ATTERBURY JOINT LAND USE STUDY

working together for the future

Camp Atterbury and Muscatatuck Urban Training Center

Joint Land Use Study

August 2009

TABLES

FIGURES

Acknowledgements

This Joint Land Use Study (JLUS) is a cooperative venture between the Counties of Bartholomew, Brown, Jennings, and Johnson; the communities of Columbus, Cordry Sweetwater Conservancy, Edinburgh, and Prince's Lakes; and military installations at Camp Atterbury and Muscatatuck Urban Training Center. This study was prepared under contract with the State of Indiana with financial support from the Office of Economic Adjustment, Department of Defense. The content does not necessarily reflect the views of the Office of Economic Adjustment or the State of Indiana.

To help with the success of this study, other industry professionals were involved, as well. These professionals aided the study in organization, development, research, public participation, and completion of the implementation plan, recommendations, and study findings. Among these industry professionals are: GRW Engineers, AMEC Earth & Environmental, Inc., Briljent LLC, Image Matters LLC, and Phelco Technologies. Together, these professionals worked with the communities and the military to develop a comprehensive study of the area.

Two committees, the Policy and Technical Committee, comprised of city, county, military, and other stakeholders, directed the development of the JLUS. The Policy and Technical Committees were advisory groups made up of representatives from the local communities.

POLICY COMMITTEE

The Policy Committee played an active and important role in the development of the Atterbury JLUS. It provided policy direction, study oversight, project monitoring, and report adoption. We would like to thank the following individuals for their support, assistance, and professional advice:

Rich Arkanoff - Superintendent, Edinburgh Community School Corporation

Bill Austin - Commissioner, Brown County

Jeff Bergman - Planning Director, City of Columbus and Bartholomew County

Michael Brady - Public Affairs Officer, Camp Atterbury

Corey Carr - Executive Director, Columbus Economic Development Board

Tom Dziennik - Board Director, Cordry Sweetwater Conservancy District

Larry Fagersten - Community Outreach, Muscatatuck Urban Training Center, United States Army

David Fisher - Plan Commission, City of Columbus

Paul Franke - Commissioner, Bartholomew County

Tom Kite - Board of Commissioners Chairman, Johnson County

Kevin McGinnis - Plan Commission, Johnson County

Cheryl Morphew - Executive Director, Johnson County Development Corporation

Colonel Barry Richmond - United States Army

TECHNICAL COMMITTEE

The Technical Committee played an active and important role in the development of the Atterbury JLUS. The Technical Committee helped identify issues, provided expertise on technical issues, suggested implementation options, and reviewed periodic draft reports. We would like to thank the following individuals for their technical expertise and assistance:

Robert Atnip - State Master Planner, Indiana National Guard

Dan Batta - Director of Planning & Zoning, Johnson County

Rod Blasdel - Director, Columbus Municipal Airport

Bill Boyle - Board Appointee, Cordry Sweetwater Conservancy District

Ryan Curry - Airport Director, North Vernon Municipal Airport

Kathryn Ertel - Executive Director, Jennings County Economic Development Commission

Don Furlow - Airport Manager, Freeman Municipal Airport

David T. Woods - Planning Director, Brown County

Thomas Weintraut, Jr. - Senior Planner, City of Columbus and Bartholomew County

OTHER CONTRIBUTORS

We would also like to thank the following individuals for their support, assistance and professional advice:

Lynn Boese - Department of Defense, Office of Economic Adjustment

Bob Brown - Analysis Integration Office, Camp Atterbury

Harold "Soup" Campbell - Mayor, City of North Vernon

Joanna Caplette - Muscatatuck Urban Training Center

Al Cornell - Town of Prince's Lakes, Building Inspector

Ted Dawson - Interim Director, Columbus Economic Development Board

John Drybread - Director of Utilities, Town of Edinburgh

Michelle Elsner – Johnson County Planning and Zoning

Andrew Fennig - Program Manager, State of Indiana, Office of Community and Rural Affairs

Mary Fouch - Commissioner, Brown County

Jack Fowler - Deputy Operations Officer, Camp Atterbury

M. Corey Harper - Airport Design Technician, Butler Fairman & Seufert,

Jason Howe - Camp Atterbury

Darrell Kent - Commissioner, Brown County

Lisa Kopczynski - Public Affairs, Camp Atterbury

Steve Leatherman - Contracts Administration, WTH Technology, Inc.

Debbie Londeree – Chief Deputy, Bartholomew County Commissioner's Office

Jason Lovell - Director of Defense Development, State of Indiana, Office of Defense Development

Jeff Lucas - GIS Mapping Division Head, Bartholomew County Surveyor's Office

Mike Magner – Jennings County Engineer

Donald V. Manley, P.E. - V.P. Airport Development, Butler Fairman & Seufert,

Nancy McWhorter - GI&S Services, Camp Atterbury

Mike Murphy - Brown County GIS Administrator

Kyleen Nash - Indiana Office of Community and Rural Affairs

William R. Ochsner - State Resourced Program Manager, Ind. Army National Guard

Jim Plump - Executive Director, Jackson County Industrial Development Corporation

Janice L. Ramey - Jennings County Auditor

James Reeves - Commissioner, Jennings County

Steve Ruble - City Engineer, City of Columbus

Aaron Shaw - GIS Director, Johnson County

Brad Teter - Building Commissioner, Town of Edinburgh

Jason Thompson - Indiana National Guard

Anita Thurston - Plans, Analysis, and Integration Office, Camp Atterbury

Cheryl B. Trisler - Executive Director, Jennings County Area Plan Commission

Jim Ude - Planning & Program Director, INDOT, Seymour District

Michael R. Weir - Jackson County Building Commissioner

Robert Willhite - Commissioner, Jennings County

Pat Wilson - Columbus Economic Development Board

Blake Wolpert - Commissioner, Brown County (Former)

Deborah S. Workman - Clerk-Treasurer, Town of Prince's Lakes

Stephanie Yager - Commissioner, Brown County (Former)

JLUS Consultants:

GRW Engineers, Inc.
AMEC Earth and Environmental
Briljent
Image Matters
Phelco Technologies

Executive Summary

What is a Joint Land Use Study?

This Joint Land Use Study (JLUS) is a cooperative venture between the Counties of Bartholomew, Brown, Jennings, and Johnson; the communities of Columbus, Cordry Sweetwater Conservancy, Edinburgh, and Prince's Lakes; and military installations at Camp Atterbury and Muscatatuck Urban Training Center. This study was prepared under contract with the State of Indiana with financial support from the Office of Economic Adjustment, Department of Defense. The content does not necessarily reflect the views of the Office of Economic Adjustment or the State of Indiana.

Atterbury JLUS Overview

The Joint Land Use Study is presented in five sections:

1.0 Study Purpose

2.0 Organization

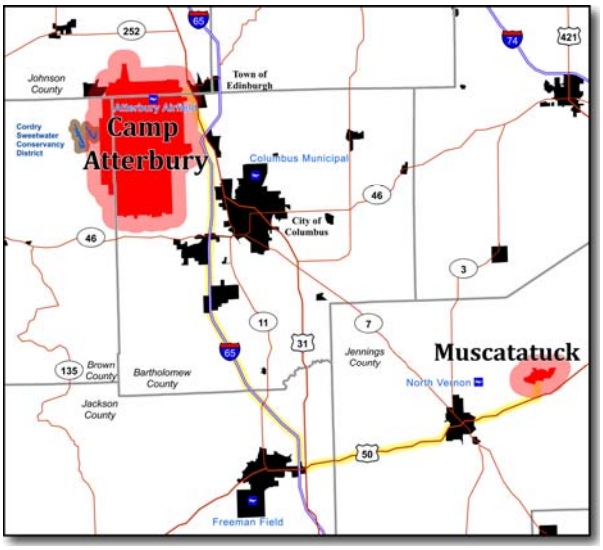
3.0 Background & Existing Conditions

4.0 Compatibility & Potential Impacts

5.0 Implementation Plan

Study Purpose

Military installations were originally located in remote areas, distant from urban areas, due largely to the availability of land and for defense and security purposes. Over time however, installations drew people and businesses closer to take advantage of civilian job opportunities offered by the installation and to provide the goods and services to support the installation's operations. Expansion of the military mission and urban growth and development around military installations may lead to land use conflicts that have an adverse effect on the military mission and surrounding communities. Through joint, cooperative military and community planning, growth conflicts can be anticipated, identified, and prevented. These actions help protect the installation's military mission, and the public health, safety, quality of life and economic stability of local communities.



Camp Atterbury and Muscatatuck, located in rural southern Indiana, are foremost installations for the Army National Guard and Army Reserves, in addition to other units that train and

mobilize there. Due to the rural character of the area, the training and operations at both locations are unencumbered. This study is being conducted at an opportune time, when land use incompatibilities are minimal, and the future is bright for the growth and development of surrounding communities and the military.

For this study, a one-mile buffer outside the boundary of Camp Atterbury and Muscatatuck (shown in pink) has been established to conduct specific analysis of existing and potential impacts for both the military and the surrounding communities within the buffer. The "study area" often refers to the area within the one-mile buffer, but also includes counties, cities, towns, and areas that may or may not fall within the buffer, but have some level of impact.

Who is Involved?

The citizens and community members that live, work, and play in southern Indiana are all part of this study, and more specifically, the following jurisdictions:

Bartholomew County	City of Columbus	Johnson County	Town of Prince's
Brown County	Cordry Sweetwater	Muscatatuck	Lakes
Camp Atterbury	Jennings County	Town of Edinburgh	Local Airports

Objectives of the JLUS

The objectives of the Joint Land Use Study are:

1. Encourage cooperative land use planning between military installations and the surrounding community.
2. Seek ways to reduce the operational impacts of military installations on adjacent land.
3. Reduce potential incompatibilities between the military installation and surrounding communities while still accommodating new growth and economic development.
4. Protect the general public's health, safety, and welfare without compromising the operational missions of the installation.

Background

Camp Atterbury is a federally owned, state-operated training and testing facility, located in Central Indiana, approximately 35 miles south of Indianapolis. It encompasses slightly more than 33,000 acres within Bartholomew, Brown and Johnson Counties.

Camp Atterbury is one of Indiana's premier training centers and one of the Army's "Power Generation Platforms." Since federalized as a mobilization center in 2003, Camp Atterbury and its partners, the 205th and 189th Infantry Brigades, have trained and mobilized over 50,000 service members assigned to various locations throughout the world.

Muscatatuck Urban Training Center (MUTC) is a state-owned, federally licensed, Advanced Urban Training Facility operated by the Indiana Army National Guard. Muscatatuck is a "living, breathing city," capable of supporting stability and reconstruction training requirements of the U.S. military.

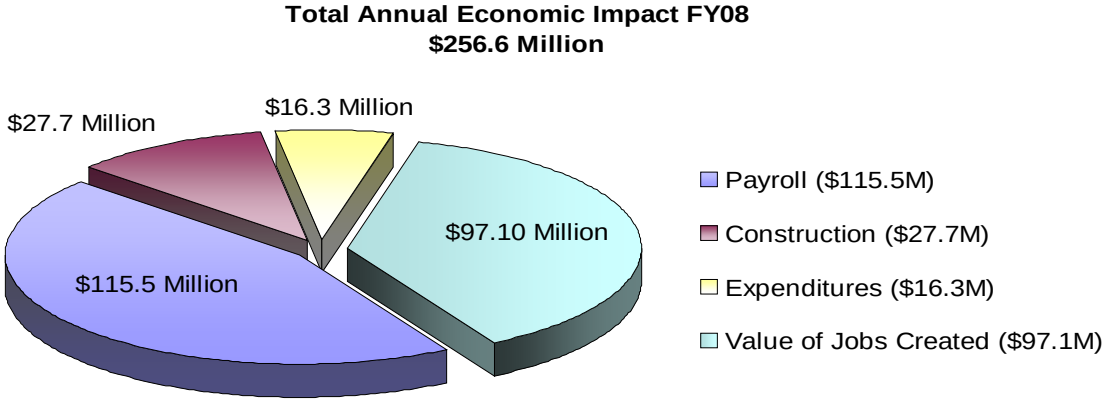
Located in Southeastern Indiana, Muscatatuck is approximately 80 miles southeast of Indianapolis, and 70 miles west of Cincinnati. It is located in Jennings County and encompasses approximately 1,000 acres, with nine miles of surface roads, one mile of underground tunnels, and a 180-acre reservoir.

Although maintained and operated by the military, Muscatatuck is a consortium of governmental, public and private entities that pool their capabilities to provide the most realistic training experience possible. Training at Muscatatuck can be tailored to replicate both foreign and domestic scenarios and can be utilized by various civilian and military organizations.

Muscatatuck serves members of active duty and reserve components to include Army, Air Force, Navy, and Marines. In addition, Muscatatuck provides training facilities for other federal, state and local agencies.

Military Economic Impact on Local Community

The economic impact of Atterbury and Muscatatuck on the surrounding region is measured in four categories: annual payroll, annual expenditures, construction contracts, and value of jobs created. Payroll includes direct employment of military and civilian personnel. Expenditures include spending on supplies, services and materials. The value of jobs created is an estimate of benefits to the region resulting from employers' expenses in salary, expenditures, and construction. For fiscal year 08 payroll was $115.5 M; expenditures were $16.3 M; construction was $27.7 M; and value of jobs created was $97.1 M; for a total economic impact of $256.6 M.



Area Growth

After a thorough land use and growth trend analysis, it has been determined that continued growth around both Camp Atterbury and Muscatatuck is highly probable. According to the U.S. Census Bureau, the five counties in the surrounding area reported a total population of 287,794 in 2005. By 2025, the five counties are projected to increase in population to 335,320, nearly a 17% increase over 20 years. Growth in the area will continue in many forms, including residential, commercial, and industrial development, which reflects the vitality of the area.

Findings

Land Use

Incompatible land uses put pressure on military installations and the surrounding communities. The burden imposed on military bases by surrounding development may affect readiness and limit the military's ability to use fully its training and testing facilities for their intended purposes. Military operations may have a negative impact on the use and enjoyment of private property outside the installation. To avoid these outcomes, it is important to plan for mutual, compatible development.

Although both Camp Atterbury and Muscatatuck are located in rural areas of southern Indiana, the surrounding communities and industries continue to grow and expand. Future use and development of privately owned land surrounding the installations is an issue that should be addressed. The installations and the surrounding communities have tools to help minimize incompatible uses. These tools are highlighted in the Implementation Plan. These tools are implemented at the local level, by administrative staff, elected officials, and legislative bodies.

There are factors that help characterize areas of potential incompatibility. Planning for compatibility is a long-term strategy that benefits the entire community. There are three categories of compatibility factors: man-made, natural resources, and competition for scarce resources. These were considered when analyzing potential incompatible land uses in the area.

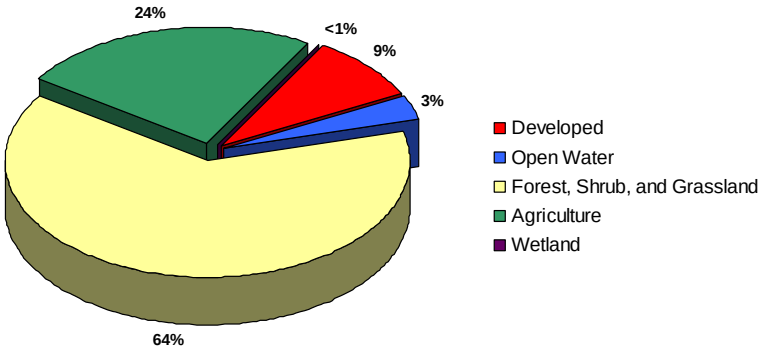
Man-Made
- Land Use
- Safety Zones
- Vertical Obstruction
- Local Housing Availability
- Infrastructure Extensions
- Anti-Terrorism / Force Protection
- Noise
- Vibration
- Dust / Smoke / Steam
- Light and Glare
- Alternative Energy
- Air Quality
- Frequency Spectrum
- Public Trespassing
- Cultural Sites
- Legislative Initiatives
- Interagency Coordination

Natural Resources
- Water Quality / Quantity
- Threatened & Endangered Species
- Marine Environments

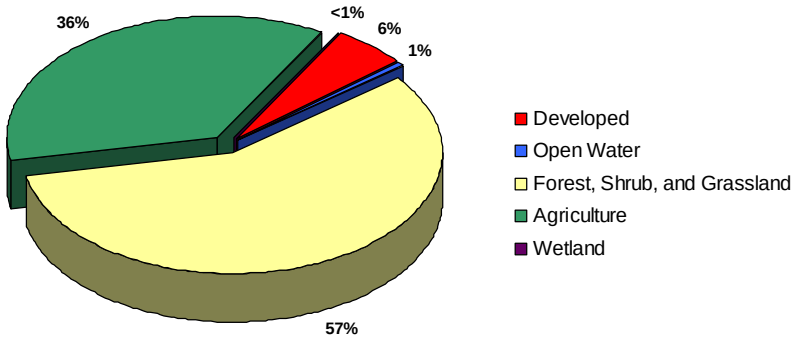
Competition for Scarce Resources
- Scarce Natural Resources
- Land, Air and Sea Spaces
- Frequency Spectrum Capacity
- Ground Transportation Capacity

Land use classification systems, developed by the United States Geological Survey, help identify similarities among uses, and assist in making decisions regarding land use compatibility and development potential. The following charts show land use classifications for the area within the one-mile buffer.

Landcover in 1 Mile Buffer (Camp Atterbury)



Landcover in 1 Mile Buffer (Muscatatuck)



There is some concern with Prince's Lakes, Edinburgh, Columbus, North Vernon, and Butlerville. As they continue to expand boundaries to include land that is currently unincorporated adjacent to the installations, it may result in loss of prime farmland, habitat for endangered species, and lead to land use incompatibilities. Each of these could have an impact on the community and the training and mission of the installation.

Currently, Prince's Lakes and the Town of Edinburgh contain undeveloped land that is zoned residential within the one-mile buffer of Atterbury. The Town of Butlerville is within the one-mile buffer of Muscatatuck. Zoning that is susceptible to development and is within the one mile buffer may require some consideration to compatibility with current and future military operations (see recommendations). Incompatibilities may be in the form of land use, height and use of structures, noise, safety, and/or any of the compatibility factors listed previously.

Safety Zones

Local Airports are used by Camp Atterbury as part of training and other military operations. To address the compatibility of land uses in and around local airports, this study determines the air safety zones based on military air safety standards. Columbus Municipal, North Vernon Municipal, and Freeman Municipal Airports military air safety zones are shown on the following pages. Safety zones provide a tool for local communities in determining what types of land uses are compatible beyond airport runways. There are land uses that are compatible and/or incompatible within each safety zone. The safety zones extend into the surrounding communities. Areas of concern are:

Columbus Municipal

- The safety zones extending to the southwest includes uses that are incompatible, and conditionally compatible.
- The safety zone extending to the southeast includes uses that are incompatible.
- The safety zone extending to the northeast includes uses that are conditionally compatible

North Vernon Municipal

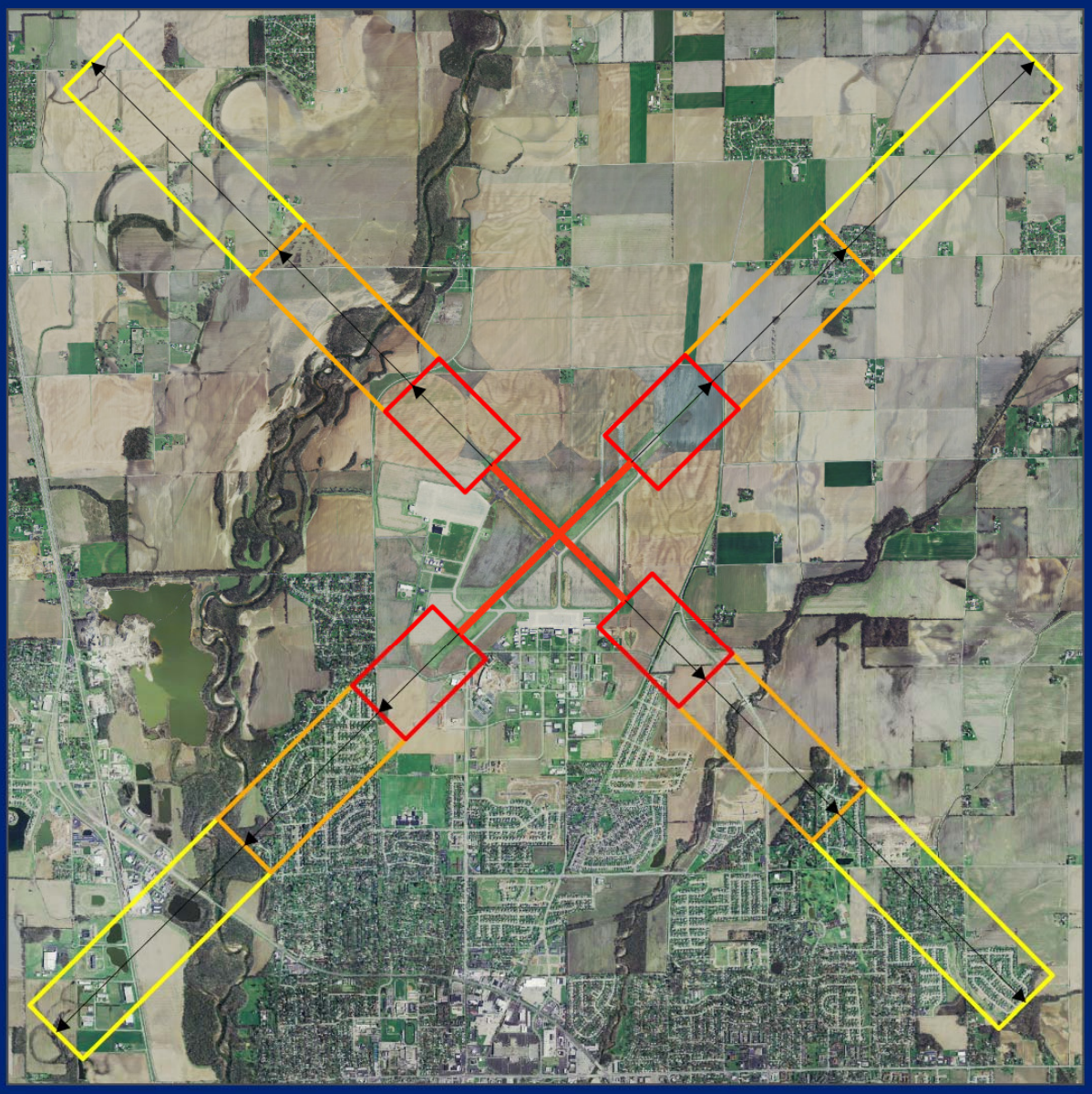
- The safety zones extending to the northeast includes uses that are incompatible.

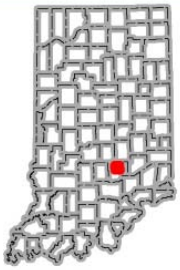
Freeman Municipal

- The safety zones 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.
- The safety zones extending to the northeast includes uses that are incompatible, and conditionally compatible.

While the possibilities of an aircraft mishap are remote, the military recommends that land use within the safety zones be minimal or low density to ensure maximum protection of public health and property. The three safety zones are as follows: Clear Zones, and Accident Potential Zones I and II. The Clear Zone (CZ) has the greatest accident potential and is an area where no structures except navigational aids and airfield lighting are allowed. Various industrial, manufacturing, and agricultural land uses are acceptable within Accident Potential Zone I (APZI). The accident potential in Accident Potential Zone II (APZII) is low enough that low-density housing and commercial uses are compatible with flight operations. Conditionally compatible uses are uses that become compatible if certain design/structural guidelines are followed. For example; a golf course may be incompatible if it contains water features, as water may attract birds, but is compatible in both APZ I and II if it does not contain water features. Conditionally compatible land uses are assessed on a case-by-case basis.

Map 4-1-3-1: Columbus Municipal (BAK) Aerial, Atterbury JLUS - DRAFT





LEGEND

- Columbus Municipal Runways
- Clear Zone
- APZ I
- APZ II

IMAGE MATTERS
Locate. Innovate.

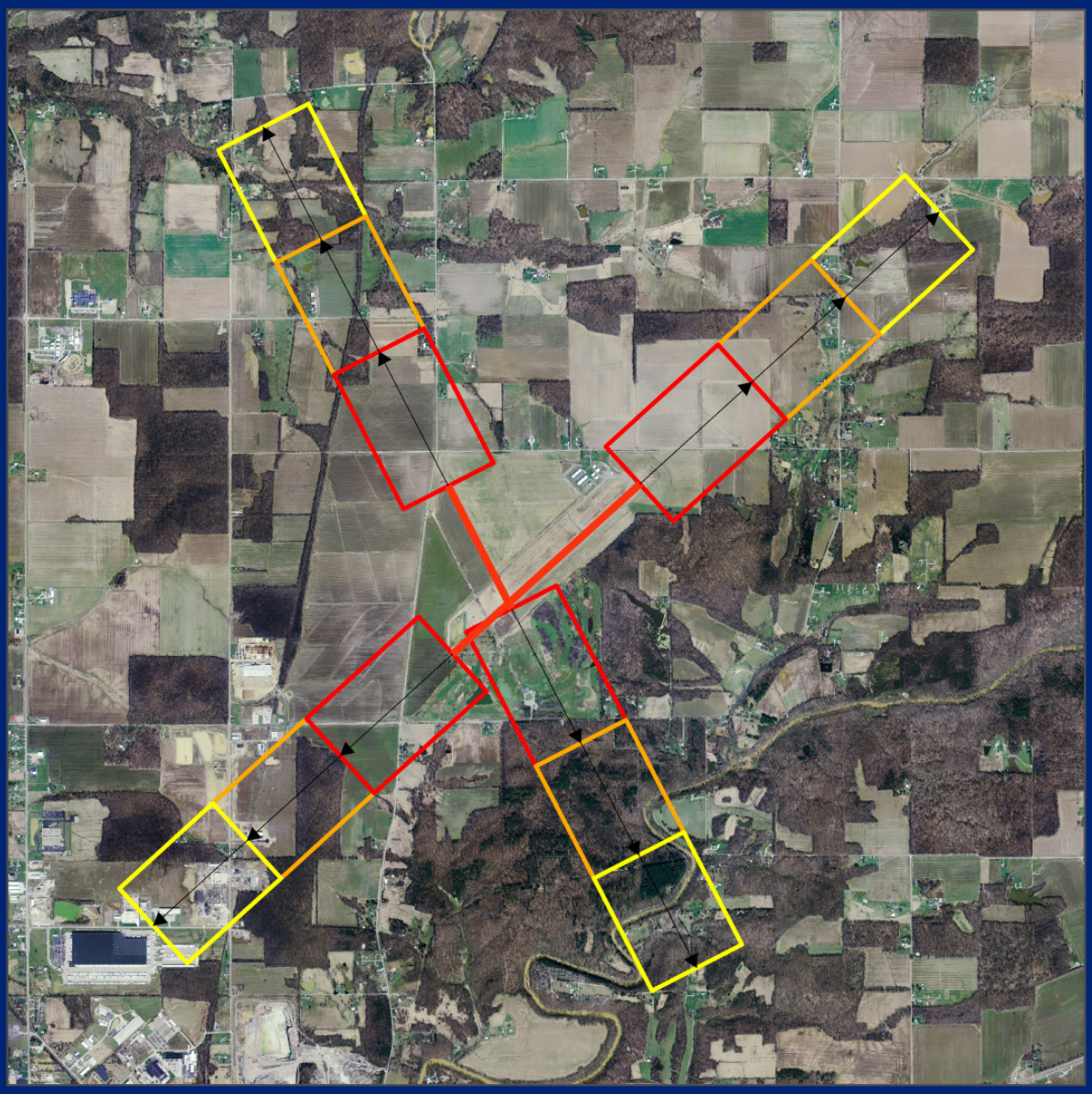
Map Scale: 1:48,000
Layer metadata available from:
www.atterburyjlus.com

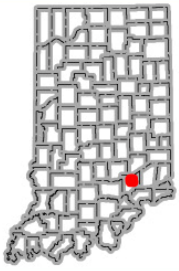
N
W E
S

0 4,000 Feet

Community Participants:
Bartholomew County,
Brown County,
Camp Atterbury Joint Maneuver Training Center,
City of Columbus,
Cordry Sweetwater Conservancy,
Jackson County,
Jennings County,
Johnson County,
Muscatatuck Urban Training Center, and
Town of Edinburgh

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





LEGEND

- North Vernon Runways
- Clear Zone
- APZ I
- APZ II

IMAGE MATTERS
Locate. Innovate.

