community project proposals and provide input in relation to AICUZ compatibility guidance;
- Coordinate with local communities to ensure understanding of AICUZ and land use compatibility issues; and,

- Brief local planners and political bodies on AICUZ program studies and updates.

5.2.26.3. Implementation and Maintenance

Implementation. Local governments have the ability to implement AICUZ guidelines through their police powers, which allow them to protect public health, safety, and welfare. The state conveys these powers to local governments so they can adopt and enforce zoning regulations and other land use controls. As such, the success of the AICUZ program depends on its voluntary acceptance and use by local governments, landowners and developers, and other agency officials. These groups and individuals must understand the recommendations from the AICUZ study.

In order to ensure successful implementation, the following techniques will assist in implementation of the AICUZ recommendations.

- Inform the public and government agencies of the AICUZ program (i.e. formal presentation of AICUZ program by installation personnel).
- Establish both a formal and informal network of contacts to routinely exchange planning information (i.e., Memorandum of Understanding [MOU], establishment of technical and/or working groups with community planners and leaders).
- The local government should use the AICUZ information to identify existing incompatible land uses.
- The local government should include the installation planner as part of project application in areas identified in the AICUZ study as having potential compatibility issues.

Maintenance. The AICUZ Program Manager (the installation lead on the project and often the installation's community planner) reviews the AICUZ operational and maintenance data at least once every two years or as part of an Environmental Impact Analysis Process (EIAP) evaluation, or in response to a significant change in aircraft or operations. This review determines if the installation needs an AICUZ update.

5.2.26.4. Resources/References

- **Air Force AICUZ Program:** http://static.e-publishing.af.mil/production/1/af_a4/publication/afi32-7063/afi32-7063.pdf

5.2.27. MP-2: Bird / Wildlife Aircraft Strike Hazard (BASH) Program

Primary responsibility: Local Military

5.2.27.1. Summary

The Bird / Wildlife Aircraft Strike Hazard (BASH) Program is aimed at minimizing collisions between military aircraft and birds. Knowledge of where birds travel, nest, and feed help the DoD avoid problem areas, and therefore save lives and avoid the destruction of valuable aircraft. The program considers not only wildlife within the confines of the airfield, but also in neighboring areas. The BASH program covers predatory birds, nuisance flocking birds (gulls), and migratory geese and ducks. In addition to birds, the BASH program also addresses other animals that could pose a hazard to aircraft operations including coyotes, deer, moose, and rabbits.

The BASH program is intended to reduce the potential for collisions between aircraft and birds or other animals, and to minimize damage and injuries when collisions occur by promoting land management practices that minimize bird attractants, and safety procedures to recognize, control, and avoid hazardous bird concentrations.

It's important to note that following.

- Some land use practices increase the attractiveness of existing geographic features to wildlife, such as open bodies of water or wetlands that serve as nesting areas for gulls, shore birds, and waterfowl.
- On-airport bird control activities are often needed to reduce bird-strike hazards. However, the effectiveness of these activities is reduced by off-airport land use practices that attract birds.
- Reporting of bird strikes is essential to the success of the program.
- The creation of new water bodies from development runoff or water features on golf courses can be a significant factor in increasing bird hazards.
- In order for BASH programs to be effective, military and federal agencies need to involve local communities that control land uses and activities within airport and aircraft operating areas.

5.2.27.2. Roles and Responsibilities

Community Planner's Role. Local governments that want to reduce bird hazards to military installations should understand the potential issues associated with BASH programs. Community planner involvement could include activities that:

- Inform and educate the public and government agencies about BASH and related land use issues.
- Establish both a formal and informal network of public and military contacts to routinely exchange planning information (i.e. Memorandum of Understanding, establishment of technical and/or working groups with military, community, and resource planners).
- Identify land uses and other activities that should not be sited within airport and aircraft operational areas because of their potential to attract birds and other wildlife.
- Work with military installations to reduce the impact of existing land uses that could increase wildlife hazards.

Indiana || Military Compatible Planning Advisory Handbook

Military Planner's Role. Some installations have full-time personnel to assist in creating, monitoring, and implementing BASH. Responsibilities can include:

- Identifying a BASH coordinator to implement the program and work with local communities;
- Establishing a Bird Deterrent Dispersal Team to identify potential hazards, maintain airfield conditions, and monitor day-to-day activities that might impact safety;
- Verifying and mapping of bird and other wildlife animal habitats;
- Identification of potential base activities that could pose problems;
- Working with adjacent and nearby communities to minimize land use activities that attract bird and other wildlife that could pose problems to aircraft;
- Implementation of pest control programs; and,
- Formally and informally establishing public contacts for information exchange.

5.2.27.3. Implementation and Maintenance

Implementation. The main focus of BASH remains bird hazards. However, Wildlife Biologists from the Department of Agriculture's Wildlife Services Division in conjunction with the individual bases are beginning to treat each airfield as its own ecosystem. BASH programs are now based on each base's specific issues and requirements. National and international military and other public and private agencies have organized to promote educational, technical, and related research activities. An implementation program generally encompasses all actions and techniques that may identify, reduce, or eliminate bird or other animal hazards to aviation, including:

- Bird and other wildlife strike reporting/statistics;
- Bird management and control techniques;
- Research on new technologies to reduce wildlife hazards;
- Training in airport wildlife management;
- Policy and airport standards concerning wildlife hazard;
- Land use and environmental issues concerning airports;
- Bird migration and general ornithology related to aviation; and,
- Remote sensing and modeling to detect and predict bird movements.

Development and implementation of an effective BASH program requires constant interaction between military sections covering natural resources, aviation safety, and air operations, as well as pilots, aircrews, and natural resource planners. Habitat modifications and scaring birds away from the runways is an integral part of the answer, but understanding the behavior and movements of birds in relation to the airfield environment and military training routes is also a critical factor in reducing bird strikes.

Maintenance. BASH programs should be periodically reviewed for effectiveness and updated as appropriate.

5.2.27.4. Resources/References

- **Bird Strike Committee USA.** This is a volunteer organization directed by a [9- to 12-person steering committee](#) consisting of 2-3 members each from the FAA, USDA, DoD, and aviation industry.
<http://www.birdstrike.org/birds.htm>
- **Navy and Marine Corps Instruction Manuals.** Current Navy and Marine Corps instructions implementing the BASH program include: OPNAVINST 3750.6R, OPNAVINST 5090.1B, OPNAVINST 11010.36B, and NAVFAC

Procedural Manual P-73. Examples of current BASH Plans, local implementing instructions, and SOP's are provided as appendices to the NAVFAC Procedural Manual P-73.

<http://www.safetycenter.navy.mil/aviation/operations/bash/>

- **Navy Safety Center.** A repository for all bird/animal strike reports and maintains the strike database. <http://www.safetycenter.navy.mil>
- **Air Force, Aviation Safety Division.** This division serves as the Air Force's point-of-contact for technical assistance pertaining to the BASH program. <http://afsafety.af.mil/AFSC/Bash/home.html>
- **Hazardous Wildlife Attractants on or Near Airports.** FAA Advisory Circular 150/5200-33A
- **Airport Safety.** Environmental Protection Agency Regulation, 40 CFR, Section 258.10, "Airport Safety", relates to landfills near municipal airports, but provides information relevant to military airports. <http://www.epa.gov/epahome/cfr40.htm>

5.2.28. MP-3: NEPA

Primary responsibility: ■ Local ■ Military

5.2.28.1. Summary

The National Environmental Policy Act (NEPA) is the federal law, effective on January 1, 1970, that established a national policy for the environment and requires federal agencies (1) to become aware of the environmental ramifications of their proposed actions, (2) to fully disclose to the public proposed federal actions and provide a mechanism for public input to federal decision making, and (3) to prepare environmental impact statements for every major action that would significantly affect the quality of the human environment.

NEPA's purpose, as stated in Section 2 of NEPA legislation, is to "encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; and to enrich the understanding of the ecological systems and natural resources important to the Nation..." NEPA ensures that the environmental impacts of a proposed action, and potential alternatives to the action, will be considered by a Federal agency before it decides to fund and implement the action. The process required under NEPA is intended to increase the quality of decisions because it demands a full understanding of the various impacts, and because input must be received from a range of stakeholders. Emergency exceptions are made when the immediate health and safety of people are threatened.

It's important to note that the NEPA process generally takes a long period of time, NEPA generally requires that any cost/benefit analysis prepared for the project be incorporated into or attached to the environmental impact statement (EIS), and that NEPA requires that the project and each of the alternatives be analyzed equally and compared.

5.2.28.2. Roles and Responsibilities

Community Planner's Role. Community planners should consider the implications to on-going military operations during the NEPA process. Areas of particular concern include public safety, aviation safety, and land use compatibility.

The community planner should also respond to NEPA Notice of Intent (NOI) to prepare an EIS and public comments periods on EIS that relate to compatibility between military installations and operation areas and areas covered by the jurisdiction's comprehensive plan.

Military Planner's Role. The military planner can assist by being an active participant in the NEPA process. The military can utilize these processes as an opportunity to make public comment in areas such as public safety, aviation safety, and land use compatibility.

5.2.28.3. Implementation and Maintenance

Implementation. NEPA requires all federal agencies, including the DoD, to prepare and report environmental impact assessments of any federal action before it is undertaken. The DoD implemented NEPA through a series of regulations such as Army Regulation 200-2. Another level of compliance was added on October 13, 1978, when President Carter signed Executive Order 12088. The Order subjects federal facilities (including military installations) to oversight by federal, state, and local environmental regulators. This order was further strengthened in 1992 with the passage of the Federal Facilities Compliance Act, which allows the EPA to inspect federal facilities to ensure environmental regulations are being met.

The NEPA process begins with the definition of the proposed action and a determination of whether this action qualifies for exclusion. If it does qualify, then a categorical exclusion (CATEX) is completed and a decision memo is published. If not

excluded, an environmental assessment (EA) can be prepared, or the agency can decide to go straight to the preparation of an EIS.

If the EA finds that significant impacts may result, an EIS is prepared. If the EA determines that no significant effects will occur, a Finding of No Significant Impact (FONSI) is completed and published.

An EIS is a comprehensive analysis of potential significant impacts that includes a thorough discussion of alternatives and potential mitigations. Following completion of the public review of the draft EIS, a final EIS is prepared along with the Record of Decision (ROD).

EIS (NEPA) Process

- Determination by Lead Agency that Permit Application is Complete
- Preparation of Environmental Assessment
- Decision to Prepare EIS
- Notice of Intent (NOI)
- Formal Scoping
- Draft EIS
- Agency and Public Review Period (typically 45 days)
- Preparation of Responses to Comments and Final EIS
- Distribution of Final EIS
- Federal Register Notice
- Public Notice of Availability (NOA) of Final EIS,
- Record of Decision (ROD)

Source: Based on *NEPA and Base Closure: Recipes for Streamlining Environment Review* March 1996.

Maintenance. As a result of the NEPA process, the proposed project could have been modified in order to reduce or avoid impacts or a set of mitigations measures could have been adopted. In either case, the planner will be responsible to ensure the modifications or mitigations are implemented with the project.

With some projects, changes in the project or conditions could change over time prior to the project being initiated. NEPA has protocols to review projects and determine if additional or follow-on analysis is warranted.

5.2.28.4. Resources/References

- **U.S. Environmental Protection Agency (EPA),** Compliance and Enforcement. This site provides pertinent information resources on the NEPA process, case law, data, reports, statutes, and training.
<http://www.epa.gov/compliance/nepa/>

5.2.29. MP-4: Installation Encroachment Action Planning

Primary responsibility: Local Military

5.2.29.1. Summary

An Installation Encroachment Control Plan (ECP) includes an analysis of a Marine Corps installation's current and future encroachment situation, and an action plan presenting control strategies and actions for reducing the encroachment threat to installation missions. An ECP is designed to identify the full range of encroachment issues impacting the installation, develop an Action Plan that promotes actions for influencing compatible land use development, document problems and corrective actions for developing plans, programs, and budgets relative to encroachment, and involve multiple stakeholders in plan development and actions.

It's important to note that an ECP is designed to discuss issues relative to the installation and the surrounding communities, cannot be implemented solely by the installation, and must follow federal, state, and local land use legislation and regulations.

5.2.29.2. Roles and Responsibilities

Community Planners. State and local governments are included in the ECP planning process to provide technical advice in land use planning around Marine Corps installations in the following areas.

- Residential and commercial development
- Transportation infrastructure improvements
- Natural resources promotion and conservation
- Environmental protections
- Economic development

Military Planners. A Marine Corps Installation's Community Plans and Liaison Office performs the following tasks to successfully develop and implement an ECP.

- Actively engage in legislative and regulatory processes at the local, regional, state, and federal levels to monitor and manage encroachment.
- Use land use planning tools such as the following to promote development of a long-term sustainment strategy.
- Air Installation Compatible Use Zones (AICUZ)
- Range Installation Compatible Use Zones (RAICUZ)
- Range Compatible Use Zones (RCUZ)
- Joint Land Use Study (JLUS)
- Promote planning efforts for airspace, land space, sea space, and spectrum frequency that are consistent with sustaining the installation's mission.
- Foster development of proactive partnerships and formal and informal relationships/agreements with other services, federal, state, and local agencies, private organizations, and non-profit groups.

5.2.29.3. Implementation and Maintenance

Implementation. Implementation of the ECP is dependent on the preparation and implementation of an action plan. The action plan contains encroachment control strategies and actions for reducing the threat to installation missions posed by encroachment.

Since encroachment is primarily driven by non-military entities, close coordination with local communities and planners will help in the success of the ECP. A next step in implementation could include development of a Joint Land Use Study (JLUS) with neighboring jurisdictions. The JLUS can help provide a local framework upon which a collaborative partnership can be built.

Maintenance. As with any plan, periodic review and evaluation is important. In addition to periodic reviews, major changes on the installation (such as mission changes) and in the surrounding region (such as major development proposals) can be triggers for a more comprehensive review and update.

5.2.29.4. Resources/References

- **Headquarters, U.S. Marine Corps, Installations & Logistics Department.**
<http://hqinet001.hqmc.usmc.mil/i&L/v2/Index.htm>

5.2.30. MP-5: Installation Master Plan

Primary responsibility: Local Military

5.2.30.1. Summary

The Installation Master Plan is a program for developing and maintaining a long-range development plan for the installation. It provides a concise, comprehensive description of the planning proposals designed to solve current problems and meet future needs. It also serves as a record of the analytical process and rationale by which these proposals were developed. The following documents comprise the Installation Master Plan.

- **Existing Condition Maps.** These maps provide accurate and current information on the layout and physical conditions of the installation.
- **Master Plan Report.** This report provides a written record of existing operational and environmental conditions at the installation.
- **Tabulation of Existing and Required Facilities (TERF).** This document is an inventory of existing and long-range facility requirements corresponding to the installation's mission.
- **Future Development Plans.** These plans provide for the logical and efficient development of the installation.
- **Project Phasing Map.** This map depicts the installation's five-year construction program in relation to an overall future facilities' site plan.

Based upon the comprehensive analysis of on-installation and off-installation conditions, a summary of limitations should be prepared as per presiding instructions. The purpose of this summary is to identify those specific conditions that most directly affect the installation's ability to carry out its mission. These conditions/issues should then be shared with local planners so collaborative solutions can be developed.

5.2.30.2. Roles and Responsibilities

Community Planners. Although local planners are not intended users of the Installation Master Plan, there are required aspects of the plan (such as off-installation data collection) where they can assist their military counterparts.

Military Planners. Installation planners are responsible for the following:

- Collecting all required on- and off-installation data;
- Establishing working relationships with neighboring jurisdictions and agencies for the collection of off-installation data; and,
- Providing information to local entities on the future development plans of the installation.

5.2.30.3. Implementation and Maintenance

Implementation. Installation Master Plans are implemented by the installation commander.

Maintenance. As with any iterative planning document, periodic review and evaluation is necessary. In addition, mission changes or other factors impacting on-installation infrastructure should trigger a comprehensive review and update of the Installation Master Plan.

5.2.30.4. Resources/References

- **UFC 2-100-01 Installation Master Planning, with Change 1.** <https://www.wbdg.org/ffc/DoD/unified-facilities-criteria-ufc/ufc-2-100-01>

5.2.31. MP-6: Integrated Cultural Resource Master Plan

Primary responsibility: Local Military

5.2.31.1. Summary

Department of Defense Instruction 4715.16 requires installations to develop an Integrated Cultural Resources Management Plan (ICRMP) as an internal compliance and management tool that integrates the entirety of the cultural resources program with ongoing mission activities. The ICRMP is a five-year planning document used to implement an installation's cultural resources management program. It is a component of the Installation Master Plan. The installation commander uses the ICRMP to assist in making decisions about cultural resources management activities and compliance procedures. The ICRMP:

- Integrates the installation's cultural resources program with ongoing mission activities;
- Allows ready identification of potential conflicts between the installation's mission and its cultural resources; and
- Identifies compliance actions necessary to keep mission-essential properties and acreage ready for use.

ICRMPs are a military installation commander's primary tool for cultural resources management. These plans emphasize a holistic approach to management of cultural resources and support mission activities. Department of Defense policy promotes integrating cultural resources with daily installation activities through the establishment of standard operating procedures in the ICRMP for each installation.

5.2.31.2. Roles and Responsibilities

Community Planners. Local planners are typically not involved in the development or update of an ICRMP, however, there are required aspects of the plan (such as off-installation data collection) where they can assist their military counterparts.

Military Planners. Installation planners are responsible for the following:

- Collecting all required on- and off-installation data;
- Establishing working relationships with neighboring jurisdictions and agencies for the collection of off-installation data; and,
- Providing cultural resource management activities to local entities that may impact the community.

5.2.31.3. Implementation and Maintenance

Implementation. Integrated Cultural Resources Management Plan are implemented by the installation commander.

Maintenance. The ICRMP should be updated every five-years. However, as with any iterative planning document, periodic review and evaluation is necessary. In addition, mission changes or other factors impacting on-installation cultural resources should trigger a comprehensive review and update of the ICRMP.

5.2.31.4. Resources/References

- **Department of Defense Instruction on Cultural Resource Management.**
<https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/DoDi/471516p.pdf?ver=2017-11-21-114100-670>

5.2.32. MP-7: Integrated Natural Resource Master Plan

Primary responsibility: Local Military

5.2.32.1. Summary

Congress established the Sikes Act (16 U.S.C. 670a-670o) in 1960 to ensure that the U.S. Department of Defense (DoD) manages and protects fish and wildlife resources on its lands. Because military lands are often protected from human access and impact, they contain some of last remaining large tracts of increasingly rare habitat types. In 1997, Congress amended the Sikes Act to require DoD to develop and implement Integrated Natural Resources Management Plans (INRMPs) to ensure appropriate and sustainable management of the natural resources for which DoD has stewardship responsibility.

The Integrated Natural Resource Master Plan is a planning document that outlines how each military installation with significant natural resources will manage those resources. They integrate military mission requirements, environmental and master planning documents, cultural resources, and outdoor recreation to ensure both military operations and natural resources conservation are included and consistent with stewardship and legal requirements. INRMPs require installations to look holistically at natural resources on a landscape or ecosystem basis. They are living documents that provide direction for daily natural resources management activities, and they provide a foundation for sustaining military readiness.

INRMPs are based on the principles of ecosystem management. They describe how to manage natural resources, allow for multipurpose uses of those resources, and define public access—all while ensuring no net loss in the capability of an installation to support its military testing and training mission.

Although variations exist among the different Military Services, a basic INRMP includes:

- A description of the installation, its history, and its current mission;
- Management goals and associated timeframes;
- Projects to be implemented and estimated costs;
- A discussion of how the military mission and training requirements are supported while protecting the environment;
- Natural resources' biological needs and legal requirements;
- The role of the installation's natural resources in the context of the surrounding ecosystem; and
- Input from the U.S. Fish & Wildlife Service (USFWS), state fish and wildlife agency, and the general public.

The INRMP planning process integrates all traditional elements of natural resources management. The process also considers military mission requirements, installation master planning, environmental planning, and outdoor recreation. To address installation requirements and regional issues, INRMPs involve appropriate stakeholders, thereby providing for more efficient and effective management of natural resources on a landscape-scale basis, all while ensuring that military readiness is sustained.

5.2.32.2. Roles and Responsibilities

Community Planners. Local planners are typically not involved in the development or update of an INRMP, however conservation planners from U.S. Fish & Wildlife Service (USFWS), Indiana Department of Natural Resources participate in the development of the INRMP to assist their military counterparts.

Military Planners. Installation planners are responsible for the following:

Indiana || Military Compatible Planning Advisory Handbook

- Collecting all required on- and off-installation data;
- Establishing working relationships with federal and state agencies for the collection of off-installation data; and,
- Coordinating with local entities on any natural resource management activities.

5.2.32.3. Implementation and Maintenance

Implementation. Integrated Natural Resource Master Plans are implemented by the installation commander.

Maintenance. All installations must keep their INRMP current. It is DoD policy to review installation INRMPs annually. The Sikes Act requires that each INRMP must be reviewed for operation and effect by USFWS and the appropriate state agency at a minimum of once every five years.

5.2.32.4. Resources/References

- **Department of Defense Integrated Natural Resources Management Plan (INRMP) Implementation Manual.** <https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/DoDm/471503m.pdf?ver=2018-11-13-125658-050>
- **Climate Adaptation for DoD Natural Resource Managers.** <https://www.denix.osd.mil/nr/DoDadaptationguide/index.html>
- **Memorandum of Understanding Between the U.S. Department of Defense and the U.S. Fish and Wildlife Service and the Association of Fish and Wildlife Agencies for a Cooperative Integrated Natural Resource Management Program on Military Installations.** https://www.denix.osd.mil/nr/focus-areas/biodiversity/integrated-natural-resource-management-plans-inrmpls/guidance/sikes-tripart-mou/03_Sikes-Tripartite-MOU.pdf
- **Integrated Natural Resource Management Plan Fact Sheet.** https://www.denix.osd.mil/nr/focus-areas/biodiversity/integrated-natural-resource-management-plans-inrmpls/guidance/integrated-natural-resource-management-plans-fact-sheet/INRMP%20fact%20sheet%2011-20-20_508_v3.pdf

5.2.33. MP-8: Noise Management Programs

Primary responsibility: Local Military

5.2.33.1. Summary

Noise is defined as unwanted sound generated from the operation of military weapons or weapons systems (e.g., aircraft, small arms, tank guns, artillery, missiles, bombs, rockets, mortars, and explosives) that affects either people, animals (domestic or wild), or structures on or in areas in proximity of a military installation. Noise Management Programs are intended to assist planners in understanding the impacts of military operations generated noise and methods to minimize or eliminate the noise source or reduce its impacts to receptors. The Army specifically uses the Noise Management program which replaced its Installation Compatible Use Zone (ICUZ) program to address noise related to on- and off-installation noise sources including small arms and large caliber weapons firing and weapons systems ranges, demolition ranges, maneuverable training areas, artillery firing points, land navigation courses, air-to-ground impact areas, airborne drop zones, tactical landing sites, and aircraft overflight.

It's important to note that military operations typically generate noise that may impact on and off base communities, unmanaged noise issues have the potential to significantly affect military readiness and / or community quality of life, and the military has many resources available to assist with understanding noise and possible mitigations.

5.2.33.2. Roles and Responsibilities

Community Planners. Include military noise as a component of community planning activities as appropriate. Coordinate with military installations as needed to obtain information or identify concerns with noise issues that affect planning activities.

Military Planners. Responsible for understanding effects and impacts of military installation noise and the implications on planning processes and programs both on and off base. Planners should engage noise technical experts as required to obtain data and information needed to conduct planning activities. Ensure senior leadership is apprised of any critical noise issues that have potential to impact military operations.

5.2.33.3. Implementation and Maintenance

Implementation. Military installations need to implement programs that are designed to understand what noise is generated by military operations and who the potential receptors. Where required by regulation or by smart planning, efforts should be made to address any concerns or issues that are identified.

Maintenance. Noise studies which are the baseline for managing noise programs should be updated on a periodic basis as conditions and / or missions change that may result in changes to noise generation / impacts.

5.2.33.4. Resources/References

- **US Army Public Health Center:** <https://phc.amedd.army.mil/topics/envirohealth/on/Pages/default.aspx>
- **SERDP / ESTCP DOD Noise Research:** <https://www.serdp-estcp.org/Program-Areas/Weapons-Systems-and-Platforms/Noise-and-Emissions/Noise/WP-200006>
- **DoD Noise Program:** <http://www.dtic.mil/whs/directives/corres/pdf/471513p.pdf>
- **DoD Operational Noise Manual:** <http://www.stoptheplanes.com/DoDNoiseManualFinalREV.pdf>
- **Army Regulation 200-1 Environmental Protection and Enhancement:** <http://cdm16635.contentdm.oclc.org/cdm/ref/collection/p16635coll11/id/1029>

5.2.34. MP-9: Range Air Installations Compatible Use Zones (RAICUZ)

Primary responsibility: Local Military

5.2.34.1. Summary

The Navy's Range Air Installations Compatible Use Zones (RAICUZ) program delineates the noise impacts from aerial firing ranges from other military noise sources. The program applies to all Navy and Marine Corps air-to-ground range installations in the United States and its territories. This program is similar to the Navy and Marine Corps Air Installation Compatible Use Zone (AICUZ) program and the Army's Operational Noise Management (ONMP) program. The primary focus of the RAICUZ is weapons safety. Aircraft and blast noise are also addressed, including ingress and egress to the targets on Military Training Routes (MTR).

The RAICUZ program protects public health, safety, and welfare, and to prevent community development from degrading the operational capability of air-to-ground ranges by meeting the following objectives:

- Preclude public exposure to hazards associated with air-to-ground weapons delivery;
- Prevent incompatible land development near training range operations to reduce hazards such as low level flight, equipment and high noise;
- Protect Navy and Marine Corps investment by safeguarding the operational capabilities of ranges; and,
- Inform the public about the RAICUZ program and seek cooperation from communities to minimize potential safety issues and noise impacts on residents from air-to-ground ranges.

It's important to note that the presence of the following factors should be considered in determining appropriate mitigation tools: low and frequent overflights, aircraft noise, light emissions, electromagnetic and radio frequency emissions, and height of trees and other obstructions. In addition, installations should review all assumptions and model inputs to ensure accurate results and determination of RAICUZ planning areas. Also, all potential users, including local governments, other federal agencies, Native American Nations, etc., should be included early in the development of the RAICUZ study. Lastly, when land use compatibility issues arise, acquisition should be the mitigation action of last resort.