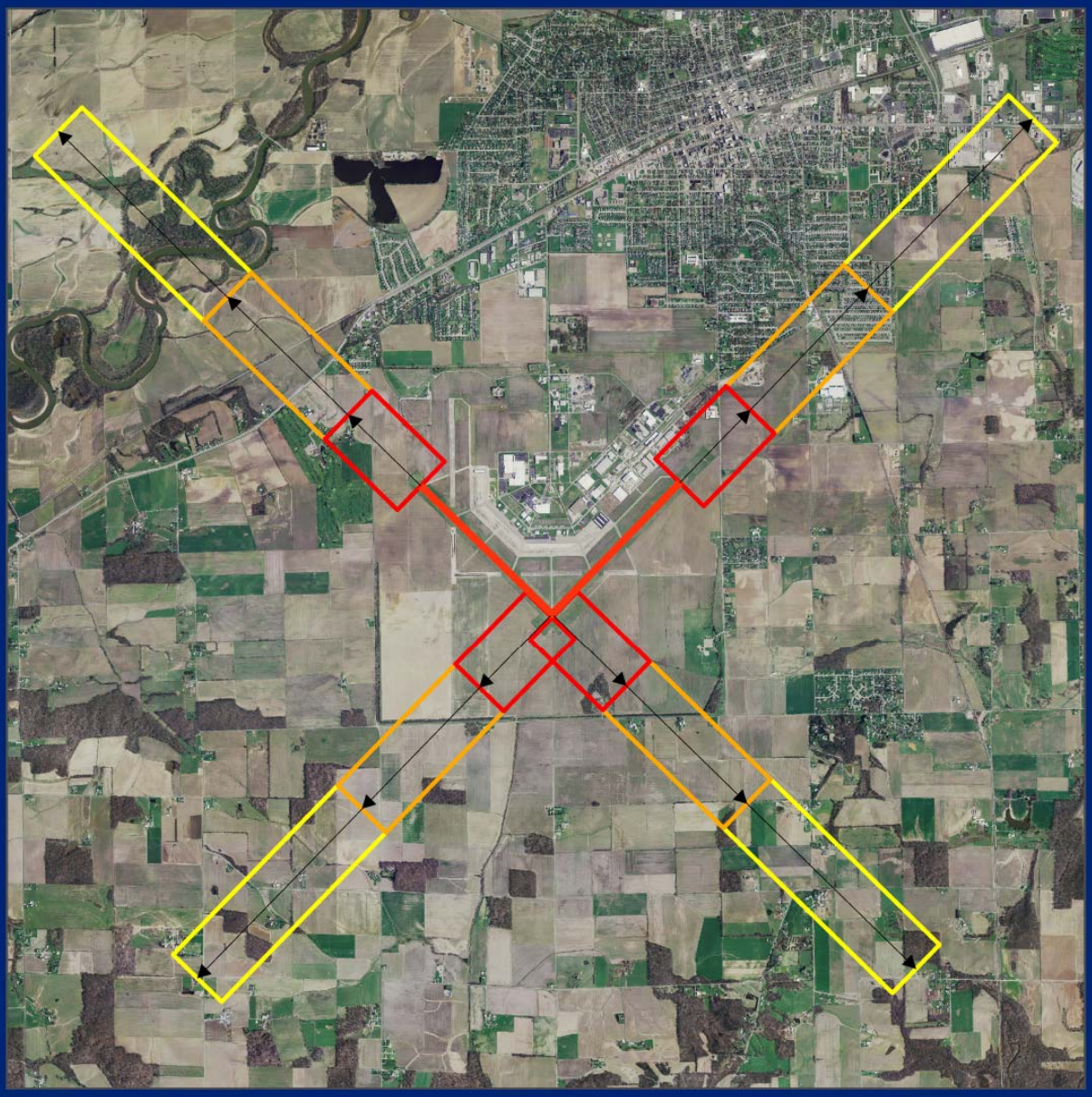
Map Scale: 1:36,000
Layer metadata available from:
www.atterburyjlus.com

N
W E
S

0 3,000 Feet

Community Participants:
Bartholomew County,
Brown County,
Camp Atterbury Joint Maneuver Training Center,
City of Columbus,
Cordry Sweetwater Conservancy,
Jackson County,
Jennings County,
Johnson County,
Muscatatuck Urban Training Center, and
Town of Edinburgh

Map 4-1-3-5: Seymour Freeman Municipal Airport (SER) Aerial, Atterbury JLUS - DRAFT



LEGEND

- Freeman Municipal Runways
- Clear Zone
- APZ I
- APZ II

IMAGE MATTERS
Locate. Innovate.

Map Scale: 1:54,000
Layer metadata available from:
www.atterburyjlus.com

N
W E
S

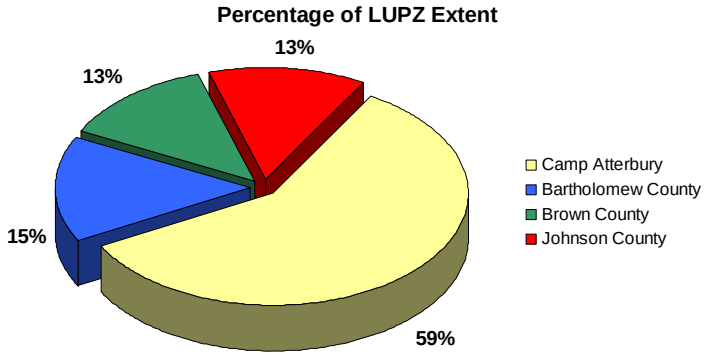
0 4,500 Feet

Community Participants:
Bartholomew County,
Brown County,
Camp Atterbury Joint Maneuver Training Center,
City of Columbus,
Cordry Sweetwater Conservancy,
Jackson County,
Jennings County,
Johnson County,
Muscatatuck Urban Training Center, and
Town of Edinburgh

Noise

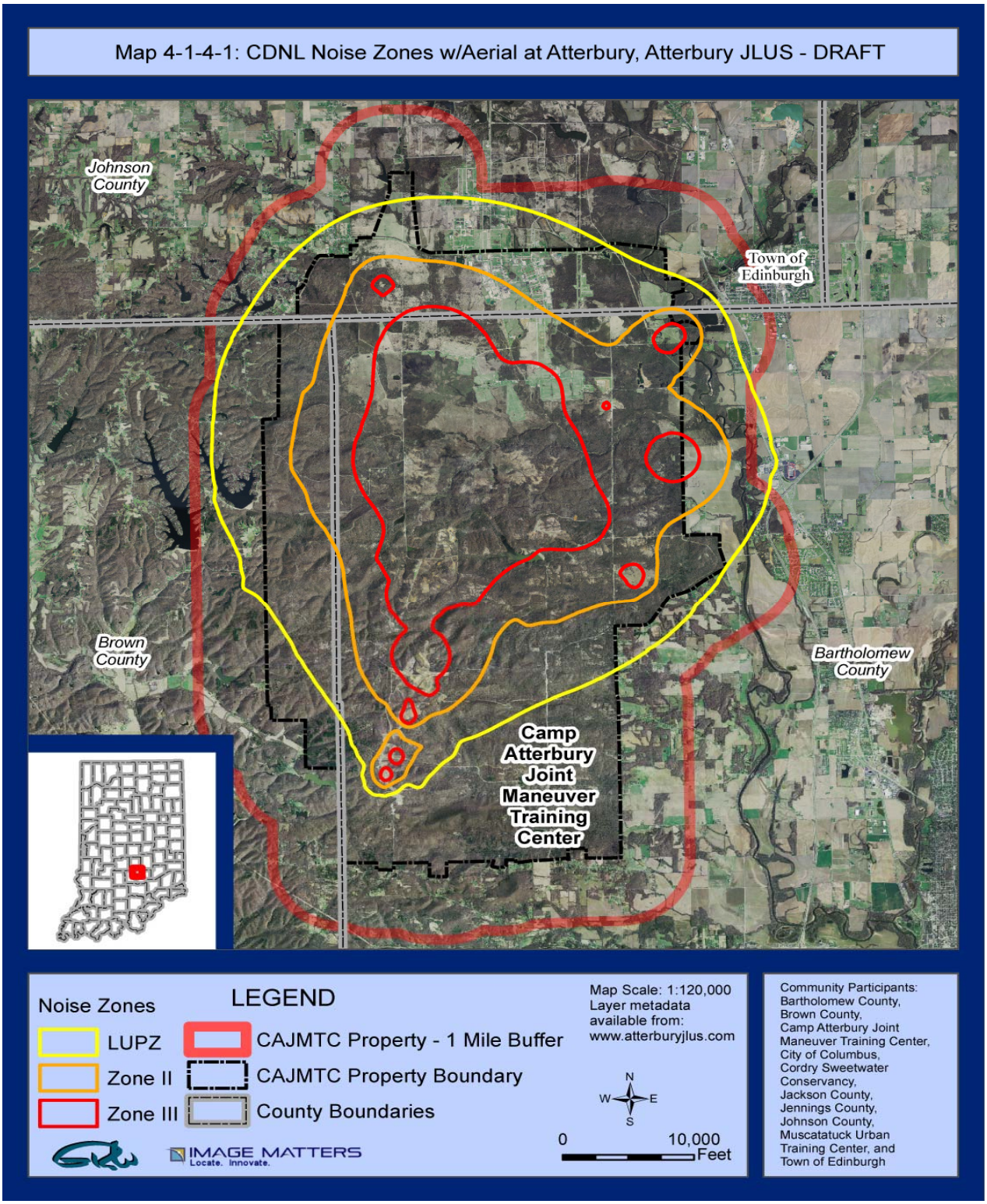
Noise from military operations, including everything from small arms fire and ordnance detonation to manufacturing and industrial noise, may have an impact on the surrounding communities. The military provides a methodology for analyzing exposure to noise hazards associated with military operations and provides land use guidelines for achieving compatibility between the Army and the surrounding communities. The noise impact on the community is translated into noise zones. There are four noise zones. 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 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. Noise Zone II is normally incompatible for noise-sensitive land uses. Noise Zone III is incompatible for noise-sensitive land uses. The noise zones at Camp Atterbury are shown on the following page. Areas of concern are:

- Noise zones extend beyond the northeastern and northwestern boundary of Atterbury and include uses that are conditionally compatible, including land that has been zoned residential in both Edinburgh and Prince's Lakes.
- Peak noise levels (single event noise levels) from artillery and demolition training can reach levels associated with a moderate risk of complaints two to three miles from the installation.
- Although the operations at Muscatatuck are not loud/frequent enough to generate Noise Zones, noise levels from artillery and demolition can reach levels associated with a moderate risk of complaints two to three miles from the installation.
- Helicopter noise may warrant additional study.
- Explosive Ordnance Disposal training may be heard beyond the boundary of Muscatatuck. There is a high risk of complaint 0.5 miles from the demolition site and a moderate risk of complaint 2 miles from the site.
- If training devices, such as artillery and grenade simulators are used in the eastern portion of Muscatatuck, noise levels may be loud enough to generate complaints.



Noise from military operations is rarely loud enough to cause physiological and/or physical damage to the hearing or structures of populations adjacent to installation boundaries. Nevertheless, while there is no physical danger from the sound, it may be irritating. This study addresses land uses that may be incompatible with specific levels of noise. As mentioned above, land uses within each noise zone are determined as compatible, conditionally compatible, or incompatible. Conditionally compatible land uses suggests uses at certain decibel levels incorporate noise reduction measures, or indoor and outdoor noise mitigation, in site planning

and design. To understand better the noise concerns at Camp Atterbury, the chart above shows the percentage of land within the Land Use Planning Z



Public Participation

For this portion of the initiative, public involvement was defined as the participation and communication with local citizens. The approach taken was to schedule public participation meetings and use those meetings, as well as the JLUS interactive web site, to gage the public interest, issues, recommendations, comments and feedback.

The public meetings consisted of two participation forums to facilitate information exchange. Each forum included a presentation, an open house to encourage conversations and questions, and a formal public comment session. The open house segment of the meeting proved productive. Attendees had the opportunity to view the maps, graphs and charts, and discuss their opinions, questions and concerns with local leaders, committee members and JLUS consultants. The JLUS web site was formatted to accept public comments to prepare for the public participation initiative.

Outcome of Initiative

The two public meetings proved successful in open and honest communication between all community members present. Committee members, airport representatives, military representatives, JLUS consultants, the former and current mayors, the media, and many local community members were present. Both evenings went smoothly and the vast majority of the attendees stayed for the entire two-hour event.

Sixty-five people attended the North Vernon meeting on June 16, 2009; and approximately 50 attendees were present at the Edinburgh meeting on June

Comments were collected from four different avenues. Consultant staff collected verbal comments during the open house portion of the meeting. Written comments were collected from attendees who completed the Public Comment Form, and recorded verbal comments were gathered during the formal public comment session. Comments were also collected through the JLUS web site.

North Vernon Meeting	Edinburgh Meeting
15 Verbal Comments	12 Verbal Comments
15 Written Comments	7 Written Comments
5 Recorded Verbal Comments	3 Recorded Verbal Comments

The comments gathered were divided into common categories or themes.

North Vernon meeting and web site submissions from near that area	Edinburgh meeting and web site submissions from near that area	Totals
6 comments on US 50 Bypass	0 comments on US 50 Bypass	6
12 comments on noise and light	9 comments on noise and light	21
4 comments on TV and cell phone reception	0 comments on TV and cell phone reception	4
10 comments on travel	2 comments on travel	12
4 comments on communication	0 comments on communication	4
2 comments on maps	5 comments on maps	7
5 comments on land purchase	0 comments on land purchase	5
5 comments on growth and jobs	3 comments on growth and jobs	8
2 comments on recreational use	2 comments on recreational use	4
3 comments on clarification	2 comments on clarification	5
8 other comments	7 other comments	15

Summary of Comments for the Public Meeting in North Vernon

Based on the comments collected, a major concern surrounding Muscatatuck Urban Training Center is noise. Noise levels and timeframes were significant issues addressed in several of the comments. The military operation noise between 2200 hours and 0700 hours is problematic and many voiced their hopes for a resolution. Out of the ten comments submitted regarding travel in the area, seven showed concern with the north/south road access. Four mentioned they had trouble accessing their farmland due to the width of guardrails or the closure of gates.

Summary of Comments for the Public Meeting in Edinburgh

Noise in and around Camp Atterbury has not been a major concern for residents within the area. Six of the nine comments praised Atterbury for the respect they had shown by keeping the noise to a minimum. Some community members stressed keeping noise levels the same as the military installation increases military operations.

Local Leader and Military Personnel Surveys

To help guide the study, and develop the final recommendations, the team created surveys to gather information from specified sectors of the community. The approach taken was to involve area military personnel from Camp Atterbury and Muscatatuck Urban Training Center and the local community leaders, to poll their feedback on issues and recommendations.

Two surveys were created, one for each demographic: “Local Leader Survey” and “Military Personnel Survey.” The questions used in the poll were specific to the type of feedback the team felt would correspond to the knowledge, experience, and expertise that each demographic represented. Detailed survey responses are found in Section 2.2 of the report.

Summary of Local Leader Survey

Based on the surveys collected, there are many unknowns about how Muscatatuck Urban Training Center has affected and is affecting the surrounding community. By contrast, an overwhelming majority of the local leaders agreed that Camp Atterbury is a significant contributor to their local economy.

Local leaders around both Camp Atterbury and Muscatatuck believe the military has plans in place to expand at the respective installations.

Regarding the Transportation Plan, most respondents considered the current and future use adequacy both at Camp Atterbury and Muscatatuck as “Unknown.”

Notably, over half (52%) agreed that additional overlay zones are needed to protect community resources or special districts.

More than half (52%) feel that land use controls surrounding the installation are adequate.

More than half, 58%, believe their Comprehensive Plans recognize Atterbury, and 28% believe their Comprehensive Plans recognize Muscatatuck as a significant local resource; and in fact, none of the comprehensive plans of surrounding communities recognize Atterbury or Muscatatuck as a significant local resource.

Summary of Military Personnel Survey

The results from the military personnel surveys reflect that the overwhelming majority of the responders (98%) feels welcome and feels supported in the community. They expressed similar feelings for the military installation and its function.

The results show that most responders (where applicable) thought the local area provided adequate housing, schools, childcare, healthcare, entertainment, and commercial outlets for their needs.

Summary of Comments Submitted in Writing on Muscatatuck

Numerous comments came in concerning noise at Muscatatuck, particularly associated with the adjacent campground. Many of these residents were upset with the periodic closure of Brush Creek Reservoir and County road closures.

Implementation Plan

The implementation of the JLUS recommendations will require a cooperative effort over a number of years. The plan will require local jurisdictions to work with the military in a concerted effort to preserve the military mission. Following the recommendations will protect public health, safety and quality of life while encouraging economic opportunities in the region. Land use compatibility recommendations are the responsibility of the local jurisdictions. The local airports will be an important element. Military operational analysis and adjustments will be a critical component of the plan. The public must understand the military's economic impact and see that the military is working together to minimize areas of incompatibility. If local jurisdictions do not achieve sufficient progress in a reasonable time, the state may choose to intervene to expedite the process.

An Implementation Matrix summarizes the Implementation Plan and in Section 5.6.

The plan makes specific recommendations to individual agencies or jurisdictions by category.

All JLUS Participants
Local Jurisdictions
Airports
State Government or General Assembly
Military or Federal Agencies

It identifies the compatibility goals and guiding principles driving the recommendation.

Preserve Military Operations
Develop Regional Partnerships
Encourage Economic Opportunities
Plan Coordination
Growth Management
Conservation
Flexible Land Use
Noise and Light Mitigation
Protect Public Health, Safety and Quality of Life

It suggests compatibility tools available for the item.

Memorandum of Understanding
Military Operations
Public Policy Initiatives
Legislation
Airport Initiatives
Noise Mitigation

Disclosures Acquisitions

It addresses the timing and cost elements of the item as Implementation Tiers and Implementation Costs.

Implementation Tiers are an indication of the timing, level of effort, resource allocation, the number of agencies, the degree of land use incompatibility, and the criticality of mission preservation. Some overlap in interpretation is inherent.

Implementation tiers provide guidance on when an item should be acted upon. They are neither explicit nor exclusive guidelines. Any of the conditions identified could trigger the action. It is assumed the affected parties will work together to achieve mutually desired results.

Similarly, implementation costs are orders of magnitude estimates on what an item may cost to implement for each individual agency.

Implementation Tiers

Tier 1	Implement within 1 year; effort minimal; initial step; potential land use incompatibility; general mission preservation.
Tier 2	Implement within 2 years; effort & resource allocation moderate; likely multi-agency involvement; second step; actual land use incompatibility; specific mission preservation.
Tier 3	Implement after 3 years; effort may be minimal to significant; # agencies may be singular to multi; implement only after other initiatives fail to produce desired results; significant land use incompatibility; critical mission preservation.

Implementation Costs

Level 1	Less than $10,000
Level 2	$10,000 to $100,000
Level 3	Greater than $100,000

It identifies the responsible agencies as either 1 = Primary, or 2 = Secondary. The responsible Agencies include:

Military or Federal Government
State Government
Bartholomew County
Brown County
Jackson County
Jennings County

Johnson County
City of Columbus
Town of Edinburgh
Town of Prince's Lakes
City of Seymour
Columbus Airport
North Vernon Airport
Seymour Airport

Recommendations

The implementation plan includes the recommendations that address the areas of concern as outlined in the study. The recommendations should guide mutual compatible development in order to maintain the positive relationship between military operations and the surrounding communities. To find a detailed plan for the implementation of the recommendations, please see Section 5.0 of the JLUS.

Recommendations for all JLUS Participants

- Establish JLUS Implementation Authority.
- Adopt electronic data storage standards.
- Establish GIS website for project participants.
- Execute Memorandums of Understanding to formalize JLUS implementation.
- Exchange information on annual basis to communicate JLUS issues identified and encountered and to communicate land use and military operational updates.
- Coordinate infrastructure policies to provide services and avoid incompatibilities.

Recommendations for Local Jurisdictions

- Appoint military representative to local Plan Commissions and airport boards.
- Update Comprehensive Plans to recognize military installations.
- Implement electronic data storage and retrieval.
- Update zoning maps to GIS or other electronic format.
- Provide military an annual report on jurisdictional activities of mutual interest between the parties and the expectations for the coming year.
- Implement Military Installation Overlay Zones considering criteria such as:
    - Establish noise and safety criteria for land uses surrounding military installations and airports.
    - Establish real estate disclosure requirements for noise sensitive, safety sensitive and other incompatible land uses identified in JLUS.
    - Establish outdoor lighting standards to reduce light pollution affecting military operations.
    - Consider vertical obstruction restrictions surrounding military installations.

Recommendations for Airports

- Adopt state and federal standards for height restrictions with accompanying exhibits into local zoning codes and maps.
- Develop noise modeling at airports incorporating military use of airports to assist in land use planning recommendations.

- Present and support legislative actions recognizing joint use civilian/military airports special circumstances.
- Present and support DOD, TSA, and FAA actions recognizing joint use civilian/military airports require capital development funding from multiple federal agencies.

Recommendations for State Government or General Assembly

- Clarify Atterbury and Muscatatuck are defined as military bases for immunity from noise pollution and telecommunications interference.
- Adopt legislation recognizing military installations are government resources worthy of special merit.
- Consider adding Atterbury and Muscatatuck to the definition of Military Base under IC 36-7-30.1.
- Include Atterbury Muscatatuck JLUS Policy & Technical Committee members in Military Base Planning Council meeting invitations.

Recommendations for Military or Federal Entities

- Maintain current Installation Environmental Noise Management Plan.
- Continue to incorporate noise mitigation measures into operations.
- Assess military operations to minimize incompatibilities.
- Work with local airport authorities on policies concerning MOAs.
- Establish a noise monitoring system for Atterbury and Muscatatuck to assist in land use planning recommendations.
- Develop sustainability initiatives to preserve and protect military mission, local communities, and the environment through available military programs.
- Implement Army Compatible Use Buffer to conserve land and prevent development of critical open areas.
- Work with state and local transportation officials to expedite US 50 North Vernon Improvements.
- Conduct public outreach to MUTC neighbors within 3 miles to work out operational issues, especially regarding rotary wing aircraft operations.
- Provide opportunities for North Vernon Airport input on rotary wing operations.
- Consider adjusting military operations to respond to reasonable calls from area on noise and safety impacts.
- Provide opportunities for public input on significant changes to military operations concerning noise, safety and quality of life issues.
- Consider public outreach or public service announcements to inform area residents that military will try to adjust or restrict low flying aircraft and provide advance notice of restricted recreational use of Brush Creek Reservoir.
- Continue to conduct “How to do Business with the Military” programs for local companies and organizations.
- Assist local governments with implementation of GIS technology.
- Provide local governments an annual report on installation activities of mutual interest between the parties and the expectations for the coming year.