5.2.34.2. Roles and Responsibilities

Community Planner's Role. Local entities should be included in the planning process and be prepared to provide technical advice to the military during the preparation of the RAICUZ. Local community capital improvement plans and general plans provide foresight into potential areas where land use conflicts may arise. These plans should be shared with adjacent military installations for their input. To assist in the implementation of the RAICUZ, community planners can perform the following actions.

- Inform and include neighboring military installations in the land entitlement process for projects proposed within or in close proximity to established RAICUZ zones. Strategies for inclusion could include inviting military counterparts to serve as ex-officio members of local planning boards and commissions or providing information on land entitlement requests to the military installations for review and comment prior to local action.
- Review and amend, when appropriate, local planning documents (zoning ordinance, subdivision guidelines, building codes) and policies to mitigate land use compatibility within and in close proximity to RAICUZ zones.

Military Planner's Role. In general, the following tasks are performed by the military planner.

- Inform local and state governmental agencies, and other federal agencies, community groups, and the general public on (1) the requirements of military flying, (2) range operations, (3) efforts underway and planned to reduce potential off-range weapons impacts and noise, and (4) the local command's position on specific land uses.
- Monitor and comment on proposed development outside of the RAICUZ boundary to reduce its potential impacts. Development that occurs up to the RAICUZ boundary could prevent mission changes or mission expansion in the future.
- Monitor changes in base operations to determine their potential impacts on the RAICUZ study.
- Evaluate base development projects based on RAICUZ criteria and requirements.
- Discuss incompatible land use proposals in adjacent communities with local elected officials and other community decision makers.

5.2.34.3. Implementation and Maintenance

Implementation. Implementation of the RAICUZ policy is predicated upon cooperation with other federal agencies, local governments, and Native American tribes responsible for land management in areas impacted by, or adjacent to, the RAICUZ study area. Local governments are responsible for protecting their residents' health, safety, and welfare through controls like zoning ordinances, building codes, subdivision regulations, building permits, and disclosure statements. As such, success of the RAICUZ program depends on the voluntary participation, acceptance, and use by local governments, private individuals, and other interested parties. The JLUS is an excellent means of incorporating RAICUZ recommendations in local comprehensive plans.

In order to ensure successful implementation, the following techniques should be utilized.

- Inform local governmental agencies of the RAICUZ program through formal actions (i.e., presentations to local elected officials) or informally (i.e., technical memorandum).
- Establish both a formal and informal network of contacts to routinely exchange planning information (i.e., Memorandum of Understanding, establishment of technical and working groups with community planners and leaders).

Maintenance. To maintain currency, RAICUZ studies should be reviewed every two years and updated as necessary to reflect changing operational and training requirements, new aircraft types, new weapons and delivery tactics, current levels of aviation activity, and land use development. The Navy requires the updating of weapon footprints if operations and training tactics have changes since the previous RAICUZ update.

5.2.34.4. Resources/References

- **Chief of Naval Operations Instruction, Encroachment Management.** OPNAVINST 3550.1, 1998
<http://www.navfac.navy.mil> (available under SECNAV and OPNAV Directives links)
- **US Navy, Operational Naval Instruction (OPNAVINST) 3550.1 (1998).**
http://neds.daps.dla.mil/Directives/3550_1.pdf
- **Sample Memorandum of Understanding** between an installation and local planning and land use approval agencies. <http://www.hqafcee.brooks.af.mil/ec/noise/aicuz/ProgramGuide/>
- **White River Military Coordination Alliance and Land Conservation Mapping Toolkit:**
<https://map.wrmcalliance.com/>

5.2.35. MP-10: Range Compatible Use Zone (RCUZ)

Primary responsibility: Local Military

5.2.35.1. Summary

The Marine Corp's Range Compatible Use Zones (RCUZ) program delineates the noise impacts from military training ranges, maneuver areas, and restricted airspace from ground, amphibious, and aviation training activities performing ground-to-ground and air-to-ground weapons training. The program applies to all Marine Corps range installations in the United States and its territories. The primary focus of the RCUZ is noise and safety associated with aircraft noise, and noise from small arms and large caliber weapons activities. Every Marine Corps installation with a live-fire training component must complete a RCUZ Study.

The RCUZ program protects public health, safety, and welfare by minimizing both local community and on-base exposure to noise and potential safety hazards resulting from military training activities, while protecting the operational capacity of the range training areas. The RCUZ program seeks to achieve compatibility between military training range installations and neighboring communities by working in partnership with local governments. It seeks to achieve, to the extent practical, compatible development of lands adjacent to ranges by providing compatible land use recommendations to local communities for their consideration in local planning by meeting the following objectives:

- Preclude public exposure to hazards associated with ground-to-ground and air-to-ground weapons delivery;
- Protect the public from noise environment associated with aircraft, small arms and large caliber weapons activity;
- Prevent incompatible land development near training range operations to reduce hazards such as low-level flight, high noise, and live fire;
- Protect Marine Corps investment by safeguarding the operational capabilities of ranges; and,
- Inform the public about the RCUZ program and seek cooperation from communities to minimize potential safety issues and noise impacts on residents from ground-to-ground and air-to-ground training ranges.

It's important to note that the presence of the following factors should be considered in determining appropriate mitigation tools: low and frequent overflights, aircraft noise, small arms noise, large caliber weapons noise, proximity to range safety zones and surface danger zones. In addition, installations should review all assumptions and model inputs to ensure accurate results and determination of RCUZ planning areas. Also, all potential users, including local governments, other federal agencies, Native American Nations, etc., should be included early in the development of the RCUZ study. Lastly, when land use compatibility issues arise, acquisition should be the mitigation action of last resort.

5.2.35.2. Roles and Responsibilities

Community Planner's Role. Local entities should be included in the planning process and be prepared to provide technical advice to the military during the preparation of the RCUZ. Local community capital improvement plans and comprehensive plans provide foresight into potential areas where land use conflicts may arise. These plans should be shared with adjacent military installations for their input. To assist in the implementation of the RCUZ, community planners can perform the following actions.

- Inform and include neighboring military installations in the land entitlement process for projects proposed within or in close proximity to established RCUZ noise and range safety zones and surface danger zones. Strategies for inclusion could include inviting military counterparts to serve as ex-officio members of local planning boards and commissions or providing information on land entitlement requests to the military installations for review and comment prior to local action.

- Review and amend, when appropriate, local planning documents (zoning ordinance, subdivision guidelines, building codes) and policies to mitigate land use compatibility within and in close proximity to RCUZ noise and safety zones.

Military Planner's Role. In general the following tasks are performed by the military planner.

- Inform local and state governmental agencies, and other federal agencies, community groups, and the general public on (1) the requirements of military flying, (2) range operations, (3) efforts underway and planned to reduce potential off-range weapons impacts and noise, and (4) the local command's position on specific land uses.
- Monitor and comment on proposed development outside of the RCUZ boundary to reduce its potential impacts. Development that occurs up to the RCUZ boundary could prevent mission changes or mission expansion in the future.
- Monitor changes in base operations to determine their potential impacts on the RCUZ study.
- Evaluate base development projects based on RCUZ criteria and requirements.
- Discuss incompatible land use proposals in adjacent communities with local elected officials and other community decision makers.

5.2.35.3. Implementation and Maintenance

Implementation. Implementation of the RCUZ policy is predicated upon cooperation with other federal agencies, local governments, and Native American tribes responsible for land management in areas impacted by, or adjacent to, the RCUZ study area. Local governments are responsible for protecting their residents' health, safety, and welfare through controls like zoning ordinances, building codes, subdivision regulations, building permits, and disclosure statements. As such, success of the RCUZ program depends on the voluntary participation, acceptance, and use by local governments, private individuals, and other interested parties. The JLUS is an excellent means of incorporating RCUZ recommendations in local comprehensive plans.

5.2.36. RC-1: Conservation Easement

Primary responsibility: Local Military

5.2.36.1. Summary

A conservation easement is a legally recorded agreement by which landowners may voluntarily restrict specific uses of their land. Conservation easements can assist in retaining land predominantly in its natural, scenic, historical, agricultural, or open-space condition.

A conservation easement is a way to protect the resource, open space, or agricultural value of land by keeping it in its current state. The owner maintains ownership of the property and the right to sell or deed the property to another. The owner also keeps the right to use the property for economic gain or recreation as long as the use is allowed by the conditions of the easement. A donation of a conservation easement can reduce estate, income, and property taxes for the owners.

Conservation easements provide a legal mechanism to implement purchase of development rights (PDR) and transfer of development rights (TDR) programs. The purpose of these programs is to use market forces to simultaneously promote conservation in designated areas, while encouraging smart growth in developed and developing areas.

PDR programs are voluntary legal agreements that allow owners with a vested development right to sell the right to develop their property to state and local governments and nonprofit organizations. The development rights associated with a parcel of land can be individually purchased from the bundle of rights that go with the land which include the right to possess, use, develop, lease, or sell the land. This agreement is recorded on the land title and permanently limits the future use of the land as stated by the PDR agreement.

TDR, sometimes referred to as a transfer of development credits, relocates potential development from areas where proposed land use or environmental impacts are considered undesirable (the donor site) to another area (the receiver site) chosen on the basis of its ability to accommodate additional development, with minimal environmental, social, and aesthetic impacts.

From a land use compatibility perspective, conservation easements provide a mechanism to maintain land in its current undeveloped state while providing benefits to the property owner.

It's important to note that donating an easement is not always a financially viable option for landowners. In addition, monitoring and enforcing conservation easements requires a serious commitment on the part of the easement holder. Also, conservation easements do not offer protection from eminent domain. If land under easement is taken through eminent domain, both the landowner and the easement holder must be compensated. Lastly, the implementation of PDR and TDR programs can be complex and administratively challenging, requiring the local government to make a strong commitment to administering the program and educating residents and developers on its use.

5.2.36.2. Roles and Responsibilities

A conservation easement is a voluntary land protection tool. When several individuals own a property, all owners must agree to place the easement. If the property is mortgaged, the mortgage holder must also agree to place the easement.

A conservation easement is designed to protect a property according to the owner's wishes. Since the easement is generally granted in perpetuity, it is necessary for an outside party to be responsible for monitoring and maintaining the easement. The outside party holds the easement and is required to monitor and enforce the adherence of current and future property owners to the terms of the easement.

Easements are usually held by local government agencies, land trusts, or other nonprofit organizations designed for this purpose. Since personnel are needed to monitor and maintain easements in perpetuity, easement donors often are required to provide financial support for the easement if it is held by a nonprofit organization. Designating both a government agency and a nonprofit or land trust as co-holders of the easement is an alternative selected by many landowners. Such an arrangement may be required by certain public programs wherein the easements are purchased by a government preservation program or organization. This responsibility generally includes:

- Establishing baseline documentation for the easement. This process involves ensuring that the language of the easement is clear and enforceable, developing maps and property descriptions, and recording the property's characteristics.
- Providing information and background data regarding the easement to new or prospective property owners.
- Establishing a review and approval process for the allowable land activities stipulated in the easement.
- Enforcing the restrictions of the easement through the legal system, if necessary.
- Maintaining property and easement-related records.

Community and military planners can work together to identify and prioritize areas where conservation easements would be beneficial to one or both entities. Once prioritized, strategies can be implemented to encourage or require the use of conservation easements.

5.2.36.3. Implementation and Maintenance

Implementation. Conservation easements are implemented through a conservation easement document that contains a series of restrictions on the use of the land. The owner transfers, by deed of conservation easement to a public agency or nonprofit organization, certain rights that will restrict land uses on the property in the future.

An easement may be granted for a term of years or in perpetuity. However, in order for a landowner to take advantage of the tax benefits of a donated easement, it must be given in perpetuity.

Maintenance. Conservation easements should be periodically reviewed to ensure the terms of the easements are being met. In addition, monitoring the use of the land should occur on a regular basis. This task may require personal visits to the property to ensure that easement restrictions are being upheld.

5.2.36.4. Resources/References

- **American Farmland Trust.** This group works to maintain farmland resources within the United States using a variety of conservation techniques. <http://www.farmland.org>
- **Land Trust Alliance.** The Land Trust Alliance promotes voluntary private land conservation to benefit communities and natural systems. Resources and training on land trusts and conservation techniques are available, in addition to available grant opportunities. <http://www.lta.org>
- **Trust for Public Land.** The Trust for Public Land (TPL) is a national, nonprofit, land conservation organization that conserves land for people to enjoy as parks, community gardens, historic sites, rural lands, and other natural places, ensuring livable communities for generations to come. This organization provides information on available federal and state programs pertaining to conservation and offers services and assistance in conservation transactions, finance, and direction (visioning). <http://www.tpl.org/>
- **National Park Service (NPS).** The NPS is the federal government's primary agency for the preservation of America's parks and conservation of natural resources. <http://www.nps.gov>
- **The Conservation Fund.** <http://www.conservationfund.org>

Indiana || Military Compatible Planning Advisory Handbook

- **The Nature Conservancy.** The Nature Conservancy's mission is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. This organization provides information on resources available for the conservation and protection of sensitive lands. <http://www.nature.org>
- **Byers, Elizabeth and Marchetti Ponte. *The Conservation Easement Handbook.*** Land Trust Alliance and the Trust for Public Land, 2005. This book provides substantial information on conservation easements and land trusts including the process for creating an easement, developing a stewardship program, and drafting a conservation easement.
- **Smart Communities Network.** This Internet site provides a wide variety of information on sustainable land use techniques, green buildings and development, and other sustainable development methods. <http://www.sustainable.doe.gov>
- **American Planning Association (APA).** APA is a nonprofit public interest and research organization committed to urban, suburban, regional, and rural planning. APA and its professional institute, the American Institute of Certified Planners, advance the art and science of planning to meet the needs of people and society. <http://www.planning.org>
- **Smart Growth Online.** The Smart Growth Network is building a library of resources to assist in educating and informing communities on various smart growth techniques. <http://www.smartgrowth.org>
- **Sierra Business Council.** <http://www.sbcouncil.org>
- **League of Cities' Institute for Local Self Government.** The League of Cities' published an "Open Space Funding Guide" that describes the use of conservation easements. <http://www.ilsg.org>
- Also refer to these related Handbook tools: **Acquisition, Avigation Easement, and Deed Restrictions.**

5.2.37. RC-2: Habitat Conservation Tools

Primary responsibility: Local Military

5.2.37.1. Summary

The 2015 Indiana State Wildlife Action Plan (SWAP) is a habitat-based plan that provides an overview of conservation threats in Indiana and identifies needed actions. The SWAP includes biological aspects of wildlife and habitat conservation in the state, as well as information on the conservation organizations currently conducting on-the-ground efforts. It identifies conservation needs, organizations working in those arenas, and overlapping areas of interest for potential partnerships.

The 2015 SWAP divided the state into six planning regions, to better focus actions and priorities based on regional resources, needs and threats. The planning regions for Indiana's SWAP were selected to reflect both aquatic and terrestrial systems. To increase the potential for conservation and management, it was important to consider both aquatic and terrestrial systems when creating the regions. The regions are broad, yet reasonable representation of the wildlife and habitats differences within Indiana's landscape.

The 2015 SWAP focuses on the eight major habitat types from the 2005 Comprehensive Wildlife Strategy, but substitutes the standardized NatureServe classification system for 2005's

The following major habitat types are used for the 2015 SWAP:

- Agricultural Lands: Lands devoted to commodity production, including intensively managed non-native grasses, row crops, fruit, and nut-bearing trees.
- Aquatic Systems: All water habitats, both flowing and stationary, but not including wetlands.
- Barren Lands: Lands dominated by exposed rock or minerals with sparse vegetation.
- Developed Lands: Highly impacted lands, intensively modified to support human habitation, transportation, commerce, and recreation.
- Forests: A plant community extending over a large area dominated by trees, the crowns of which form an unbroken covering layer or canopy.
- Grasslands: Open areas dominated by grass species.
- Subterranean Systems: Connected underground rooms and passages beyond natural light penetration.
- Wetlands: Temporarily or permanently flooded habitats, often supporting aquatic vegetation.

It's important to note that developing and promoting farming technologies and practices that have conservation benefits (e.g., cover crops, no-till, and soil health) helps with habitat loss. In addition, building external capacity by forming and facilitating partnerships, alliances, and networks of organizations to address invasive species helped with invasive species. Also, developing, changing, influencing, and helping implement formal legislation, regulations, and voluntary standards helps with law and policy guidelines. Lastly, removing unnecessary dams and fitting necessary dams with effective fish passage structures helps with dams and water management and use.

5.2.37.2. Roles and Responsibilities

Community Planners. Use the ISWAP to research data pertinent to local concerns. Use the information in local planning initiatives and decisions as applicable. Provide local data that is of use to the NHP.

Indiana || Military Compatible Planning Advisory Handbook

Military Planners. Use the ISWAP to research data pertinent to local concerns. Use the information in local planning initiatives and decisions as applicable. Provide installation data (only as allowed by pertinent regulations) that is of use to the NHP.

5.2.37.3. Implementation and Maintenance

Implementation. Use the ISWAP as a tool and program to enhance local land use planning.

Maintenance. Use the ISWAP as a tool and program to enhance installation land use planning.

5.2.37.4. Resources/References

- **Indiana State Wildlife Action Plan 2015 Report:** <https://www.in.gov/dnr/fish-and-wildlife/wildlife-resources/state-wildlife-action-plan/report/>

5.2.38. RC-3: Readiness and Environmental Protection Integration (REPI)

Primary responsibility: Local Military

5.2.38.1. Summary

The DoD REPI Program is a key tool for combating encroachment that can limit or restrict military training, testing, and operations. The REPI Program protects these military missions by helping remove or avoid land-use conflicts near installations and addressing regulatory restrictions that inhibit military activities. The REPI Program is administered by the Office of the Secretary of Defense (OSD).

REPI enhances military readiness by preventing, mitigating, or reducing restrictions on the timing, frequency, and type of training activities caused by encroachment. REPI does this by promoting compatible development and protecting valuable habitat that supports unconstrained training, testing, and operations. In addition, REPI gives base commanders supportive tools through education, innovative strategies and pilot projects, and transfer of case studies addressing regulatory barriers to help increase their flexibility in meeting mission requirements.

It's important to note that encroachment is a critical challenge the DoD and Services face as they continue to train and prepare for our nation's defense, the REPI program benefits national defense and also environmental stewardship through resulting land conservation, and communities that have completed a JLUS can look for REPI opportunities to implement specific recommendations by working with the military installation.

Within the REPI Program is REPI Challenge, which allows outside entities to submit for REPI projects/funding and not through the traditional internal DoD REPI applicants. The focus for the 2022 REPI Challenge was on projects that promote land conservation or management activities that limit incompatible development, enhance military installation resilience to climate change and extreme weather events, or relieve current or anticipated environmental restrictions at locations hosting key capabilities of strategic importance to the DoD.

5.2.38.2. Roles and Responsibilities

Community Planner's Role. Work with military installations to support REPI initiatives that benefit the continued military mission and presence in the community.

Military Planner's Role. Identify REPI opportunities that meet the intent of the program and protect the installation military mission. Assess previous studies and reports including JLUS's to determine what opportunities may exist that could be supported with REPI resources. NC installations that have benefitted from REPI include Fort Bragg, Camp Lejeune, MCAS Cherry Point and Seymour Johnson AFB.

5.2.38.3. Implementation and Maintenance

Implementation. Access REPI opportunities annually in advance of the call for proposed initiatives by DOD. Engage with prospective partner organizations in advance to develop concept, roles, and plan of action.

Maintenance. See Implementation above.

5.2.38.4. Resources/References

- **DOD REPI.** <http://www.repi.mil/>

5.2.39.RC-4: Sentinel Landscapes Program

Primary responsibility: Local Military

5.2.39.1. Summary

The U.S. Departments of Agriculture (USDA), Defense (DoD), and the Interior (DOI) established the Sentinel Landscapes Partnership through a Memorandum of Understanding in 2013. The Partnership is a nationwide Federal, local and private collaboration dedicated to promoting natural resource sustainability and the preservation of agricultural and conservation land uses in areas surrounding military installations. Agencies from the three Departments coordinate the Partnership at the national level through the Sentinel Landscapes Federal Coordination Committee (FCC).

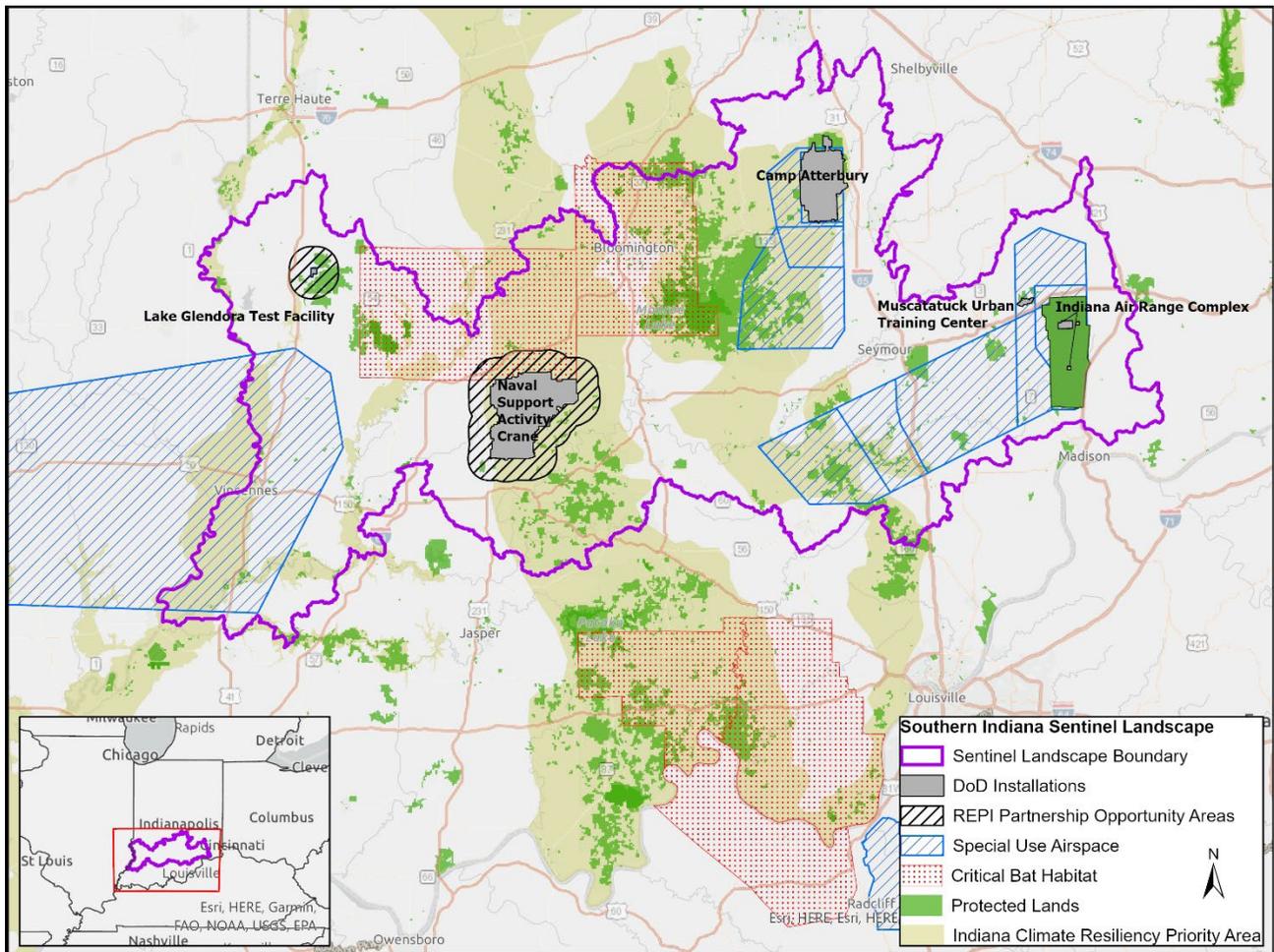
The Sentinel Landscapes Partnership seeks to recognize and incentivize landowners to continue maintaining these landscapes in ways that contribute to the nation's defense. Where shared interests can be identified within a Landscape, the Partnership coordinates mutually beneficial programs and strategies to preserve, enhance or protect habitat and working lands near military installations to reduce, prevent or eliminate restrictions due to incompatible development that inhibit military testing and training

Priorities, engagement, and accomplishments differ dramatically across the six Sentinel Landscapes. Despite these differences, all locations fulfill the three core requirements for a Sentinel Landscape as defined by the FCC. To become a Sentinel Landscape, the FCC requires that a proposed Landscape have:

- An anchor military installation with a military mission that benefits from compatible land uses outside of the installation's boundaries;
- A defined landscape associated with the anchor installation where Federal, state, local, and private programs and efforts can be coordinated to support voluntary conservation and landowner involvement; and
- Articulated goals and outcomes that promote and sustain compatible land uses for military operations while providing tangible benefits to conservation and working lands within the defined Landscape.

The Southern Indiana Sentinel Landscape, shown on the following page, is anchored by four critical DoD installations and ranges: Naval Support Activity Crane, the Lake Glendora Test Facility, Atterbury-Muscatatuck Training Center, and the Indiana Air Range Complex. These installations and ranges provide a variety of testing and training opportunities for the Army, Navy, Air Force, Marine Corps, National Guard, as well as federal and state partners. This vast landscape also contains six state parks, seven state forests, nine state fish and wildlife areas, 39 state-dedicated nature preserves, one National Forest, and three National Wildlife Refuges. With the primary objective of preserving and protecting military mission readiness, operations, testing and training capabilities, the Southern Indiana Sentinel Landscape partners, coordinated through the Indiana University Conservation Law Center, will also promote and support agricultural and working lands; provide for watershed and riparian corridor protections thus promoting landscape resiliency; sustain and restore forest lands through sustainable land management and protections; and ensure endangered, threatened and at-risk species protection through habitat preservation and restoration.

Indiana || Military Compatible Planning Advisory Handbook



Source: <https://sentinellandscapes.org/landscapes/southern-indiana/>

It's important to note the partnership highlights for the Southern Indiana Sentinel Landscape:

- **Sustainable Working Land for Habitat, Resilience, and Recreation:** Much of the land surrounding the Southern Indiana Sentinel Landscape installations is forested or agricultural. These natural and working lands provides an opportunity for partners and stakeholders to sustainably manage forests, build soil health and resiliency on agricultural lands, improve ecosystem health, and maintain areas compatible with the military mission. Within the first five years as a sentinel landscape, the Southern Indiana Sentinel Landscape aims to enhance forestland management including oak and hickory regeneration, reforestation projects, and invasive species removal; protect sensitive floodplains and wetland corridors; promote agricultural best management practices; and connect natural lands for habitat and recreation opportunities. Sustainable forestry and invasive plant removal projects decrease the likelihood of wildfires during drought conditions, while reforestation projects increase floodwater storage and reduce nutrient loads and sedimentation during heavy storms. In addition to improving landscape resiliency by maintaining and connecting healthy forests, the project also addresses habitat needs of the federally endangered Indiana bat, federally threatened northern long-eared bat, hellbender salamander, and neotropical

migratory songbirds among others. Combined, these efforts have the potential to mitigate the effects of existing encroachment threats or avoid them altogether.

- **Partnerships for Healthy Rivers and Watersheds:** Southern Indiana Sentinel Landscape partners are building on years of successful collaborations focused on river and watershed protection. Protecting and enhancing rivers and their watersheds further improves landscape resilience. The ongoing Healthy Rivers Initiative, managed by the Indiana Department of Natural Resources, is one of the largest land conservation initiatives ever undertaken in Indiana. Through this initiative, natural resource agencies and organizations work with willing landowners to permanently protect land located within the Muscatatuck River and Wabash River floodplains. Implementation of regional watershed management plans, state and federal wetland and waterway programs, and perpetual easement programs will allow for improved resiliency and encroachment protections. These projects involve the protection, restoration, and enhancement of riparian and aquatic habitats with a focus on the species of greatest conservation need, including threatened and endangered, and declining migratory birds and waterfowl. These initiatives also benefit the public and surrounding communities by providing flood protection to riparian landowners and increasing tourism and public access to recreational opportunities such as hunting, fishing, hiking, and bird watching. In addition, best management practices on agricultural lands reduces nutrient runoff and increase resilience to droughts and flooding. Working with existing partnership projects and other riparian and watershed initiatives, the Southern Indiana Sentinel Landscape aims to promote water conservation within wetlands and floodplains by providing watershed and riparian corridor protections and waterway and wetland restoration.

5.2.39.2. Roles and Responsibilities

Community Planner's Role. Identify Sentinel Landscape opportunities that meet the intent of the program as noted in the Key Issues above. Assess previous studies and reports including JLUS's to determine what opportunities may exist that could be supported with Sentinel Landscapes initiatives. The Southern Indiana Sentinel Landscape was established in 2022.

Military Planner's Role. Work with local partners to support Sentinel Landscape initiatives that benefit the continued military mission and presence in the community.

5.2.39.3. Implementation and Maintenance

Implementation. Access Sentinel Landscape opportunities annually in advance of the call for proposed initiatives. Engage with prospective partner organizations in advance to develop concept, roles and plan of action.

Maintenance. See Implementation above.

5.2.39.4. Resources/References

- **Southern Indiana Sentinel Landscape.** <https://sentinellandscapes.org/landscapes/southern-indiana/>

This page intentionally blank.



6 || Implementation Toolkit

Inside Chapter 6...

6.1. Introduction.....	6-2
6.2. Compatibility Case Studies	6-2
6.3. Communication Checklists and Worksheets.....	6-18
6.4. Consultation Guide.....	6-26

6.1. Introduction

This chapter is intended to assist with military compatibility planning and implementation, with information, coordination resources, and tools for county and municipality elected officials and planners, community members, and military planners to make informed compatibility decisions.

There are three main sections including five community case studies, communication checklists and worksheets, and a consultation guide. The case studies provide the varying levels of current compatibility planning and collaboration for Indiana communities and how they might develop effective solutions to address their unique compatibility challenges. The communication checklists and worksheets provide a step-by-step guide on considerations for conducting a compatible use study, creating, or amending a Comprehensive Plan and Zoning regulations for compatibility, and how to identify and evaluate development projects that may be a concern for the military for the purpose of coordination and notification. The consultation guide is organized by military installation and provides area maps and contact information for installations and their surrounding communities to support coordination.

Organized by major military installation, the Consultation Guide provides area maps and contact information for bases and local governments, followed by contacts for additional defense-related facilities, organizations, and other resources by topic.

6.2. Compatibility Case Studies

This Section contains five case studies describing compatibility planning and collaboration in action. They serve as examples of current compatibility between communities and the military in different scenarios and illustrate effective solutions that can be employed through successful partnering.

Case study examples in this section offer information for general reference purposes and do not represent universally applicable models. Policy language should always be specifically drafted for the individual community with respect to local needs in the public process.

Each of the five case studies focus on a different community-military relationship scenario:

- A defense community in proximity to a military installation with no planning mechanism (Greene County and NSA Crane)
- A defense community in proximity to a military installation with a planning and coordination mechanism (Miami County and Grissom ARB)
- A defense community in proximity to a military installation with joint use of a civilian airport (Vigo County and Indiana National Guard located the Terre Haute Reginal Airport)
- A defense community in proximity to a military installation with no air mission (Jennings County and the Indiana National Guard Muscatatuck Urban Training Center)
- A community with no proximate military installation but within an area of low-level military air operations (Town of Medora under multiple Military Training Routes)

6.2.1. CASE STUDY: GREENE COUNTY

Defense Community in Proximity to a Military Installation with no Planning Mechanism (Greene County and NSA Crane)

Greene County, located in southwestern Indiana, comprises 545.92 square miles of predominantly rural agricultural and forest land. Greene County is the northern border of Naval Support Activity (NSA) Crane which encompasses approximately 98 square miles. NSA Crane consists of heavily forested, undulating terrain traversed by 6 creeks, 124 miles of roadway, and 90 miles of rail line. The 800-acre Lake Greenwood reservoir is situated in the northwest portion of the installation with most facilities clustered in a “downtown” area south of the lake. Other key areas include 51,000 acres of ordnance storage (more than 80% of the installation), live fire and demolition ranges, and munitions testing and disposal areas. The Lake Glendora Test Facility, an integral part of NSA Crane, is located approximately 7 miles west of Greene County’s western boundary in Sullivan County.

NSA Crane’s primary mission is to enable and sustain readiness by providing consistent, standardized, and reliable support to its many tenant partners. The installation’s largest and most active tenants are Naval Surface Warfare Center Crane Division and Crane Army Ammunition Activity, with operations ranging from high-powered electromagnetic systems testing to explosives and ammunition disposal.

Compatibility issues identified in the NSA Crane Joint Land Use Study relevant to Greene County:

- Air Quality (potential future issue)
- Biological Resources
- Coordination / Communication
- Housing Availability
- Land Use
- Noise
- Resiliency
- Water Quality / Quantity (potential future issue)

Compatibility Status and Strategies

The following table outlines how Greene County has integrated compatibility into their local land use framework and processes and key opportunities and strategies for Greene County referenced in this Handbook.

Greene County Military Compatibility		
Compatibility Factor	Current Status	Handbook Strategies and Solutions
Air Quality (potential future issue)	Greene County is covered under the State of Indiana State Implementation Plan (SIP) revision including a Limited Maintenance Plan submitted to the EPA on April 25, 2019. The EPA approved the SIP on January 27, 2020.	No action recommended.
Biological Resources	<p>The Southern Indiana Sentinel Landscape was established in 2022 to address several encroachment challenges including incompatible development, declines in water quality, risks of drought and flooding, challenges to soil health and loss of prime soils, invasive species and threatened and endangered species habitat loss.</p> <p>The White River Military Coordination Alliance hosts a Conservation Incentive Toolkit to identify opportunities for land conservation in the communities that neighbor NSA Crane and Lake Glendora</p>	<p>Habitat Conservation Tools Develop a Conservation Plan for Indiana Bat and Northern Long-Eared Bat with US Fish and Wildlife Service, Indiana Department of Natural Resources and NSA Crane. Identify existing suitable habitat areas within a 10-mile radius of NSA Crane for preservation and to reduce potential impacts on future NSA Crane missions.</p> <p>Readiness and Environmental Protection Integration (REPI) Use the REPI program and funding to partner with conservation organizations and willing landowners to protect the Indiana bat</p>

<p>Biological Resources continued</p>	<p>Test Facility. It includes tools targeted for Landowners, Conservation Partners, and the public.</p>	<p>and Northern long-eared bat habitat within 10 miles of NSA Crane to safeguard mission capability at NSA Crane.</p> <p>Sentinel Landscapes Program Continue public education and seek public partnerships for the Southern Indiana Sentinel Landscape to address habitat needs of the Indiana bat and northern long-eared bat.</p>
<p>Coordination / Communication</p>	<p>Greene County is a member of the White River Military Coordination Alliance. whose focus is creating opportunities for economic prosperity and land conservation in the region, safeguarding NSA Crane’s military mission, and protecting community health and safety.</p> <p>The White River Military Coordination Alliance in partnership with NSA Crane has developed informational and educational brochures to enhance awareness and broaden the community understanding of value of NSA Crane, implemented a Communications Plan for public outreach and notifications.</p> <p>The White River Military Coordination Alliance developed the Conservation Land Conservation Mapping Toolkit for public inputs to Crane for issues including noise, land use or general comments.</p> <p>The Crane Regional Defense Group, a subcommittee of the White River Military Coordination Alliance, was established in 2020 as a citizen-led committee established through partnerships between chambers of commerce, county councils, financial institutions, and local business leaders. This grassroots effort expands community support and advocacy for NSA Crane at the local and federal level. The Group’s mission is to preserve the strategic value of NSA Crane by supporting local outreach and legislative initiatives that protect military installations in the region and state and leverage the installation’s potential to bring economic growth to Southern Indiana.</p> <p>The White River Military Coordination Alliance in partnership with NSA Crane, and including Greene County, have established Memorandums of Agreement (MOAs) for coordination. These MOAs include the MOA for ensuring community growth is compatible with and/or supports the military missions of NSA Crane and establishing effective and timely means of communication to coordinate and address mutual concerns</p>	<p>Community Engagement</p>

<p>Coordination / Communication continued</p>	<p>and issues, and the 911 MOA between emergency response entities to improve the safety and care of those on base and in the surrounding communities.</p>	
<p>Housing Availability</p>	<p>Need for high quality housing accommodations proximate to NSA Crane to attract and retain personnel in the local area.</p>	<p>Comprehensive Plan Update the Comprehensive Plan to incorporate a Housing Element with a vision, goals, and objectives that consider providing a variety of housing options to accommodate transient and permanent party military personnel.</p> <p>Implement the recommendations from the Indiana Uplands Regional Housing Study for Greene County.</p>
<p>Land Use</p>	<p>The Greene County Comprehensive Plan acknowledges NSA Crane and references supporting the needs of WestGate@Crane Technology Park through infrastructure extensions, establishment of a Tax Increment Finance (TIF) district to support future industrial and commercial development and enhancing local connectivity with trails linking WestGate@Crane Technology Park and the Town of Crane.</p> <p>Greene County has not adopted a Zoning Ordinance or Subdivision Regulations that could promote compatible development with NSA Crane.</p> <p>Greene County entered into a Memorandum of Agreement with NSA Crane in 2020 to implement coordination requirements of Indiana Code 36-7-30.1, to guide future coordination efforts with respect to land use between NSA Crane and the community.</p>	<p>Coordination Checklist Employ the Development Coordination Checklist for determining development applications that may be of interest to NSA Crane and that can be forwarded to the installation for review and comment.</p> <p>Use the Comprehensive Plan and Zoning Code Checklist for Military Compatibility in Chapter 6 – Implementation Toolkit, to identify and support growth at NSA Crane and the WestGate@Crane Technology Park such as providing a variety of housing options to accommodate transient and permanent personnel, services, and amenities.</p> <p>.</p> <p>Sentinel Landscapes Program and REPI Continue public education and seek public partnerships for the Southern Indiana Sentinel Landscape and REPI to address challenges of incompatible development by promoting and supporting agricultural and working lands.</p>
<p>Noise</p>	<p>Greene County residents may experience noise from NSA Crane testing activities.</p>	<p>Coordination Checklist Employ the Development Coordination Checklist for determining development applications that may be of interest to NSA Crane and that can be forwarded to the installation for review and comment.</p> <p>Real Estate Disclosure Consider a notice of potential military impacts on subdivision plats and real estate disclosures within high noise areas.</p>
<p>Resiliency</p>	<p>There is no current activity conducted by NSA Crane and/or Greene County to address installation and community resiliency from an all-hazards perspective.</p>	<p>Conduct an NSA Crane Military Installation Resiliency Study to understand resiliency vulnerabilities and challenges for the installation and surrounding community including implementation actions that NSA Crane, Greene County, and other jurisdictions and equity stakeholders can take to improve NSA Crane and community resiliency.</p>

<p>Water Quality / Quantity (potential future issue)</p>	<p>Future growth at NSA Crane presents an NSA Crane Wastewater infrastructure capacity and environmental compliance concern for continued service to the Town of Crane.</p> <p>Stormwater Runoff at Northern Boundary of NSA Crane. Concern for the quality of stormwater runoff flowing into NSA Crane from adjacent land uses along the northern boundary.</p>	<p>Memorandum of Understanding Design and develop a plan and use agreement for Greene County to provide wastewater treatment services to the Town of Crane.</p> <p>Zoning/Land Use Controls Consider adopting land use controls that stipulate low intensity land uses within the limited area of the Lake Greenwood Watershed to agriculture and residential uses.</p> <p>Consider adopting minimum lot sizes that conform to requirements for septic systems.</p>
---	--	--

6.2.2. CASE STUDY: Miami County, IN

Defense Community in Proximity to a Military Installation with a Planning and Coordination Mechanism (Miami County and Grissom ARB)

Miami County spans 377.39 square miles in north central Indiana and includes the City of Peru, the towns of Amboy, Bunker Hill, Converse, Denver, and Macy, and 28 unincorporated communities. Miami County is home to Grissom Air Reserve Base (ARB) located in the southwest portion of the county. Grissom ARB encompasses approximately 2.66 square miles in Miami and Cass Counties. The base is adjacent to the Grissom Aeroplex developed in 2008 on property exceded by the federal government and now managed by the Miami County Economic Development Authority.

The **434th Air Refueling Wing** (434 ARW) is the host unit at Grissom ARB, whose mission is to develop and maintain the operational capability of its units and train reservists for worldwide duty. Training consists of flight operations, deployments, and weekend training. Critical training and operational requirements are met through the aircraft and aviation facilities at Grissom ARB.

Compatibility factors identified in the Grissom ARB Joint Land Use Study relevant to Miami County:

Anti-Terrorism / Force Protection (35), Coordination / Communication (58), Energy Development (58), Infrastructure Extensions (172), Land Use (66), Legislative Initiatives (PF, 69), Light and Glare (124), Noise (101), Resiliency, Roadway Capacity (51), Safety Zones (132), Vertical Obstruction (B-8), and Water Quality / Quantity (176).

- Antiterrorism/ Force Protection
- Coordination / Communication
- Energy Development
- Infrastructure Extensions
- Land Use
- Light and Glare
- Noise
- Resiliency
- Roadway Capacity
- Safety Zones
- Vertical Obstructions
- Water Quality / Quantity

As a result of the lack of military compatibility, Coordination and Communication, Land Use, and Water Quality and Quantity are among compatibility issues that Miami County must address.

Compatibility Status and Strategies

The following table outlines how Miami County has integrated compatibility into their local land use framework and processes and key opportunities and strategies for Miami County referenced in this Handbook.

Miami County Military Compatibility		
Compatibility Factor	Current Status	Handbook Strategies and Solutions
<p>Coordination / Communication</p>	<p>Miami County is a member of the Grissom Regional Defense Alliance – a subcommittee of the Miami County Economic Development Authority (MCEDA) to enhance regional cooperation for continued defense growth and development in North Central Indiana. The Grissom Regional Defense Alliance serves as the civil advocate for continued defense growth both inside the current Grissom Air Reserve Base and outside at the Grissom Aeroplex.</p>	<p>Community Engagement Create and make available public engagement materials regarding federal requirements and FAQs related to the use of "drones" in the vicinity of Grissom ARB, links to FAA and other relevant federal agencies, and notification procedures to Grissom ARB for any noticed drone activity.</p> <p>Coordination Checklist Employ the Development Coordination Checklist for determining development applications that may be of interest to Grissom ARB and that can be forwarded to the base for review and comment.</p> <p>Development Review Consider creating a technical review committee/process to the Zoning Ordinance for conditional uses (see Conditional Use Permitting below) and having a representative from Grissom ARB sit on that technical review committee.</p> <p>Consider a pre-application meeting process for conditional use applications and include/invite a representative participant from Grissom ARB.</p> <p>Geographic Information Systems (GIS) Use GIS to update the zoning map. Ensure the map and any adopted overlay district is publicly available in hardcopy and electronically.</p> <p>Legislation Consider support for state legislation to require notification to Grissom ARB of planning actions in the area surrounding the base.</p> <p>Memorandum of Understanding (MOU) Develop a Memorandum of Understanding (MOU) between the local governments, Grissom ARB, and other key stakeholders, to guide future coordination efforts with respect to land use between the Grissom ARB and the community.</p> <p>Consider a Memorandum of Agreement (MOA) for notification of planning actions to Grissom ARB.</p>
<p>Energy Development</p>	<p>The Miami County Wind Energy Conversion Systems and Meteorological Towers Ordinance adopted in 2021</p>	<p>No action recommended.</p>

<p>Energy Development continued</p>	<p>requires notification and coordination with the Grissom ARB Installation Encroachment Management Team Coordinator. The Miami County Regulating Solar Energy Systems Ordinance adopted in 2021 requires notification and coordination with the Grissom ARB Installation Encroachment Management Team Coordinator.</p>	
<p>Infrastructure Extensions</p>	<p>INDOT coordinates with Miami County regarding potential improvements to US 31.</p>	<p>Zoning/Land Use Controls Consider the location and extent of potential INDOT improvements to US 31 in relationship to local development approvals and utility infrastructure locations by avoiding approval of structures that could increase or create incompatible land uses within the Grissom ARB impact areas.</p>
<p>Land Use</p>	<p>The Miami County Comprehensive Plan provides extensive background information on Grissom ARB (and the Grissom Aeroplex) as well as general land use policies related to Grissom ARB.</p> <p>The Miami County Zoning Ordinance does not acknowledge or include regulations related to Grissom ARB or military compatibility. The Zoning Ordinance and Map do not delineate military footprints outside Grissom ARB where military operations can impact the surrounding community.</p> <p>In the absence of regulations related to Grissom ARB or military compatibility, growth surrounding the installation can present future encroachment concerns.</p>	<p>Acquisition Consider land acquisition tools and partnerships to acquire land from willing sellers for the purpose of reducing potential development encroachment on Grissom ARB operations.</p> <p>Avigation Easements Consider a voluntary avigation easement program with willing landowners that grants the right of flight including the right to generate dust inherent in aircraft flight; and the right to restrict or prohibit lights, electromagnetic signals, and bird and wildlife attractants.</p> <p>Cluster Development Consider regulations to encourage or require cluster development to reduce areas impacted by military operations.</p> <p>Conditional Use Permitting Consider adding conditional uses/use process to Zoning Code for those uses that may impact military operations so that additional review and conditions may be considered for those developments.</p> <p>Military Influence Area Establish a Military Influence Area boundary comprising military operational footprints outside Grissom ARB where Zoning/Land Use Controls can be applied.</p> <p>Real Estate Disclosure Consider a notice of potential military impacts on subdivision plats and real estate disclosures within military influence areas.</p> <p>Zoning/Land Use Controls Consider the location and extent of potential INDOT improvements to US 31 in relationship to local development approvals and utility infrastructure locations by avoiding approval of structures that could increase or create incompatible land uses within the Grissom ARB impact areas.</p>

<p>Legislative Initiatives</p>	<p>Though Miami County requires coordination with Grissom ARB for certain types of development, there is no formal requirement for coordination of Comprehensive Plan amendments, rezonings, development applications</p>	<p>Legislation Consider support for state legislation to require notification to Grissom ARB of planning actions in the area surrounding the base.</p>
<p>Light and Glare</p>	<p>There are no outdoor lighting requirements in the Miami County Zoning Code.</p> <p>Coordination is required with the Grissom ARB Installation Encroachment Management Team Coordinator for solar energy projects.</p>	<p>Zoning/Land Use Controls Consider lighting regulations that require downward facing, fully shielding lighting and provisions for electronic billboard lighting to preserve the nighttime lighting conditions for military flight operations.</p> <p>Consider requiring a glare study for projects within visibility areas for Air Traffic Controllers to reduce the potential for glare.</p>
<p>Noise</p>	<p>There are no sound attenuation requirements in the Miami County Zoning Code for noise sensitive land uses within</p>	<p>Avigation Easements Consider a voluntary avigation easement program with willing landowners that grants the right of flight including the right to noise inherent in aircraft flight.</p> <p>Sound Attenuation Consider regulations that require sound attenuation in the construction of new noise sensitive land uses within high noise areas associated with Grissom ARB operations.</p> <p>Zoning/Land Use Controls Consider regulations to preclude noise sensitive land uses within high noise areas associated with Grissom ARB operations.</p>
<p>Resiliency</p>	<p>There is no current activity conducted by Grissom ARB and/or Miami County to address installation and community resiliency from an all-hazards perspective.</p>	<p>Conduct a Grissom ARB Military Installation Resiliency Study to understand resiliency vulnerabilities and challenges for the base and surrounding community including implementation actions that Grissom ARB, Miami County, and other equity stakeholders can take to improve Grissom ARB and community resiliency.</p>
<p>Vertical Obstruction</p>	<p>The Miami County Zoning Ordinance does not include regulations related to height of structures relative to the Code of Federal Regulations Part 77 Imaginary Surfaces surrounding Grissom ARB. The Zoning Map does not delineate imaginary surfaces to prevent the creation of vertical obstructions to safe pilot navigation.</p>	<p>Avigation Easements Consider a voluntary avigation easement program with willing landowners for the use of airspace above heights in compliance with Code of Federal Regulations Part 77.</p> <p>Zoning/Land Use Controls Update Zoning Ordinance to require coordination with Grissom ARB to ensure no interference with base flight operations and specifically Code of Federal Regulations Part 77.</p>
<p>Water Quality / Quantity</p>	<p>While stormwater causes minimal mission impacts at Grissom ARB today, occasional (i.e., every 3-5 years) flooding occurs in adjacent off-base areas because of the installation's stormwater management system.</p>	<p>Miami County and Grissom ARB should update the 2004 Stormwater Study by identifying any continued or new on-base stormwater constraints that could impact current for future missions and operations. This could be part of the Grissom ARB Installation Resiliency Study recommended above.</p>

6.2.3. CASE STUDY: Vigo County, IN

Defense Community in Proximity to a Military Installation with Joint Use of a Civilian Airport (Vigo County and Indiana National Guard located the Terre Haute Reginal Airport)

Vigo County comprises 410.45 square miles along the Indiana/Illinois border in the central part of the state. Vigo County is characterized by low hill country bisected by the Wabash River. While predominantly agricultural, the urban community of Terre Haute is a major population center in the county with a 2020 population of almost 60,000.

The Indiana National Guard Hulman Field is located at Terre Haute Regional Airport – a general aviation airport owned and operated by the Terre Haute Regional Airport Authority approximately six miles from the center of Terre Haute. The Indiana National Guard facilities are in the northeast portion of the airfield, surrounded by agricultural land use. The National Guard facility serves as the headquarters of the Indiana Air National Guard and its 181st Intelligence Wing, while the U.S. Air Force uses the facility for worldwide command and control of remotely piloted aircraft (RPA).

Compatibility factors relevant to Vigo County:

- Coordination / Communication
- Energy Development
- Land Use
- Resiliency
- Safety Zones

Compatibility Status and Strategies

The following table outlines how Vigo County has integrated compatibility into their local land use framework and processes and key opportunities and strategies for Vigo County referenced in this Handbook.