1.0 Study Purpose

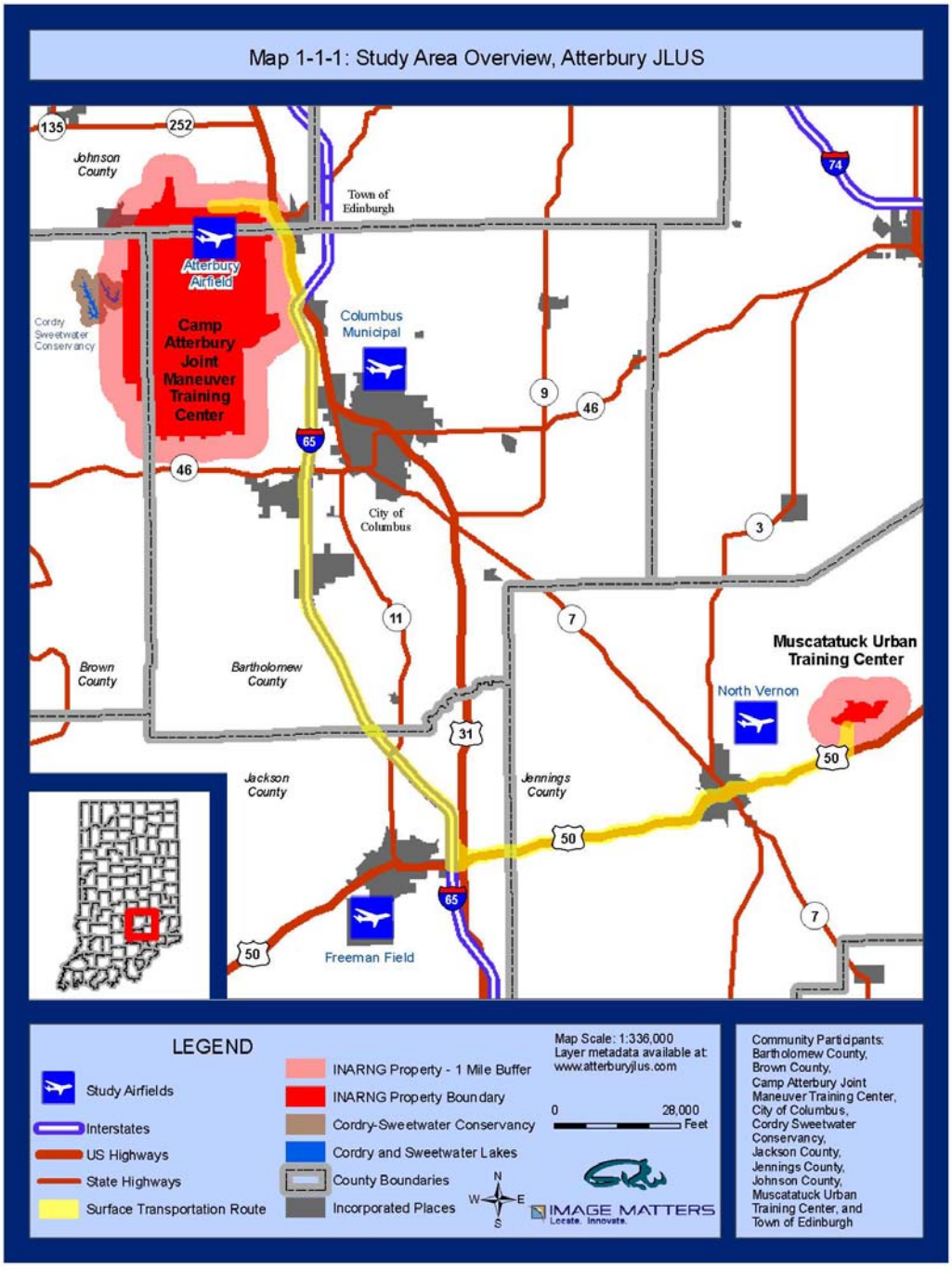
1.1 Problem Statement

Military installations were originally located in remote areas, distant from urban areas, due largely to the availability of land and for defense and security purposes. Over time however, installations drew people and businesses closer to take advantage of civilian job opportunities offered by the installation and to provide the goods and services to support the installation's operations. Expansion of the military mission and urban growth and development around military installations may lead to land use conflicts that have an adverse effect on the military mission and surrounding communities. Through joint, cooperative military and community planning, growth conflicts can be anticipated, identified, and prevented. These actions help protect the installation's military mission, and the public health, safety, quality of life and economic stability.

Camp Atterbury and Muscatatuck, located in rural southern Indiana, are foremost installations for the Indiana Army National Guard (INARNG) and Army Reserves, not to mention other units that train and mobilize there. Due to the rural character of the area, the training and operations at both locations are unencumbered. This study is being conducted at an opportune time, when land use conflicts are minimal, and the future is bright for the growth and development of surrounding communities and the military.

For this study, a one-mile buffer has been established outside the boundary of Camp Atterbury and Muscatatuck to conduct specific analysis of existing and potential impacts for both the military and the surrounding communities. The Study Area is shown on Map 1-1-1-1, found on the following page. Although the "study area" often refers to the area within the one-mile buffer, certain sections will focus on counties, cities, towns, and areas that may or may not fall within the buffer, but have some level of impact.

Map 1-1-1-1: Study Area Overview



1.2 Study Goals and Objectives

Objectives of the Joint Land Use Study (JLUS):

1. Encourage cooperative land use planning between military installations and the surrounding community.
2. Seek ways to reduce the operational impacts of military installations on adjacent land.
3. Reduce potential conflicts between the military installation and its host community while still accommodating new growth and economic development.
4. Protect the public's health, safety, and welfare without compromising the operational missions of the installation.
5. Express community and military goals and objectives.
6. Understand the economic, social, and physical relationship between the installation and the region.
7. Analyze land uses within 1 mile of installation borders.
8. Assess impacts and identify compatible land uses.
9. Make recommendations to ensure the protection of public, private, and military combined vision.

1.3 Stakeholder Expectations

1.3.1 Communities

There is widespread support for the military in the surrounding communities. Local leaders recognize the benefits of the military's presence in the community. Many have actively supported the proposed expansion of the mission of Camp Atterbury and Muscatatuck Urban Training Center.

A distinct difference exists between the two military sites. Camp Atterbury is a known entity that the surrounding communities understand and for which they are familiar. The study encountered people whose property had been purchased by the military in the 1940s when Atterbury was first commissioned. The residents of Prince's Lakes, Johnson County, Brown County and Bartholomew County are accustomed to the noise produced by the Atterbury and generally expressed an attitude of acceptance living near the installation.

Muscatatuck is fairly unknown to the Jennings and Jackson County communities. The communities support the reuse of the site by the military after the closing of the state hospital and the loss of jobs. A general characterization of the response to the proposed military mission at Muscatatuck is that they have been hearing about plans for years and they are anxious to see the benefits become reality. The Mayor of North Vernon expressed a positive reaction to the permanent nature of the military employment center.

Jennings County is concerned with the periodic closure of County Roads surrounding Muscatatuck. The discussions between the military and local leaders need to continue in an effort to resolve how to keep Muscatatuck secure during training while accommodating Campbell Township traffic, particularly getting local traffic across the Muscatatuck River.

Typical urban and rural planning issues are to be expected. Urban expectations and attitudes toward land use planning tend to be positive. The interest is on economic gains of job creation while preserving community character, the environment and existing neighborhoods. Leadership from Columbus, North Vernon, and Edinburgh welcome the military operational expansion. They realize the positive impacts of increased military employment and training. They are attempting to position their communities to take advantage of the opportunities that will develop.

Rural interests tend to be focused on property rights and the preservation of a property owner's ability to use their land in the manner they deem appropriate. They generally appreciate Camp Atterbury for what it is and what it does; however, there is concern over how much land the military plans to influence outside their property.

County leaders expressed concern for excessive land use restrictions without compensation to the property owners for development rights. They are concerned about the potential loss of tax revenue from diminished land rights and the associated decrease in assessed value. They are willing to accommodate the military planning into their local area plans to help preserve the military mission. They want some assurances that the military planning being discussed today—which encourages updates and adjustments to local plans—will materialize, when the wars in Iraq and Afghanistan wind down or with changes in presidential administration or operations in the Department of Defense.

Johnson County hopes to gain from continued commercial and residential development north of Atterbury that is in support of the military installation. Atterbury personnel have rented approximately 1,000 apartment units in White River Township. The County is in the process of updating its Comprehensive Plan. They hope to bond for $3.1 M of improvements to the County Park north of Atterbury. Their ability to finance the park is limited due to a possible County Jail project.

Brown County recognizes the benefits of increased employment at the installations. The location of the Camp Atterbury gate inhibits their ability to benefit economically. The road network in Brown County west of the north gate is not suitable for truck traffic. This puts Brown County businesses at a competitive disadvantage compared to those more easily accessed from the east via Hospital Road and U.S. 31. Five hundred twenty-five residences are within the one-mile buffer. Homeowners are aware of Camp Atterbury and have worked together to make Cordry Sweetwater a wonderful community in which to live. Although residents do hear the machineguns, bombing and aircraft over head, it has been expressed that the community is proud of the United States Military men and women who dedicate their lives to protect our Country.

1.3.2 Airports

Freeman Municipal Airport (Seymour) (SER)
North Vernon Municipal Airport (OVO)
Columbus Municipal Airport (BAK)

The local airports in Seymour, North Vernon, and Columbus actively work with the military and directly benefit from additional use of the airports by the military. All airport managers welcome the military use of the airports. Airport managers strongly desire to meet with military planners regularly to coordinate efforts, plans, and capital improvements. Joint funding requests are particularly welcome. Stronger two-way communication exchange is desired so that airport managers can be more aware of the military plans affecting airports. They are especially interested in working closely on the issue of Military Operating Airspace (MOA). Map 3-3-4-1 depicts the different MOAs in the study area.

1.3.3 Military

Camp Atterbury and Muscatatuck leadership expresses the desire to be good neighbors and wants to participate in the local land use and utility service decision-making process. They understand the challenge of educating the local communities concerning development rights versus the potential to prevent the military from expanding its mission and loss of associated economic gains.

The military is concerned with residential and other noise sensitive land use conflicts that may arise in close proximity to the property. For example, they would like to see the residential land uses contained to the south side of S.R. 46 on the west side of Columbus.

The military shares the desire to preserve the military mission while protecting the health, safety and quality of life of the area residents by actively working together on land use issues. They want to see the local communities thrive and benefit from the military's economic impact.

1.3.4 General Public

The expectations of the public were solicited in the community public forums conducted in June with additional public comment on the project website throughout the months of June and July. The results of this input can be found in Section 2.2.

1.3.5 Long-term Planning Objectives

The following are some of the goals and objectives from participating jurisdictions' comprehensive plans that relate to development in and around Camp Atterbury and Muscatatuck. The goals and objectives reflect the combined vision of the community and the installation to protect the health, safety, and welfare of residents and maintain quality of life while protecting the mission and future of military operations in the area.

It is notable that none of the local community Comprehensive Plans acknowledges the military property as being a relevant issue in making land use decisions for surrounding land and potential incompatibilities.

Camp Atterbury Objectives:

1. Stay relevant, ready, and responsive (flexible and adaptable) as a training center.
2. Prepare to build and then fine-tune the new ranges and other state-of-the-art facilities required to train the Future Force.
3. Identify and address deficiencies and maintenance needs in a coordinated and proactive manner.
4. Serve and build relationships with the regional community.

Muscatatuck Urban Training Center Objectives:

1. Remain flexible and adaptable as a training center.
2. Promote dual use of facilities when practical.
3. Stay up to date with developing new ranges and new training methods and types, including virtual, constructive, and live-fire exercises.
4. Serve and build a relationship with the regional community.

Bartholomew County Land Use Principles:

1. Preserve productive farmland for farming.
2. Make decisions that will direct growth to areas that are suitable for growth.
3. Make land use decisions that protect and improve community resources and the environment.
4. Intergovernmental cooperation should be encouraged.

Johnson County Development Goals:

1. Provide a logical framework for land use and development decision-making.
2. Conserve the agricultural resources in Johnson County.
3. Preserve the existing rural, small-town quality of life in Johnson County.
    a. Limit new development in agricultural areas of the county.
    b. Create a land use plan that takes a proactive approach to development in order to minimize the negative effects of growth.

   c. Encourage development which is consistent with the existing character of the community.

Brown County Development Objectives:

1. Maintain the county's rural atmosphere.
2. Identify areas within the county that are appropriate for residential development.
3. Establish land use criteria that will minimize conflicts between residential lifestyles and other land use options.
4. Protect the integrity and stability of existing residential areas from encroachment by incompatible uses.

Jackson County Goals and Objectives:

1. Remain an existing and viable farming community.
2. Encourage redevelopment and infill development instead of green field development, with tax incentives and/or other incentives.
3. Recognize and prepare for changes in Jackson County's population.
4. Preserve strategic green space and expand parks, including trail systems.
   a. Identify and acquire strategic land for purchase or donation.
   b. Consider using life estates and qualified conservation easements, leveraging the Heritage Trust Fund, for acquisition of parkland for future development or acquisition of floodplains/wetlands for preservation.

Jennings County Opportunities and Needs:

1. Future growth in Jennings County will depend heavily upon the continued development of the transportation infrastructure of the county.
2. Projected growth, especially along the three dominant corridors within the county, is to be planned for and adequately served.
3. Commercial and industrial development in rural areas of the county should comply with the same standards as sites in North Vernon.
4. Discourage conflicting land uses within a single area.

1.4 GIS Data Compilation Overview

Much of the technical information involved in a JLUS has a geospatial component – reference to the earth's surface, thus most participants find maps to be an essential part of developing and sustaining a JLUS. One of the most useful tools for developing maps and analyzing the data, which comprise them, is a Geographic Information System (GIS). Although the Atterbury JLUS grant did not cover the cost to establish a GIS system, grant funds were allocated to compile, integrate, and analyze the geospatial data with GIS software, as well as produce the new maps and the summary information found in several of the data tables in this report. While these products are very useful, the geospatial information and aerial imagery used to produce them is generally costly to acquire. For this reason, the Atterbury JLUS made maximum use of existing geospatial information that covered the study area, whatever the source, as long as the information was of adequate quality and was shared willingly.

1.4.1 Geospatial Data Collection

The first step in the development of the Geographic Information Systems (GIS) data stack used for this study was to compile a list of all required "layers," and then make a formal request to the participants. Requests for Information (RFI) regarding digital geospatial data were distributed separately to the participating counties, Atterbury, and Muscatatuck. Three of the counties use contracted GIS data management services with a local technology company, WTH: Brown, Jackson, and Jennings counties. Of these, all but Jackson County signed formal data sharing agreements for use and publication of their data within the context of this project. Bartholomew and Johnson counties utilize in-house GIS departments, which provide the essential geospatial data for their jurisdictions. The City of Columbus and Bartholomew County share GIS. The Town of Edinburgh does not have GIS, and provided hardcopy documents and maps.

The following table summarizes the participating counties' contributions:

Table 1-4-1-1: County GIS Properties and Data Contributions

County	Bartholomew / City of Columbus	Brown	Jennings	Johnson	Town of Edinburgh
Type of GIS	In-house CAD / GIS	WTH - managed	WTH - managed	In-house GIS	None
Format of zoning dataset for 1-mile buffer area	PDF map	Digital geospatial	Paper map	Digital geospatial	PDF map
Digital geospatial parcel dataset	Yes	Yes	Yes	Yes	Obtained from Study counties
Metadata	No	No	No	No	N/A

Another primary source of data was the Indiana Geological Survey (IGS), who provide data download services as well as access to the 2005 Natural Color Ortho-Imagery product via web mapping service technology. In addition to the ortho-imagery, which is presented as a background on several of the maps (e.g., Map 4-1-3-1), the key Indiana data layers (and their original source) obtained from IGS were:

- County Boundaries (Bureau of Census Topologically Integrated Geographic Encoding & Referencing (TIGER) data).
- Managed Lands, Indiana Department of Nature Resources (IDNR).
- Flood Hazard Zones, Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps, IDNR.
- Hydrography (US Geological Survey).
- Indiana Highways, Environmental Systems Research Institute (ESRI) Data.

Other publicly available data included the following data and sources:

- Flood Hazard Zone data for Johnson County, one of very few county areas missing from the state-wide IDNR dataset, was obtained directly from FEMA in Digital Flood Insurance Rate Map (DFIRM) format.
- FAA Airport runway data (spreadsheet), National Flight Data Center (NFDC), Federal Aviation Administration (FAA).
- National Land Cover Dataset (NLCD), 2001, Multi-Resolution Land Characteristics (MRLC) Consortium.

The primary INARNG data layers utilized in the study:

- Installation property boundaries for Atterbury and Muscatatuck (and the 1-mile buffers generated from them).
- Military Operation Airspace (MOA) areas.
- Noise areas.

1.4.2 GIS Data Conversion, Compilation, and Integration

All of the geospatial data was converted to the State Plane Indiana East coordinate system, North American Datum 1983, with units of feet. Federal Geographic Data Committee (FGDC) - compliant metadata for each layer is available through the study website. GIS integration, analysis, and map production was performed using ArcGIS 9.2 SP6.

Zoning Layer

Evaluation of the zoning districts in the 1-mile buffer area around the two installations shared their data was necessary for one of the most critical analyses of the study. Fortunately, zoning information was received from the participating counties and municipalities that shared data and in which the INARNG installation property 1-mile buffers are located. Table 1-4-1-1, found on page 10, summarizes the type of zoning data received from the participating municipalities.

The process required for automation and integration of the zoning information depended on the format in which the data was received. Brown and Johnson counties provided their zoning information from their GIS, requiring little integration effort. For the other three municipalities in which paper or digital non-geo-referenced maps were received, the data required automation to our digital geospatial format. Because zoning district boundaries largely follow parcel boundaries, the county parcel data could be used to generate an automated, geo-referenced zoning dataset for all areas of the 1-mile buffer.

The process for generating the zoning datasets for Bartholomew and Jennings Counties, and for the portion of the Town of Edinburgh in Bartholomew and Johnson Counties was as follows:

1. Copy the parcel layer, and subset to the 1-mile buffer region,
2. Add attributes to store the zoning information of the new zoning district polygons (parcel aggregates),
3. Using the non-geo-referenced maps for guidance, selecting a set of parcels that represented a single district type,
4. Populating the attribute field for that selected set of parcels with the correct district type code,
5. Repeating steps 3 and 4 until all district polygons were complete, and

6. Dissolving boundaries of adjacent parcels that have the same code for the zoning attribute. In only a small number of cases did zoning district boundaries diverge from the parcel boundaries. In these cases, it was necessary to split the parcels to better follow the zoning district boundaries.

Airport Accident Potential Zones (APZ) and Clear Zones (CZ)

An APZ and CZ were developed for both ends of each runway in the three study airports, which are discussed in Section 3.4.4 of this report. The data used to generate these safety zone polygons were the two center endpoint locations for each major runway at the airports.

The process for developing the APZ and CZ polygons (with dimensions for Class A and Class B Army runways listed in Section 4.1.3 of this report), was as follows:

1. Generate a runway centerline connecting the two runway endpoints,
2. Create a round-ended buffer around the runway centerline 3000ft to the far edge of the imaginary CZ box where it reaches a point on the box that would be perpendicular to the runway,
3. Extend the line out to the point described in step 2,
4. Delete the buffer polygon,
5. Repeat this process for the APZ I and APZ II at appropriate distances (e.g., either 2500 or 5000 feet for APZ I for Class A or B runways, respectively),
6. Create flat-ended buffer polygons for each of the 3 new line segments which are the centerlines of the 3 safety zones, and
7. Repeat these steps for the other end of the runway.

Flood Hazard Zones

In order to create a continuous Flood Hazard Zone layer for the study area suitable for display, the following steps were taken:

1. Clip the state-wide IDNR layer to the 5-county study area,
2. Union with the Johnson County DFIRM data, and
3. Dissolve the boundaries of the different Special Flood Hazard Zones.

1.4.3 GIS-based Analysis

The most frequent analyses performed for the study were to find the total areas for the different values of an attribute (i.e., zone district type, or land use class) of a feature type of interest (i.e., zoning districts, and land use) that falls within a particular zones of interest (i.e., the 1-mile buffers, and the APZs and CZs). This was accomplished in the following manner:

1. Find the geometric intersection of the zones of interest and the feature type of interest,
2. Add an attribute “ACRES” to the dataset resulting from step 1,
3. Calculate the areas of each feature polygon, in acre units,
4. Summarize the areas for each unique value of the attribute that specifies the feature type,
5. Export the new tabular data to a spreadsheet, and
6. Reformat and import the table into Microsoft Word.

2.0 Organization

The JLUS process was designed to create a community-based plan that builds consensus and obtains support from varied interests, including residents, property owners, local elected officials, business interests, and the military, the state, and federal agency representatives. To achieve the JLUS objectives, the Atterbury and Muscatatuck JLUS process included a public outreach program that included opportunities for interested parties to participate in the plan.

2.1 Participating Stakeholders

An early step in any planning process is the identification of stakeholders. For this project, the term stakeholder refers to individuals, groups, organizations, and local governmental entities interested in, affected by, or affecting the outcome of the JLUS project. Stakeholders identified for the Atterbury and Muscatatuck JLUS include, but were not limited to, the following:

- Department of Defense officials
- Office of Economic Adjustment
- City and county elected officials, representatives, and staff
- Muscatatuck Urban Training Center
- Camp Atterbury Joint Maneuver Training Center
- Local, regional, and state planning, regulatory, and land management agencies
- Public and other interested persons
- Non-governmental organizations (NGOs)

The Policy and Technical committees, comprised of city, county, military, and other stakeholders, directed the development of the JLUS.

2.1.1 Policy Committee

The Policy Committee is made up of representatives from different agencies and jurisdictions. The Policy Committee is responsible for leading the direction of the JLUS and monitoring the implementation and adoption of policies and strategies.

Responsibilities	Policy Committee Participants
Policy Direction Study Oversight Monitoring Report Adoption	United States Army Office of Economic Adjustment Cordry Sweetwater Conservancy District Johnson County Bartholomew County City of Columbus Johnson County Brown County Muscatatuck Urban Training Center Camp Atterbury Joint Maneuver Training Center Edinburgh Community Schools Columbus Economic Development Board Johnson County Economic Development Board

2.1.2 Technical Advisory Committee

The Technical Advisory Committee is made up of representatives from different agencies and jurisdictions. The committee identified and addressed technical issues, provided feedback on report development, and assisted in the development and evaluation of implementation strategies and tools.

Responsibilities	Technical Advisory Committee Participants
Identify issues Provide expertise to address technical issues Evaluate and recommend implementation options Provide draft and final report recommendations	City of Columbus Bartholomew County Cordry Sweetwater Conservancy District INARNG, State Planning Jennings County Economic Development Brown County Johnson County Freeman Municipal Airport North Vernon Municipal Airport Columbus Municipal Airport Muscatatuck Urban Training Center

Policy and Advisory Committee meetings were held throughout the process in order to ensure the JLUS identified and appropriately addressed local issues.

Policy and Technical Advisory Committee Meetings
Policy & Technical Committees Meetings September 8, 2008 October 23, 2008 February 19, 2009 June 9, 2009 July 23, 2009 TBA Additional Technical Committee Meetings December 18, 2008 April 16, 2009 August 26, 2009

Objectives accomplished at each meeting are highlighted as follows:

Meeting # 1 – September 8, 2008: The Technical and Policy committees held a kick-off meeting, which included all partners. The meeting introduced the project and educated the committee members on military and community activities, as well as identified encroachment issues and compatibility factors.

Meeting # 2 – October 23, 2008: The Technical and Policy Committee's discussion included military personnel, assessing economic impact, airport utilization, construction issues, development concerns, the JLUS website, public participation, and public surveys.

Meeting # 3 – December 18, 2008: The Technical Committee met and held discussions surrounding the topics of data compilation, website goals, Google Earth, transportation, and the next scheduled meeting.

Meeting # 4 – February 19, 2009: The Technical and Policy Committees met to discuss the website, public meetings, surveys, study, data collection, press releases and media, committee member contact list, airport, and the Indiana Office of Defense Development – Federal Readiness and Environmental Protection Initiative (REPI) Program.

Meeting # 5 – April 16, 2009: The Technical Committee held discussions on the schedule, task list and milestones, data collection, JLUS document outline, surveys, public participation, press release, and the next scheduled meeting.

Meeting # 6 – June 9, 2009: Reviewed the joint land use study draft report for feedback from the Committee members, discussed the public participation meetings, and reviewed the initial public survey results.

Meeting # 7 – July 23, 2009: Reviewed the public participation process as well as the final recommendation lay out and gathered final comments from the Committee members to incorporate into the report.

Meeting # 8 – August 26, 2009: Final project meeting and delivery.

2.2 Public Participation

2.2.1 Public Involvement Principles

Public involvement is a critical component of the JLUS process and assures that all stakeholders and the public have opportunities to become involved in information sharing and decision-making. Public involvement principles, which guided the Atterbury JLUS, are:

- Provide an open exchange of information and ideas among the stakeholders, public, and participants of the JLUS.
- Be proactive in providing complete information, public notice, and opportunities for involvement.
- Involve citizens who are potentially affected by the JLUS and subsequent land development policy and building code recommendations and decisions.
- Provide an open forum in which affected parties feel welcome and encouraged to participate in the study process.

The major public participation avenues used in this JLUS were:

- Public outreach materials.
- Survey of military personnel and local leaders.
- Public forums.

2.2.2 Public Outreach Materials

In the initial phase of the JLUS, a Fact Sheet was developed to describe the JLUS program and objectives, identify methods to provide input into the process, and identify the study area proposed for the Atterbury JLUS. This Fact Sheet was provided at all meetings and to all interested members of the public.

In addition to the Fact Sheet, a project website was maintained to provide stakeholders, the public, and media representatives with access to project information. This website was maintained for the entire project to ensure that information was easily accessible and will be maintained until approximately August 2010. Information contained on the website includes: project points of contact, schedules, Fact Sheet, committee members, community links, meeting summaries, documents, maps, public meeting information, and

a comment form. The website will house public comments and survey data, as well as the draft and final study. The website address is www.atterburyjlus.com.

Media relations are also an important component of a successful JLUS. A media list that includes daily newspapers, community papers, radio, TV, and publications of chambers of commerce and other community interests was developed, maintained, and cross-referenced with the JLUS consultants. The contacts were forwarded by committee members and from the military installation committee members. The media list will be maintained during the study and remain available one year after the completion of the JLUS.

2.2.3 Survey of Military Personnel and Local Leaders

Overview of Initiative

The Camp Atterbury and Muscatatuck Joint Land Use Study (JLUS) team welcomes public involvement. To help support this, the team felt that it was important to gather information from specified sectors of the community. The approach taken was to involve area military personnel from Camp Atterbury and Muscatatuck Urban Training Center and the local community leaders to poll their feedback on issues and recommendations.

Two surveys were created, one for each demographic. The questions used in the poll were specific to the type of feedback the team felt would correspond to the knowledge, experience, and expertise that each demographic represented.

Key Objectives

Briljent's mission was to poll local leaders and military personnel to gage their collective feelings on various topics concerning the installations and the local land use. In support of this initiative, Briljent's role included gathering the team's ideas for survey questions, creating the survey, helping coordinate the distribution and then compiling the survey results. Briljent's responsibilities also included editing the surveys, establishing the reporting requirements, and communicating the results to assist the JLUS consultants and committee members in creating the final report. These actions drove this initiative and created success.

Outcome of Initiative

The two surveys proved successful in gathering both military personnel and local leader data in a reportable, cooperative fashion. The number of participants varied by type of survey. The local leader survey was sent to 287 Plan Commission members, staff members and elected officials in all affected counties and cities defined in the study area. Approximately 26% or 74 total local leaders completed and returned the survey. Contacts at Camp Atterbury and Muscatatuck Urban Training Center assisted in the distribution of

military personnel surveys. A total of 250 surveys were sent out and 192 completed surveys were returned from these two sites.