Vigo County Military Compatibility		
Compatibility Factor	Current Status	Handbook Strategies and Solutions
Coordination / Communication	The Unified Zoning Ordinance for Vigo County does not promote coordination with the Indiana National Guard for planning purposes; however, it does require coordination with the Terre Haute Regional Airport Authority for development within the Noise Overlay District.	<p>Coordination Checklist Employ the Development Coordination Checklist for determining development applications that may be of interest to the Indiana National Guard and that can be forwarded to the base for review and comment.</p> <p>Development Review Consider a pre-application meeting process for special exception applications and include/invite a representative participant from the Indiana National Guard.</p> <p>Compatible Use Study Consider conducting a Compatible Use Study to identify and analyze current and potential military and community compatibility issues and implementation actions to address them.</p>

<p>Coordination/Communication continued</p>		<p>Geographic Information Systems (GIS) Use GIS to update the zoning map with the overlay districts. Make the zoning map publicly available in hardcopy and electronically.</p> <p>Leadership Engagement Consider forming a regional alliance of leaders including Vigo County, City of Terre Haute, Indiana National Guard, Terre Haute Regional Airport Authority, and other equity stakeholders to coordinate long-term planning for mutually beneficial outcomes.</p> <p>Legislation Consider support for state legislation to require notification to Indiana National Guard of planning actions in the area surrounding the base.</p>
<p>Energy Development</p>	<p>Because there are no energy development ordinances in Vigo County, wind and solar energy developments could impact low-level flight, radars, and create frequency interference associated with Indiana National Guard and Terre Haute Regional Airport operations.</p>	<p>Zoning/Land Use Controls Consider adopting ordinances for wind energy and solar energy development siting that requires notification and coordination with the Indiana National Guard and Terre Haute Regional Airport Authority.</p>
<p>Land Use</p>	<p>The Thrive 2025: Terre Haute Vigo County Comprehensive Plan does not acknowledge the Indiana National Guard but does acknowledge the Terre Haute Regional Airport. It discourages development that would encroach on or interfere with airport operations as a matter of policy and recommends a Sub Area Plan for guiding development.</p> <p>Although the Indiana National Guard does not have aircraft stationed at Terre Haute Regional Airport, the Vigo County Zoning Ordinance has a Hulman Regional Airport Noise Overlay District (ANO) and Hulman Regional Airport Airspace Overlay District (AAO). These overlay districts include sound attenuation requirements and use regulations for noise, height regulations, regulations pertaining to smoke, dust, and particulate matter relative to aircraft operations, and outdoor lighting pertaining to glare.</p> <p>The Vigo County Hulman Regional Airport Airspace Overlay District (AAO) does not acknowledge or regulate uses within the Runway Protection Zones and</p>	<p>Acquisition Consider land acquisition tools and partnerships to acquire land from willing sellers for the purpose of reducing potential development encroachment around the Terre Haute Regional Airport.</p> <p>Avigation Easements Consider a voluntary avigation easement program with willing landowners that grants the right of flight including the right to generate dust inherent in aircraft flight; and the right to restrict or prohibit lights, electromagnetic signals, and bird and wildlife attractants.</p> <p>Cluster Development Consider regulations to encourage or require cluster development to reduce areas impacted by military operations.</p> <p>Compatible Use Study Consider conducting a Compatible Use Study to identify and analyze current and potential military and community compatibility issues and implementation actions to address them.</p> <p>Military Influence Area</p>

Indiana || Military Compatibility Handbook

<p>Land Use continued</p>	<p>they are not incorporated on the electronically online zoning map.</p>	<p>Establish a Military Influence Area boundary comprising military operational footprints outside Terre Haute Regional Airport where Zoning/Land Use Controls can be applied.</p> <p>Real Estate Disclosure Consider a notice of potential military impacts on subdivision plats and real estate disclosures within military influence areas.</p> <p>Zoning/Land Use Controls Update the overlay districts with specific provisions for how compliance with the imaginary surfaces is determined by county staff and the public.</p> <p>Update zoning map to ensure areas overlay district areas for the Terre Haute Regional Airport are available electronically.</p>
<p>Resiliency</p>	<p>There is no current activity conducted by the Indiana National Guard and/or Vigo County to address installation and community resiliency from an all-hazards perspective.</p>	<p>Conduct an Indiana National Guard Military Installation Resiliency Study to understand vulnerabilities and challenges for the base and surrounding community including implementation actions that the Indiana National Guard, Vigo County, City of Terre Haute, Terre Haute Regional Airport Authority, and other equity stakeholders can take to improve resiliency.</p>
<p>Safety Zones</p>	<p>The Vigo County Hulman Regional Airport Airspace Overlay District (AAO) does not acknowledge or regulate uses within the Runway Protection Zones and they are not incorporated on the electronically online zoning map.</p>	<p>Avigation Easements Consider a voluntary avigation easement program with willing landowners within the CZ that grants the right of flight including the right to prohibit structures or improvements other than low-growth vegetation.</p> <p>Deed Restrictions Consider a voluntary deed restriction program from willing landowners to extinguish development rights on private property within airfield safety zones.</p> <p>Zoning/Land Use Controls Update the airport overlay districts to add regulations for the Runway Protection Zones.</p>

6.2.4. CASE STUDY: Jennings County, IN

Defense Community in Proximity to a Military Installation with no Air Mission (Jennings County and the Indiana National Guard Muscatatuck Urban Training Center)

Jennings County spans 378.34 square miles in the southeastern part of the state, bordered by six (6) other counties: Decatur County to the north, Ripley and Jefferson Counties to the east and southeast, Scott County to the south, and Jackson County to the northwest. The county is predominantly rural with farms and woodlands. Within the County are the City of North Vernon, Town of Vernon, and 16 unincorporated communities.

Jennings County is home to the 1,000-acre Muscatatuck Urban Training Center (MUTC). The MUTC was established on the grounds of a former mental institution in 2005 as an integral component of Camp Atterbury, which is approximately 35 miles northwest of the MUTC. The Indiana National Guard leverages the institution’s extensive infrastructure to provide a globally unique, urban and rural, multi-domain operating environment that is recognized as the DOD’s largest urban training facility. MUTC is eager to work with local companies as a resource for training and partner in both commercial and military research and development.

MUTC is mostly surrounded by forested areas and agricultural land uses, including Brush Creek State Fish and Wildlife Area less than two miles to the northeast and the collocated Big Oaks Wildlife Refuge/Jefferson Proving Ground roughly three miles southeast. of MUTC and the Southern Purdue Agricultural Center is approximately a half mile south of MUTC and the unincorporated community of Butlerville is approximately a mile to the southeast.

Compatibility factors identified in the Camp Atterbury / Muscatatuck Urban Training Center Joint Land Use Study relevant to Jennings County:

- Coordination / Communication
- Land Use
- Resiliency
- Roadway Capacity

Compatibility Status and Strategies

The following table outlines how Jennings County has integrated compatibility into their local land use framework and processes and key opportunities and strategies for Jennings County referenced in this Handbook.

Jennings County Military Compatibility		
Compatibility Factor	Current Status	Handbook Strategies and Solutions
Coordination / Communication	<p>There is a need for enhanced public awareness of the MUTC mission, operations, and economic value.</p> <p>There is a need for enhanced coordination between the Indiana National Guard and community so that Jennings County and the Indiana National Guard can plan for and work collaboratively on win-win compatibility solutions.</p>	<p>Community Engagement Develop informational and educational brochures and an outreach program to broaden the community understanding of value of MUTC.</p> <p>Identify and use best methods of public outreach for notification when there are heightened periods of training activities at MUTC.</p> <p>Work with MUTC leadership to more clearly define, and publish, a formal grievance process for residents who wish to notify officials of recurring issues related to</p>

<p>Coordination/Communication continued</p>		<p>activities at the MUTC facility.</p> <p>Compatible Use Study Consider conducting a Compatible Use Study Update to engage the surrounding jurisdictions and the community to collaborate on identifying and analyzing current and potential military and community compatibility issues and implementation actions to address them.</p> <p>Coordination Checklist Employ the Development Coordination Checklist for determining development applications that may be of interest to the Indiana National Guard and that can be forwarded to the base for review and comment.</p> <p>Geographic Information Systems (GIS) Use GIS to update the zoning map with the overlay district areas. Make the map publicly available in hardcopy and electronically.</p> <p>Leadership Engagement Consider forming a regional alliance of leaders including Jennings County, City of North Vernon, Town of Vernon, Indiana National Guard, and the North Vernon Board of Aviation Commissioners, and other equity stakeholders to coordinate long-term planning for mutually beneficial outcomes.</p> <p>Legislation Consider support for state legislation to require notification to Indiana National Guard of planning actions in the area surrounding the base.</p>
<p>Land Use</p>	<p>The Jennings County Comprehensive Plan addresses land use issues related to military compatibility with MUTC, and the North Vernon Airport used by the Indiana National Guard. The Land Use chapter discusses fully integrating the MUTC into the local economy and defines a MUTC Compatible Use Area which includes background, key issues and trends, economic impacts, housing impacts, transportation impacts, and recommendations from the 2009 Joint Land Use Study to successfully achieve military compatibility with MUTC.</p> <p>The Jennings County Zoning Code provides regulations only related the North Vernon Airport.</p>	<p>Memorandum of Understanding (MOU) Develop a Memorandum of Understanding (MOU) between the local governments, Indiana National Guard, and other key stakeholders, to guide future coordination efforts with respect to land use between MUTC and the community.</p> <p>Consider a Memorandum of Agreement (MOA) for notification of planning actions to MUTC.</p> <p>Compatible Use Study Consider conducting a Compatible Use Study Update to identify and analyze current and potential military and community compatibility issues and implementation actions to address them.</p> <p>Military Influence Area Establish a Military Influence Area boundary comprising military operational footprints outside MUTC where Zoning/Land Use Controls can be applied.</p>

<p>Land Use continued</p>		<p>Real Estate Disclosure Consider a notice of potential military impacts on subdivision plats and real estate disclosures within military influence areas.</p> <p>Sentinel Landscapes Program Continue public education and seek public partnerships for the Southern Indiana Sentinel Landscape to address challenges of incompatible development by promoting and supporting agricultural and working lands.</p> <p>Zoning/Land Use Controls Update the Zoning Ordinance with appropriate compatibility regulations within the Military Influence Area to promote compatible development and continued quality of life for area residents.</p>
<p>Resiliency</p>	<p>There is no current activity conducted by the Indiana National Guard and/or Jennings County to address installation and community resiliency from an all-hazards perspective.</p>	<p>Conduct an Indiana National Guard Military Installation Resiliency Study to understand resiliency vulnerabilities and challenges for the base and surrounding community including implementation actions that the Indiana National Guard, Jennings County, City of North Vernon, Town of Vernon, North Vernon Board of Aviation Commissioners, and other equity stakeholders can take to improve Indiana National Guard Base, North Vernon Municipal Airport, and community resiliency.</p>
<p>Roadway Capacity</p>	<p>Concern with traffic impacts from the periodic closure of county roads surrounding MUTC, the impact of heavy convoy vehicles on roads, and accommodating local traffic during heavy training periods at MUTC.</p>	<p>Comprehensive Plan Assess ongoing impacts to local roads from additional traffic volumes and heavy equipment hauling related to convoy vehicles traversing through Jennings County. Incorporate the findings of the assessments in long range transportation plans with implementation actions including designated convoy routes, long-term transportation improvements, and budgeting for long-term maintenance needs on impacted roads.</p> <p>Consider developing a county road access plan to manage transportation issues when roads are closed due to MUTC exercises.</p>

6.2.5. CASE STUDY: Town of Medora, IN

Community with no Proximate Military Installation but within an Area of Low-Level Military Air Operations

The Town of Medora is in the southwest corner of Jackson County, Indiana, approximately 10 miles from Brownstown, the county seat of Jackson County. Medora has a total area of 0.3 square miles and a population of 635 according to the 2020 Decennial census, a decrease of 8% over the previous 10 years.

Though Medora is not geographically close to any military installations (the closest installations are NSA Crane approximately 30 miles to the west, Camp Atterbury approximately 37 miles to the north, and Muscatatuck UTC approximately 40 miles to the northeast), the Town is under four overlapping low-level Military Training Routes as shown in the table below. Within these routes, aircraft are authorized to fly as low 300 feet above ground level, and in some cases lower altitudes depending on meteorological conditions. While the special operating procedures for these routes stipulate, “avoid overflight of cities, towns, and villages to extent possible”, there may be instances where overflight occurs. The most common compatibility factor associated with aircraft overflight is noise and the most common impact from noise is quality of life. Because there are no military installations proximate to Medora, members of the community may not know the source of the low-level aircraft noise to reach out to with any concerns.

Military Training Routes over the Town of Medora

Route Name	Kind of Route	Minimum Altitude	Maximum Altitude	Route Width (Nautical Miles)	Controller	Controller Public Phone Number
IR-618	Slow Route	500 ft AGL to all segments ¹	From 3000 ft to 6000 ft MSL	7 to 12 NM	Atterbury ING	(812) 526-1114
VR-619	Visual Route	Variable segments starting at 300 ft AGL ²	From 3000 ft to 6000 ft MSL	7 to 12 NM	Jefferson Range	(812) 689-7295
VR-1679	Visual Route	Variable segments starting at 500 ft AGL ³	1500 ft AGL for all segments	9 to 14 NM	Atterbury ING	(812) 526-1114
VR-1631	Visual Route	Variable segments starting at 300 ft AGL ⁴	1500 ft AGL for all segments	8 NM for all segments	Wright-Patterson AFB	(937) 257-3551

Notes:

¹ Contour flying authorized for entire route in visual meteorological conditions

² Contour flying authorized for entire route in visual meteorological conditions

³ Terrain-following operations authorized for entire route

⁴ Terrain-following operations authorized for entire route

Compatibility Status and Strategies

The following table outlines how the Town of Medora has integrated compatibility into their local land use framework and processes and key opportunities and strategies for the Town of Medora referenced in this Handbook.

Town of Medora Military Compatibility		
Compatibility Factor	Current Status	Handbook Strategies and Solutions
<p>Noise</p>	<p>No acknowledgement of low-level overflight or land use restrictions in the Town code relative to noise sensitive land uses.</p>	<p>Because low-level overflight may be infrequent and the town is entirely within four overlapping Military Training Routes, it is impractical for the Town to adopt any land use restrictions that limit development of noise sensitive land uses.</p> <p>The solution for the Town of Medora is twofold:</p> <ul style="list-style-type: none"> ■ Access to this Handbook to understand the military operational areas affecting them and the source of those activities ■ Accessibility to contact information for the military installations that control use of the low-level airspace overhead

6.3. Communication Checklists and Worksheets

The following checklists/worksheets address some of the general considerations, steps, data, and documents that apply to conducting a compatible use study, incorporating military compatibility in Comprehensive Plans and Zoning Codes, and notification to the military of types of development projects that may be a concern for military planners. The checklists are based on best practices from other states and projects, and types of compatibility impacts, such as land use, noise, frequency spectrum interference, and vertical obstructions, from Department of Defense land use guidance and instruction.

The checklists can assist counties and municipalities, developers, residents, and the military with enhancing awareness, mitigation or prevention, and coordination to prevent incompatible development with military installations and their surrounding communities. These checklists are not intended to be a mechanism to approve or deny development but rather for informational purposes.

Compatible Use Study Checklist

Preparing for a Compatible Use Study

1A	Conduct preliminary consultation between stakeholders, including governmental parties like units of local/regional/tribal government, and an authorized military representative.	<input type="checkbox"/>
1B	Identify affected areas to delineate study area.	<input type="checkbox"/>
1C	Identify affected residents, businesses, military services, governments, and other stakeholders.	<input type="checkbox"/>
1D	Identify the purpose for considering (or initiating) joint-planning effort.	<input type="checkbox"/>
1E	Review the military mission, role, features, activities, and area(s) of influence on land, sea, air, and other resources or systems (such as telecommunications, navigation systems, transportation systems, etc.)	<input type="checkbox"/>
1F	Identify and review applicable local/regional planning documents, and available installation plans or studies.	<input type="checkbox"/>
1G	Review relevant state/federal regulations.	<input type="checkbox"/>
1H	Inventory land uses near the military installation or range.	<input type="checkbox"/>
1I	Identify impacts and set preliminary goals.	<input type="checkbox"/>

Formal Compatible Use Study Initiation

2A	Prepare a memorandum of agreement and/or charter for units of government or others with roles of formal contribution and responsibility in the compatibility project.	<input type="checkbox"/>
2B	Identify stakeholder committees (policy and technical) to guide the project.	<input type="checkbox"/>
2C	Prepare a communication and public participation plan.	<input type="checkbox"/>
2D	Set a timeline and identify funding for staff, outreach, and planning activities.	<input type="checkbox"/>
2E	Prepare a project proposal and project work plan for the compatibility study.	<input type="checkbox"/>

Example Compatible Use Study Data Products

3A	Map(s) showing administrative boundaries, military base or range features, and indicated compatibility interest-areas.	<input type="checkbox"/>
3B	Map(s) and/or model(s) showing applicable traffic patterns (land, airspace, and/or waterways).	<input type="checkbox"/>
3C	Map(s) and/or model(s) of noise impacts.	<input type="checkbox"/>
3D	Map(s) and/or model(s) of impacts.	<input type="checkbox"/>
3E	Analysis of identified impacts.	<input type="checkbox"/>

Example Compatible Use Study Deliverables

4A	Policy recommendations to reduce impact/improve compatibility.	<input type="checkbox"/>
4B	Implementation plan to review, select, and adopt policy recommendations in the comprehensive plan and development regulations as part of the update process.	<input type="checkbox"/>
4C	Evaluation and update plan or strategy to monitor/update compatibility initiatives.	<input type="checkbox"/>
4D	Other tools as required by the project.	<input type="checkbox"/>

Comprehensive Plan and Zoning Code Checklist for Military Compatibility

Identification of Community Applicability

- 1A Is the county or municipality identified in an Air Installation Compatible Use Zone (AICUZ) study? Yes No
If YES, proceed to 2A.

- 1B Is the county or municipality identified in a Compatible Use Study (or Joint Land Use Study)? Yes No
If YES, proceed to 2A.

- 1C Is the county or municipality within 3-miles of a military installation, military range, or military-use civilian airport? Yes No
If YES, proceed to 2A.

Military Compatibility in Comprehensive Plans

- 2A Does the county or municipality have a Comprehensive Plan? Yes No
If YES, proceed to 2B.
If NO, consider developing a Comprehensive Plan containing policies, land use designations, and consistent zoning to discourage the siting of incompatible uses adjacent to the military installation, military range, or military-use civilian airport.

- 2B Does the Comprehensive Plan include policies and land use designations to discourage the siting of incompatible uses adjacent to the military installation, military range, or military-use civilian airport? Yes No
If YES, proceed to 2C.
If NO, proceed to 2D.

- 2C Are there changes needed to the current policies and land use designations to discourage the siting of incompatible uses? Yes No
If YES, identify and assess appropriate changes to policy and land use designations. Inform and coordinate with the commander of the military installation, military range, or military-use civilian airport and the airport manager regarding proposed amendments to the Comprehensive Plan.

- 2D Has a review of current or potential compatibility concerns been conducted and coordinated with the commander of the military installation, military range, or military-use civilian airport and the airport manager? Yes No
If YES, implement applicable changes to the Comprehensive Plan. Proceed to 3A.
If NO, identify and assess appropriate policies and land use designations to discourage the siting of incompatible uses adjacent to the military installation, military range, or military-use civilian airport. Inform and coordinate with the commander of the military installation, military range, or military-use civilian airport and the airport manager regarding intent to adopt a Comprehensive Plan. Proceed to 2A.

Military Compatibility in Zoning Code

- 3A Does the county or municipality have a Zoning Code? Yes No
If YES, proceed to 3B.
If NO, consider adopting a Zoning Code that includes regulations, zoning overlay districts, zoning maps, with online public access to this information to prevent the siting of incompatible uses adjacent to the military installation, military range, or military-use civilian airport and maximize public access and awareness.

Military Compatibility in Zoning Code continued

- | | | |
|----|---|--|
| 3B | Does the Zoning Code include regulations, in an overlay district or otherwise, to prevent the siting of incompatible uses adjacent to the military installation, military range, or military-use civilian airport?
If NO , consider adopting regulations, in an overlay district or otherwise, and corresponding maps to prevent the siting of incompatible uses including, as appropriate, formalized coordination with the military, land uses, residential density, height restrictions, outdoor lighting, noxious pollution, renewable energy, stormwater management, and subdivisions. | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 3D | Is the Zoning Code publicly accessible online including searchable regulations, zoning overlay district, as applicable, and maps depicting areas where compatibility regulations apply?
If NO , consider publishing this information online to maximize public access and awareness. | <input type="checkbox"/> Yes <input type="checkbox"/> No |

Indiana || Military Compatibility Handbook

Military Compatibility Development Coordination Checklist

Amendments to a Comprehensive Plan or Zoning Code Regulations

1A	Has the installation commander been notified of the intent to amend the Comprehensive Plan, Zoning Code regulations, or building codes for land adjacent to the military installation, military range, or military-use civilian airfield?	<input type="checkbox"/> Yes <input type="checkbox"/> No
1B	Has a request been made for the installation commander to provide a written recommendation and supporting facts relating to land use in the area addressed by the proposed amendment?	<input type="checkbox"/> Yes <input type="checkbox"/> No
1C	Has a timeframe been established and communicated for a response from the installation commander to the requesting government?	<input type="checkbox"/> Yes <input type="checkbox"/> No
1D	Has the commander been notified that a response is not received within a specified timeframe that the local government may presume implementation of the proposal will not adversely affect the installation?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Land Use

1A	Is the planning action within a 3-mile Coordination Area or other defined State Area of Interest Military Installation Area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
1B	Does the planning action propose to:	
	Change the zoning map?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Change permitted use of land?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Construct a telecommunications tower, windmill, wind farm or other type of tall structure?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Approve new major subdivision preliminary plats?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Plan or regulate the use, improvement, and maintenance of real property?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Plan or regulate the location, condition, and maintenance of structures and other improvements?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Regulate the platting and subdividing of real property located within three (3) miles of the perimeter of a military base?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Involve a request for tax abatement?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Change regulations or plans?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Expand public facilities?	<input type="checkbox"/> Yes <input type="checkbox"/> No
1C	If yes to any of the above in 1B, has the public hearing been scheduled?	<input type="checkbox"/> Yes <input type="checkbox"/> No
1D	Has written notice of the proposed action been sent to the military installation by certified mail or by institutionalized process agreed to by the community and military?	<input type="checkbox"/> Yes <input type="checkbox"/> No
1E	Has a response been received from the military installation on the proposed planning action?	<input type="checkbox"/> Yes <input type="checkbox"/> No
1F	For planning actions, such as new development and redevelopment OTHER than those listed in 1B, is it within any of the following areas?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Clear Zone?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Accident Potential Zone I?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Accident Potential Zone II?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Within Noise Contours or Noise Complaint Risk Zone (if Yes, see Noise Section)	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Under a Military Training Route?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Under an airspace Restricted Area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Under a Military Operations Area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	High Risk of Adverse Impact Zone?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Range Compatible Use Zone?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Surface Danger Zone	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Explosive Safety Quantity Distance Arcs?	<input type="checkbox"/> Yes <input type="checkbox"/> No

	Military Compatibility Area Footprint?	<input type="checkbox"/> Yes <input type="checkbox"/> No
1G	Does the development propose:	
	Any impacts that might interfere with safe pilot navigation?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Any unique electrical requirements that may create interference with navigational signals or radio communications between an aircraft and air traffic control or military radar line-of-sight requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Any unique lighting requirements or lack of requirements that may make it difficult for pilots using an airport to distinguish airport lights from other lights?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Any unique lighting requirements that could interfere with the effective use of night vision goggles?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Generate smoke, fumed or glare that can impact pilot visibility during take offs or landings?	<input type="checkbox"/> Yes <input type="checkbox"/> No
1H	For development within the areas listed in 1G, has the military been notified of the intent to take action, prior to a decision?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Noise

2A	Is the proposed planning action located:	
	Within the 65-69 dB Noise Contour?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Within the 70-74 dB Noise Contour?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Within the 75 or greater Noise Contour?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Within a PK15 Peak Noise Complaint Risk Area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Under a Military Training Route?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Under an airspace Restricted Area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Under a Military Operations Area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Within a Range Compatible Use Zone?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2B	Does the planning action include the development of noise-sensitive land uses such a residential use, schools, hospitals, daycares, senior living facilities or other uses where people congregate such as a place of worship?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2C	Is the planning action within a Noise Overlay District per local codes or military noise operational footprint?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2D	Does the proposed planning action conform to the land use compatibility guidance in local codes or recommended by the DoD?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2E	If not mandated by local codes, does the planning action include noise level reduction measures in new construction to achieve recommended indoor noise levels?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Vertical Obstructions

3A	Does the planning action include the construction of a:	
	Structure?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Tower?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Windmill? (Single)	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Windmill array? (More than one)	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Temporary structure such as a construction crane?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Amusement Park rides?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Other?	<input type="checkbox"/> Yes <input type="checkbox"/> No
3B	Is the structure located within any of the following?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Approach and Departure Clearance Surface? (Imaginary Surface)	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Inner Horizontal Surface? (Imaginary Surface)	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Conical Surface? (Imaginary Surface)	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Outer Horizontal Surface? (Imaginary Surface)	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Transitional Surface? (Imaginary Surface)	<input type="checkbox"/> Yes <input type="checkbox"/> No

Indiana || Military Compatibility Handbook

	Military Training Route?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Restricted Area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Military Operations Area?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	High Risk of Adverse Impact Zone?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	FAA Part 77 Obstruction Evaluation AREA?	<input type="checkbox"/> Yes <input type="checkbox"/> No
3C	What is the maximum height of the structure?	____ Ft. AGL
3D	If the structure is located within a Military Training Route, Restricted Area, or Military Operations Area, what is the minimum altitude for aircraft in that airspace?	____ Ft. AGL
3E	What is the proposed frequency usage of the structure, if any?	_____
3F	Has the proposed frequency changed since review and approval by the State and FAA? <i>If yes, notify the impacted military installation prior to permit issuance.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
3G	Is the structure within a 3-mile Coordination Area surrounding a military installation? <i>If yes, complete checklist steps 1B through 1F.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
3H	Has the application for the permit received a Federal Aviation Administration Obstruction Evaluation?	<input type="checkbox"/> Yes <input type="checkbox"/> No
3I	If the FAA determination is included with the permit application, is it a Determination of No Hazard to Air Navigation?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Additional Renewable Energy Project Siting Guidance

Some renewable energy projects and energy conveyance systems may pose risks for pilot safety, navigation, radar, and communications including wind turbines, solar arrays, geothermal production facilities, and transmission lines. Consultation should start locally with the military installation early in project planning.

Frequently Asked Questions

Who should consult with the Department of Defense, and when?

Developers, permitting agencies, project proponents, and developments involving foreign investment/developers, are encouraged to begin consulting with the Department of Defense about potential renewable energy projects as early in the planning process as possible. Project proponents can include private developers, landowners, public officials, energy/utility organizations, Indian tribes, and county and municipal governments.

How early should preliminary consultation occur?

It is ideal to consult with the Department of Defense before applying to county and municipal governments to ensure potential impacts are addressed as early as possible in a project planning stage. Consultation even as early as initial project concept helps renewable energy proponents and developers plan around avoidable issues before large investment of interest, time, and money.

Will early consultation with the DOD satisfy legal requirements for notification or consultation?

Early consultation does not replace the Federal Aviation Administration's (FAA) Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) filing process or other legally required consultation procedures. Instead, early consultation is a means to coordinate project reviews with the goal of reaching a mutually agreeable proposal. This often includes a letter from the military memorializing agreements and support of a project from a military stakeholder perspective.

Two sources of information on renewable energy siting are the FAA for the OE/AAA process:

<https://oeaaa.faa.gov/oeaaa/external/portal.jsp>; and the Department of Defense Military Aviation and Installation Assurance Siting Clearinghouse: www.acq.osd.mil/dodsc/

Is consultation confidential?

When consulting with the Department of Defense, indicate that a request for consultation or review is “proprietary” or “business sensitive” if applicable.

Why consult so early?

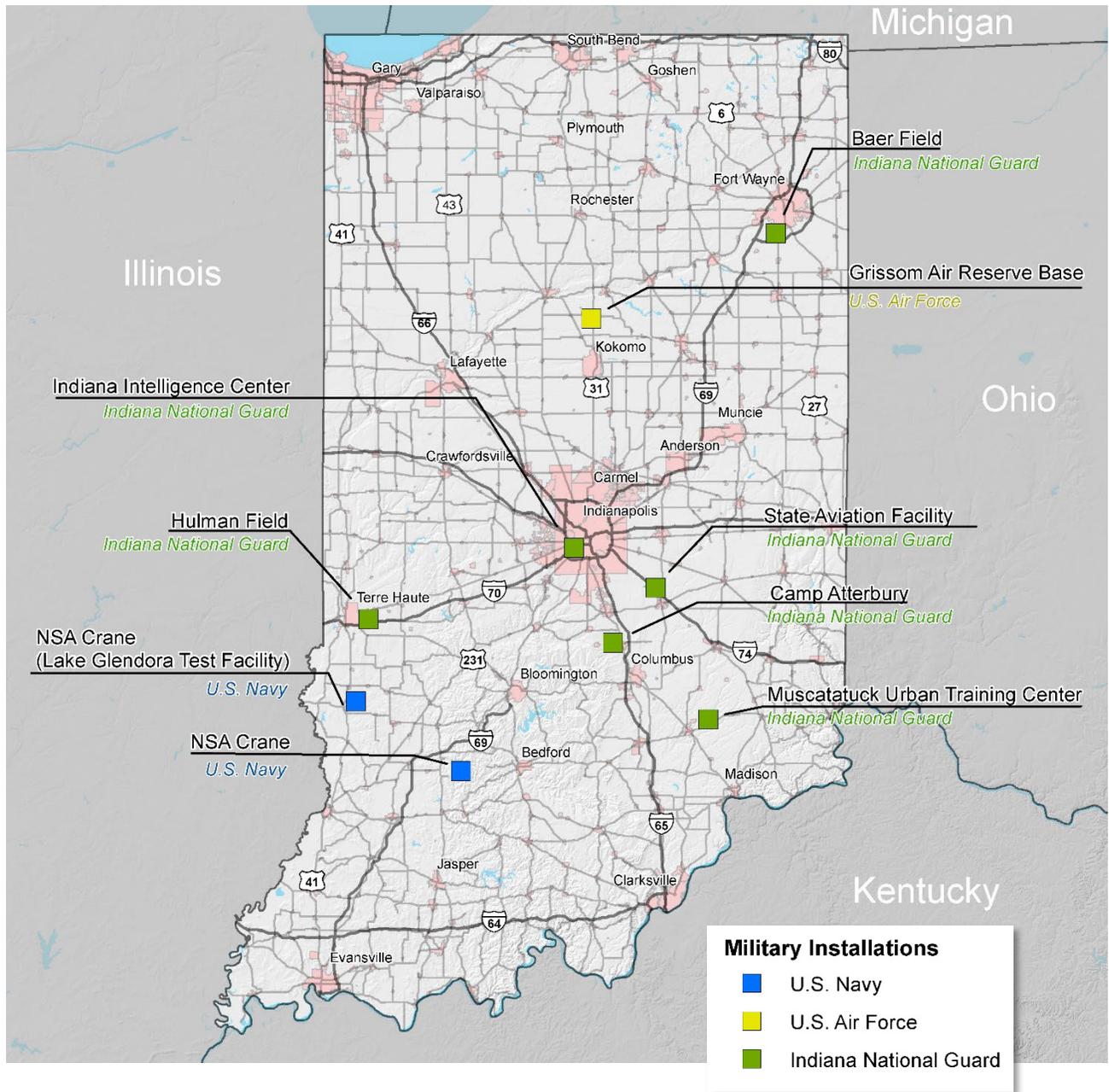
Preliminary consultation minimizes the risk of late-stage delays caused by conflicts that might be avoidable through early information exchange in concept and planning phases. Early consultation (before project permitting) is not required but is strongly advised prior to committing significant financial or political investment in a project. Coordination ideally results in a project that preserves the integrity of military training areas and the safety of those using them while supporting goals related to energy and economic development. Early consultation offers the greatest chance to identify and work together around findings that may pose civilian or military safety risks.

What are the steps for early consultation with the military?

1. Start early consultation with a local inquiry to a military installation command representative.
2. Discuss the development concept with the military representative to identify potential concerns and work to achieve mutually agreeable solutions where needed.

6.4. Consultation Guide

This Consultation Guide provides helpful contacts to support civilian-military communication and coordination for the military installations provided on the statewide map below. Contact information in this guide includes maps for general reference and military and local government contacts surrounding each major installation as a helpful resource.



Consultation Guide Orientation

The Consultation Guide begins with a listing of federal and state resources, followed by general resources applicable statewide organized by topic, and then resources for each military installation. For each Indiana military installation, there is a map identifying the installation with their respective surrounding jurisdictions (counties, cities, and towns). Following each map is a list of contacts for general reference. Contact information for the installations, counties, cities, and towns, and other resource organizations by topic, are listed, including their main website, address, and relevant phone numbers (as available). The list of phone numbers serves to help facilitate coordination with community concerns and planning questions between the public and the military.

For questions about a military base or compatibility issue, it is recommended to start by calling the Public Affairs Office. This office fields calls from the public and can either answer question(s) or direct you to the person, group, or organization that can. For questions regarding land use outside an installation, contacting the respective local government planning or community development offices is recommended. For questions not pertaining to land use or permitting, calling the main line is recommended. If a main line is not provided in the list of contacts, contact the county supervisor or city/town mayor, and explain what you need so that they can direct you to the appropriate resource.

Indiana || Military Compatibility Handbook

6.4.3. Baer Field

The Indiana Air National Guard Base at Baer Field, is located at the Fort Wayne International Airport, approximately seven miles south-southwest of the Fort Wayne city center in northeast Indiana. Established as an Army Air Force training facility in 1941, the airfield was largely given over to civil control after World War II, with the Air Force maintaining jurisdiction over a small section of the airport for reserve training and Air National Guard use. The base now encompasses approximately 111 acres at the eastern end of the airport. Of the land used by the Indiana National Guard, 28 acres is owned by the State with the remainder leased from the Fort Wayne-Alten County Airport Authority.

Baer Field Counties: Allen, Wells.
Baer Field Cities/towns: Fort Wayne, Ossian, Zanesville.

Indiana || Military Compatibility Handbook

Baer Field (122nd Fighter Wing)	https://www.221wawg.af.mil/ 3306 W Ferguson Rd, Fort Wayne, IN 46809 Automated Base Directory (260)478-3210 Base Exchange (260)478-7637 Fire and Emergency Services (260)478-3283 Public Affairs Office (260)478-3374 Security Forces (260)478-3234	Ossian Town Hall (260)622-4261 Town Manager (260)622-4261 Police Department (260)622-7519 Fire Department (260)622-4625
Fort Wayne International Airport	https://fwairport.com/ 3801 W Ferguson Rd, Fort Wayne, IN 46806 Main Line (260)747-4146	Town of Zanesville No Website 17736 Wayne Street, Zanesville, Indiana, 46799 Town Office (260)638-0261
Allen County	https://www.allencounty.us/ 710 S Calhoun St, Fort Wayne, IN 46802 Assessor (260)449-7123 County Council (260)449-7241 Environmental Management (260)449-7636 Planning Services (260)449-7637 Board of Commissioners (260)449-7555 Sheriff Department (260)449-3200 Parks and Recreation (260)449-5777 Treasurer (260)449-7683	
Wells County	https://www.wellscounty.org/ 112 W Market St, Bluffton, IN 46714 Assessor (260)824-6476 County Council (260)824-6470 Circuit Court Clerks Office (260)824-6478 Emergency Management Office (260)824-6433 Plan Commission (260)824-6937 Sheriff's Dept / Jail (260)824-3426 Treasurer (260)824-9512	
City of Fort Wayne	https://www.ci.fortwayne.in.us/ 200 East Berry St., Fort Wayne, IN 46822 Main Line (260)427-8311 City Clerk and City Council (260)427-1091 Community Development Division (260)427-1127 Fire Department (260)427-1478 Public Works Director (260)427-1172 Police Department (260)427-1222	
Town of Ossian	http://www.ossian.in.us/ 537 N Jefferson St, Ossian, IN 46777	

6-28 Implementation Toolkit
6-28 Implementation Toolkit

6.4.1. Federal and State Contacts

Federal Aviation Administration (FAA)

https://www.faa.gov/about/office_org/field_offices/fsdo/?state=IN
www.faa.gov/airports/environmental

Flight Standards District Office, 1201 Columbia Road, Suite 101, Plainfield, IN 46168
Airport Environmental Programs, 800 Independence Ave SW, Washington, DC 20591
Flight Standards District Office (317) 837-4400
Airport Environmental Programs (866) 835-5322

National Oceanic and Atmospheric Administration

NOAA Central Region Collaboration Team (Central and South Indiana)
<https://www.noaa.gov/regional-collaboration-network/regions-central>
Regional Team Coordinator (816) 830-1437
NOAA Great Lakes Region Collaboration Team (Northern Indiana)
<https://www.noaa.gov/regional-collaboration-network/regions-great-lakes>
4840 South State Road, Ann Arbor, MI, 48108
Office (734) 315-0577

Midwestern Regional Climate Center (Partnership between National Centers for Environmental Information and Purdue University)

<https://mrcc.purdue.edu/>
915 West State Street, West Lafayette, IN 47907
Service Office (765) 494-6574

Indiana State Department of Transportation Aviation Division

<https://www.in.gov/indot/multimodal/aviation/>
100 N. Senate Ave., IGCN 758-MM
Indianapolis, IN 46204
Aviation Program Manager (317) 495-4875
UAS Program Manager (317) 677-4071

6.4.2. Resources by Topic

This section contains additional contacts for statewide governmental entities, associations, and governmental research resources that may be useful for policy and planning interests, organized according to the following:

- Agriculture
- Civilian-Military Partnering Organizations
- Economic Development and Commerce
- Education
- Emergency Management
- Environment, Lands, Water, and Shorelines
- Governmental Research and Planning
- Housing and Real Estate
- Infrastructure, Energy, and Public Utilities
- Regional Councils of Government
- Transportation
- Tribal Government
- Indiana State Legislative Resources

Indiana || Military Compatibility Handbook

Agriculture

American Farmland Trust (AFT)

1200 18th St NW, Washington, DC 20036
202-331-7300
www.farmland.org

Indiana Farm Bureau

225 South East Street, Indianapolis, IN 46202
800-327-6287
<https://www.infarmbureau.org/>

Indiana State Department of Agriculture

One North Capitol Avenue, Suite 600, Indianapolis, IN 46204
317.232.8770
<https://www.in.gov/isda/>

Purdue University Department of Agriculture, County Extension Program

615 West State Street, West Lafayette, IN 47906
765-494-8491
<https://extension.purdue.edu/about/county-office.html>

U.S. Department of Agriculture (USDA)

Headquarters, 1400 Independence Ave SW,
Washington, DC 20250
202-720-2791
www.usda.gov

U.S. Department of Agriculture (USDA), Farm Service Agency, Indiana State Office

5981 Lakeside Boulevard, Indianapolis, IN 46278
317-290-3315
<https://www.fsa.usda.gov/state-offices/Indiana/index>

Civilian-Military Partnering Organizations

DoD Office of Local Defense Community Cooperation

2231 Crystal Drive, Suite 520, Arlington, VA 22202
703-697-2130
<https://oldcc.gov/>

Grissom Regional Defense Alliance

1525 W Hoosier Blvd, Peru, IN 46970
765-689-0159
<https://grissomrda.com/>

National Defense Industry Association – Greater Indiana

<https://www.ndiaindiana.com/>

White River Military Coordination Alliance

<https://wrmcalliance.com>

Economic Development and Commerce

Crane Regional Defense Group

812-277-9778
<https://www.craneregionaldefensegroup.org/>

East Gate Business and Technology Center, Lawrence County Economic Growth Council

1116 16th St., Bedford, IN 47421
812-275-4493
<https://lawrencecountygrowth.com/launch-here/key-industries>

Grissom Aeroplex

1525 W. Hoosier Blvd., Suite 201, Peru, IN 46970
765-689-0159
<http://www.miamicountyeda.com/grissom-aeroplex/about-grissom-aeroplex.php>

Indiana Chamber of Commerce

115 West Washington St., Suite 850S, Indianapolis, IN 46204
317-264-3110
<https://www.indianachamber.com/>

Indiana Defense Network

<https://bestindefense.org/>

Indiana Economic Development Association

125 West Market Street, Suite 300, Indianapolis, IN 46204
317-454-7013
<https://www.ieda.org/>

Indiana Economic Development Corporation

1 North Capitol Ave, Suite 700, Indianapolis, IN 46204
317-232-8800
<https://www.iedc.in.gov>

Indiana Economic Development Corporation – Defense Development

1 North Capitol Ave, Suite 700, Indianapolis, IN 46204

317-232-8800

<https://www.iedc.in.gov/industries/defense-and-national-security>

Indiana Economic Development Corporation – Regional Economic Acceleration and Development Initiative

<https://www.iedc.in.gov/program/indiana-readi/overview#skip-header>

<https://www.iedc.in.gov/program/indiana-readi/regions#skip-header>

Note: Web link above lists contact information by participating region.

Indiana Innovation Institute

2719 E. 10th Street, Room 114, Bloomington, IN 47408
812-758-4338

<https://in3indiana.com/>

Indiana Office of Community and Rural Affairs

One North Capitol, Suite 600 Indianapolis, IN 46204-2027

317-233-3762

<https://www.in.gov/ocra/>

Indiana Office of Energy Development

One North Capital Avenue, Suite 900
Indianapolis, IN 46204

www.in.gov/oed

Indiana Procurement Technical Assistance Center (PTAC)

<https://indianaptac.com/>

<https://indianaptac.com/locations/>

Note: Web link above is to a list of regional PTAC offices that serve all 92 Indiana counties including points of contact.

Local Economic Development Organizations (LEDO)

https://www.iedc.in.gov/docs/default-source/iedc-assets/ledo-list.pdf?sfvrsn=c0ca43d1_58

Note: Web link above is to a comprehensive list of LEDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

North Central Indiana Economic Development Partnership

<https://www.nciedp.com/>

<https://www.nciedp.com/the-region#CONTACTUS>

Note: Web link above lists contact information for each county member of the partnership including Cass, Clinton, Fulton, Howard, and Miami counties.

Radius Indiana

1504 I Street, Bedford, IN 47421

812-277-9778

<https://radiusindiana.com/major-industries/#defense>

Regional Economic Development Organizations (REDO)

https://iedc.in.gov/docs/default-source/iedc-assets/redo_map.pdf

Note: Web link above is to a comprehensive list of REDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Regional Opportunity Initiatives, Inc.

100 S. College Avenue, Suite 240, Bloomington, IN 47404

812-287-8116

<https://regionalopportunityinc.org/>

Southern Indiana Defense Industry Network

440 Fifth Street, Columbus, IN 47201

<https://southernindefense.com/>

Southern Indiana Development Commission

405 JFK Avenue, Suite A, P.O. Box 442, Loogootee, IN 47553

812-295-3707

<https://www.sidc.cc/>

U.S. Department of Agriculture (USDA)

Rural Development State Office

5975 Lakeside Boulevard, Indianapolis, Indiana 46278-1996

317-290-3100

<https://www.rd.usda.gov/in>

WestGate@Crane Technology Park

13598 E. WestGate Drive, Odon, Indiana 47562

812-863-4080

<https://westgatecrane.com/>

Education

DOD Education Activity (DODEA) Partnership Educational Partnership Branch, Department of Defense Education Activity

Indiana || Military Compatibility Handbook

4800 Mark Center Drive, Alexandria, VA 22350-1400
571-372-6026

www.dodea.edu/Partnership

Indiana Department of Education

100 N Senate Ave 9th Floor, Indianapolis, IN 46204
317-232-6610

<https://www.in.gov/doi/>

Indiana University Center for Rural Engagement

750 E Kirkwood Ave, Bloomington, Indiana, 47405
812-855-0568

<https://rural.indiana.edu/index.html>

Regional Opportunity Initiatives, Inc.

100 S. College Avenue, Suite 240, Bloomington, IN
47404

812-287-8116

<https://regionalopportunityinc.org/>

Emergency Management

Emergency Management Alliance of Indiana

<http://indianaema.org/>

Indiana Department of Homeland Security (IDHS) – Emergency Management and Preparedness Division

317-232-2222

<https://www.in.gov/dhs/emergency-management-and-preparedness/division/>

<https://www.in.gov/dhs/contact-us/>

Note: Web link above lists contact information for each IDHS District and each county emergency management agency.

National Oceanic and Atmospheric Administration (NOAA) Office of Response and Restoration

509-533-0391

<https://response.restoration.noaa.gov/>

Note: NOAA's Office of Response and Restoration manages the Data Integration, Visualization, Exploration, and Reporting (DIVER) tool developed by NOAA to support natural resource damage assessment efforts: <https://response.restoration.noaa.gov/diver>

Environment, Land, Water, and Shorelines

Indiana Association of Soil and Water Conservation Districts

225 S. East Street, Ste. 142, Indianapolis, IN 46202
317-692-7325

<http://wordpress.iaswcd.org/>

Indiana Department of Environmental Management

Indiana Government Center North, 100 North Senate
Avenue, Indianapolis, IN 46204-2251

317-232-8603

<https://www.in.gov/idem/>

Indiana Land Protection Alliance

620 East Ohio Street, Indianapolis, IN 46202

317-445-7474

<https://www.protectindianaland.org/indiana-land-trusts>

<https://www.protectindianaland.org/indiana-land-trusts>

Note: Web link above provides links to all land trusts operating in Indiana by county and alphabetically.

Indiana Natural Resources Commission

Indiana Government Center North, 100 North Senate
Avenue, Room N103, Indianapolis, Indiana 46204-2200

317-232-4699

<https://www.in.gov/nrc/>

Indiana Department of Natural Resources

402 West Washington Street, Indianapolis, IN 46204
317-232-4200

<https://www.in.gov/dnr/>

Indiana Department of Natural Resources

Division of Fish and Wildlife

402 W. Washington St. RM W273, Indianapolis, IN
46204

317-232-4200

<https://www.in.gov/dnr/fish-and-wildlife/>

Division of Forestry

402 W. Washington St., Room W296, Indianapolis, IN
46204

317-232-4105

<https://www.in.gov/dnr/forestry/>

Indiana Department of Natural Resources

Division of Historic Preservation and Archaeology

402 W. Washington St., Room W274, Indianapolis, IN
46204

317-232-1646

<https://www.in.gov/dnr/historic-preservation/>

**Division of Outdoor Recreation, State & Community
Outdoor Recreation Planning Section**

402 W. Washington Street, Room 271
Indianapolis, IN 46204
317-232-4075

<https://www.in.gov/dnr/state-parks/recreation/grants/outdoor-recreation-grants/>

Note: Web link above points to state outdoor recreation grants available through the Division of Outdoor Recreation.

Division of Water

402 W. Washington St., Room W264, Indianapolis, IN 46204
317-232-4160

<https://www.in.gov/dnr/water/>

Indiana University Environmental Resilience Institute

812-855-2469

<https://eri.iu.edu/index.html>

Indiana University Conservation Law Center

116 S Indiana Ave, Ste 4, Bloomington, IN 47408
812 856 0229

<https://conservationlawcenter.org/>

Note: The Conservation Law Center is the Southern Indiana Sentinel Landscape coordinator where the local program/administration is housed.

Land Trust Alliance (LTA)

1331 H St, NW, Ste 400, Washington, DC 20005
202-638-4725

www.lta.org

National Oceanic and Atmospheric Administration (NOAA)

Midwestern Regional Climate Center

915 West State Street, West Lafayette, IN 47907
765-494-6574

<https://mrcc.purdue.edu/>

Central Region Collaboration Network

816-830-1437

<https://www.noaa.gov/regional-collaboration-network/regions-central>

Southern Indiana Sentinel Landscape

<https://sentinellandscapes.org/landscapes/southern-indiana/>

The Conservation Fund (TCF)

1655 N Fort Myer Drive, Ste 1300, Arlington, VA 22209
703-525-6300

www.conservationfund.org

The Nature Conservancy (TNC)

4245 N Fairfax Drive, Ste 100, Arlington, VA 22203
703-841-4850

<https://www.nature.org/en-us/about-us/where-we-work/united-states/indiana/>

The Trust for Public Land (TPL)

901 5th Ave Ste 1520, Seattle, WA 98164
206-587-2447

www.tpl.org

U.S. Department of Agriculture (USDA), Forest Service

1400 Independence Ave., SW, Washington, D.C. 20250-0003

800-832-1355

<https://www.fs.usda.gov/>

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service, Indiana Office

6013 Lakeside Boulevard, Indianapolis, IN 46278
317-290-3200

<https://www.nrcs.usda.gov/wps/portal/nrcs/in/home/>

<https://www.nrcs.usda.gov/wps/portal/nrcs/in/contact/local/>

Note: Web link above provides locations and points of contact for all local Natural Resources Conservation Service offices throughout Indiana.

U.S. Department of the Interior, Bureau of Land Management

1849 C St NW, RM 5665, Washington, DC, 20240
202-208-3801

www.blm.gov/

U.S. Department of the Interior, Fish and Wildlife Service, Midwest Region

5600 American Blvd. West Suite 990 Bloomington, MN 55437-1458

612-713-5360

<https://www.fws.gov/about/region/midwest>

Indiana || Military Compatibility Handbook

U.S. National Park Service

1849 C St, NW, Washington, DC 20240
202-208-6843
www.nps.gov/index.htm

Government Research and Planning

American Planning Association

1776 Massachusetts Ave, NW, Washington, DC 20036
202-872-0611
www.planning.org

Indiana Chapter

<https://indiana.planning.org/>

Association of Indiana Counties

101 West Ohio Street, Suite 1575, Indianapolis, In 46204
317-684-3710
<https://www.indianacounties.org/>

Ball State University – Center for Business and Economic Research

Whitinger Business Building, Room 149
2000 W. University Ave. Muncie, IN 47306
765-285-5926
<https://www.bsu.edu/academics/centersandinstitute/cber>

Council of State Governments

Hall of States, 444 N Capitol St, NW, Ste 401,
Washington, DC 20001
202-624-5460
www.csg.org

Accelerate Indiana Municipalities

125 W. Market Street, Suite 100, Indianapolis, IN 46204
317-237-6200
<https://aimindiana.org/>

Indiana Association of City Engineers

317-237-6200 x 234
<https://aimindiana.org/members/affiliate-groups/indiana-association-of-city-engineers/>

Indiana Association of Regional Councils

101 W Ohio Street, Suite 1575, Indianapolis, IN 46204
317-829-3659
<https://www.iarc.cc/>

Indiana Conference of Mayors

317-237-6200 x 224

<https://aimindiana.org/icom>

Indiana League of Municipal Clerks and Treasurers

317-237-6200 x 223
<https://aimindiana.org/ilmct>

Indiana Mayors Assistants

317-237-6200 x 223
<https://aimindiana.org/members/affiliate-groups/indiana-mayors-assistants/>

Indiana Metropolitan Planning Organization

<http://www.indianampo.com/>
http://www.indianampo.com/inmpo_regions.html

Note: Web link above provides locations and points of contact for all metropolitan councils in Indiana.

Indiana Municipal Management Association

317-237-6200 x228
<https://aimindiana.org/members/affiliate-groups/indiana-municipal-management-association/>

Indiana University-Indiana Business Research Center (IBRC)

Kelley School of Business, Hodge Hall, Suite 4048
1309 E. 10th Street, Bloomington, IN 47405
812-855-5507
<https://ibrc.kelley.iu.edu/>

International City/County Management Association

777 N Capitol St, NE, Ste 500, Washington, DC 20002
202-289-4262
www.icma.org

National Association of Counties

440 First St, NW, Washington, DC 20001
202-303-6226
www.naco.org

National Conference of State Legislatures

444 N Capitol St, Washington, DC 20001
202-624-5400
www.ncsl.org

National Governors Association

Hall of States, 444 N Capitol St, Washington, DC 20001
202-624-5300
www.nga.org

National League of Cities

1301 Pennsylvania Ave, NW, Ste 550, Washington, DC
20004
202-626-3000
www.nlc.org

Redevelopment Association of Indiana

317-237-6200 x 225
<https://aimindiana.org/members/affiliate-groups/redevelopment-association-of-indiana-about/>

STATS Indiana

<https://www.stats.indiana.edu/>

U.S. Conference of Mayors

1620 Eye St, NW, Washington, DC 20006
202-293-7330
www.usmayors.org

Health

Indiana Department of Health

2 N. Meridian St., Indianapolis, IN 46204
317-233-1325
<https://www.in.gov/health/>

Division of Emergency Preparedness

2 North Meridian Street, 6-Selig, Indianapolis, IN 46204
317-233-1325
<https://www.in.gov/health/emergency-preparedness/>

Local Health Departments

<https://www.in.gov/health/health-and-human-services/local-health-department-outreach-division/local-health-department-information/>

Note: Web link above provides points of contact for all county health departments throughout Indiana.