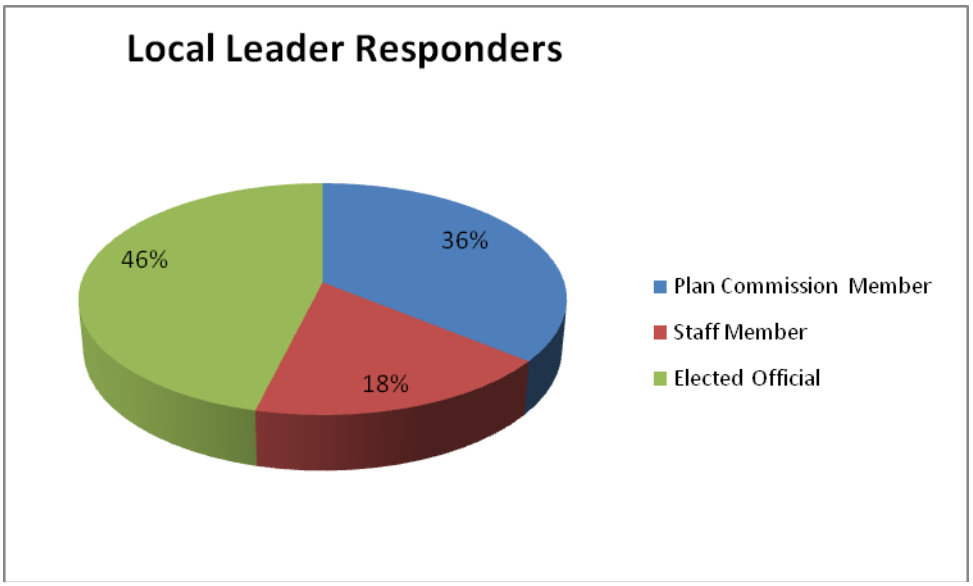
Summary of Survey Format

Both surveys requested information on the respondent's city, county and zip code of residence. All questions on both surveys consisted of queries or fill in the blank inquiries with a variety of answers that could be chosen by darkening the radial buttons next to their chosen answer.

Local Leader Survey Data Compilation Review

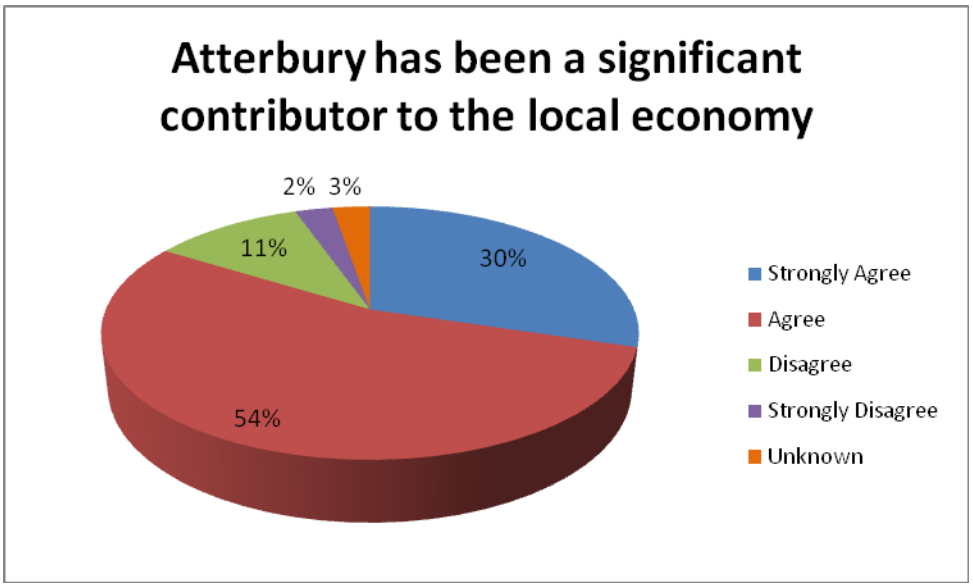
The local leader surveys consisted of 24 questions. Respondents identified if they were members of the Plan Commission, a staff member or an elected official. The local leader questions were broken down into three specific data points: economy, transportation and land use.

Of the local leaders that responded, almost half were elected officials.

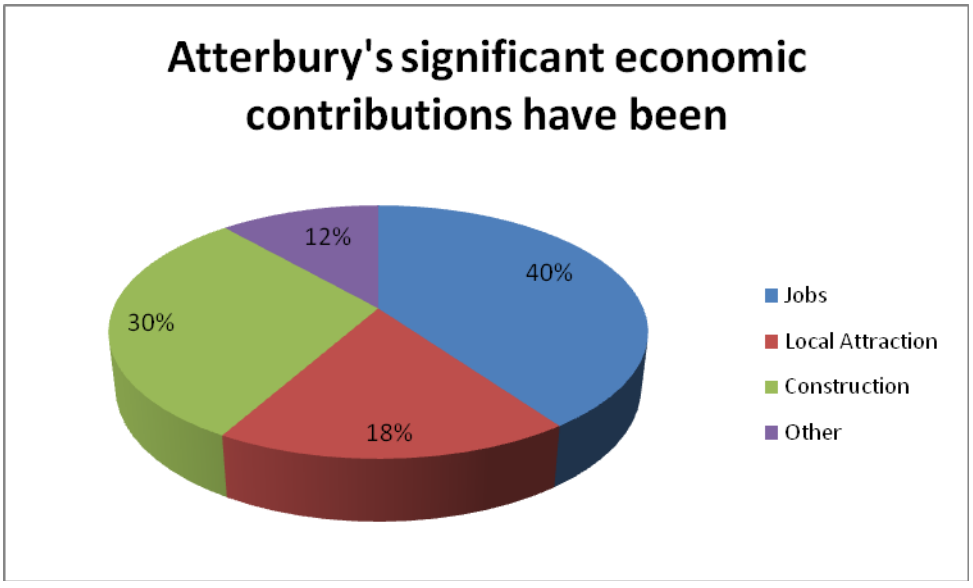


Economy Questions

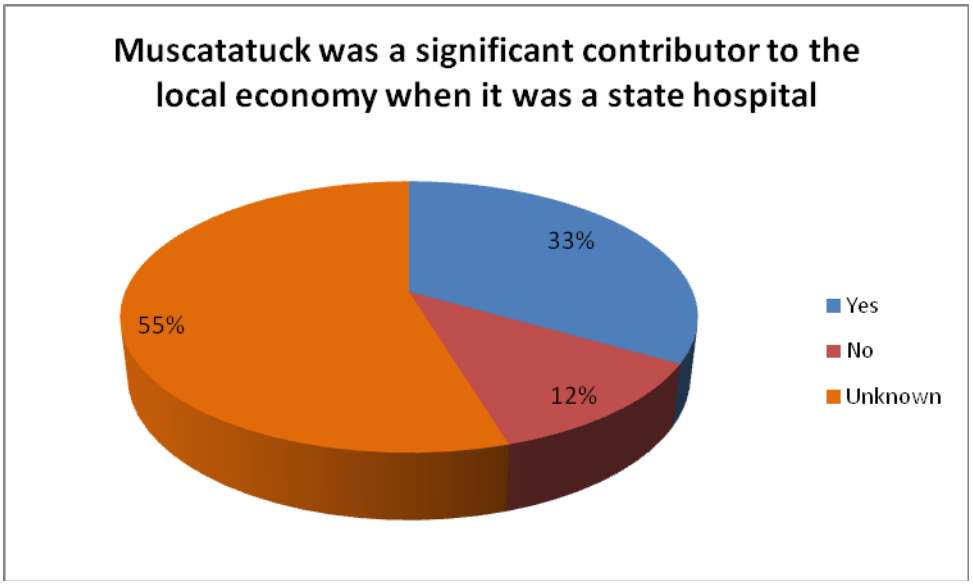
Question 1 results show that the majority of local leaders feel that Camp Atterbury has been a significant contributor to the local economy.



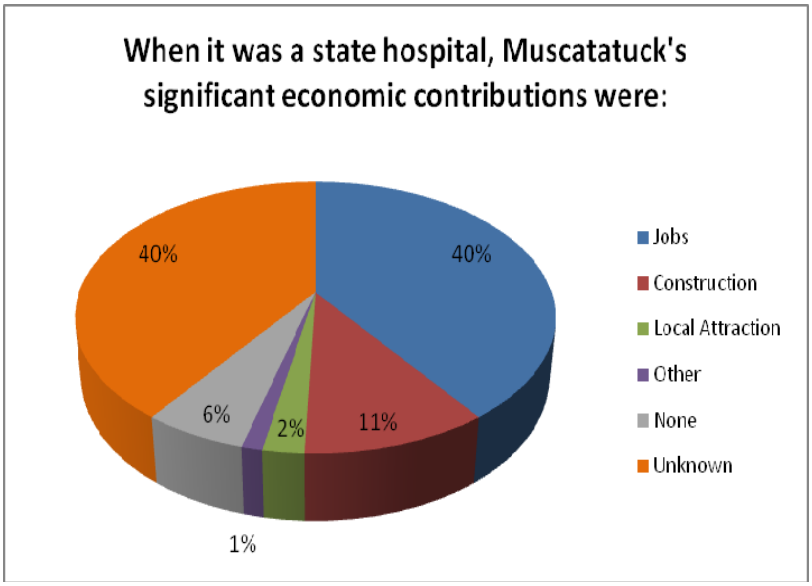
Question 2 results show that local leaders believe Camp Atterbury's two significant contributions to the local economy have been jobs and construction.



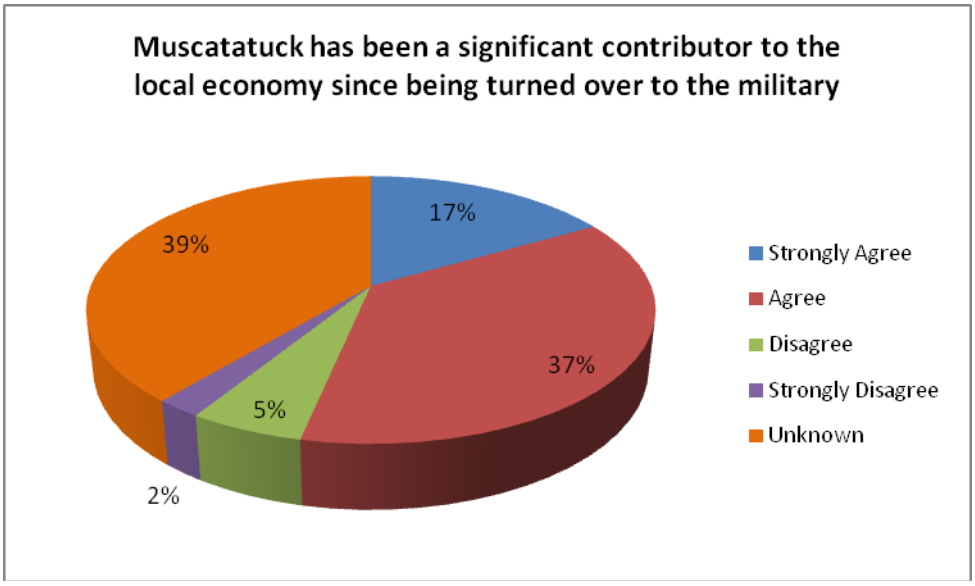
Question 3 results show that the majority of local leaders did not know if Muscatatuck was a significant contributor to the local economy when it was a state hospital.



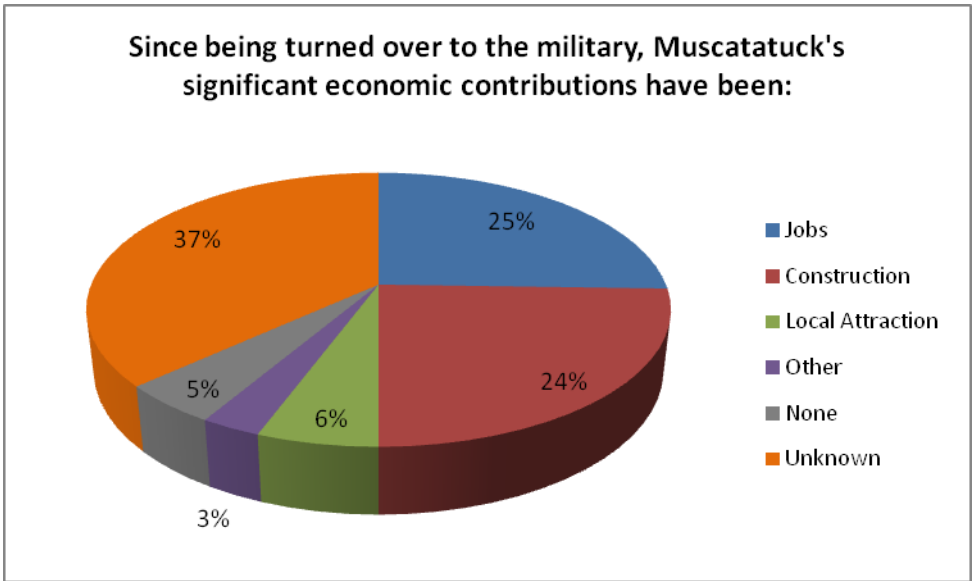
Question 4 results show the majority of local leaders were either not sure of the economic contributions from Muscatatuck while it was a state hospital or believe that jobs were the significant contribution.



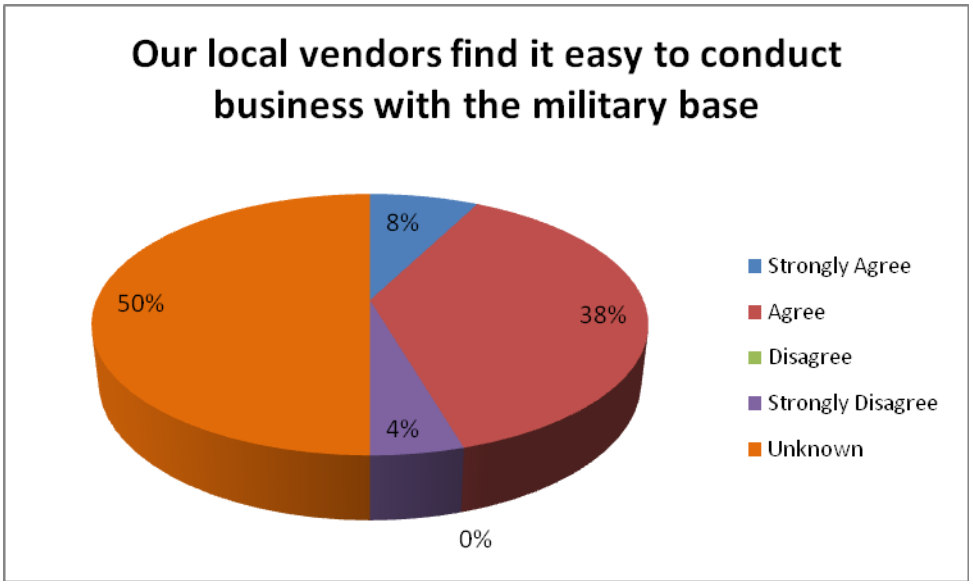
Question 5 results show that more than one third of the local leaders believe Muscatatuck has been a significant contributor since becoming military and another third are not sure.



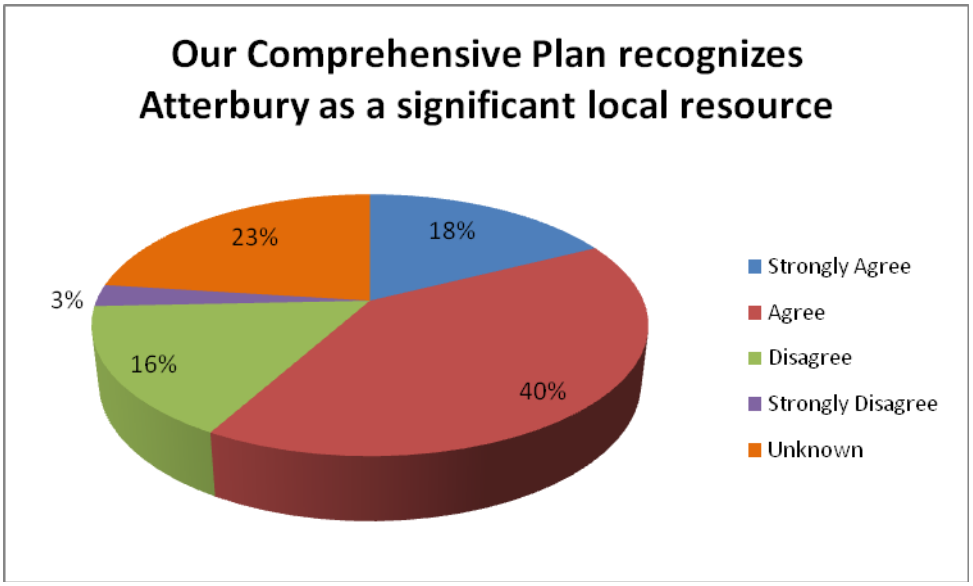
Question 6 results show that more than one third of the local leaders are not sure what Muscatatuck's economic contributions have been, while one fourth believe jobs and almost another fourth believe construction have been the significant contributions since Muscatatuck was turned over to the military.



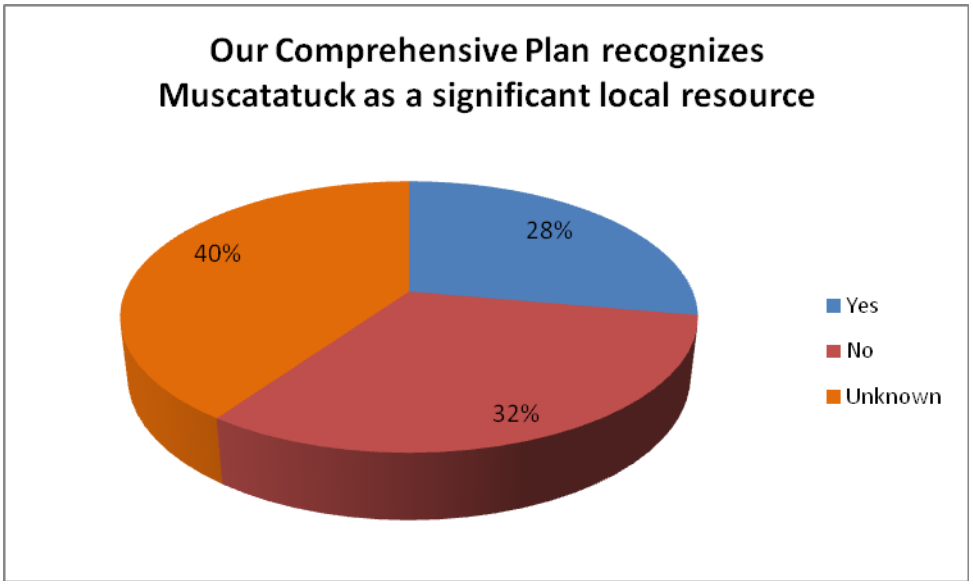
Question 7 results show that 46% of the local leaders believe local vendors find it easy to conduct business with the military base.



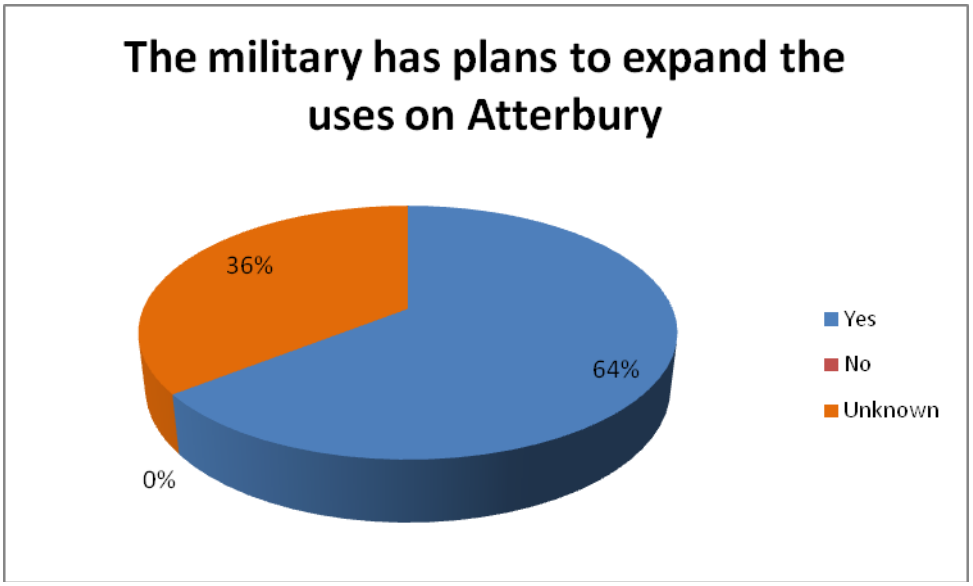
Question 8 results show that more than half of the local leaders believe their Comprehensive Plan recognizes Camp Atterbury as a significant resource.



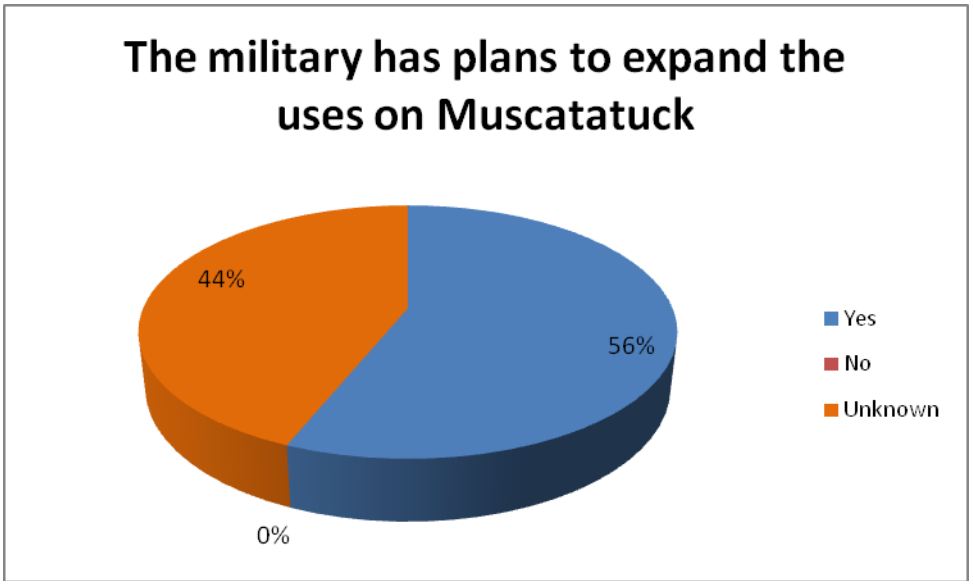
Question 9 results show that local leaders were fairly divided on their thoughts of Muscatatuck as a significant local resource.



Question 10 results show that roughly two thirds of the local leaders believe that the military has plans to expand the uses on Camp Atterbury.

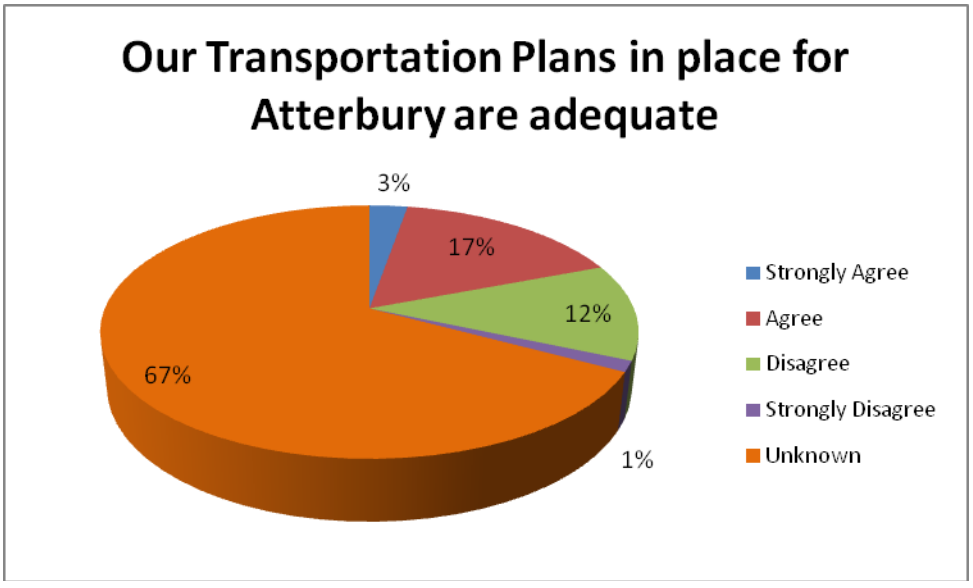


Question 11 results show that more than half of the local leaders believe the military will also expand their uses on Muscatatuck.

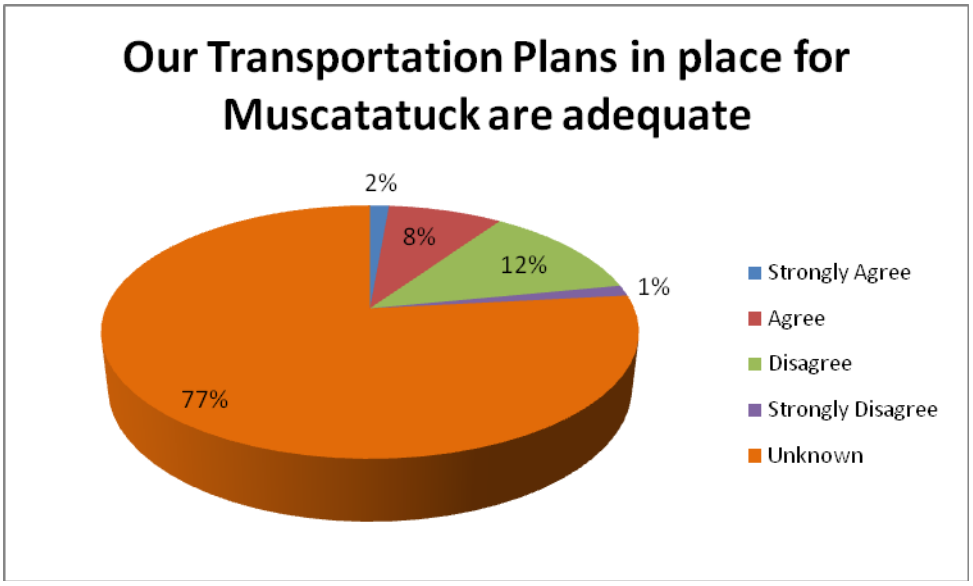


Transportation Questions

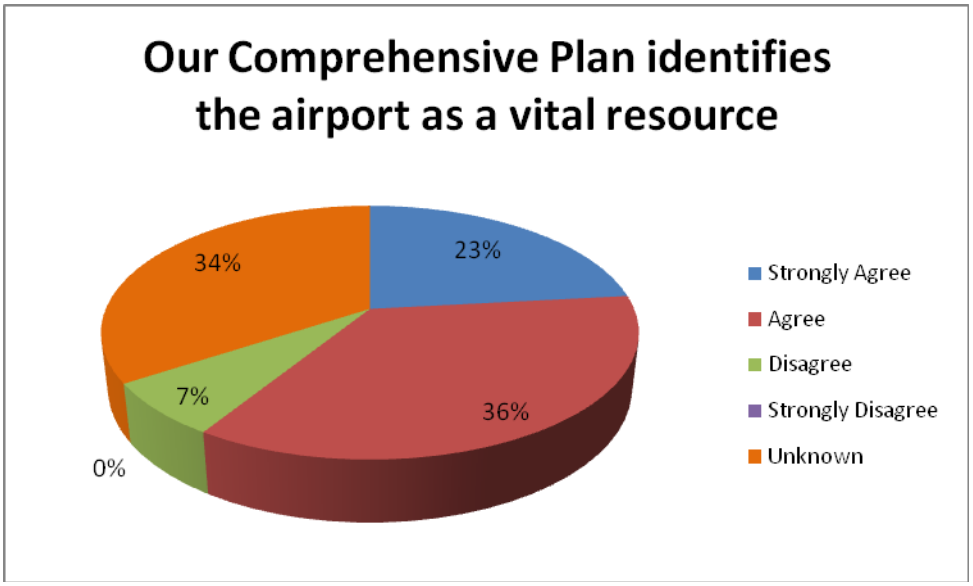
Question 12 results show that more than two thirds of the local leaders do not know if their Transportation Plans in place for Camp Atterbury are adequate.