Housing and Real Estate

Affordable Housing Association of Indiana

530 S. 13th St., Decatur IN 46733
260-724-6490
<https://inaha.org/>

Indiana Association of Realtors

143 W Market St, Ste 100, Indianapolis, IN 46204
800-284-0084
<https://indianarealtors.com/>

Indiana Builders Association

101 W Ohio St., Ste. 710, Indianapolis, IN 46204
317-917-1100
<https://buildindiana.org/>

Indiana Housing & Community Development Authority

30 South Meridian Street, Suite 900, Indianapolis, IN
46204
317-232-7777
<https://www.in.gov/ihcda/>

U.S. Department of Housing and Urban Development (HUD) – Indiana Field Office

Minton-Capehart Federal Building, 575 North
Pennsylvania Street, Room 655, Indianapolis, IN
46204-1555
317-226-6303
<https://www.hud.gov/states/indiana>

Infrastructure, Energy, and Public Utilities

DoD Military Aviation and Installation Assurance Siting Clearinghouse (Energy Siting)

3400 Defense Pentagon, Room 5C646, Washington, DC
20301-3400

osd.dod-siting-clearinghouse@mail.mil

<https://www.acq.osd.mil/dodsc/>

Note: Start early consultation with local military base representatives

Indiana Energy Association

One American Square, Suite 1600 Indianapolis, Indiana
46282
317-632-4406
<https://indianaenergy.org/>

Indiana Municipal Power Agency

11610 N. College Ave., Carmel, IN 46032
317-573-9955
<https://www.impa.com/>

Indiana Office of Energy Development

One North Capital Avenue, Suite 900, Indianapolis, IN
46204
Email: www.grants@oed.in.gov
<https://www.in.gov/oed/>

Indiana Utility Regulatory Commission (IURC)

PNC Center, 101 W. Washington Street, Suite 1500E,
Indianapolis, IN 46204
317-232-2701
<https://www.in.gov/iurc/>

Indiana || Military Compatibility Handbook

Regional Councils of Government

Evansville Regional Economic Partnership

318 Main Street, Suite 400, Evansville, IN 47708
812-423-2020
www.evansvilleregion.com

East Central Indiana Regional Planning District

1208 White River Blvd, Ste 127, Muncie, IN 47303
765-254-0116
www.ecirpd.org

Indiana 15 Regional Planning Commission

221 E First Street, Ferdinand, IN 47532
812-367-8455
www.ind15rpc.org

Kankakee - Iroquois Regional Planning Commission

115 E 4th Street, PO Box 127 Monon, IN 47959
219-253-6658
www.kirpc.net

Madison County Council of Governments

739 Main Street, Anderson, IN 46016
765-641-9482
www.mccog.net

Michiana Area Council of Governments

227 W Jefferson Blvd, 1120 County/City Building, South Bend, IN 46601
574-287-1829
www.macog.com

Northeastern Indiana Regional Coordinating Council

200 E. Berry Street, Suite 230, Ft. Wayne, IN 46802
260-449-7309
www.nircc.com

Northwestern Indiana Regional Planning Commission

6100 Southport Rd, Portage, IN 46368
219-763-6060
www.nirpc.org

Region III-A Economic Development District & Regional Planning Commission

217 Fairview Blvd, Kendallville, IN 46755
260-347-4714
www.region3a.org

River Hills Economic Development District & Regional Planning Commission

300 Spring St, Suite 2A, Jeffersonville, IN 47130
812-288-4624
www.riverhills.cc

Southeastern Indiana Regional Planning Commission

405 W. US Hwy 50, PO Box 765 Versailles, IN 47042
812-689-5505
www.sirpc.org

Southern Indiana Development Commission

PO Box 442, Loogootee, IN 47553
812-295-3707
www.sidc.cc

THRIVE West Central

2800 Poplar St. STE 9A, Terre Haute, IN 47803
812-238-1561
www.thrivewestcentral.com

North Central Indiana Regional Planning Council

1525 West Hoosier Boulevard, Suite 204, Peru, IN 46970
765-689-4026
www.ncirpc.com

Eastern Indiana Regional Planning Commission

401 East Main Street, Richmond, IN 47374
765-977-3907
<https://easternindianarpc.org/>

Indianapolis Metropolitan Planning Organization

200 East Washington Street, Suite 2322, Indianapolis, IN 46204
www.indympo.org

Transportation, Aviation and Ports

Federal Aviation Administration (FAA) - Airport Environmental Programs

800 Independence Ave SW, Washington, DC 20591
866-835-5322
www.faa.gov/airports/environmental

Federal Aviation Administration (FAA) Great Lakes Regional Office

O'Hare Lake Office Center, 2300 East Devon Avenue
Des Plaines, IL 60018
847-294-7294

https://www.faa.gov/about/office_org/headquarters_offices/ara/great_lakes

Indiana Department of Transportation

100 N. Senate Ave., IGCN 755, Indianapolis, IN 46204
855-463-6848

<https://www.in.gov/indot/>

Note: INDOT provides resources for regional transportation planning organizations (RTPOs) and metropolitan planning organizations (MPOs).

Crawfordsville District

[41 West 300 North, Crawfordsville, IN 47933](#)

855-463-6848

Email: westcentrallndiana@indot.in.gov

Fort Wayne District

5333 Hatfield Road, Fort Wayne, IN 46808

855-463-6848

Greenfield District

32 South Broadway, Greenfield, IN 46140

855-463-6848

Email: indotgreenfieldcustomerservice@indot.IN.gov

La Porte District

315 E. Boyd Blvd., LaPorte, IN 46350

855-463-6848

Seymour District

185 Agrico Lane, Seymour, IN 47274

855-463-6848

Vincennes District

[3650 South U.S. Highway 41, Vincennes, IN 47591](#)

855-463-6848

Email: swincommunications@indot.in.gov

Indiana Department of Transportation – Aviation Division

100 N. Senate Ave., IGCN 758-MM, Indianapolis, IN 46204

<https://www.in.gov/indot/multimodal/aviation/>

Note: Web link provides individual staff contact information.

Ports of Indiana

<https://www.portsofindiana.com/>

Central Office

150 W. Market Street, Ste. 450, Indianapolis, IN 46204

317-232-9200

Burns Harbor

6625 S. Boundary Drive, Portage, IN 46368

219-787-8636

Jeffersonville

1402 Port Road, Jeffersonville, IN 47130

812-283-9662

Mount Vernon

2751 Bluff Road, Mount Vernon, IN 47620

812-838-4382

Tribal Governments

Indiana Native American Indian Affairs Commission

100 North Senate Avenue, Room N300, Indiana Government Center North, Indianapolis, IN 46204

317-234-4887

<https://www.in.gov/inaiac/>

Pokégnek Bodéwadmik Pokagon Band of Potawatomi

58620 Sink Road, Box 180, Dowagiac, Michigan 49047

800- 517-0777

<https://www.pokagonband-nsn.gov/>

Miami Tribe of Oklahoma

3410 P. Street, Miami, OK 74354

918-541-1300

<https://miamination.com/>

Indiana State Legislative Resources

The Indiana Courts and Legislature

The Indiana State Legislature website provides current information for legislators, committee hearings, floor activities, proposed bills, laws, and rules for Indiana statutes:

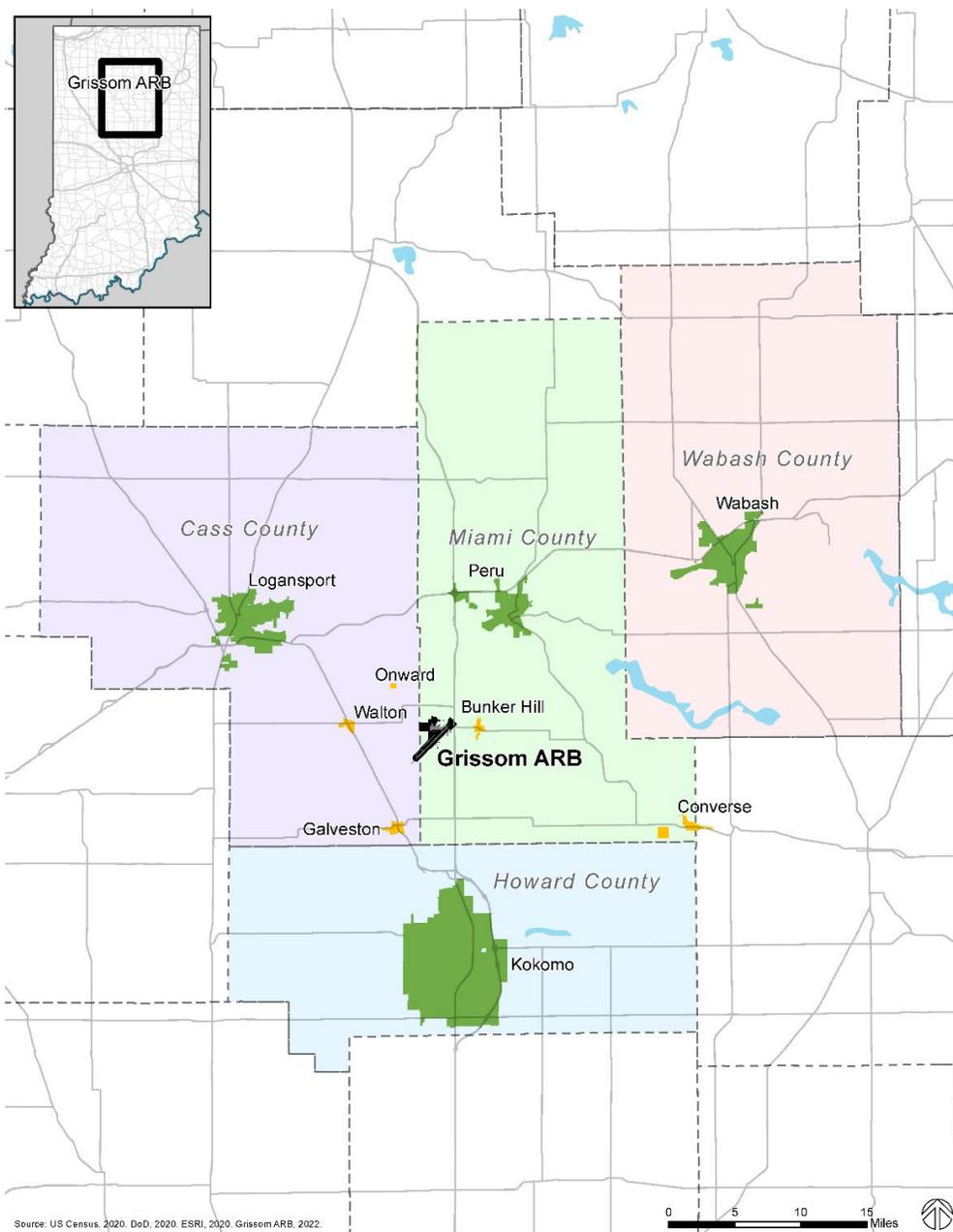
<http://iga.in.gov/>

6.4.3. Grissom ARB

Grissom Air Reserve Base (ARB) encompasses approximately 2.66 square miles (~1,700 acres) in Miami and Cass Counties in north central Indiana. It is roughly eight (8) miles southwest of the City of Peru and 12 miles due north of the City of Kokomo. Initially established as a Naval facility in 1942 before serving as an active Air Force base, the installation was ultimately realigned and downsized under the Air Force Reserve Command (AFRC) in 1994. It has served as a joint-use civilian/Air Reserve facility known as Grissom Aeroplex since 2008.

Grissom ARB Counties: Cass, Howard, Miami, Wabash.

Grissom ARB Cities/towns: Kokomo, Logansport, Peru, Wabash, Bunker Hill, Converse, Galveston, Onward, Walton.



Indiana || Military Compatibility Handbook

Grissom ARB

<https://www.grissom.afrc.af.mil/>

1438 Foreman Drive, Grissom ARB, IN 46971
Automated Base Directory (765) 688-5211
Army Reserve (765) 689-9179
Marine Corps Reserve (765) 688-4404
Visitors Center (765) 688-4352
Public Affairs Office (765) 688-3348

Grissom Aeroplex (Miami County Economic Development Authority)

<http://www.miamicountyeda.com/grissom-aeroplex/about-grissom-aeroplex.php>

1525 West Hoosier Blvd., Suite 201, Peru, IN 46970
Main Line (765) 689-0159

Cass County

<https://www.co.cass.in.us/>

200 Court Park, Logansport, IN 46947
Assessor (574) 753-7710
Clerk (574) 753-7740
Economic Development (574) 732-2590
EMA (574) 722-2484
Planning Department (574) 753-7775
Sheriff's Department (574) 753-7800
Treasurer (574) 753-7850

Howard County

<http://www.howardcountyin.gov/>

220 N Main St, Kokomo, IN 46901
Clerk (765) 456-2204
Commissioners (765) 456-7010
Council (765) 456-7010
County Assessor (765) 456-2211
Emergency Management (765) 456-2242
Treasurer (765) 456-2213
Sheriff's Office (765) 457-1105
Planning Commission (765) 456-2330

Miami County

<https://www.miamicountyin.gov/>

25 N Broadway, Peru, IN 46970
Treasurer's Office (765) 472-2610
Assessor's Office (767) 472-2230
Building Commission (765) 472-2485
Sheriff's Department (765) 472-0850
Zoning Administrator (765) 472-2485

Wabash County

<http://www.wabashcounty.in.gov/>

221 S Miami St, Wabash, IN 46992
Main Line (260) 563-0661
Assessor Ext 1227
Clerk Ext 1230
Plan Commission Ext 1267
Treasurer Ext 1259
Plan Commission Director Ext 1267
Plan Commission Office Admin. Ext 1252
Chairman Commissioner (260) 407-2256
Council Chairman (260) 571-2543

City of Kokomo

<https://www.cityofkokomo.org/>

100 S Union St, Kokomo, IN 46901
Main Line (765) 456-7444
Board of Public Works (765) 456-7444
City Clerk (765) 456-7370
Common Council (765) 210-0032
Mayor's Office (765) 456-7444
Plan Commission (765) 456-2330
Fire Department (765) 457-2636
Police Department (765) 456-7100
Development Department (765) 456-7375

City of Logansport

<http://www.cityoflogansport.org/>

601 E Broadway, Logansport, IN 46947
Mayor (574) 753-2551
Clerk-Treasurer (574) 753-4745
Deputy Mayor (574) 753-2551
Fire Chief (574) 753-3102
Street Commissioner (574) 753-4610
Building Commissioner (574) 753-4831
Planning Director (574) 753-7775
Zoning Administrator (574) 753-7775
Park Administrator (574) 753-6969

City of Peru

<https://www.cityofperu.org/>

35 S Broadway, Peru, IN 46970
Boards, Commissions & Cmths (765) 472-2400
Clerk-Treasurer's Office (765) 472-2344
City Hall (765) 472-2400
Peru Fire Department (765) 472-2410
Planning & Zoning (765) 472-2400
Indiana State Police - Peru District (800) 382-0689

Indiana || Military Compatibility Handbook

City of Wabash

<https://www.cityofwabash.com/>

202 S. Wabash St, Wabash, IN 46992

Main Line	(260) 563-4171
Mayor's Office	(260) 563-4171
City Council	(260) 563-4171
Boards and Commissions	(260) 563-4171
City Clerk Treasurer's Office	(260) 274-1487
Board of Public Works and Safety	(260) 563-4171
Board of Zoning Appeals	(260) 563-4171
Plan Commission	(260) 563-4171
Redevelopment Commission	(260) 563-4171
Fire Department	(260) 563-1166
Parks Department	(260) 274-1494

Town of Bunker Hill

<https://www.townofbunkerhillin.com/>

144 West Broadway, Bunker Hill, IN 46914

Main Line (765) 614-9043

Town of Converse

<https://www.townofconverse.com/>

210 N. Jefferson St, Converse, IN 46919

Main Line (765) 395-3459

Town of Galveston

302 E. Jackson St, Galveston, IN 46932

Town Hall (574) 699-6664

Town of Onward

Onward Municipal Bldg. P.O. Box 32, Onward, IN 46967

Town Hall (574) 626-2117

Town of Walton

100 Depot St, Walton, IN 46994

Town Hall (574) 626-2941

Civilian-Military Partnering Organizations

Grissom Regional Defense Alliance

1525 W Hoosier Blvd, Peru, IN 46970

765-689-0159

<https://grissomrda.com/>

Economic Development and Commerce

Grissom Aeroplex

1525 W. Hoosier Blvd., Suite 201, Peru, IN 46970

765-689-0159

<http://www.miamicountyeda.com/grissom-aeroplex/about-grissom-aeroplex.php>

Indiana Economic Development Corporation – Regional Economic Acceleration and Development Initiative

<https://www.iedc.in.gov/program/indiana-readi/overview#skip-header>

<https://www.iedc.in.gov/program/indiana-readi/regions#skip-header>

Note: Web link above lists contact information by participating region.

Indiana Procurement Technical Assistance Center (PTAC)

<https://indianaptac.com/>

<https://indianaptac.com/locations/>

Note: Web link above is to a list of regional PTAC offices that serve all 92 Indiana counties including points of contact.

Local Economic Development Organizations (LEDO)

https://www.iedc.in.gov/docs/default-source/iedc-assets/ledo-list.pdf?sfvrsn=c0ca43d1_58

Note: Web link above is to a comprehensive list of LEDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

North Central Indiana Economic Development Partnership

<https://www.nciedp.com/>

<https://www.nciedp.com/the-region#CONTACTUS>

Note: Web link above lists contact information for each county member of the partnership including Cass, Clinton, Fulton, Howard, and Miami counties.

Regional Economic Development Organizations (REDO)

https://iedc.in.gov/docs/default-source/iedc-assets/redo_map.pdf

Note: Web link above is to a comprehensive list of REDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Environment, Land, Water, and Shorelines

Indiana Land Protection Alliance

620 East Ohio Street, Indianapolis, IN 46202
317-445-7474

<https://www.protectindianaland.org/indiana-land-trusts>

<https://www.protectindianaland.org/indiana-land-trusts>

Note: Web link above provides links to all land trusts operating in Indiana by county and alphabetically.

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service, Indiana Office

6013 Lakeside Boulevard, Indianapolis, IN 46278
317-290-3200

<https://www.nrcs.usda.gov/wps/portal/nrcs/in/home/>

<https://www.nrcs.usda.gov/wps/portal/nrcs/in/contact/local/>

Note: Web link above provides locations and points of contact for all local Natural Resources Conservation Service offices throughout Indiana.

Regional Councils of Government

North Central Indiana Regional Planning Council

1525 West Hoosier Boulevard, Suite 204, Peru, IN 46970

765-689-4026

www.ncirpc.com

6.4.4. Naval Support Activity Crane/ Lake Glendora Test Facility

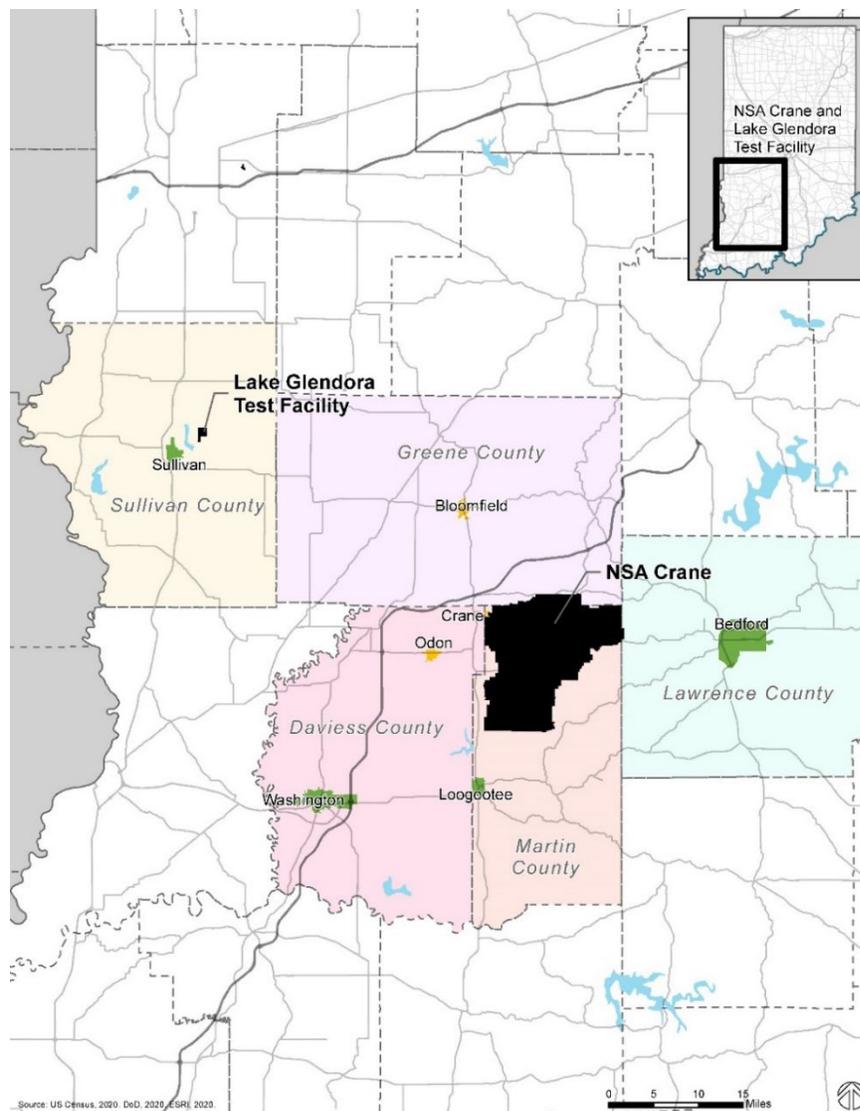
NSA Crane was established in southwestern Indiana in 1941, roughly 75 miles south of Indianapolis and 25 miles southwest of the City of Bloomington. NSA Crane is bordered by Daviess, Greene, Lawrence, and Martin counties. The closest communities are the Town of Crane, immediately adjacent to the installation's northwest corner, and the unincorporated community of Burns City, immediately adjacent to its western perimeter. NSA Crane encompasses approximately 97.6 square miles. It is the third largest U.S. Naval facility. The Lake Glendora Test Facility, an integral part of NSA Crane, is 30 miles northwest of the installation in Sullivan County.

NSA Crane Counties: Daviess, Greene, Lawrence, Martin.

NSA Crane Cities/towns: Bedford, Loogootee, Washington, Bloomfield, Crane, Odon.

Lake Glendora Test Facility County: Sullivan.

Lake Glendora Test Facility City: Sullivan.



Indiana || Military Compatibility Handbook

NSA Crane

<https://cnrma.cnrc.navy.mil/Installations/NSA-Crane/>

300 Hwy 361 Code N1, Bldg. 3219, Crane, IN 47522
Public Affairs Office (812) 854-3524
Commercial (812) 854-3965
Community Plans & Liaison Office (812) 854-6997

Daviess County

<https://www.daviess.org/>

200 E Walnut St, Washington, IN 47501
Main Line (812) 254-1091
Assessor's Office (812) 254-1091
Clerk's Office (812) 254-8664
County Commissioners (812) 254-8662
County Council (812) 254-8662
Treasurer's Office (812) 254-8654
Plan Director (812) 254-8208

Greene County

<https://www.co.greene.in.us/>

1 E Main St, Bloomfield, IN 47424
Assessor's Office (812) 384-2002
Clerk's Office (812) 384-8532
Treasurer's Office (812) 384-4378
Redevelopment Commission (812) 384-0081

Lawrence County

<https://lawrencecounty.in.gov/>

916 15th St, Bedford, IN 47421
County Commissioners (812) 275-2644
Treasurer (812) 275-2431
County Assessor (812) 275-5405
Emergency Management (812) 277-9680
County Clerk (812) 275-7543

Martin County

<https://martincountyindiana.com/>

129 Main St, Shoals, IN 47581
Assessor (812) 247-2070
Clerk (812) 247-3651
Board of Commissioners Pres. (812) 653-2771
County Council President (812) 709-0099
Emergency Management (812) 295-6626
Treasurer (812) 247-3701
Sheriff's Office (812) 247-3726
Clerk (812) 247-3651

City of Bedford

<https://www.bedford.in.us/>

1102 16th Street, Bedford, IN 47421
City Hall (812) 279-6555
Mayor's Office (812) 279-6555
Clerk-Treasurer (812) 275-1604
Fire Department (812) 275-4544
Planning/Zoning Director (812) 275-1631

City of Loogootee

<https://cityofloogootee.com/>

401 John F Kennedy Avenue, Loogootee, Indiana, 47553
Mayor's Office (812) 295-4770
Clerk -Treasurer's Office (812) 295-3200
Public Works Department (812) 295-2497
Sheriff's Department (812) 247-3726
Fire Chief (812) 295-2323
Board of Public Works (812) 846-6862
Common Council (812) 486-6862

City of Washington

<https://www.washingtonin.us/>

101 NE Third St, Washington, IN 47501
Mayor's Office (812) 254-5575
Clerk Treasurer (812) 254-6143
Engineering Department (812) 254-5171
Fire Chief (812) 254-1172
Parks and Recreation (812) 254-6010
Police Department (fill in others) (812) 254-4410
Plan and Building Commission (812) 254-8208

Town of Bloomfield

12 East Main Street, Bloomfield, Indiana, 47424
Town Hall (812) 384-4114

Town of Crane

129 Earle St, Crane, IN 47522
Town Hall (812) 854-7865

Town of Odon

<https://townofodon.com/>

109 S Spring St, Odon, IN 47562
Town Hall (812) 636-4321
Police Department (812) 636-8550

Indiana || Military Compatibility Handbook

NSA Crane – Lake Glendora Test Facility

<https://cnrma.cnic.navy.mil/Installations/NSA-Crane/>
2726 N County Rd 225, New Lebanon, IN 47882
Public Affairs Office (812) 854-3524
Commercial (812) 854-3965
Community Plans & Liaison Office (812) 854-6997

Sullivan County

<https://www.sullivancounty.in.gov/>
100 Courthouse Square, Sullivan, IN 47882
Main Line (812) 905-0499
County Council (812) 268-4491
County Commissioners (812) 268-5677
Assessor's Office (812) 268-5110
Clerk (812) 268-4657
Sheriff's Office (812) 268-4308

City of Sullivan

<https://www.cityofsullivan.org/>
32 North Court Street, Sullivan, IN 47882
City Hall (812) 268-6077
Fire Department (812) 268-5837
Police Department (812) 268-4353
Clerk – Treasurer (812) 268-6077
Mayor's Office (812) 268-5464

Civilian–Military Partnering Organizations

White River Military Coordination Alliance
<https://wrmcalliance.com>

Economic Development and Commerce

Crane Regional Defense Group
812-277-9778
<https://www.craneregionaldefensegroup.org/>

**East Gate Business and Technology Center,
Lawrence County Economic Growth Council**
1116 16th St., Bedford, IN 47421
812-275-4493
<https://lawrencecountygrowth.com/launch-here/key-industries>

Indiana Procurement Technical Assistance Center (PTAC)

<https://indianaptac.com/>
<https://indianaptac.com/locations/>

Note: Web link above is to a list of regional PTAC offices that serve all 92 Indiana counties including points of contact.

Local Economic Development Organizations (LEDO)

https://www.iedc.in.gov/docs/default-source/iedc-assets/ledo-list.pdf?sfvrsn=c0ca43d1_58

Note: Web link above is to a comprehensive list of LEDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Radius Indiana

1504 I Street, Bedford, IN 47421
812-277-9778

<https://radiusindiana.com/major-industries/#defense>

Regional Economic Development Organizations (REDO)

https://iedc.in.gov/docs/default-source/iedc-assets/redo_map.pdf

Note: Web link above is to a comprehensive list of REDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Regional Opportunity Initiatives, Inc.