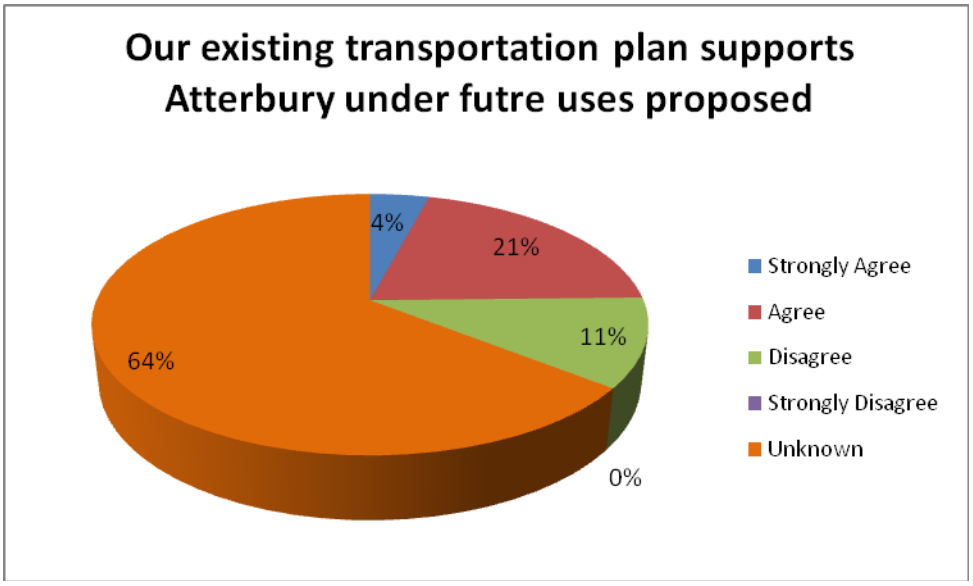
Question 13 results show that more than three fourths of the local leaders do not know if their Transportation Plans in place for Muscatatuck are adequate.



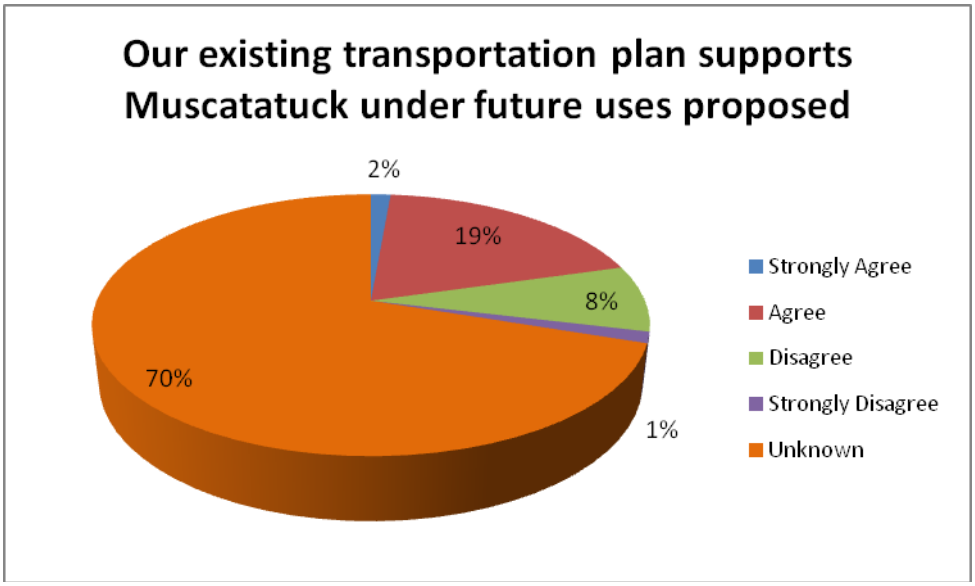
Question 14 results show that local leaders are split as whether the Comprehensive Plan identifies the airport as a vital resource.



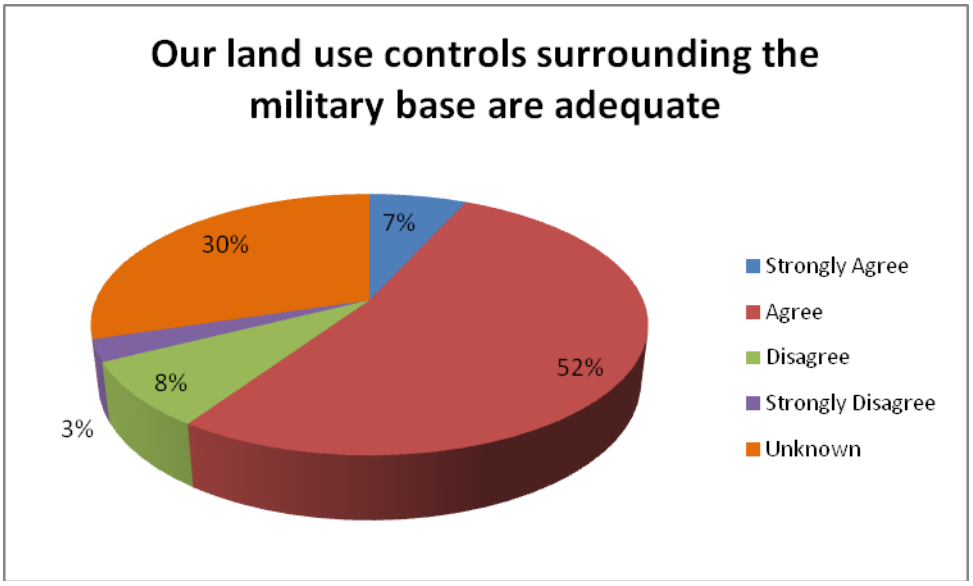
Question 15 results show that the majority of local leaders are unsure if their existing transportation plan supports Camp Atterbury under proposed future uses.



Question 16 results show that the majority of local leaders is also unsure that its existing transportation plan supports Muscatatuck under future uses proposed.

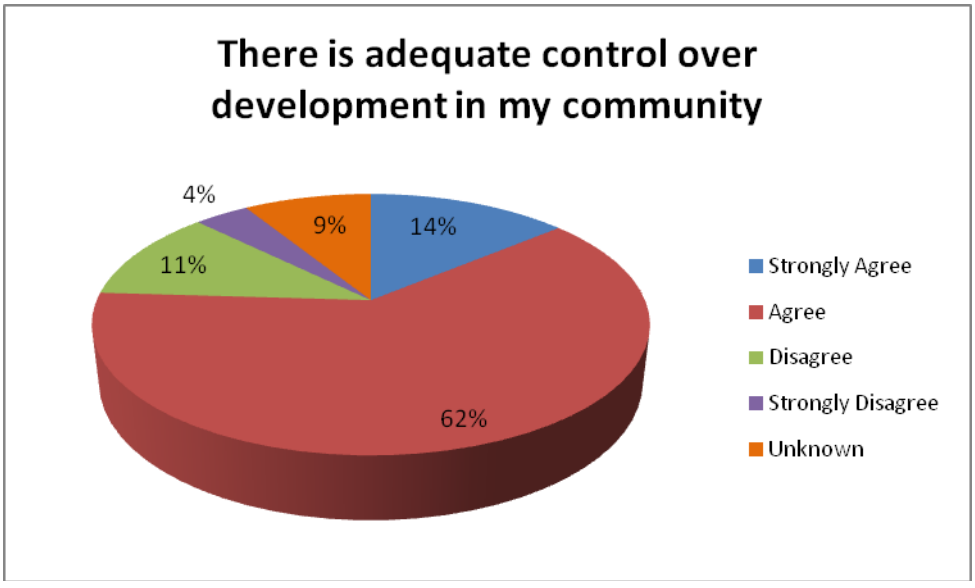


Question 17 results show that the more than half of the local leaders feel their land use controls surrounding the military base are adequate.

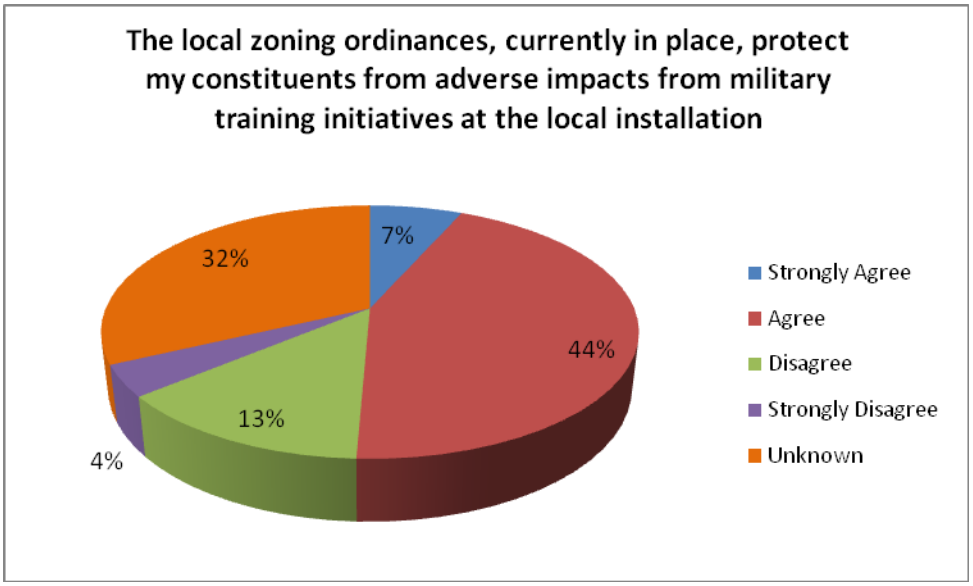


Land Use Section

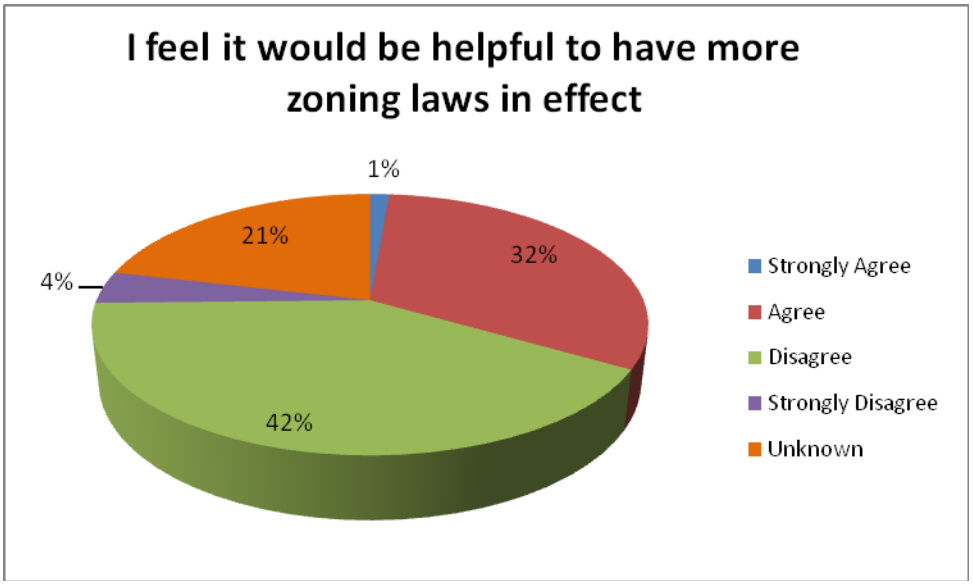
Question 18 results show that three fourths of local leaders believe there is adequate control over development in their community.



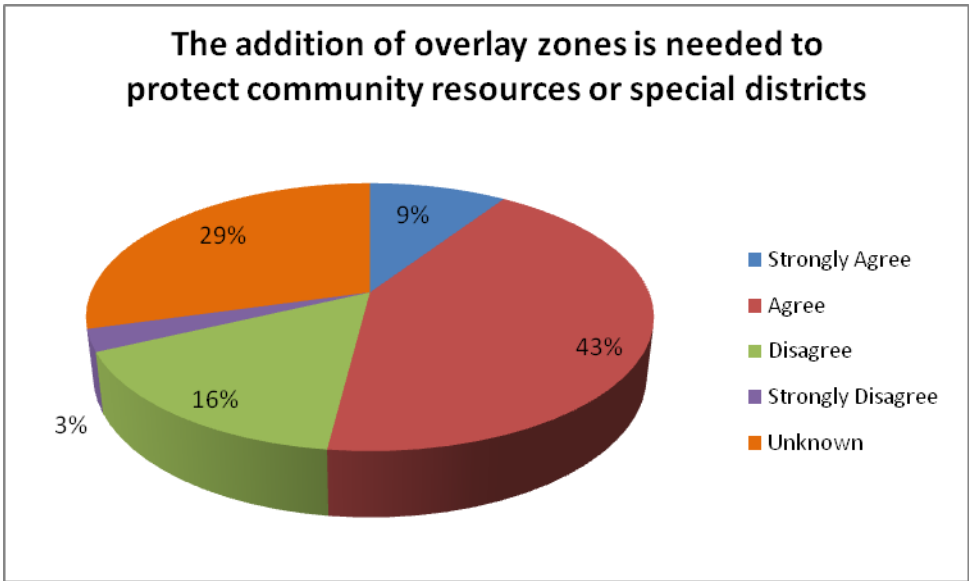
Question 19 results show that more than half of the local leaders agree that local zoning ordinances in place protect their constituents from adverse impacts from the military training initiatives at the local installation. Close to one third are unsure.



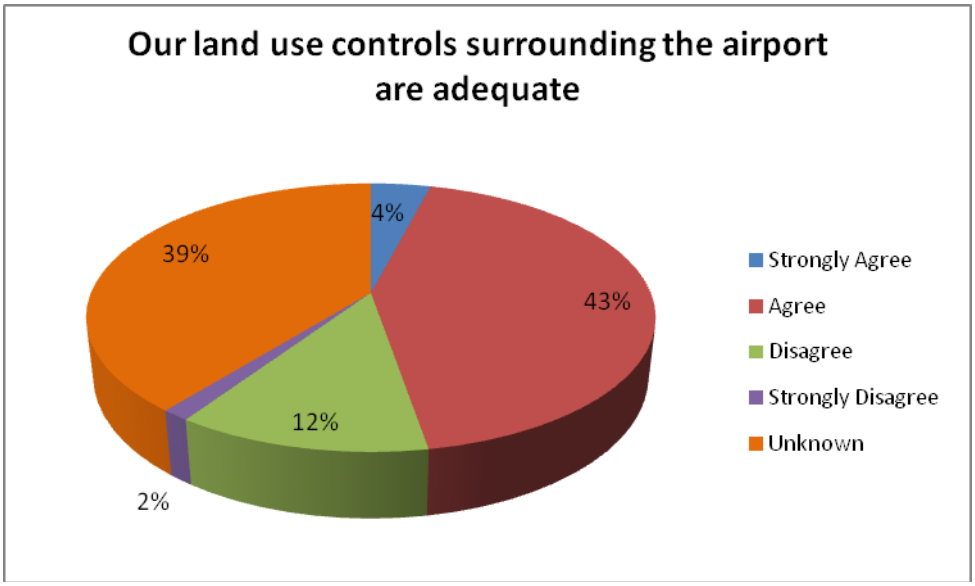
Question 20 results show that one third of the local leaders think it would be helpful to have more zoning laws in effect, while close to half disagree that more zoning laws would be helpful.



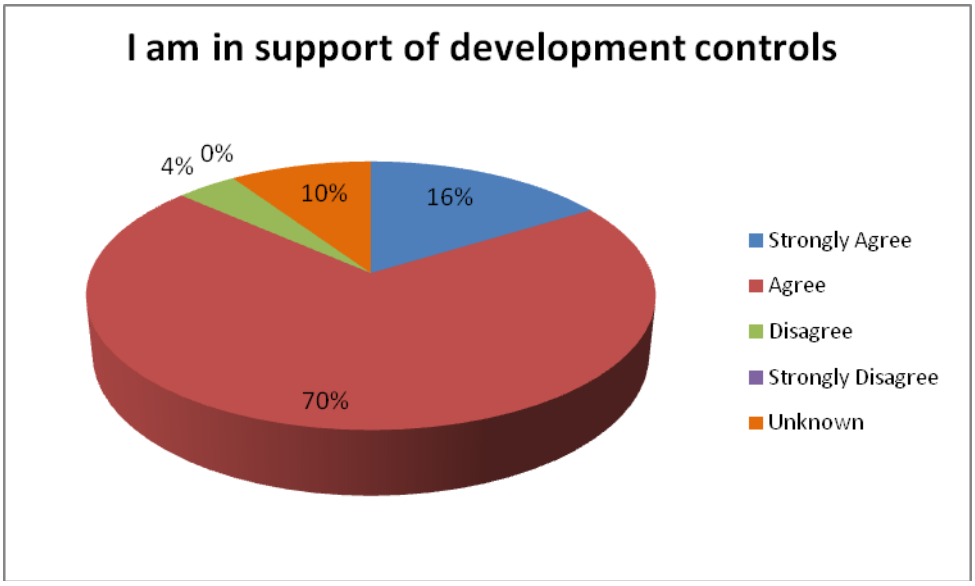
Question 21 results show that over half of the local leaders believe additional overlay zones are needed to protect community resources or special districts.



Question 22 results show that majority of local leaders are split between believing their land use controls surrounding the airport are adequate and not knowing if the controls are adequate.



Question 23 results show that more than 4 of 5 local leaders support development controls.



Comments on Local Leader Survey Results

Based on the surveys collected, there are many unknowns about how Muscatatuck Urban Training Center has affected and is affecting the surrounding community. By contrast, an overwhelming majority of the local leaders agreed that Camp Atterbury is a significant contributor to their local economy.

Local leaders around both Camp Atterbury and Muscatatuck believe the military has plans in place to expand at the respective installations.

Regarding the Transportation Plan, most respondents considered the current and future use adequacy both at Camp Atterbury and Muscatatuck as “Unknown.”

Notably, over half (52%) agreed that additional overlay zones are needed to protect community resources or special districts.

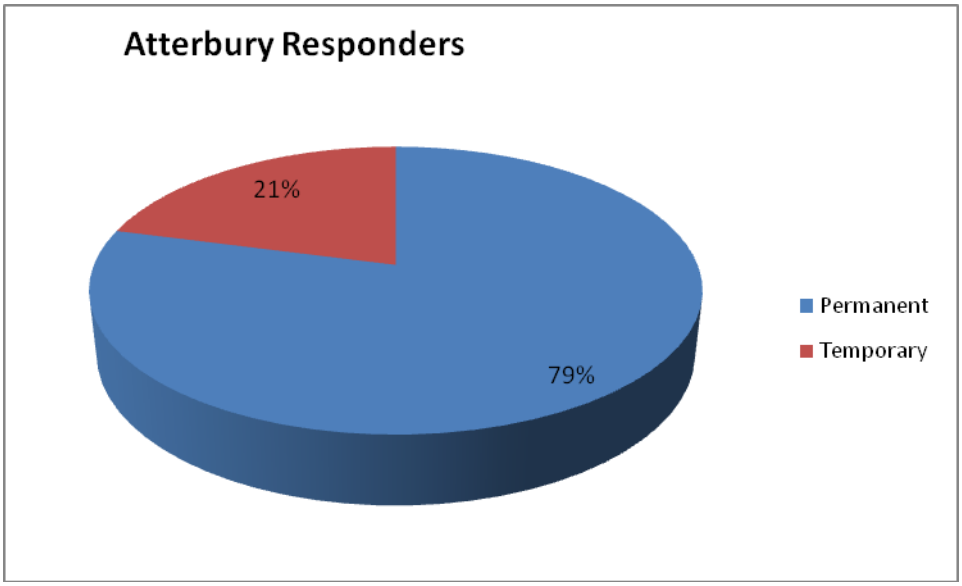
More than half (52%) feel that land use controls surrounding the installation are adequate.

More than half, 58%, believe their Comprehensive Plans recognize Atterbury, and 28% believe their Comprehensive Plans recognize Muscatatuck as a significant local resource; and in fact, none of the comprehensive plans of surrounding communities recognize Atterbury or Muscatatuck as a significant local resource.

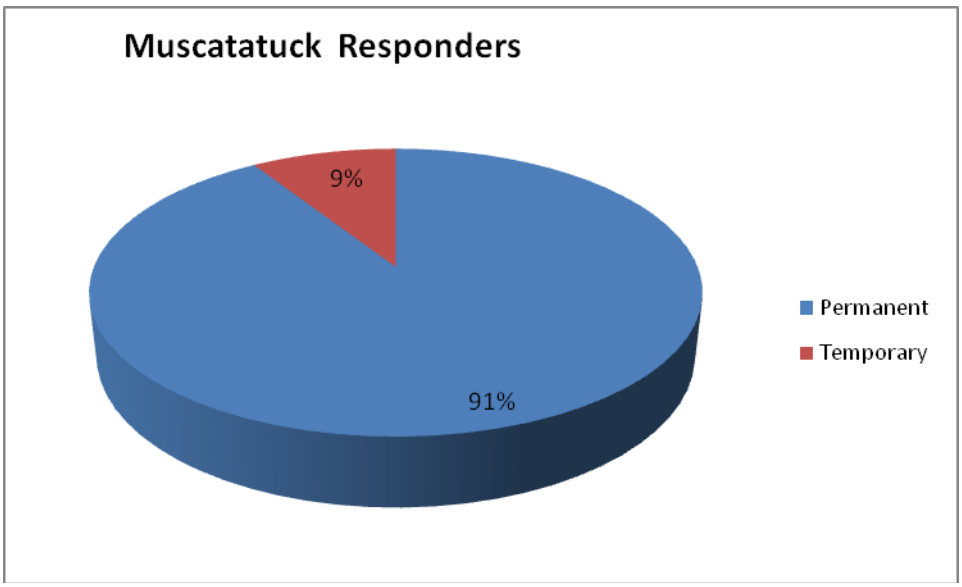
Military Personnel Survey Data Compilation Review

The military personnel surveys had 12 questions. Respondents were requested to indicate whether they were permanently or temporarily stationed or employed at Atterbury or Muscatatuck. The military personnel questions focused on the surrounding community and land use controls.

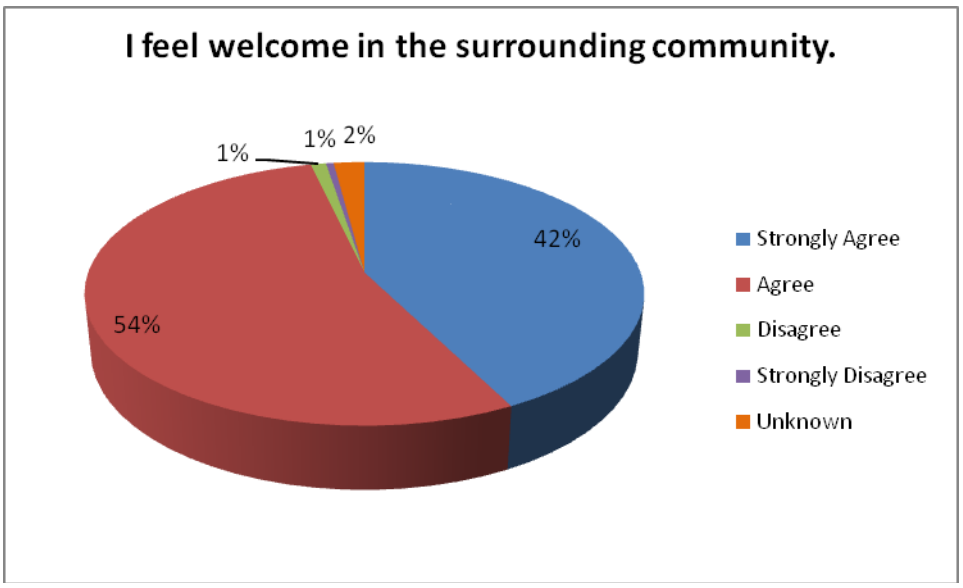
Nearly 80% of the Camp Atterbury responders are permanently stationed there.



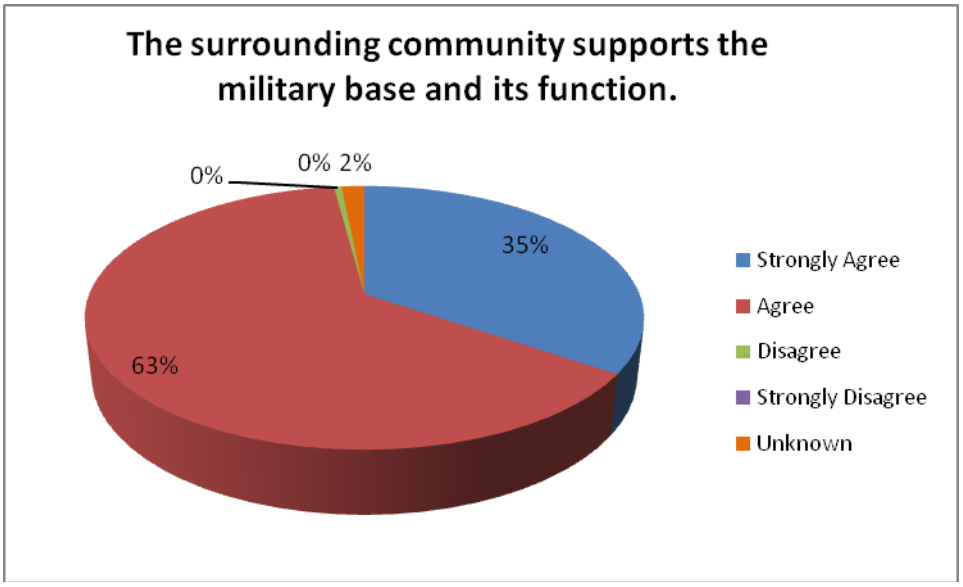
Over 90% of Muscatatuck responders are permanently stationed there.



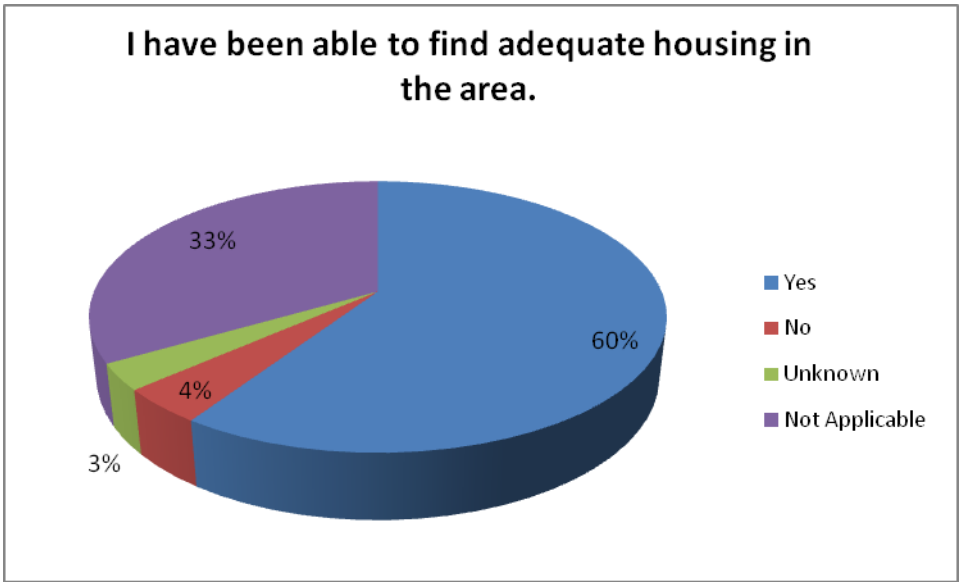
Question 1 results show that 96% of military personnel feel welcomed by the surrounding community.



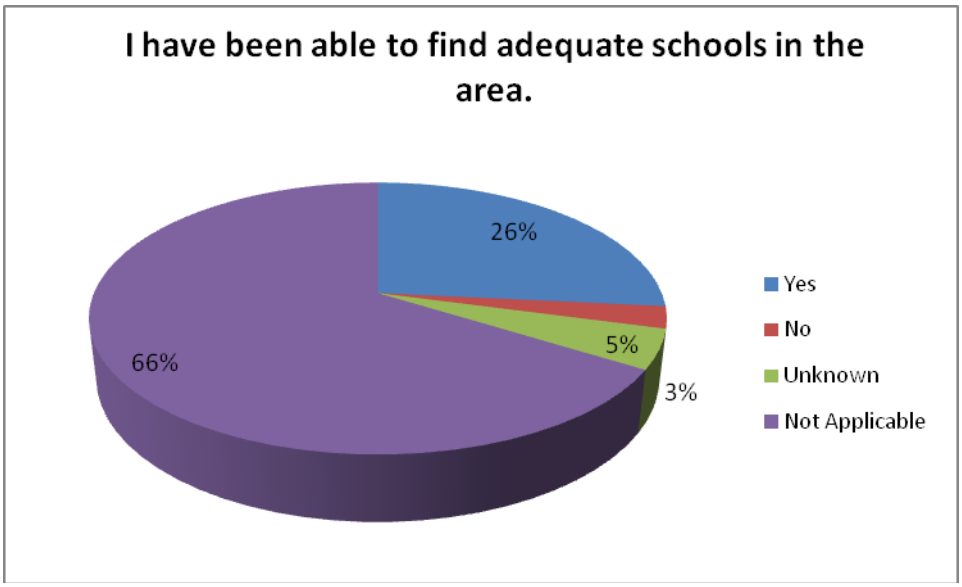
Question 2 results show that 98% of military personnel agree the surrounding community supports the military base and its function.



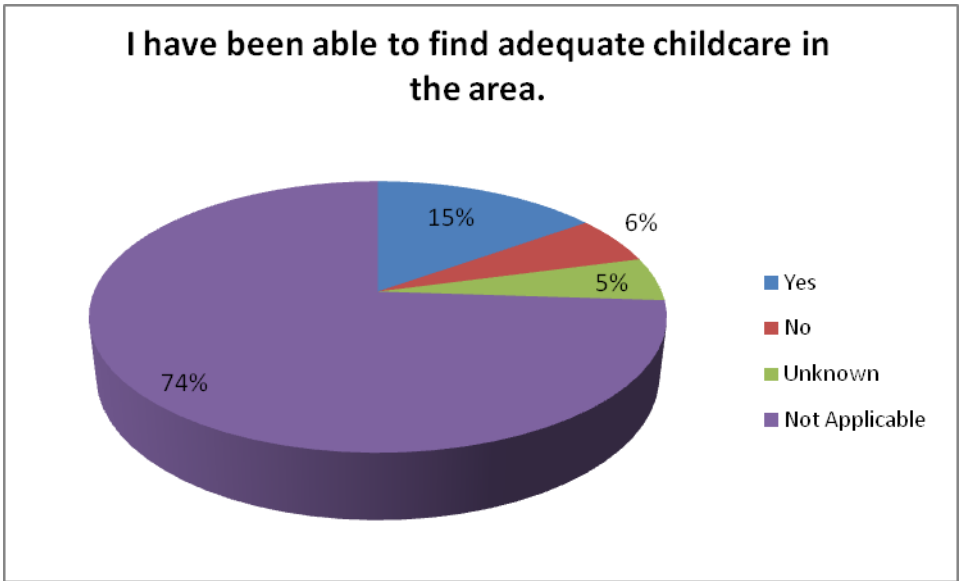
Question 3 results show that more than half of the military personnel have been able to find adequate housing in the area. One third of the military personnel responded this question was not applicable.



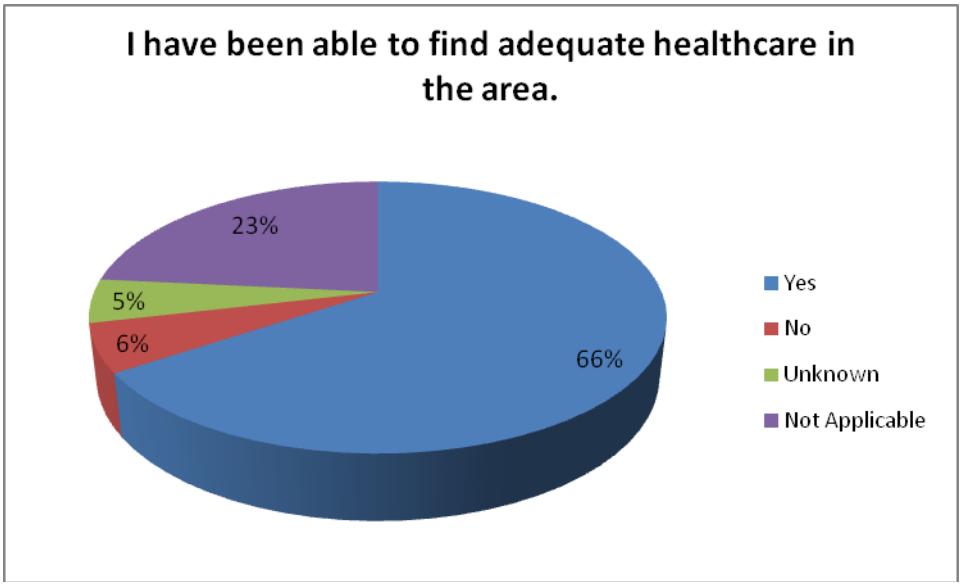
Question 4 results show that two thirds of the military personnel responded that the question about finding adequate schools in the area was not applicable.



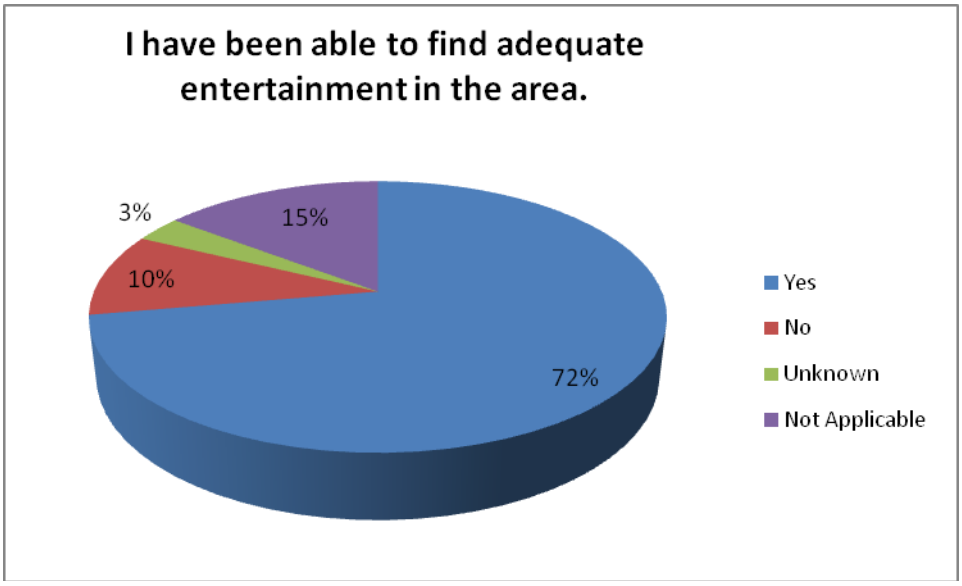
Question 5 results show that three fourths of the military personnel marked that finding adequate childcare in the area was not applicable.



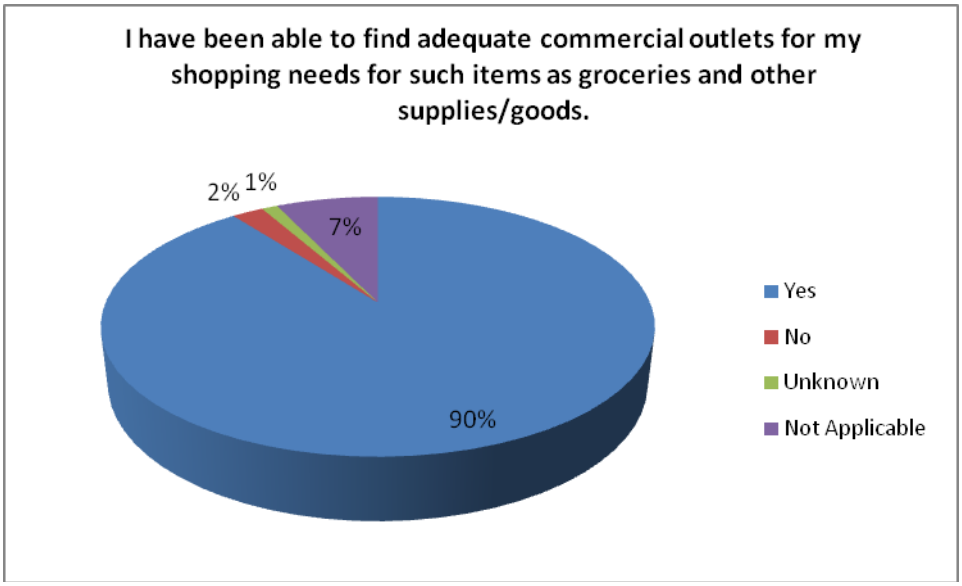
Question 6 results show that two thirds of the military personnel have been able to find adequate healthcare in the area.



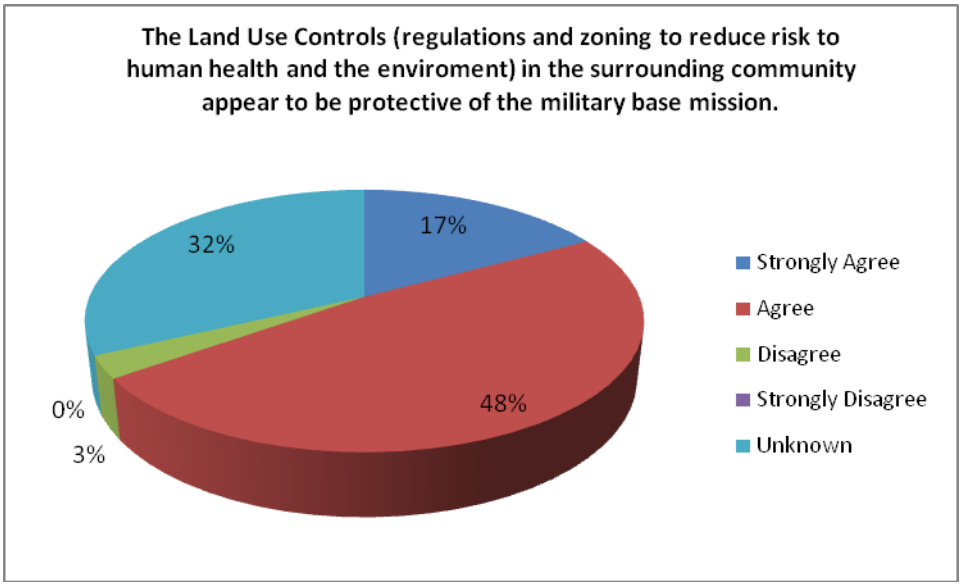
Question 7 results show that the majority of military personnel have been able to find adequate entertainment in the area.



Question 8 results show that an overwhelming 90% of the military personnel have been able to find adequate commercial outlets for shopping needs such as groceries and other supplies/goods.



Question 9 results show that almost three fourths of the military personnel agree that the Land Use Controls in the surrounding community appear to be protective of the military base mission.



Comments on Military Personnel Survey Results

The results from the military personnel surveys reflect that the overwhelming majority of the responders (98%) feels welcome and feels supported in the community. They expressed similar feelings for the military installation and its function.

The results show that most responders (where applicable) thought the local area provided adequate housing, schools, childcare, healthcare, entertainment, and commercial outlets for their needs.

Survey Report Summary

Through the use of surveys, data has been collected and is available and will be available for one year from the end of this contract (http://www.atterburyjlus.com). Analysis of the surveys has been taken into account in the recommendations found in section 5.0 Implementation Plan.

2.2.4 Public Forums

Overview of Initiative

The Camp Atterbury and Muscatatuck Joint Land Use Study (JLUS) team welcomed public involvement. For this portion of the initiative, public involvement was defined as

the participation and communication with local citizens. The approach taken was to schedule public participation meetings and use those meetings, as well as the JLUS interactive web site, to gage the public interest, issues, recommendations, comments and feedback.

The public meetings consisted of two participation forums to facilitate information exchange. Each forum included a presentation, an open house to encourage conversations and questions, and a formal public comment session. The open house segment of the meeting proved productive. Attendees had the opportunity to view the maps, graphs and charts, and discuss their opinions, questions and concerns with local leaders, committee members and JLUS consultants.

Public Forums
Public Forum #1 – June 16, 2009 – North Vernon, IN Public Forum #2 – June 18, 2009 – Edinburgh, IN

Joint Land Use Study Draft Presentation

June 16, 2009
6:00 pm – 8:00 pm
Education and Training Center, Elsner Hall
1200 West O & M Avenue
North Vernon, Indiana 47265

Joint Land Use Study Draft Presentation

June 18, 2009
6:00 pm – 8:00 pm
Edinburgh Park and Recreation Department, Community Center
733 South Eisenhower Drive
Edinburgh, IN 46124

The JLUS web site was formatted to accept public comments to prepare for the public participation initiative.

Key Objectives

The consultant's role was to facilitate public participation in support of this initiative by defining the public participation process, communicating with the media, publicizing the meetings, inviting key partners and the public, and assisting in the facilitation of the public meetings. The consultant responsibilities also included collecting the public comments, establishing the reporting requirements, and communicating the results to assist in creating the final report. These actions drove this initiative and created success.

The consultant team presented the final draft, and initiated the comments and exchange of information at the public meetings through the following tasks:

- Welcomed all attendees.
- Requested all attendees sign in.
- Provided comment cards to all attendees for their response.
- Gathered the names of attendees making verbal comments.
- Answered questions during the open forum portion of the meetings and collected public comments.
- Recorded the verbal public comments.
- Collected written public comments.

Outcome of Initiative

The two public meetings proved successful in open and honest communication between all community members present. Committee members, airport representatives, military representatives, JLUS consultants, the former and current mayors, the media, and many local community members were present. Both evenings went smoothly and the vast majority of the attendees stayed for the entire two-hour event.

Approximately 65 people attended the North Vernon meeting on June 16, 2009; and approximately 50 attendees were present at the Edinburgh meeting on June 18, 2009.

Another outcome of this initiative was the successful capture of comments gathered from the JLUS website. The website gives the public another avenue to submit their thoughts, suggestions and concerns.

An unexpected gain was the media coverage the two public meetings provided. Multiple newspaper publications, radio, and TV stations chose to run articles covering the meetings.

Summary of Comments Collected

Comments were collected from four different avenues. Consultant staff collected verbal comments during the open house portion of the meeting. Written comments were collected from attendees who completed the Public Comment Form, and recorded verbal comments were gathered during the formal public comment session. Comments were also collected through the JLUS web site.

Public comment received through the project website (www.atterburyjlus.com), and other sources, was accepted for approximately 60 days, from June 1st through July 31st, 2009.

North Vernon Meeting	Edinburgh Meeting
15 Verbal Comments	12 Verbal Comments
15 Written Comments	7 Written Comments
5 Recorded Verbal Comments	3 Recorded Verbal Comments

The comments gathered were divided into common categories or themes.

North Vernon meeting and web site submissions from near that area	Edinburgh meeting and web site submissions from near that area	Totals
6 comments on US 50 Bypass	0 comments on US 50 Bypass	6
12 comments on noise and light	9 comments on noise and light	21
4 comments on TV and cell phone reception	0 comments on TV and cell phone reception	4
10 comments on travel	2 comments on travel	12
4 comments on communication	0 comments on communication	4
2 comments on maps	5 comments on maps	7
5 comments on land purchase	0 comments on land purchase	5
5 comments on growth and jobs	3 comments on growth and jobs	8
2 comments on recreational use	2 comments on recreational use	4
3 comments on clarification	2 comments on clarification	5
8 other comments	7 other comments	15

Summary of Comments for North Vernon Meeting and Muscatatuck area

Based on the comments collected, a major concern surrounding Muscatatuck Urban Training Center is noise. Noise levels and timeframes were significant issues addressed in several of the comments. The military operation noise between 2200 hours and 0700 hours is problematic and many voiced their hopes for a resolution.

Out of the ten comments submitted regarding travel in the area, seven showed concern with the north/south road access. Four mentioned they had trouble accessing their farmland due to the width of guardrails or the closure of gates.

Summary of Comments for Edinburgh and Camp Atterbury area

Noise in the Camp Atterbury area has not been a major issue. Six of the nine comments praised Atterbury for the respect they had shown by keeping the noise to a minimum. Some community members stressed keeping noise levels the same as the military installation experiences future growth.

Summary of Comments Submitted in Writing on Muscatatuck

Numerous comments came in concerning noise at Muscatatuck, particularly associated with the adjacent campground. Many of these residents were upset with the periodic closure of Brush Creek Reservoir and County road closures.

3.0 Background & Existing Conditions

This section provides an overview of the installation's history and mission, a description of the surrounding communities along with population projections, infrastructure and transportation conditions and planned projects, the environmental conditions surrounding the installations, and the economic impact of the military in the region.

3.1 Installation Background and Mission

3.1.1 Camp Atterbury

Camp Atterbury is a federally owned, state-operated training and testing facility, located in Central Indiana, approximately 35 miles south of Indianapolis. It encompasses slightly more than 33,000 acres within Bartholomew, Brown and Johnson Counties.

Camp Atterbury is one of Indiana's premier training centers and one of the Army's "Power Generation Platforms." Since federalized as a mobilization center in 2003, Camp Atterbury and its partners, the 205th and 189th Infantry Brigades, have mobilized over 50,000 service members to various locations throughout the world, and demobilized over 30,000 in support of the War on Terror.

Camp Atterbury serves members of active duty and reserve components to include Army, Air Force, Navy, Marines, as well as civilians. In addition, Camp Atterbury provides training facilities for federal, state and local emergency response agencies.

Installation History

The history of Camp Atterbury began in the late 1930's with the surveying of lands west of Edinburgh, Indiana. In April 1941, the War Department announced plans to build the post. The Army took over 40,000 acres including two communities, formerly known as Kansas and Moriah. What was known as Mount Pisgah became the center of Camp Atterbury. Construction started in February 1942 and ended approximately seven months later with 1,780 buildings erected at a cost of 38 million dollars. The Camp began operation on June 2, 1942. Over 275,000 soldiers trained there during World War II. Late in 1942, a prisoner-of-war camp was built which held 15,000 German and Italian prisoners. The Post was deactivated in December 1946, and briefly opened again in August 1950 for the Korean War, closing its doors again in March 1954.

In 1966, a parcel of approximately 600 acres, bordering the Driftwood River, on the east side of the post, was deeded to the U.S. Forest Service as a National Forest. Effective 31 December 1968, the post was declared excess to Army needs and was subdivided into five parcels of land, with the Prince's Lake Water and Sewage Utilities taking control of the wells and sewage treatment plant and 70 acres of land. The remaining acreage was divided as follows: 5,500 acres was purchased by the Indiana Departments of Natural Resources; 300 acres, encompassing the Wakeman Army Hospital was leased by U.S.

Department of Labor for use as the Atterbury Job Corps Center; 561 acres were deeded to the Johnson County Park and Recreation Department; and the remaining approximate 33,000 acres were leased to the Military Department of Indiana for Reserve Forces Training use.

The only Army National Guard unit to see combat during the Vietnam War, Company D, 151st Infantry, also known as "The Indiana Rangers", received much of its pre-deployment training at the installation. Company D became one of the most highly decorated units of the entire conflict. Use of Camp Atterbury by National Guard and other Reserve Component units began increasing in the late seventies.

The military renaissance of the 1980s proved a boon to the installation, with new construction replacing many of the WWII-vintage structures. By the early 1990s, several projects were underway, including the construction of a rail loading area, and a new airfield. These improvements were most timely. When Iraq invaded Kuwait, America's response included the mobilization of thousands of National Guard and Reserve troops. Once again, Camp Atterbury was called upon to mobilize hundreds of Indiana's citizen-soldiers in support of Desert Shield and Desert Storm. The air-ground range was busy daily, with F-16s and A-10 tank killing fighters honing their skills prior to being deployed.

Though smaller by 7,000 acres than in WWII, Camp Atterbury, at the beginning of the 21st Century, is a post truly reborn. Automated firing ranges, a newly reconstructed airfield, and the ability to accommodate over 5,000 soldiers have made Camp Atterbury a premier training site. Its status as the Midwest's only state-operated mobilization site has increased the installation's importance to overall national security, processing over 20,000 soldiers since 11 September 2001.

The current mission of Camp Atterbury is:

Provide adequate facilities, training areas, and ranges to maintain the readiness of the Army National Guard (ARNG) and the Air National Guard (ANG) for their assigned mission of being prepared to protect the Unites States in the event of mobilization. The following objectives support this mission:

1. Serve as a Forces Command Power Generation Platform (PGP) and 1A Mobilization Station – Camp Atterbury is the designated mobilization site for many units of the National Guard and U.S. Army Reserve.
2. Serve as a premier training site for both individuals and units from all branches of service for both Reserve and Active Duty training and other special training events.
3. Serve as a training site for all Public Service organizations such as Department of Homeland Security, State and Local Police, and other first responders.

3.1.2 Muscatatuck Urban Training Center (MUTC)

Muscatatuck Urban Training Center (MUTC) is a state-owned, federally licensed, Advanced Urban Training Facility operated by the Indiana National Guard. Muscatatuck is a "living, breathing city," capable of supporting stability and reconstruction training requirements.

Located in Southeastern Indiana, Muscatatuck is approximately 80 miles southeast of Indianapolis, and 70 miles west of Cincinnati. It is located in Jennings County and includes approximately 1,000 acres, with nine miles of surface roads, one mile of underground tunnels, and a 180-acre reservoir.

Muscatatuck is a consortium of governmental, public and private entities that pool their capabilities to provide the most realistic training experience possible. Training at Muscatatuck can be tailored to replicate both foreign and domestic scenarios and can be utilized by various civilian and military organizations.

Muscatatuck serves members of active duty and reserve components to include Army, Air Force, Navy, Marines, as well as civilians. In addition, Muscatatuck provides training facilities for federal, state and local emergency response agencies.

Installation History

The Muscatatuck State Developmental Center (MSDC) was initially a residential, state-owned and operated hospital facility for the mentally handicapped. The MSDC opened in 1920 and was in operation until 2004. Throughout the 84 years the facility was in operation, the name and objectives of the MSDC changed a number of times.

When the MSDC opened in 1920, it was known as the Indiana Farm Colony for Feeble Minded Youth and only accepted mentally handicapped men over the age of sixteen. At that time, the MSDC was considered a home, not a school, and the residents were expected to perform farming chores in order to earn their keep and to provide food for the MSDC.

The MSDC began accepting female residents in early 1933. At that point, 120 women were transferred to the MSDC from the Fort Wayne School for Feeble Minded Youth in northern Indiana. The female residents' activities, living quarters, and dining facilities were kept separate from those of the male residents at the MSDC.

On July 1, 1937, the MSDC was administratively separated from the Fort Wayne School for Feeble Minded Youth and the name of the MSDC changed to Muscatatuck Colony. In 1938, Works Progress Administration (WPA) appropriations allowed Muscatatuck Colony to begin constructing state of the art facilities for housing and support of the mentally handicapped.