100 S. College Avenue, Suite 240, Bloomington, IN 47404

812-287-8116

<https://regionalloppportunityinc.org/>

Southern Indiana Defense Industry Network

440 Fifth Street, Columbus, IN 47201

<https://southernindefense.com/>

Southern Indiana Development Commission

405 JFK Avenue, Suite A, P.O. Box 442, Loogootee, IN 47553

812-295-3707

<https://www.sidc.cc/>

WestGate@Crane Technology Park

13598 E. WestGate Drive, Odon, Indiana 47562

812-863-4080

<https://westgatecrane.com/>

Education**Regional Opportunity Initiatives, Inc.**

100 S. College Avenue, Suite 240, Bloomington, IN
47404
812-287-8116
<https://regionalopportunityinc.org/>

Environment, Land, Water, and Shorelines**Indiana Land Protection Alliance**

620 East Ohio Street, Indianapolis, IN 46202
317-445-7474
<https://www.protectindianaland.org/indiana-land-trusts>
<https://www.protectindianaland.org/indiana-land-trusts>

Note: Web link above provides links to all land trusts operating in Indiana by county and alphabetically.

Southern Indiana Sentinel Landscape

<https://sentinellandscapes.org/landscapes/southern-indiana/>

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service, Indiana Office

6013 Lakeside Boulevard, Indianapolis, IN 46278
317-290-3200
<https://www.nrcs.usda.gov/wps/portal/nrcs/in/home/>
<https://www.nrcs.usda.gov/wps/portal/nrcs/in/contact/local/>

Note: Web link above provides locations and points of contact for all local Natural Resources Conservation Service offices throughout Indiana.

Regional Councils of Government**Southern Indiana Development Commission**

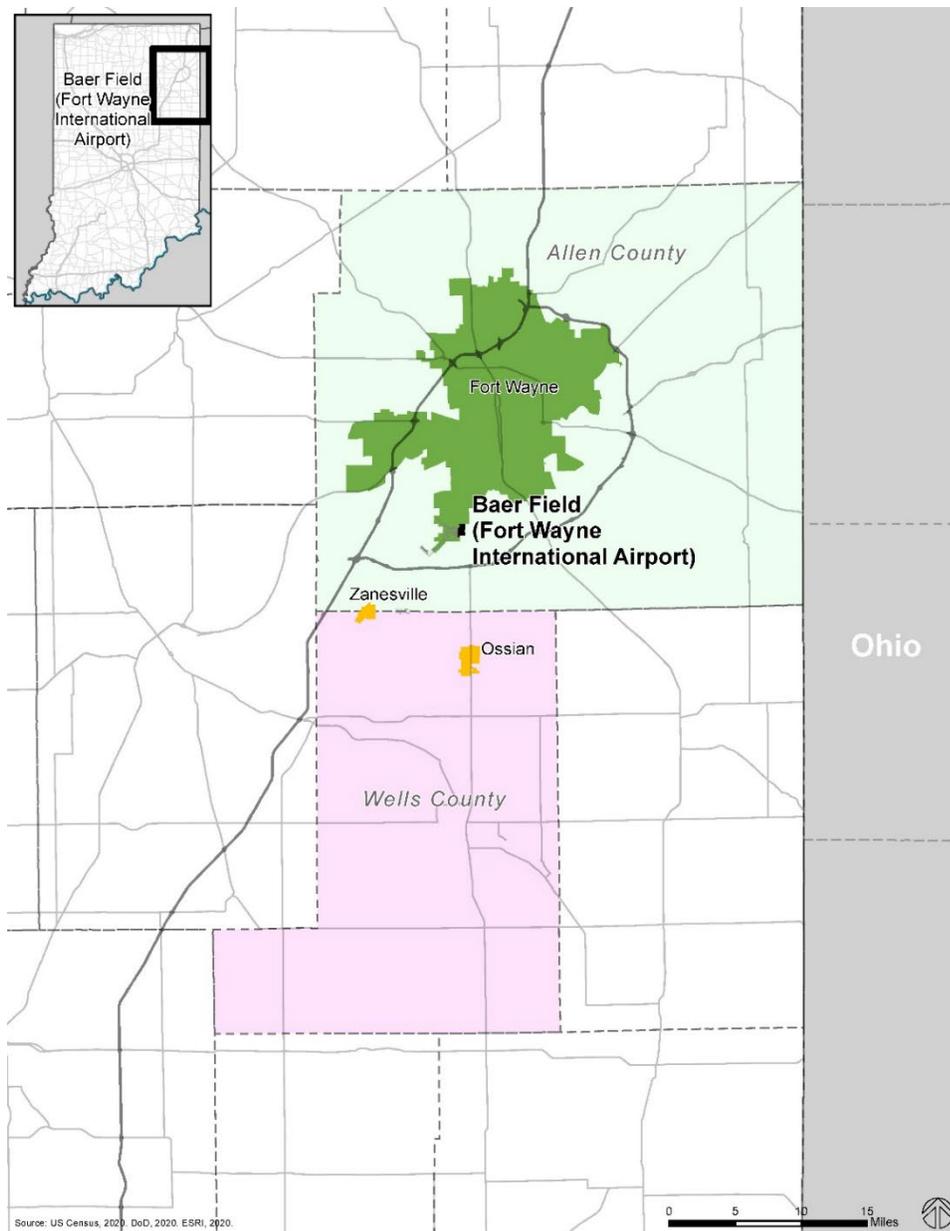
PO Box 442, Loogootee, IN 47553
812-295-3707
www.sidc.cc

6.4.5. Baer Field

The **Indiana Air National Guard Base at Baer Field**, is located at the Fort Wayne International Airport, approximately seven miles south-southwest of the Fort Wayne city center in northeast Indiana. Established as an Army Air Force training facility in 1941, the airfield was largely given over to civil control after World War II, with the Air Force maintaining jurisdiction over a small section of the airport for reserve training and Air National Guard use. The base now encompasses approximately 111 acres at the eastern end of the airport. Of the land used by the Indiana National Guard, 28 acres is owned by the State with the remainder leased from the Fort Wayne–Allen County Airport Authority.

Baer Field Counties: Allen, Wells.

Baer Field Cities/towns: Fort Wayne, Ossian, Zanesville.



Indiana || Military Compatibility Handbook

Baer Field (122nd Fighter Wing)

<https://www.122fw.ang.af.mil/>

3005 W Ferguson Rd, Fort Wayne, IN 46809
Automated Base Directory (260) 478-3210
Base Exchange (260) 478-2637
Fire and Emergency Services (260) 478-3293
Public Affairs Office (260) 478-3314
Security Forces (260) 478-3234

Fort Wayne International Airport

<https://fwairport.com/>

3801 W Ferguson Rd, Fort Wayne, IN 46809
Main Line (260) 747-4146

Allen County

<https://www.allencounty.us/>

715 S Calhoun St, Fort Wayne, IN 46802
Assessor (260) 449-7123
County Council (260) 449-7241
Environmental Management (260) 449-7878
Planning Services (260) 449.7607
Board of Commissioners (260) 449-7555
Sheriff Department (260) 449-3000
Parks and Recreation (260) 449-3777
Treasurer (260) 449-7693

Wells County

<https://wellscounty.org/>

102 W Market St, Bluffton, IN 46714
Assessor (260) 824-6476
County Council (260) 824-6470
Circuit Court Clerk's Office (260) 824-6479
Emergency Management Office (260) 824-6433
Plan Commission (260) 824-6407
Sheriff's Dept / Jail (260) 824-3426
Treasurer (260) 824-6512

City of Fort Wayne

<https://www.cityoffortwayne.org/>

200 East Berry St., Fort Wayne, IN 46802
Main Line (260) 427-8311
City Clerk and City Council (260) 427-1221
Community Development Division (260) 427-1127
Fire Department (260) 427-1478
Public Works Director (260) 427-1172
Police Department (260) 427-1222

Town of Ossian

<http://www.ossianin.com/>

507 N Jefferson St, Ossian, IN 46777
Ossian Town Hall (260) 622-4251
Town Manager (260) 622-4251
Police Department (260) 622-7519
Fire Department (260) 622-4625

Town of Zanesville

No Website
17736 Wayne Street, Zanesville, Indiana, 46799
Town Office (260) 638-0051

Economic Development and Commerce

Indiana Procurement Technical Assistance Center (PTAC)

<https://indianaptac.com/>

<https://indianaptac.com/locations/>

Note: Web link above is to a list of regional PTAC offices that serve all 92 Indiana counties including points of contact.

Local Economic Development Organizations (LEDO)

https://www.iedc.in.gov/docs/default-source/iedc-assets/ledo-list.pdf?sfvrsn=c0ca43d1_58

Note: Web link above is to a comprehensive list of LEDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Regional Economic Development Organizations (REDO)

https://iedc.in.gov/docs/default-source/iedc-assets/redo_map.pdf

Note: Web link above is to a comprehensive list of REDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Indiana || Military Compatibility Handbook

Environment, Land, Water, and Shorelines

Indiana Department of Environmental Management

Indiana Government Center North, 100 North Senate Avenue, Indianapolis, IN 46204-2251

317-232-8603

<https://www.in.gov/idem/>

Indiana Land Protection Alliance

620 East Ohio Street, Indianapolis, IN 46202

317-445-7474

<https://www.protectindianaland.org/indiana-land-trusts>

<https://www.protectindianaland.org/indiana-land-trusts>

Note: Web link above provides links to all land trusts operating in Indiana by county and alphabetically.

Regional Councils of Government

Northeastern Indiana Regional Coordinating Council

200 E. Berry Street, Suite 230, Ft. Wayne, IN 46802

260-449-7309

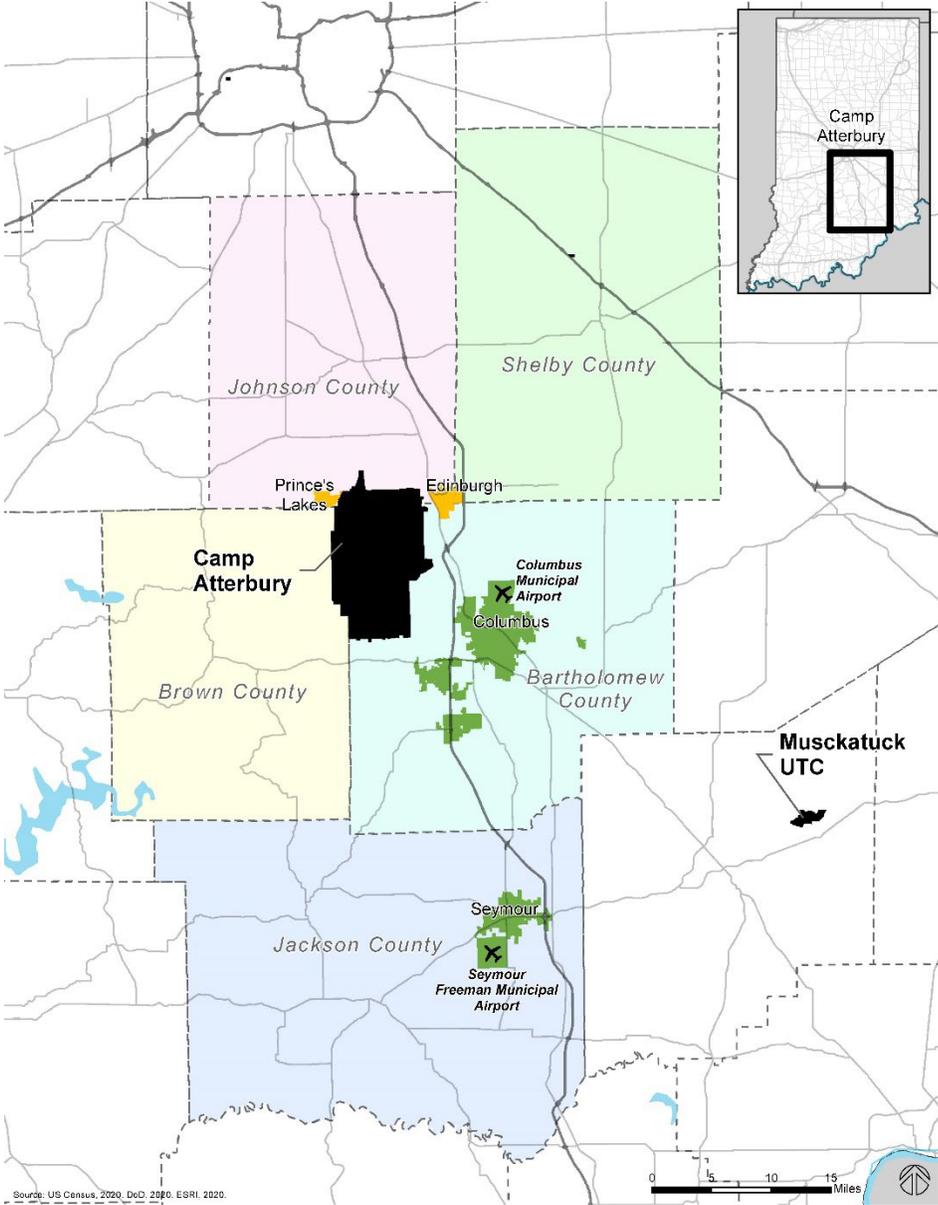
www.nircc.com

6.4.6. Camp Atterbury

Camp Atterbury is operated by the Indiana National Guard as a military and civilian training facility that provides state-of-the-art training and testing support to National Guard, Reserve, Active Duty, and Joint Armed Forces. The facility comprises 36,000 acres, primarily in Bartholomew, Brown, Johnson, and Jennings Counties in south central Indiana, with the main installation roughly 5 miles east of Prince’s Lakes and 3.5 miles west of the Town of Edinburgh. The Atterbury Job Corps Center and 622-acre Johnson County Park are immediately north. Muscatatuck Urban Training Center, an integral component of the Camp Atterbury mission, is located approximately 42 miles southeast. Camp Atterbury contains Himsel Army Airfield which is used by the Indiana National Guard in conjunction with Columbus Municipal Airport and Seymour Freeman Field Municipal Airport.

Camp Atterbury Counties: Bartholomew, Brown, Jackson, Johnson, Shelby.

Camp Atterbury Cities/towns: Columbus, Seymour, Edinburgh, Prince’s Lakes.



Indiana || Military Compatibility Handbook

Camp Atterbury

<https://www.atterburymuscatatuck.in.ng.mil/>

3008 Old Hospital Road, Edinburgh, IN 46124
Post Locator (812) 526-1499
Front Gate Security Building 438 Ext 62500
Front Gate Security Emerg. Line Ext 61109 or
(812) 526-1109
Military Police Station Ext 61234 or
(812) 526-1234
Headquarters Executive Assistant (812) 526-1304
Public Affairs/Welcome Center (812) 526-1386
^After Normal Business Hours (317) 519-7263
Community Relations Specialist Ext 61553
Public Affairs Officer (PAO) Ext 61386
Information Management Office (812) 526-1328

Columbus Municipal Airport

<https://www.columbus.in.gov/airport/>

4770 Ray Boll Blvd, Columbus, IN 47203
Main Line (812) 376-2519

Seymour Freeman Field Municipal Airport

<https://seymourin.org/index.php/offices/aviation-airport>

1025 A Ave, Seymour, IN 47274
Office Phone (812) 522-2031

Bartholomew County

<https://www.bartholomew.in.gov/>

234 Washington St, Columbus, IN 47201
Assessor (812) 379-1505
Clerk (812) 379-1600
Emergency Management (812) 379-1680
Park Director (812) 374-2250
Sheriff's Office (812) 379-1650
Treasurer (812) 379-1530

Brown County

<https://www.browncounty-in.gov/>

201 Locust Lane, Nashville, IN 47448
Assessor (812) 988-5466
Board of Commissioners (812) 988-4901
Clerk (812) 988-5510
County Council (812) 988-5485
Emergency Management (812) 988-2063
Parks & Recreation (812) 988-5522
Planning Commission (812) 988-5490
Sheriff's Department (812) 988-6655
Treasurer (812) 988-5458

Jackson County

<https://www.jacksoncounty.in.gov/>

220 E. Walnut St, Brownstown, IN 47220
Assessor (812) 358-6111
Clerk's Office & Election Board (812) 358-6116
County Commissioners (812) 358-6161
Emergency Management (812) 358-6110
Planning & Zoning Building Com. (812) 358-6109
Sheriff's Office (812) 358-2141
Treasurer (812) 358-6125

Johnson County

<https://co.johnson.in.us/>

86 W. Court St, Franklin, IN 46131
Main Line (317) 346-4300
Commissioners (317) 346-4301
Assessor (317) 346-4701
Treasurer (317) 346-4330
Emergency Management Agency (317) 346-4655
Parks (812) 526-6809
Planning and Zoning (317) 346-4350

Shelby County

<https://www.co.shelby.in.us/>

25 W. Polk Street, Shelbyville, IN 46176
Assessor (317) 392-6305
Emergency Mgmt. (317) 392-6308
Treasurer (317) 392-6375
Clerk (317) 392-6320
Plan Commission (317) 392-6338
Commissioners (317) 392-6330

City of Columbus

<https://www.columbus.in.gov/>

123 Washington St, Columbus, IN 47201
Main Line (812) 376-2500
Mayor's Office (812) 376-2500

City of Seymour

<https://www.seymourin.org/>

301 N Chestnut St, Seymour, IN 47274
Main Line (812) 522-4020
Clerk/Treasurer (812) 523-5881
Fire Chief (812) 522-2598
Mayor's Office (812) 523-5880
Parks Director (812) 523-5884
Building Commissioner (812) 523-5882
Police Chief (812) 522-1234

Town of Edinburgh

<https://www.edinburgh.in.us/>

107 South Holland Street, Edinburgh, IN 46124

Main Line (812) 526-3512

Town Manager (812) 526-3513

Clerk-Treasurer (812) 526-3511

Fire Chief (812) 526-3536

Police Chief (812) 526-3500

Building & Zoning Official (317) 450-4868

Buildings & Grounds (812) 526-3535

Planning Director (812) 314-5114

Town of Prince's Lakes

<https://townofprinceslakes.com/>

14 E Lakeview Dr, Nineveh, IN 46164

Town Hall (317) 933-2163

Marshal, Police Department (317) 933-3517

Economic Development and Commerce

Indiana Procurement Technical Assistance Center (PTAC)

<https://indianaptac.com/>

<https://indianaptac.com/locations/>

Note: Web link above is to a list of regional PTAC offices that serve all 92 Indiana counties including points of contact.

Local Economic Development Organizations (LEDO)

https://www.iedc.in.gov/docs/default-source/iedc-assets/ledo-list.pdf?sfvrsn=c0ca43d1_58

Note: Web link above is to a comprehensive list of LEDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Regional Economic Development Organizations (REDO)

https://iedc.in.gov/docs/default-source/iedc-assets/redo_map.pdf

Note: Web link above is to a comprehensive list of REDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Regional Opportunity Initiatives, Inc.

100 S. College Avenue, Suite 240, Bloomington, IN 47404

812-287-8116

<https://regionalloppportunityinc.org/>

Southern Indiana Defense Industry Network

440 Fifth Street, Columbus, IN 47201

<https://southernindefense.com/>

Education

Regional Opportunity Initiatives, Inc.

100 S. College Avenue, Suite 240, Bloomington, IN 47404

812-287-8116

<https://regionalloppportunityinc.org/>

Environment, Land, Water, and Shorelines

Southern Indiana Sentinel Landscape

<https://sentinellandscapes.org/landscapes/southern-indiana/>

Regional Councils of Government

Southeastern Indiana Regional Planning Commission

405 W. US Hwy 50, PO Box 765 Versailles, IN 47042

812-689-5505

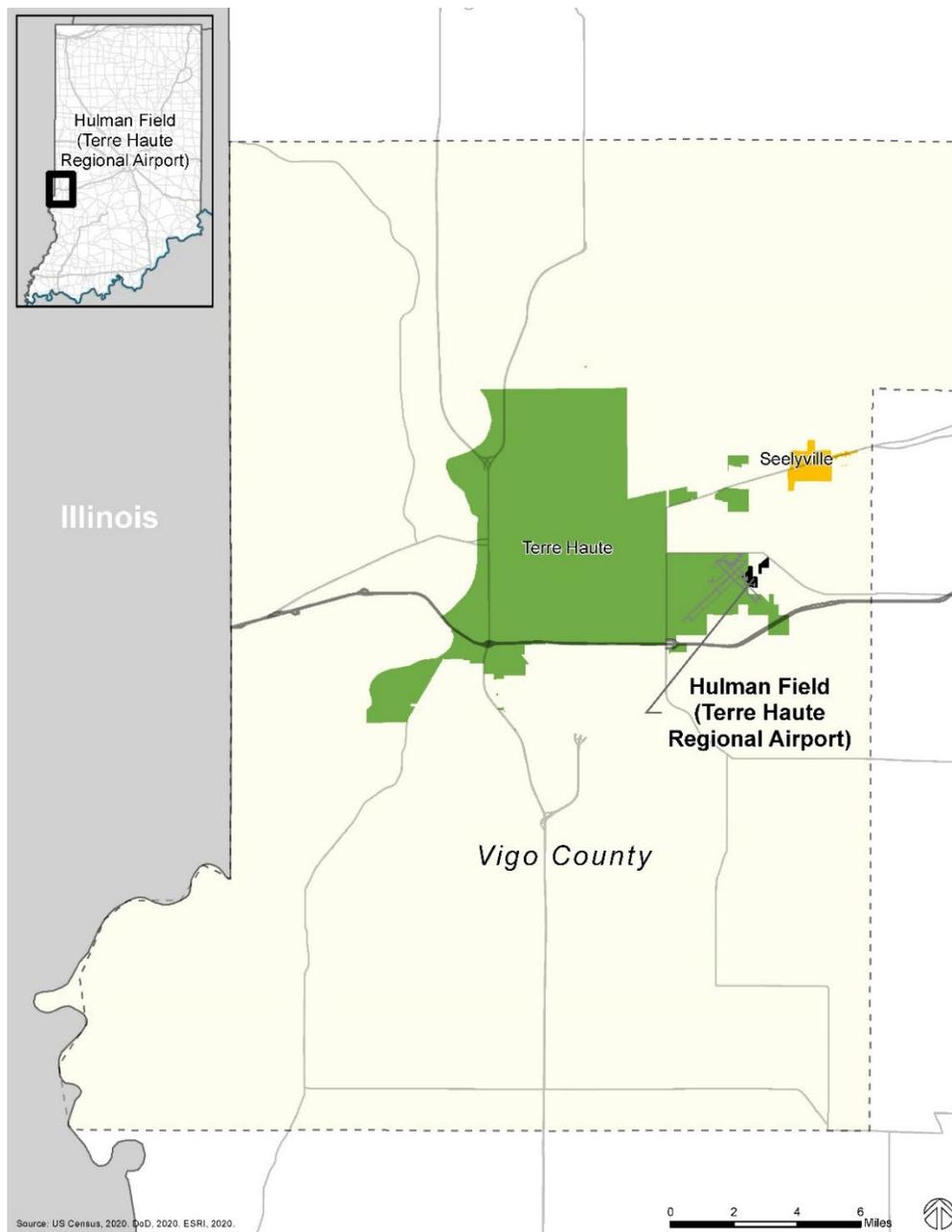
www.sirpc.org

6.4.7. Hulman Field (Terre Haute Regional Airport)

Hulman Field Air National Guard Base is located at Terre Haute Regional Airport, a joint civil-military use, general aviation airport in the City of Terre Haute. The Indiana National Guard facilities occupy the northeast portion of the airfield, which is approximately six miles from the city center. Hulman Field serves as the headquarters of the Indiana Air National Guard and its 181st Intelligence Wing, while the U.S. Air Force uses the facility for worldwide command and control of remotely piloted aircraft (RPA).

Hulman Field County: Vigo.

Hulman Field Cities/towns: Terre Haute, Seelyville.



Hulman Field (181st Intelligence Wing)

<https://www.181iw.ang.af.mil/>

780 Vanatti Circle, Terre Haute, IN 47803
 Base Information (812) 877-5210
 Public Affairs (812) 877-5658
 (812) 877-5471

Terre Haute Regional Airport

<https://huf.com/>

581 S. Airport Street, Terre Haute, IN 47803
 Office Phone (812) 877-2524
 Executive Director Ext 110
 Director of Operations Ext 114
 Public Safety Phone (812) 240-0789

Vigo County

<https://www.vigocounty.in.gov/>

650 South First Street, Terre Haute, IN 47807
 County Commissioners (812) 462-3367
 County Council (812) 231-5638
 Area Planning Department (812) 462-3354
 Assessor (812) 462-3358
 Clerk (812) 462-3211
 Treasurer (812) 462-3251
 Emergency Management Agency (812) 462-3217
 Fire Invest. & Safety Task Force (812) 462-3305
 Sheriff's Office (812) 462-3226

City of Terre Haute

<https://www.terrehaute.in.gov/>

17 Harding Avenue, Terre Haute, IN 47807
 Main Line (812) 244-2311
 Mayor's Office (812) 244-2303
 Board of Public Works (812) 244-2333
 City Clerk (812) 244-2103
 City Council (812) 244-2103
 Fire Department/EMS (812) 244-2803
 Parks & Recreation (812) 232-2727
 Police Department (812) 244-2501
 Engineering Department (812) 232-4028

Town of Seelyville

<https://seelyville-in.gov/seelyville-town-hall>

2299 N. Main St, Terre Haute, IN 47803
 Main Line (812) 877-2665

Economic Development and Commerce

Indiana Procurement Technical Assistance Center (PTAC)

<https://indianaptac.com/>
<https://indianaptac.com/locations/>

Note: Web link above is to a list of regional PTAC offices that serve all 92 Indiana counties including points of contact.

Local Economic Development Organizations (LEDO)

https://www.iedc.in.gov/docs/default-source/iedc-assets/ledo-list.pdf?sfvrsn=c0ca43d1_58

Note: Web link above is to a comprehensive list of LEDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Regional Economic Development Organizations (REDO)

https://iedc.in.gov/docs/default-source/iedc-assets/redo_map.pdf

Note: Web link above is to a comprehensive list of REDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

NOAA to support natural resource damage assessment efforts: <https://response.restoration.noaa.gov/diver>

Environment, Land, Water, and Shorelines

Indiana Land Protection Alliance

620 East Ohio Street, Indianapolis, IN 46202
 317-445-7474

<https://www.protectindianaland.org/indiana-land-trusts>

<https://www.protectindianaland.org/indiana-land-trusts>

Note: Web link above provides links to all land trusts operating in Indiana by county and alphabetically.

Regional Councils of Government

THRIVE West Central

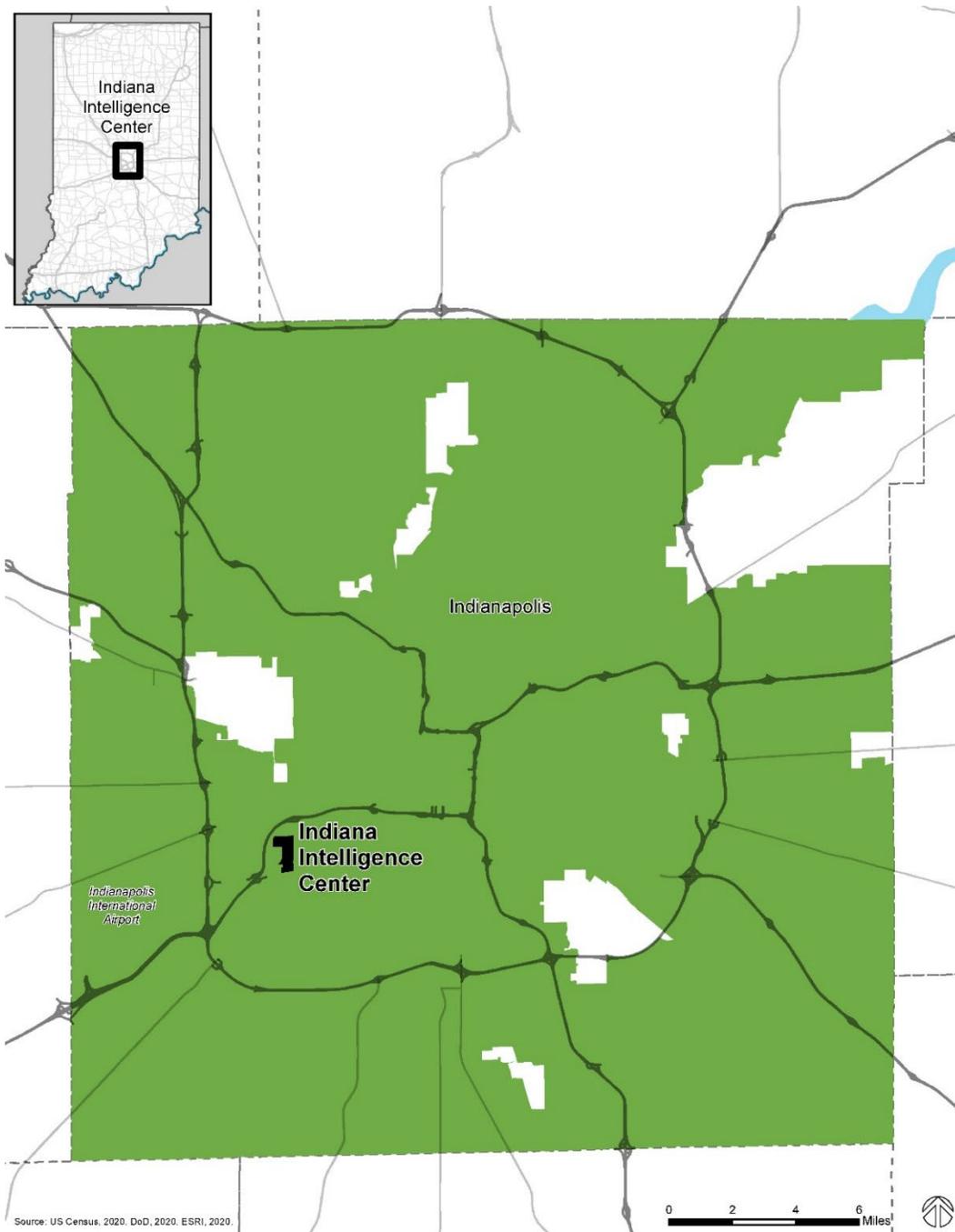
2800 Poplar St. STE 9A, Terre Haute, IN 47803
 812-238-1561

www.thrivewestcentral.com

6.4.8. Indiana Intelligence Center

The **Indiana Intelligence Center** is collocated with the Indiana National Guard headquarters at Stout Field in the City of Indianapolis. One of the top intelligence training sites in the U.S. Army, the facility is immediately adjacent to commercial and industrial uses that share the former World War II site northeast of the I-70/Sam Jones Expressway interchange on the west side of the city.

Indiana Intelligence Center City: Indianapolis.



Indiana || Military Compatibility Handbook

Indiana Intelligence Center

<https://www.in.ng.mil/About/Organization/Indiana-Intelligence-Center/>

2002 S Holt Rd, Indianapolis, IN 46241

Director	(317) 247-3326
State Security Officer	(317) 247-3589
Switchboard	(317) 247-3300
Intelligence Operations Officer	(317) 247-3300
	Ext 72275

City of Indianapolis

<https://www.indy.gov/>

200 E Washington St, Indianapolis, IN

Office of the Mayor	(317) 327-3601
City-County Council	(317) 327-4242
Assessor's Office	(317) 327-4907
Clerk's Office	(317) 327-4740
Department of Metropolitan Dev.	(317) 327-5155
Department of Public Works	(317) 327-4000
Fire Department	(317) 327-6041
Police Department	(317) 327-3811
Parks and Recreation	(317) 327-7275
Sheriff's Office	(317) 327-1700
County Commissioners	(317) 327-4907

Economic Development and Commerce

Indiana Procurement Technical Assistance Center (PTAC)

<https://indianaptac.com/>

<https://indianaptac.com/locations/>

Note: Web link above is to a list of regional PTAC offices that serve all 92 Indiana counties including points of contact.

Local Economic Development Organizations (LEDO)

https://www.iedc.in.gov/docs/default-source/iedc-assets/ledo-list.pdf?sfvrsn=c0ca43d1_58

Note: Web link above is to a comprehensive list of LEDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Regional Economic Development Organizations (REDO)

https://iedc.in.gov/docs/default-source/iedc-assets/redo_map.pdf

Note: Web link above is to a comprehensive list of REDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Environment, Land, Water, and Shorelines

Indiana Land Protection Alliance

620 East Ohio Street, Indianapolis, IN 46202

317-445-7474

<https://www.protectindianaland.org/indiana-land-trusts>

<https://www.protectindianaland.org/indiana-land-trusts>

Note: Web link above provides links to all land trusts operating in Indiana by county and alphabetically.

Regional Councils of Government

Indianapolis Metropolitan Planning Organization

200 East Washington Street, Suite 2322, Indianapolis, IN 46204

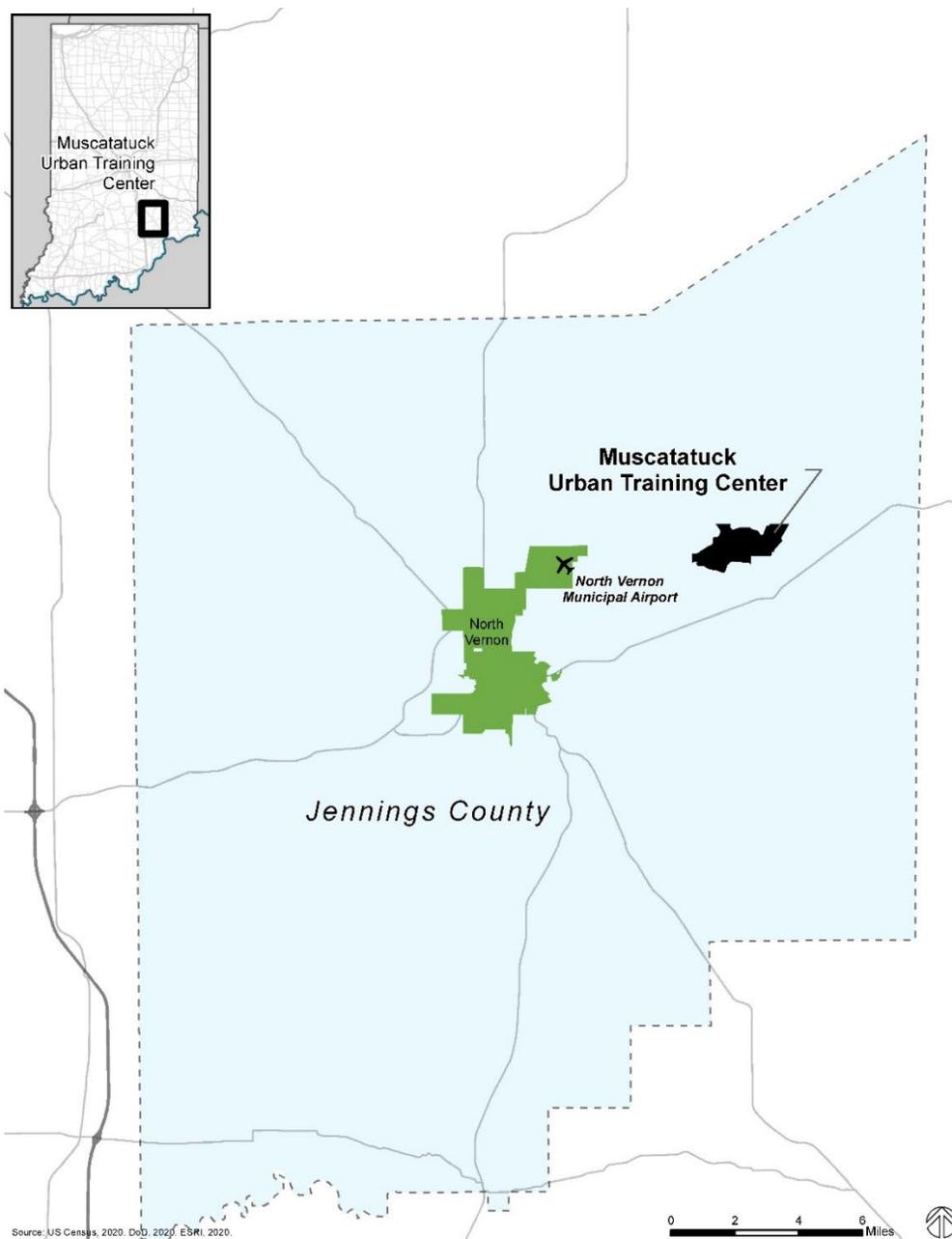
www.indympo.org

6.4.9. Muscatatuck Urban Training Center

The **Muscatatuck Urban Training Center (MUTC)** is situated just west of Brush Creek Reservoir in Jennings County. The facility is roughly three miles northwest of the Jefferson Proving Ground, one mile northwest of the unincorporated community of Butlerville, and five miles northeast of the City of North Vernon. The MUTC is the Department of Defense's largest urban training facility, established in 2005 as an integral component of Camp Atterbury (approximately 42 miles northwest). Military training also includes operations at the nearby North Vernon Municipal Airport.

MUTC County: Jennings.

MUTC Cities/towns: North Vernon.



Indiana || Military Compatibility Handbook

Muscatatuck Urban Training Center

<https://www.atterburymuscatatuck.in.ng.mil/>
4230 E Administration Drive, Butlerville, IN 47223
Post Locator (812) 526-1499
Main Line Switchboard (812) 458-8780
Public Affairs Office (317) 247-3300,
Ext. 41610
^After Normal Business Hours (317) 519-7263

North Vernon Municipal Airport

<https://www.northvernon-in.gov/departments/airport.php>
645 E County Rd 450 N, North Vernon, IN 47265
Main Line / Director of Operations (812) 346-5223

Jennings County

<https://jenningscounty-in.gov/>
200 East Brown Street, Vernon, Indiana 47282
Area Planning (812) 352-3005
Assessor (812) 352-3011
Clerk (812) 352-3070
Commissioners President (812) 592-5408
Emergency Management Agency (812) 346-1691
Parks and Recreation (812) 346-2953
Treasurer (812) 352-3060

City of North Vernon

<https://www.northvernon-in.gov/>
143 E. Walnut Street, North Vernon, In 47265
Main Line (812) 346-3789
Office of the Mayor (812) 346-3789
Clerk-Treasurer (812) 346-5907
Police Department (812) 346-1466
Fire Department (812) 346-3300.
Parks & Recreation (812) 346-9371

Economic Development and Commerce

Indiana Procurement Technical Assistance Center (PTAC)

<https://indianaptac.com/>
<https://indianaptac.com/locations/>
Note: Web link above is to a list of regional PTAC offices that serve all 92 Indiana counties including points of contact.

Local Economic Development Organizations (LEDO)

https://www.iiedc.in.gov/docs/default-source/iiedc-assets/ledo-list.pdf?sfvrsn=c0ca43d1_58

Note: Web link above is to a comprehensive list of LEDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Regional Economic Development Organizations (REDO)

https://iiedc.in.gov/docs/default-source/iiedc-assets/redo_map.pdf

Note: Web link above is to a comprehensive list of REDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Regional Councils of Government

Indianapolis Metropolitan Planning Organization

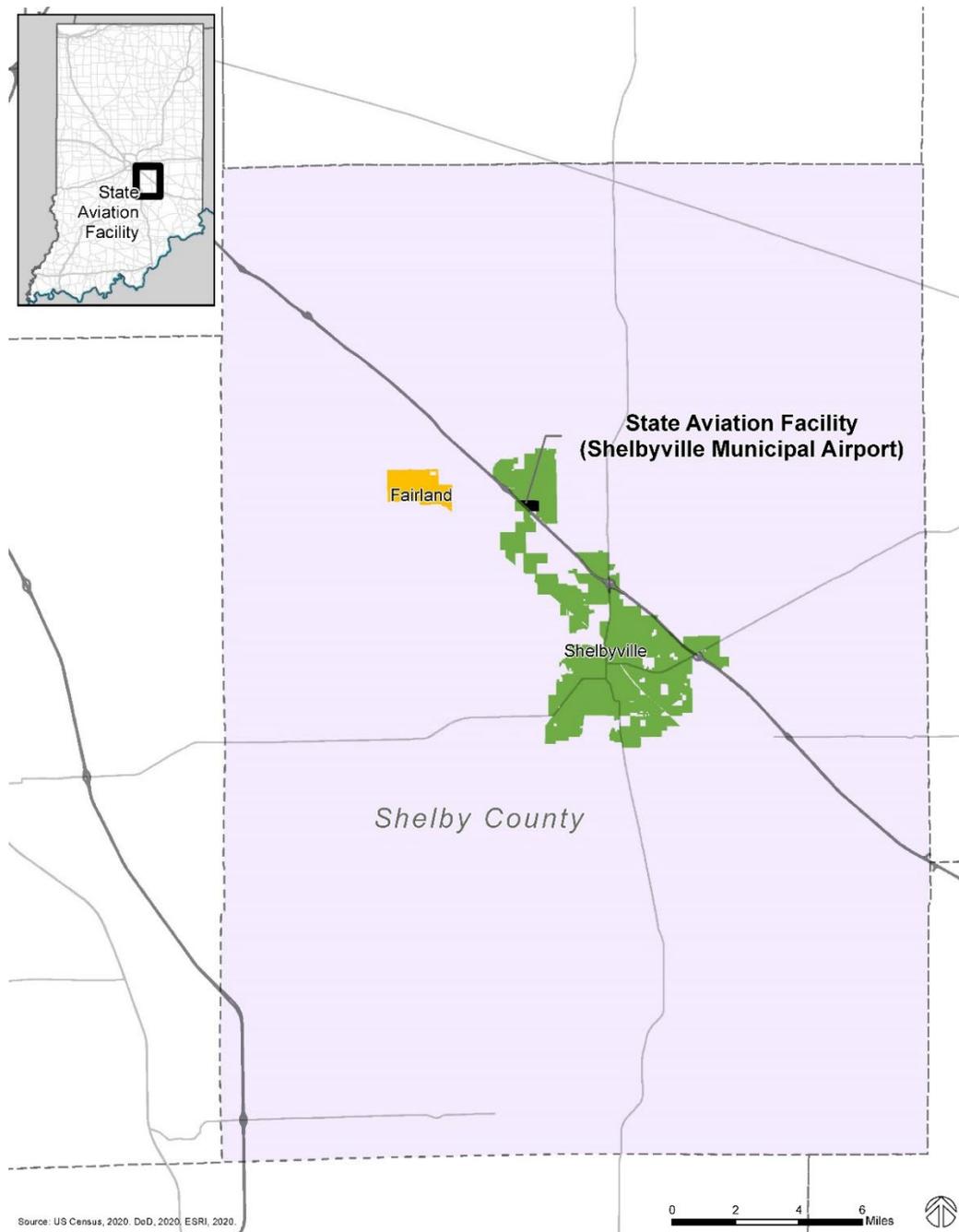
200 East Washington Street, Suite 2322, Indianapolis, IN 46204
www.indympo.org

6.4.10. State Aviation Facility

The **Indiana Guard State Aviation Facility** is located adjacent and west of the Shelbyville Municipal Airport, roughly three miles northwest of the City of Shelbyville. The facility was established in 1971 as a four-unit armory facility but now is home to the 38th Combat Aviation Brigade which provides military and community support to Indiana as the only aviation unit in the state.

State Aviation Facility County: Shelby.

State Aviation Facility Cities/towns: Shelbyville, Fairland.



Indiana || Military Compatibility Handbook

State Aviation Facility

<https://www.in.ng.mil/About/Organization/38th-Infantry-Division/38th-Combat-Aviation-Brigade/>
3556 N Michigan Rd, Shelbyville, IN 46176
Indiana Army National Guard (317) 392-8200
AASF Flights OPS Officer (317) 392-8213

Shelbyville Municipal Airport

<http://www.shelbyvilleairport.com/>
3529 North 100 West, Shelbyville, IN 46176
Airport Manager (317) 392-1284

Shelby County

<https://www.co.shelby.in.us/>
25 W. Polk Street, Shelbyville, IN 46176
Assessor (317) 392-6305
Emergency Mgmt. (317) 392-6308
Treasurer (317) 392-6375
Clerk (317) 392-6320
Plan Commission (317) 392-6338
Commissioners (317) 392-6330

City of Shelbyville

<https://www.cityofshelbyvillein.com/>
44 W Washington Street, Shelbyville, IN 46176
City Hall (317) 398-6624
Building Commission (317) 392-5102
Clerk-Treasurer (317) 392-5103
Fire Department (317) 392-5119
Mayor (317) 398-6624
Parks & Recreation (317) 392-5128
Plan Commission (317) 392-5102
Police Department (317) 392-2511
Redevelopment Commission (317) 398-6624

Town of Fairland

<http://fairlandin.org/>
105 S. Walnut St., Fairland, IN 46126
Main Line (317) 427-0090

Economic Development and Commerce

Indiana Procurement Technical Assistance Center (PTAC)

<https://indianaptac.com/>
<https://indianaptac.com/locations/>

Note: Web link above is to a list of regional PTAC offices that serve all 92 Indiana counties including points of contact.

Local Economic Development Organizations (LEDO)

https://www.iedc.in.gov/docs/default-source/iedc-assets/ledo-list.pdf?sfvrsn=c0ca43d1_58

Note: Web link above is to a comprehensive list of LEDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Regional Economic Development Organizations (REDO)

https://iedc.in.gov/docs/default-source/iedc-assets/redo_map.pdf

Note: Web link above is to a comprehensive list of REDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Environment, Land, Water, and Shorelines

Indiana Land Protection Alliance

620 East Ohio Street, Indianapolis, IN 46202
317-445-7474

<https://www.protectindianaland.org/indiana-land-trusts>

<https://www.protectindianaland.org/indiana-land-trusts>

Note: Web link above provides links to all land trusts operating in Indiana by county and alphabetically.

Regional Councils of Government

Southeastern Indiana Regional Planning Commission

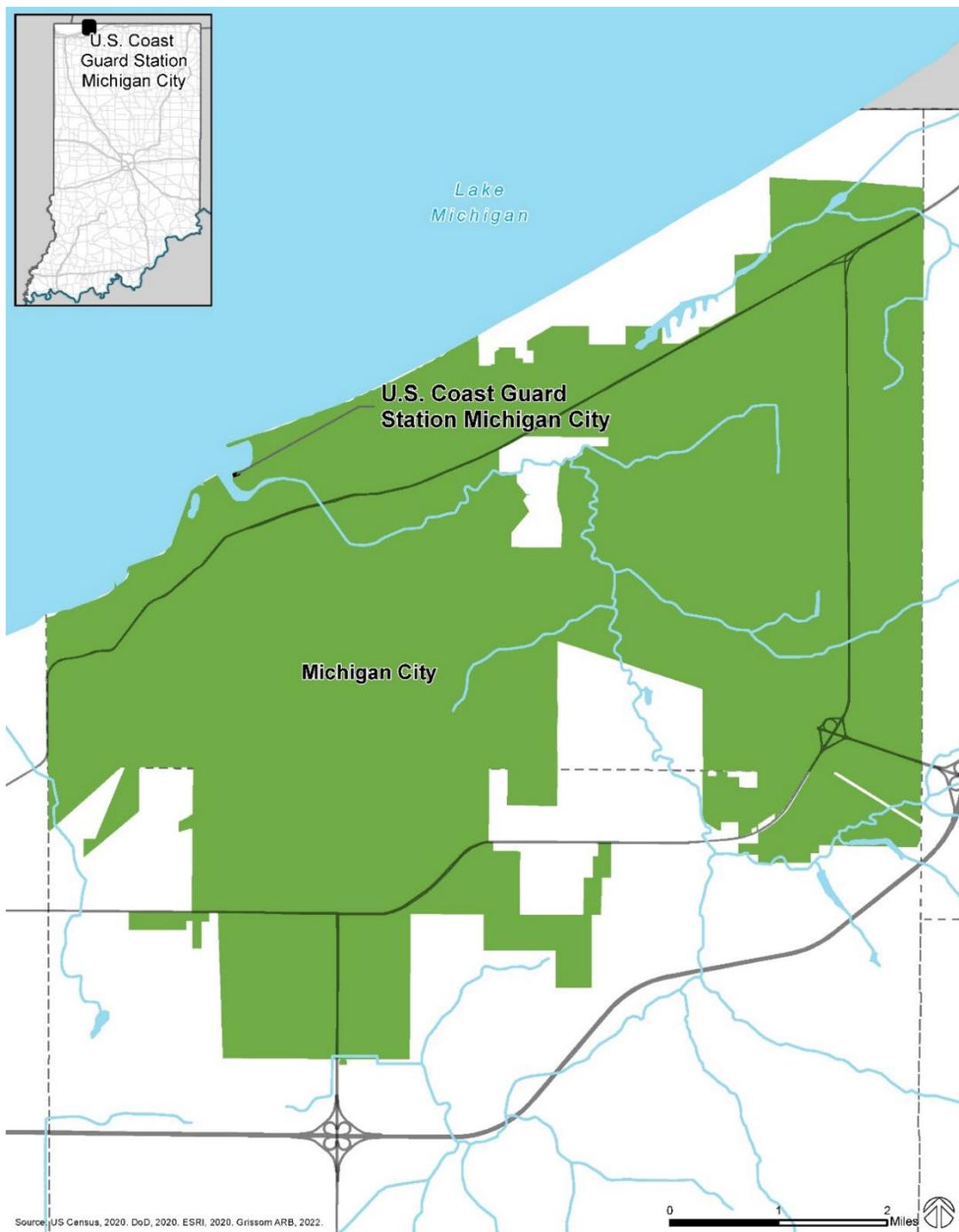
405 W. US Hwy 50, PO Box 765 Versailles, IN 47042
812-689-5505

www.sirpc.org

6.4.11. U.S. Coast Guard Station Michigan City

The **U.S. Coast Guard Station Michigan City** was established in 1889 in Michigan City. Located at the mouth of Trail Creek, it is the sole Lake Michigan U.S. Coast Guard unit in Indiana. The facility includes an operations building and berthing for seven vessels. The facility is located next to the Port Authority Marina, Old Lighthouse Museum, Indiana National Guard Recruiting Office, and two city parks.

U.S. Coast Guard Station City: Michigan City.



Indiana || Military Compatibility Handbook

U.S. Coast Guard Station Michigan City

<https://www.atlanticarea.uscg.mil/Our-Organization/District-9/Ninth-District-Units/Sector-Lake-Michigan/Units/Michigan-City/>

10 On the Lake, Michigan City, IN 46360
Main Laine (219) 879-8371

City of Michigan City

<https://www.emichigancity.com/>

100 E Michigan Boulevard, Michigan City, IN 46360
Main Line (219) 873-1400
City Council (210) 873-1410
Clerk (219) 873-1410
Community Development (219) 873-1419
Emergency Management (219) 873-1499
Fire Administration (219) 873-1452
Mayor's Office (219) 873-1400
Parks & Recreation (219) 873-1506
Planning & Inspection (219) 873-1419

Economic Development and Commerce

Indiana Procurement Technical Assistance Center (PTAC)

<https://indianaptac.com/>
<https://indianaptac.com/locations/>

Note: Web link above is to a list of regional PTAC offices that serve all 92 Indiana counties including points of contact.

Local Economic Development Organizations (LEDO)

https://www.iedc.in.gov/docs/default-source/iedc-assets/ledo-list.pdf?sfvrsn=c0ca43d1_58

Note: Web link above is to a comprehensive list of LEDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Regional Economic Development Organizations (REDO)

https://iedc.in.gov/docs/default-source/iedc-assets/redo_map.pdf

Note: Web link above is to a comprehensive list of REDOs throughout Indiana along with contact and website information. The list is maintained by the Indiana Economic Development Corporation.

Environment, Land, Water, and Shorelines

Indiana Land Protection Alliance

620 East Ohio Street, Indianapolis, IN 46202
317-445-7474

<https://www.protectindianaland.org/indiana-land-trusts>

<https://www.protectindianaland.org/indiana-land-trusts>

Note: Web link above provides links to all land trusts operating in Indiana by county and alphabetically.

Regional Councils of Government

Michiana Area Council of Governments

227 W Jefferson Blvd, 1120 County/City Building, South Bend, IN 46601
574-287-1829

www.macog.com

This page intentionally blank.





S  DC

 Matrix