By 1941, the MSDC began to focus more on educating the residents and less on work. This change in focus also brought about another name change and the MSDC was renamed the Muscatatuck State School and, at that time, housed nearly 1,300 residents. Then in 1952 another significant change occurred, the MSDC began admitting children under the age of six.

During the early sixties, the population remained relatively stable with approximately 2,000 residents. By the late sixties fundamental changes in the treatment and care of mentally handicapped people were being made nationwide. These changes focused on providing skill training to the mentally handicapped that would allow them to integrate into society once they were discharged from facilities such as the Muscatatuck State School. The results of these changes at the MSDC included phasing out all farming activities and the number of residents began to decline.

The name of the MSDC changed again during the mid 1970s to the Muscatatuck State Hospital and Training Center. This time brought about even more changes at the MSDC. Because of special education laws enacted during the ‘70s, children under the age of six were no longer admitted to the MSDC. Then in 1977, the MSDC was certified as an Intermediate Care Facility for the Mentally Retarded and by 1984, the population at the MSDC had decreased to 836 residents. The fifth and final name change was the Muscatatuck State Development Center.

In April 2001, the Governor of Indiana announced that the MSDC would be closed by June 30, 2003. On July 7, 2005, the MSDC was transferred to the Indiana National Guard to be used as a regional training facility for the DoD, and as a training center for the Department of Homeland Security, law enforcement agencies, firefighters, and emergency medical personnel.

The current mission of Muscatatuck Urban Training Center is:

> Become the primary regional Combined Arms Collective Training Facility (CACTF) for the DoD and provide a dynamic urban training environment for the DoD, Department of Homeland Security, law enforcement agencies, and emergency medical personnel to prepare for urban combat training as well as mass casualty response training.

3.2 Surrounding Communities Overview

3.2.1 Bartholomew County

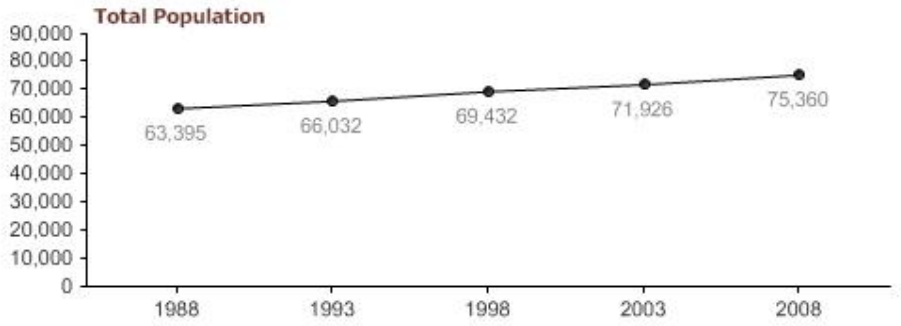
Bartholomew County was founded in 1821 and is located in the southeastern part of the state with Columbus serving as the county seat. Covering 409 square miles, it lies mostly in the level areas surrounding the East Fork of the White River and its tributaries.

The majority of the property that comprises Camp Atterbury lies in Bartholomew County. In addition, there are seven incorporated jurisdictions in Bartholomew County: the City of Columbus, a portion of the Town of Edinburgh, and the following towns: Clifford, Elizabethtown, Hartsville, Hope, and Jonesville. There are three townships bordering Camp Atterbury on the east and south. These are German Township, Columbus Township, and Harrison Township. In addition, several small subdivisions in Bartholomew County border Camp Atterbury, including Talberton Pleasant View, Driftwood Trailer, Taylorsville, Shangri-La, Ford's, and Dogwood Estates. The county is bisected by Interstate Highway 65 and U.S. Highway 31, along with a commercial rail line. The population of Bartholomew County was 74,750 in 2007. There were 257 new housing units built in 2007. Between 2000 and 2006, the population grew by 4.2%. This is slightly greater than the overall population growth rate for the State of Indiana. Agriculture, manufacturing, and tourism are the economic drivers in the county.

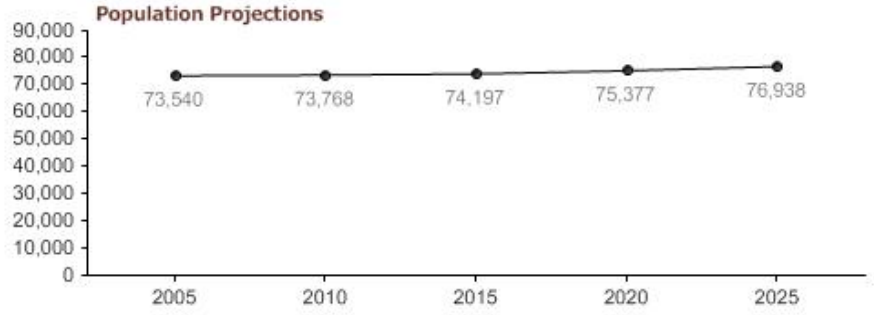
The Driftwood River runs parallel to U.S. Highway 31 and Interstate Highway 65 along the eastern boundary of the installation. It has a large watershed and annual flooding is a common occurrence. The impact of the flooding from the Driftwood River usually falls within land that is agricultural or parkland. Along with storing floodwaters, recharging groundwater, and providing habitat for wildlife, the Driftwood River floodplain acts as a natural limitation for development in the area, both on the side of Camp Atterbury and within surrounding townships. The Bartholomew County Comprehensive Plan designates the planned use of the area between Camp Atterbury and the City of Columbus' planning jurisdiction as "General Rural District."

Table 3-2-1-1: Bartholomew County Population

Population Over Time – BARTHOLOMEW CO					
	1988	1993	1998	2003	2008
Total Population	63,395	66,032	69,432	71,926	75,360
Change Since 1988		2,637	6,037	8,531	11,965
Pct. Change Since 1988		4.2%	9.5%	13.5%	18.9%



Population Projections - BARTHOLOMEW CO					
	2005	2010	2015	2020	2025
Population Projections	73,540	73,768	74,197	75,377	76,938
Change Since 2005		228	657	1,837	3,398
Pct. Change Since 2005		0.3%	0.9%	2.5%	4.6%



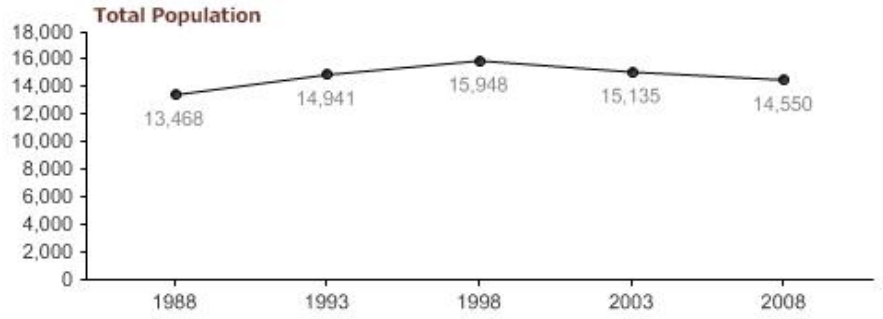
3.2.3 Brown County

Brown County is located to the south of Johnson County, to the west of Bartholomew County, and contains almost the entire western border of Camp Atterbury. The county is tied with Benton County in northwest Indiana as the least densely populated counties in the state. There were 88 new housing units built in 2007. Brown County also has the highest concentration of forested land in the State. Although the county is sparsely populated, tourists heavily visit Brown County especially in the fall, and around the town of Nashville.

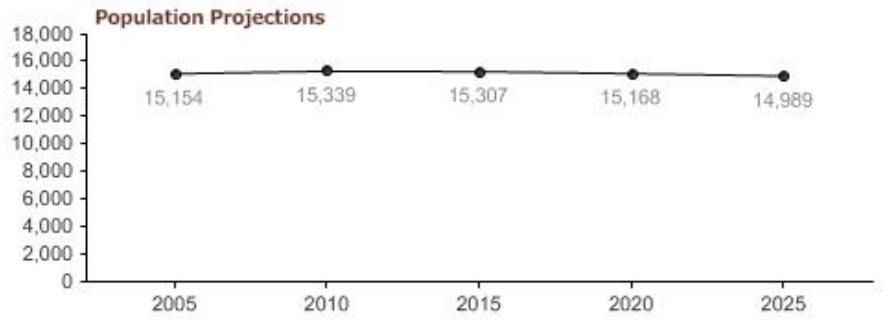
Two dams completed in the mid to late 1960s, as part of the Cordry Sweetwater Conservancy District, are located in the northeast corner of the county near the western border of Camp Atterbury. Residential development continued for many years after the completion of the dams. In 1987, the district began reaching peak population levels, which had changed over the years from a permanent residency, to nearly half of the population having only part-time occupancy in the district. Cordry Sweetwater Conservancy District borders Camp Atterbury on the west and is within the one-mile buffer; there are 525 residences that are within the one-mile buffer. Homeowners are aware of Camp Atterbury and have worked together to make Cordry Sweetwater a wonderful community in which to live. Although residents do hear the machineguns, bombing and aircraft over head, it has been expressed that the community is proud of the United States Military Men and Women who dedicate their lives to protect our Country.

Table 3-2-3-1: Brown County Population

Population Over Time – BROWN CO.					
	1988	1993	1998	2003	2008
Total Population	13,468	14,941	15,948	15,135	14,550
Change Since 1988		1,473	2,480	1,667	1,082
Pct. Change Since 1988		10.9%	18.4%	12.4%	8.0%



Population Projections – BROWN CO.					
	2005	2010	2015	2020	2025
Population Projections	15,154	15,339	15,307	15,168	14,989
Change Since 2005		185	153	14	-165
Pct. Change Since 2005		1.2%	1.0%	0.1%	-1.1%



3.2.4 Jackson County

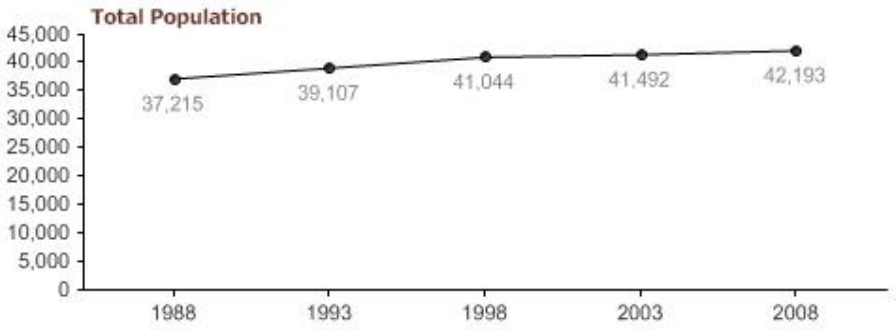
Jackson County is located south of Brown and Bartholomew Counties, west of Jennings County, and contains the intersection of a major transportation corridor used by Camp Atterbury: Interstate Highway 65 and U.S. Highway 50.

Jackson County, Indiana was founded in 1816 and named for Andrew Jackson, hero of the Battle of New Orleans in the War of 1812. The county seat is Brownstown and the largest city is Seymour, neither of which is included within the planning jurisdiction of the county. Jackson County covers slightly more than 509 square miles or 325,760 acres. Approximately 10% of the County's land is currently within the boundaries of an incorporated city or town.

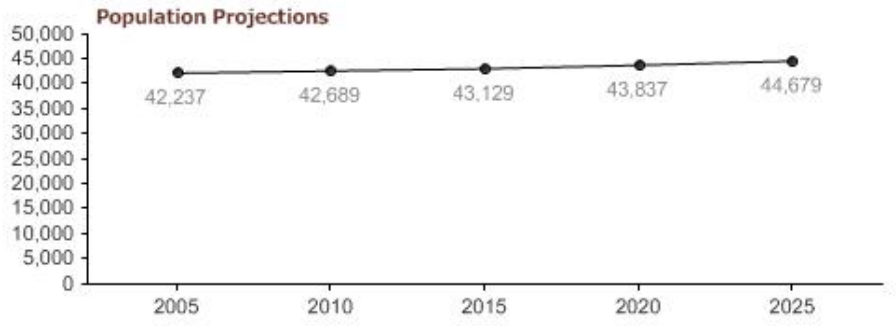
Similar to surrounding counties, Jackson County accommodates many recreational activities including hiking, swimming, boating, camping, and contains local, state, and national parks and forests. Agriculture is the major industry in the county, although industrial development continues and is an important part of the growth within the county. Headed by the Jackson County Industrial Development Corporation (JCIDC), industrial and economic development has seen investment exceed $200 million since 2000, specifically in the town of Seymour, and in the entire county.

Table 3-2-4-1: Jackson County Population

Population Over Time – JACKSON CO.					
	1988	1993	1998	2003	2008
Total Population	37,215	39,107	41,044	41,492	42,193
Change Since 1988		1,892	3,829	4,277	4,978
Pct. Change Since 1988		5.1%	10.3%	11.5%	13.4%



Population Projections – JACKSON CO.					
	2005	2010	2015	2020	2025
Population Projections	42,237	42,689	43,129	43,837	44,679
Change Since 2005		452	892	1,600	2,442
Pct. Change Since 2005		1.1%	2.1%	3.8%	5.8%

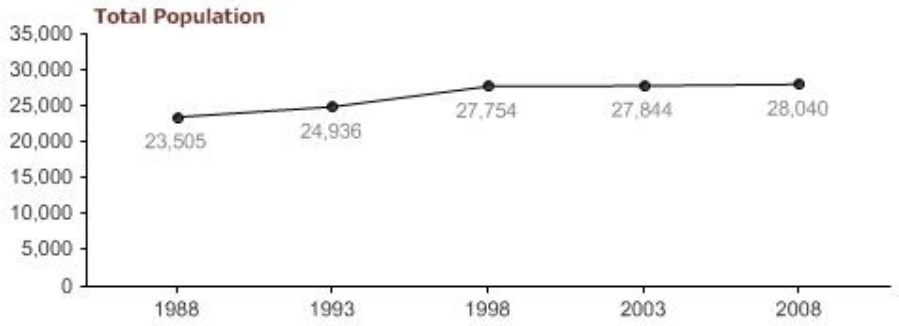


3.2.5 Jennings County

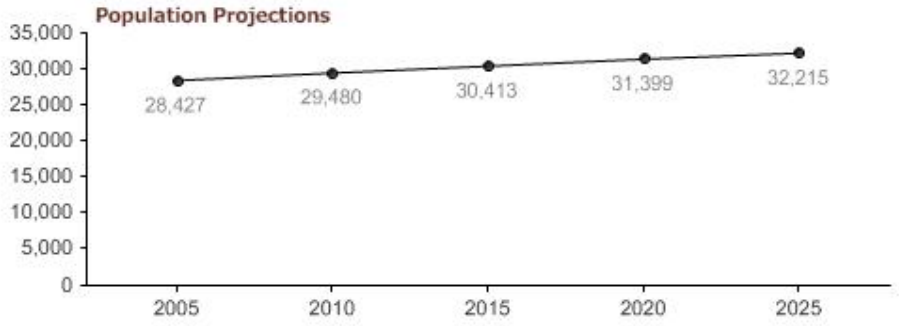
Jennings County lies southeast of Bartholomew County, east of Jackson County, and contains the Muscatatuck Urban Training Center. Jennings County is named after Indiana State's first governor, Jonathan Jennings, and became a county in 1816, the same year Indiana became a state. The City of North Vernon is the largest incorporated place in the county, and lies just north of Vernon, the county seat. Jennings County is primarily rural, with the majority of the county consisting of individual farms and woodlands. Its rolling hills and meandering streams belie the fact that it is located in Indiana, better known for its flat lands and industry-laden shores. Residents in Jennings County enjoy rural, country living and still have access to three strategic metropolitan areas – Indianapolis, Louisville and Cincinnati – all within 70 miles.

Table 3-2-5-1: Jennings County Population

Population Over Time – JENNINGS CO.					
	1988	1993	1998	2003	2008
Total Population	23,505	24,936	27,754	27,844	28,040
Change Since 1988		1,431	4,249	4,339	4,535
Pct. Change Since 1988		6.1%	18.1%	18.5%	19.3%



Population Projections – JENNINGS CO.					
	2005	2010	2015	2020	2025
Population Projections	28,427	29,480	30,413	31,399	32,215
Change Since 2005		1,053	1,986	2,972	3,788
Pct. Change Since 2005		3.7%	7.0%	10.5%	13.3%



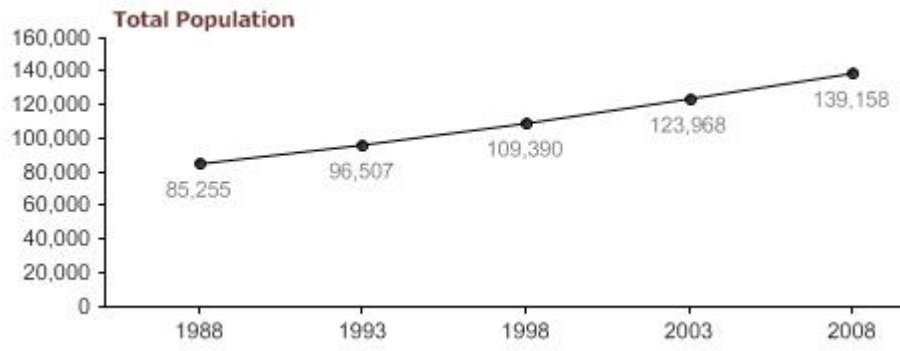
3.2.2 Johnson County

The northern border of Camp Atterbury lies within Johnson County. Johnson County, the second fastest growing county in the Indianapolis metropolitan area, is located south of Marion County and Indianapolis. It is comprised of nine townships and covers 320 square miles of land. Interstate Highway 65 provides the north-south access to much of the county, as well as U.S. Highway 31. Johnson County continues to grow, adding new, quality development. There were 752 new housing units in Johnson County in 2007. Their intention is to maintain the rural character and scenic quality of the central Indiana agrarian landscape.

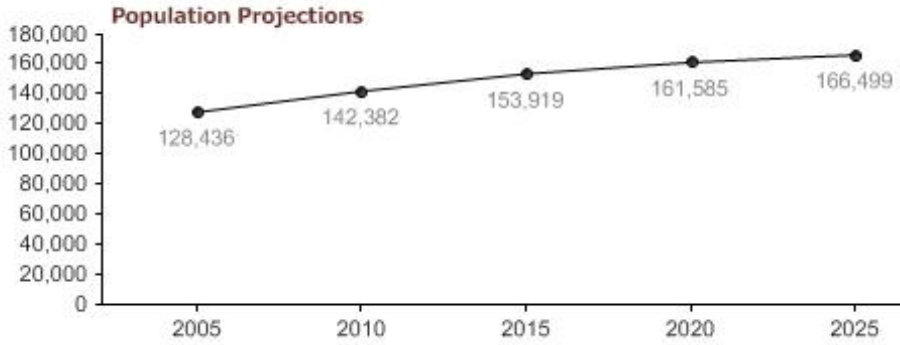
The largest parks complex in the county is located in Nineveh Township and includes the Johnson County Recreation Area, the Hoosier Horse Park, and the federally owned nature preserve, all of which are located near the northern boundary of Camp Atterbury. The Johnson County Recreation Area is dedicated to camping and provides for activities such as hiking, mountain biking, horseback riding, fishing, and other outdoor sports. The large, natural, open areas comprised of woodlands are located principally in floodplain areas and in the hilly terrain common to the southern portion of Johnson County. In many instances, these areas are located next to farmland; however, given that many of these areas are subject to frequent flooding, they will most likely continue to remain outside of agricultural production. Camp Atterbury represents the largest single public land use found in the county.

Table 3-2-2-1: Johnson County Population

Population Over Time – JOHNSON CO.					
	1988	1993	1998	2003	2008
Total Population	85,255	96,507	109,390	123,968	139,158
Change Since 1988		11,252	24,135	38,713	53,903
Pct. Change Since 1988		13.2%	28.3%	45.4%	63.2%



Population Projections – JOHNSON CO					
	2005	2010	2015	2020	2025
Population Projections	128,436	142,382	153,919	161,585	166,499
Change Since 2005		13,946	25,483	33,149	38,063
Pct. Change Since 2005		10.9%	19.8%	25.8%	29.6%



3.3 Infrastructure, Transportation, and Airports

3.3.1 Utility Systems

The water and wastewater systems serving the installations will continue to support the facilities as operations expand. Atterbury is served by the Town of Prince's Lakes Utilities and has contributed to treatment plant capital construction. Muscatatuck has existing water and wastewater treatment plants on site that are both being eliminated. Jennings County Water will provide water. Wastewater will be provided by the City of North Vernon. The existing plants will be left in place to be used for urban training exercises.

The following tables summarize the water and wastewater utility service in the communities surrounding the installations. Water and wastewater utility systems in the surrounding communities appear to be sufficient to support additional growth.

Table 3-3-1-1: Area Water System Summary

Atterbury Joint Land Use Study Area Water System Summary								
	Raw Water Source	Source Capacity (mgd)	Plant Type	Plant Capacity (mgd)	Storage	Average Day (mgd)	Peak Day (mgd)	Comments on Recent or Planned Updates
Edinburgh	Wells	4.30	Iron removal filtration	1.44	Two elevated 750,000 gal tanks	0.70	1.00	Plant built in 2007
Prince's Lakes	Wells	4.30	Pressure filters	2.80	Two elevated 750,000 gal tanks built in 2002, 108 ft and 161 ft height	0.70		Plant built in 2003
Columbus	Wells	23.00	Iron removal filtration	20.00	Five 500,000 Gal. Elevated Tanks & One 1.4 MG Standpipe	7.00	17.00	Original 5MG Plant built in 50's & 20 MG Plant built in 70's
North Vernon	Muscatatuck River, Brush Creek Resevoir	Varies	Surface Water	3.50	1.2 MG underground storage & Two Elevated Tanks (300,000 Gal. a piece)	1.20	2.10	New Upflow Clarifer in 1999. In the process of eliminating solid settling basin and installing new upflow clarifer

Table 3-3-1-2: Area Wastewater System Summary

Atterbury Joint Land Use Study Area Wastewater System Summary					
	Plant Treatment Capacity (mgd)	Plant Hydraulic Capacity (mgd)	Average Day (mgd)	Peak Day (mgd)	Comments on Recent or Planned Updates
Edinburgh	1.50		0.40-0.75	3.00	Plant built 2007
Prince's Lakes	3.50	7.00	1.20		Plant to be upgraded by 2011 to oxidation ditch
Columbus	12.40	18.00	11.00	18+	New Plant's construction to begin 2009
Columbus New	13.90	39.00			

3.3.2 Existing Roadway System

US highways, interstate highways, state highways, county roads and local streets serve Camp Atterbury and Muscatatuck. The military uses the existing transportation network to move equipment and people between sites. They are sensitive to creating local traffic problems and continuously monitor activities and make adjustments to avoid conflicts. Convoys are broken into time-separated intervals. Vehicle weights are kept to civilian highway safe loading.

County Roads surrounding Muscatatuck are an area of concern. There have been discussions of making CR 475 East and CR 450 East limited access to the military. This combination of county roads is the only bridge across the Muscatatuck River in eastern Jennings County. The westernmost road into Muscatatuck is owned by the military. The mayor of North Vernon believes local anxiety over the road issue would subside if the Muscatatuck plans for limiting access to these two roads included the installation of a bridge across the river at some other nearby location.

The following bullets highlight the major transportation routes serving the installations.

- US 31 is a US highway that runs north-south through Bartholomew County. It is located just a few miles east of Camp Atterbury, and it can be accessed easily from camp Atterbury via Hospital Road, the only entrance/exit of the installation. It also serves briefly as part of the Surface Transportation Route that the military convoys use when traveling from installation to installation. It connects Atterbury to I-65. It is a direct route to Franklin and an alternate route to Indianapolis and Louisville.

- US 50 is a US highway that runs east-west through Jennings County. It lies just south of Muscatatuck. It is also part of the Surface Transportation Route. It passes through Seymour, and it is a route to the north boundary of Jefferson Proving Grounds and Crane Naval Weapons Support Center.

- I - 65 is an interstate highway that runs north-south through Bartholomew County. It is just east of Camp Atterbury. It intersects with US 50 in Jackson County, and it is a part of the Surface Transportation Route. It connects both installations to Indianapolis and Louisville.

- SR 46 is a state highway that runs east-west through the middle of Bartholomew County and goes just south of Camp Atterbury. It intersects US 31, I-65, SR 11, SR 7, and SR 9. To the west, it goes to Brown County and Bloomington, and to the east, it connects with US 421 in Greensburg. It is the most direct route to Hullman Field in Terre Haute.

- SR 11 is a state highway in Bartholomew county that starts at SR 46 in Columbus and goes south through the middle of Bartholomew County. It intersects with both

I - 65 and US 50 in Jackson County. It is an alternate route from Atterbury to Seymour.

- SR 7 is a state highway that starts at SR 46 in Columbus and goes southeast through Bartholomew County and Jennings County. It intersects US 31 in Bartholomew County, and it intersects US 50 and SR 3 in Jennings County in North Vernon. It is an alternate route between Atterbury and Muscatatuck.

- SR 9 is a state highway that runs north-south. It starts at SR 46, east of Columbus, and goes north to Shelbyville.

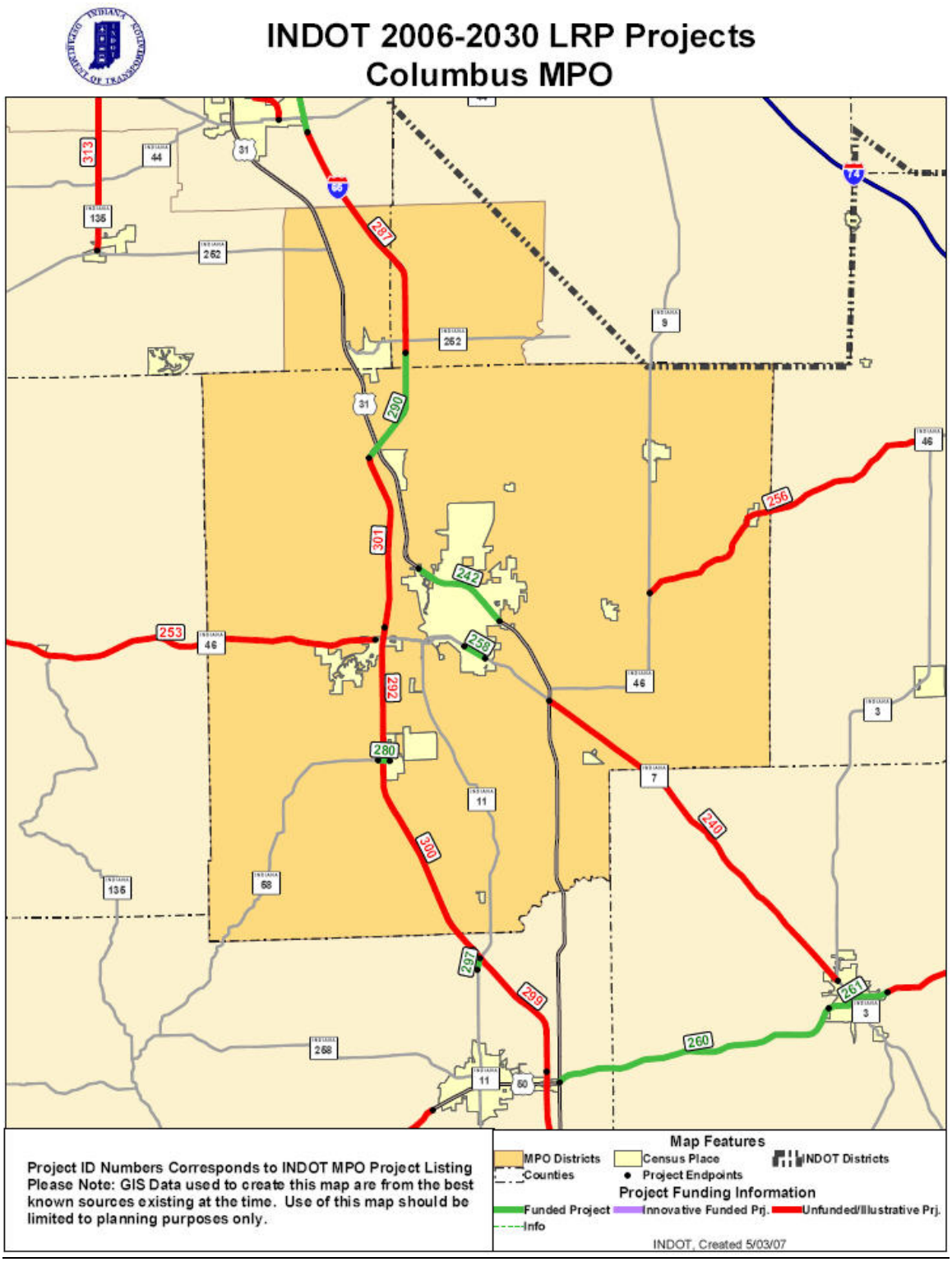
- SR 3 is a state highway that runs north-south through Jennings County. It intersects with US 50 and SR 7 in North Vernon and SR 46 near Greensburg.

- Hospital Road is a county road that runs east-west in the southeast corner of Johnson County. It serves as the only entrance/exit of Camp Atterbury. It intersects with US 31. East of US 31, it becomes SR 252, serving as an alternate route through Edinburgh to I-65.

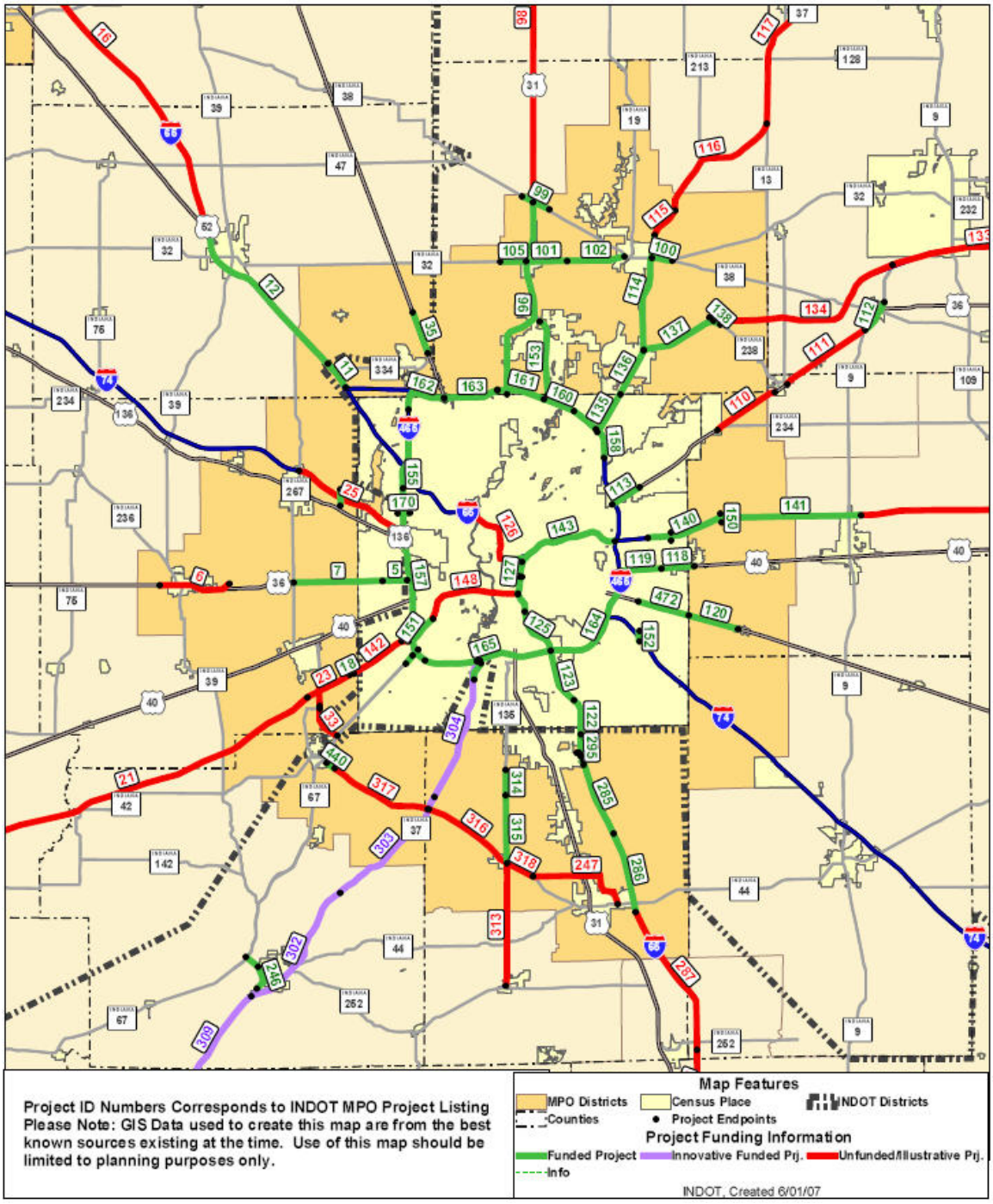
3.3.3 Surface Transportation Proposed Improvements

The following information was extracted from the Indiana Department of Transportation's *2030 Long Range Transportation Plan* (2007 Update). The extracted information was placed in a table (see Table 3-3-3-1, Transportation Projects in Study Area) to organize the improvement projects by county for the specific study area. The DES ID numbers below correspond to the aforementioned table. The LRP ID numbers below correspond to the graphical locations of the listed improvements (see Map 3-3-3-1, "INDOT 2006-2030 LRP Projects Columbus MPO," Map 3-3-3-2, "INDOT 2006-2030 LRP Projects Indianapolis MPO," and Map 3-3-3-3, "INDOT 2006-2030 LRP Projects Seymour District Area"). Estimated costs were taken from the Indiana Department of Transportation's website on May 27, 2009.

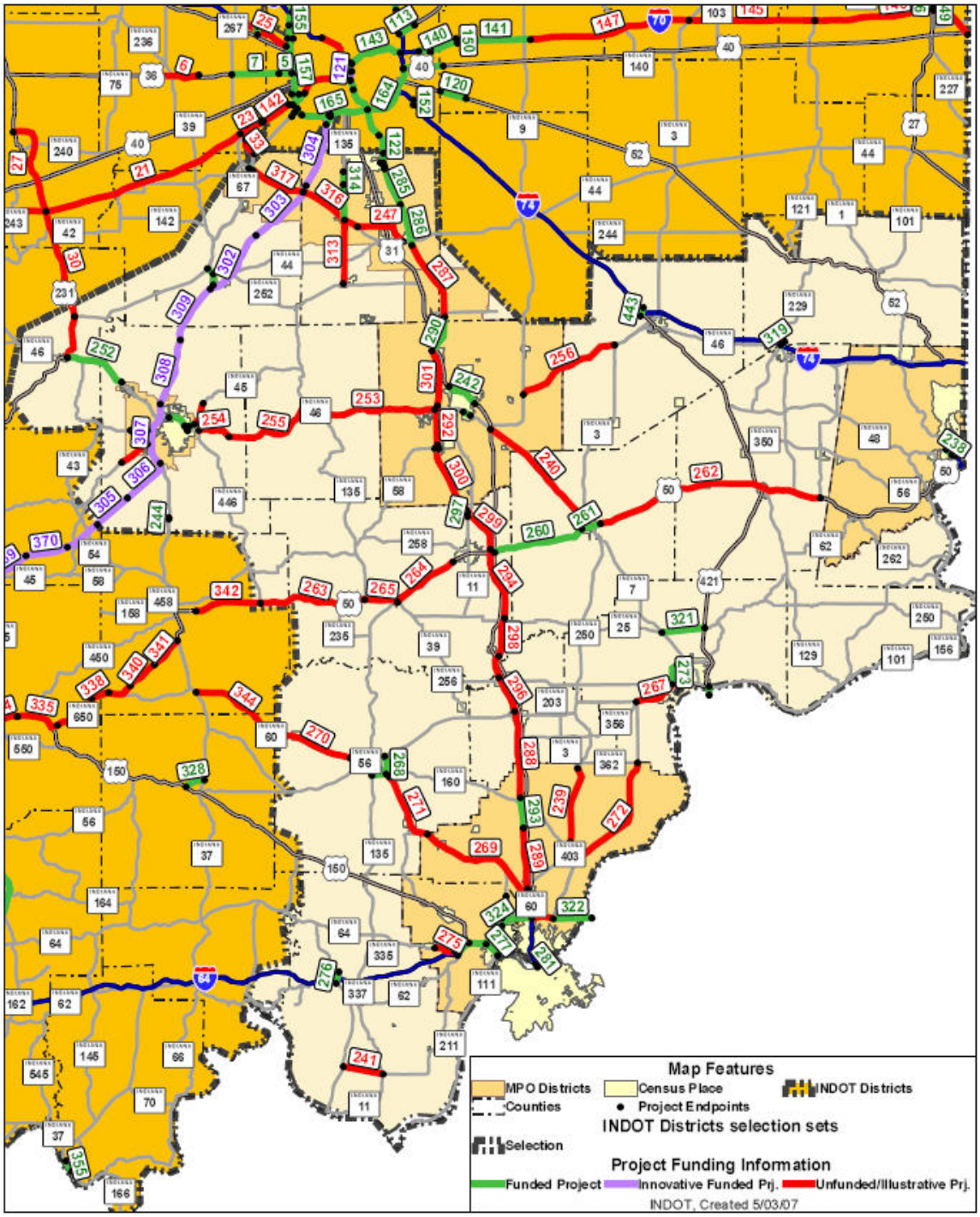
Map 3-3-3-1: INDOT 2006 – 2030 LRP Projects Columbus MPO



Map 3-3-3-2: INDOT 2006 – 2030 LRP Projects Indianapolis MPO



Map 3-3-3-3: INDOT 2006 – 2030 LRP Projects Seymour District



Project ID Numbers Corresponds to INDOT District Project Listing
Please Note: GIS Data used to create this map are from the best known sources existing at the time. Use of this map should be limited to planning purposes only.

Bartholomew County

Interstate 65 is scheduled to undergo four improvement projects. The first improvement (DES #0101101, LRP #280) is an interchange modification at the intersection of Interstate 65 and State Road 58. The project is funded by Major Moves and will begin construction in 2010.

The second improvement (DES #0300862, LRP #290) is a travel lane expansion project, four to six lanes, along Interstate 65 from one-half mile south of US 31 to one-half mile south of State Road 252 (4.21 miles). The project is funded by HERS and is anticipated for construction in 2025.

The third improvement (DES #0401224, LRP #301) is a travel lane expansion project, four to six lanes, along Interstate 65 from one-half mile north of State Road 46 to one-half mile south of US Highway 31 (6 miles). This project is funded by the Mobility Corridor and is anticipated for construction in 2025.

The fourth improvement (DES #0300883, LRP #292) is a travel lane expansion project, four to six lanes, along Interstate 65 from one-half mile north of State Road 58 to one-half mile north of State Road 46 (4.66 miles). The project is funded by the Mobility Corridor and is anticipated for construction in 2025.

State Road 46 is scheduled to undergo two improvement projects. The first improvement (DES #9902930, LRP #258) is a travel lane expansion project, four to five lanes, along State Road 46 from Marr Road to Mapleton/Pence Street (0.90 miles). The project is funded by Major Moves and is currently under construction.

The second improvement (DES #0500387, LRP #256) is a travel lane expansion project, two to four lanes, along State Road 46 from State Road 9 to the south junction at State Road 3 (12.95 miles). The project is currently unfunded but is anticipated for construction in 2025.

US Highway 31 is scheduled to undergo one improvement project. The improvement (DES #9700230, LRP #242) is a travel lane expansion project, two to five lanes, along US Highway 31 from 1.48 miles south of old State Road 46 to 2.46 miles north of old State Road 46 (2.72 miles). The project is funded by Major Moves and will begin construction in 2010.

Brown County

State Road 46 is scheduled to undergo one improvement project. The improvement (DES #0500266, LRP #253) is a travel lane expansion project, two to four lanes, along State Road 46 from the west junction at State Road 135 to one-half mile west of Interstate 65 (16 miles). The project is funded by the Mobility Corridor and is anticipated for construction in 2025.

Jackson County

Interstate 65 is scheduled to undergo five improvement projects. The first improvement (DES #0401145, LRP #297) is an interchange modification project along at the intersection of Interstate 65 and State Road 11. The project is funded by Major Moves and will begin construction in 2011.

The second improvement (DES #0401199, LRP #298) is a travel lane expansion project, four to six lanes, along Interstate 65 from one-half mile north of US Highway 31 to one-half mile north of State Road 250 (4.03 miles). The project is currently unfunded and is anticipated for construction in 2025.

The third improvement (DES #0401204, LRP #300) is a travel lane expansion project, four to six lanes, along Interstate 65 from one-half mile north of State Road 11 to one-half mile north of State Road 58 (8.34 miles). The project is currently unfunded and is anticipated for construction 2025.

The fourth improvement (DES #0401202, LRP #299) is a travel lane expansion project, four to six lanes, along Interstate 65 from one-half mile north of US Highway 50 to one-half mile north of State Road 11 (6 miles). The project is currently unfunded but is anticipated for construction in 2025. The fifth improvement (DES #0300891, LRP #294) is a travel lane expansion project, four to six lanes, along Interstate 65 from one-half mile north of State Road 250 to one-half mile north of US Highway 50 (8.47 miles). The project is currently unfunded and is anticipated for construction in 2025.

Jennings County

US Highway 50 is scheduled to undergo four improvement projects. The first improvement (DES #0401401, LRP #260) is a travel lane expansion project, two to four lanes, along US Highway 50 from US Highway 31 to the western urban area boundary of North Vernon (9.03 miles). The project is funded by Major Moves and will begin construction in 2014.

The second improvement (DES #0401402, LRP #261) is a travel lane expansion project, two to four lanes, along US Highway 50 from the western urban area boundary of North Vernon to the eastern urban area boundary of North Vernon (3.90 miles). The project is funded by Major Moves and will begin construction in 2015.

The third improvement (DES #0401402, LRP #261) is a travel lane expansion project, two to four lanes, along US Highway 50 from the western urban area boundary of North Vernon to the eastern urban area boundary of North Vernon. The project has funding years of 2016-2020.

State Road 7 is scheduled to undergo one improvement project. The improvement (DES #0500401, LRP #241) is a travel lane expansion project, two to four lanes, along State Road 7 from State Road 3 to US Highway 31 (14.90 miles). The project is funded by HERS and is anticipated for construction in 2025.

Johnson County

Interstate 65 is scheduled to undergo six improvement projects. The first improvement (DES #0300621, LRP #283) is a travel lane expansion project, four to five lanes, along Interstate 65 south of Main Street/Greenwood Road Interchange (0.50 miles). The project is funded by Major Moves and is currently under construction.

The second improvement (DES #0300618, LRP #282) is an interchange modification project at the Main Street/Greenwood Road southbound exit ramp to Sheek Road. The project is funded by Major Moves, is currently under construction, and is nearing the completion date of 2010.

The third improvement (DES #0300840, LRP #285) is a travel lane expansion project, four to six lanes, along Interstate 65 from one-half mile south of Whiteland Road to one-half mile south of Greenwood Road (4.74 miles). The project is currently unfunded and has the funding years of 2016-2020.

The fourth improvement (DES #0401307, LRP #295) is a travel lane expansion project, six to eight lanes, along Interstate 65 from one-half mile south of Greenwood Road to one-half mile south of County Line Road (1.47 miles). The project is currently unfunded and has the funding years of 2016-2020.

The fifth improvement (DES #0300854, LRP #287) is a travel lane expansion project, four to six lanes, along Interstate 65 from one-half mile south of State Road 252 to one-half mile south of State Road 44 (9.29 miles). The project is funded by HERS and is anticipated for construction in 2025.

The sixth improvement (DES #0300842, LRP #286) is a travel lane expansion project, two to six lanes, along Interstate 65 from one-half mile south of State Road 44 to one-half mile south of Whiteland Road (5.16 miles). The project is funded by Major Moves and has the funding years of 2026-2030.

State Road 44 is expected to undergo one improvement project. The improvement (DES #Frank1, LRP #247) is a new road construction project from State Road 144 to State Road 44 at Eastview Drive (6.51 miles). The project is currently unfunded and has the funding year 2025.

State Road 135 is scheduled to undergo three improvement projects. The first improvement (DES #9803440, LRP #314) is a travel lane expansion project, two to four lanes, along State Road 135 from County Road 700 North to County Road 850 North (1.90 miles). The project is funded by Major Moves and will begin construction 2010.

The second improvement (DES #9902950, LRP #315) is a travel lane expansion project, two to four lanes, along State Road 135 from State Road 144 to Stones Crossing Road (4.07 miles). The project is funded by Major Moves and will begin construction in 2012.

The third improvement (DES #0500399, LRP #313) is a travel lane expansion project, two to four lanes, along State Road 135 from State Road 252 to State Road 144 (7.34 miles). The project is currently unfunded and has the funding year of 2025.

State Road 144 is scheduled to undergo two improvement projects. The first improvement (DES #0500397, LRP #316) is a new road construction project from State Road 37 to State Road 135 (6 miles). The projected is currently unfunded and has the funding year of 2025.

The second improvement (DES #Frank5, LRP #318) is a travel lane expansion project, two to four lanes, along State Road 144 from State Road 135 to County Road 200 North. The project is currently unfunded and has the funding year of 2025.

3.3.4 Airports

Accurate projections of military traffic would help the local airports in the annual planning and capital improvement programs. The Federal Aviation Administration (FAA) is reluctant to grant capital improvement funds to airports based on projections. Actual traffic counts greatly assist the airport planners make their case to the FAA in requests for capital improvements. Local airport managers and planners must use standard FAA figures to estimate military traffic. Continued use of FAA standards will likely underestimate the military traffic at Seymour, North Vernon, and Columbus.

The Indiana Army National Guard (INARNG) plans to increase their training mission to involve up to 10 US Marine Corp Expeditionary Units (about the size of 3500-person Army Brigade Combat Teams) per year. Because a considerable component of this training would involve Muscatatuck and air operations, INARNG has formally declared their support for the proposed expansion of North Vernon Airport in a letter dated 2 Sept 2008. The air traffic density is expected to be similar to that present at Muscatatuck debut test exercise which had over 400 flights in and out of the area. Note that while the letter of support was written only about North Vernon Municipal Airport, it is reasonable to assume that the potential fixed-wing aircraft usage could be applied to either Columbus or Freeman Municipal Airport (given that the infrastructure was there), although they do not provide the proximity to Muscatatuck as does North Vernon. Estimated annual operations including the expanded Marine Corp training mission component is as follows, in Table 3-3-4-1:

Table 3-3-4-1: North Vernon Airport Estimated Annual Operations

Aircraft Approach Category Annual Operations				
Aircraft Owner	**Make/Manufacturer**	**Model**	**Est. Max. Landing/ Takeoff Wt. (lbs)**	**Est. # of Takeoffs/ Landings/Yr.**
AF	Boeing	C-17 Globemaster 3	585,000	20x4x10=800
AF	Lockheed Martin	C-130 Hercules	155,000	20x4x10=800
USMC	Bell Helicopter / Boeing	CV-22 Osprey	60,500	4x8x2=64
USMC	McDonnell Douglas	AV-8B Harrier II	31,000	4x8x2=64
AF	Alenia Aeronautica	C-27J Spartan	70,100	2x2x20=80
AF	Gulfstream Aerospace	C-20	C-208=69,700 C-20H=74,600	2x2x20=80
AF	Gulfsteam Aerospace	C-37A	90,500	2x2x20=80
AF	Learjet, Inc.	C-21	18,300	2x2x20=80
USA	Short Brothers	C-23 Sherpa	C23A=22,900 C23B/C=25,600	1x4x10=40
USA	Handley Page/ British Aerospace	HP.137 Jetstream	15,332	1x2x5=10
USA/USAF	Beechcraft	C-12F Huron	12,500	1x2x5=10
USA	Sikorsky	UH60 Black Hawk	24,500	8x40x10=3,200
USMC	Boeing	CH46-Sea Knight	24,300	8x40x2=640
USA	Eurocopter	UH72 Lakota	7,903	4x30x10=1,200
USA	MD Helicopters	MH-6 Little Bird	3,100	4x30x10=1,200
USA/USMC	Boeing Helicopters	CH47 Chinook	50,000	6x40x6=1,440
USMC	Sikorsky	CH53E Super Stallion	73,000	4x20x2=160
USA	Bell Helicopters	OH58D Kiowa Warrior	5,189	4x30x10=1,200
USA	Boeing	AH64D Apache	15,075	4x30x10=1,200
			Total	12,348

Source: Indiana Army National Guard, INARNG - USMC Estimated Annual Operations

The design considerations for an airfield include mission requirements, expected type and volume of air traffic, traffic patterns such as the arrangement of multidirectional approaches and takeoffs, ultimate runway length, runway orientation required by local wind conditions, local terrain, restrictions due to airspace obstacles or the surrounding community, noise impact, and the potential for aircraft accidents. Runways used for military operations are classified as either Class A or Class B: Class A runways intended primarily for small and light aircraft; and Class B runways for high-performance and large, heavy aircraft. The important factors in the classification of runways are: runway length, width, surface type and condition, airport elevation, surrounding terrain and obstacles and type of aircraft, according to the Unified Facilities Criteria (UFC), Airfield and Heliport Planning and Design Guidelines from the Department of Defense.

The Indiana Army National Guard is discussing current and future use of the Seymour, North Vernon, and Columbus airports, where Class A or B runways at the airports will be determined by their capacity to accommodate the aircraft such as the C-130 and C-17.

The scope of this study includes the evaluation of the use of the three airports, and establishing safety zones, as described later in this report in Section 4.1.3. For the purposes of this study, Columbus and Seymour airports are evaluated as Class B runways and North Vernon airport as a Class A runway. This decision was based on the past use of the three airports by C-130 and C-17 aircraft, as well as the current runway characteristics (i.e., length and pavement thickness and condition). It is important to note that this classification is not official, nor does it preclude the potential for North Vernon to receive Class B status in the future through capital improvements and military use.

The following table summarizes the current characteristics of the three airport's major runways evaluated in the study.

Table 3-3-4-2: Dimensions of Major Runways

Airport	Runway ID	Runway Length (ft)	Runway Width
Columbus	05/23	6400	150
Columbus	14/32	5000	100
North Vernon	05/23	5002	75
North Vernon	15/33	2730	50
Seymour	05/23	5500	100
Seymour	14/32	5502	100

All three local airports desire to achieve Class B runway status, and accommodate the use of additional military aircraft at their respective facilities. Seymour had to accept responsibility for its runway design to allow a C-130 to land there in 1999. Design calculations supporting this can be found on the accompanying CD containing the reference material used for this report. Local airport planners and managers believe military cooperation would greatly enhance their efforts to achieve Class B runway status.

For the purposes of examining present and future land use compatibilities within the safety zones at each of the airports, specifications from UFC 3-260-01 were applied to the (assumed) Class B runways at Columbus, North Vernon, and Class A runway at Seymour. These Army runway safety zones for Columbus, North Vernon, and Seymour are presented in maps in Section 3.4.1 and Section 4.1.3.

The policy concerning Military Operating Airspace requires continuous communication between the military and the local airport managers. The MOA is a temporary restricted flight zone for military fixed wing aircraft. There is a potential impact on general aviation airspace and/or commercial airspace if the full extent of military plans develops. Each airport desires to preserve their general aviation operations. They are trying to balance the

military and civilian interests in managing the airports. Airport managers are interested in the future of military use at the airports.

North Vernon is concerned that MOA may restrict business for Instrument Flight Rules (IFR) and corporate business. North Vernon desires to have IFR operations available on Visual Flight Rule (VFR) days. They fear becoming known as a military airfield that private and commercial pilots may choose to avoid in the future. Seymour welcomes the military use of the airport and strongly desires as much traffic as the military will offer. Columbus welcomes the use of large aircraft for military mobilization. They are excited about the Marines scheduled training exercise, including VTOL operations, scheduled for 2009.

A summary of the planned capital improvements ($25,000 or more) at North Vernon Municipal Airport is presented below in the Capital Improvement Plan (CIP). The airport's priority focus is to overlay Runway 5-23 and construct a Wildlife Control & Security Fence. All of these projects, including those under $25,000, total $9,665,060. All are construction project unless noted as "Design."

Table 3-3-4-3: North Vernon Municipal Airport 2010–2014 CIP

Priority	Project Description	Project Cost
Fiscal Year 2009		
1	Phase 2 – Wildlife Control and Security Fence	$1,963,750
Fiscal Year 2010		
2	Phase 2 – GA Apron (Design)	$123,560
3	Phase 3 – Runway 15-33 and Taxiway "A" Lighting	$378,810
Fiscal Year 2011		
5	Phase 3 – GA Apron – Sequence 1	$767,980
6	Phase 4 – Expand GA Apron – Sequence 2	$797,980
Fiscal Year 2012		
7	Phase 2 – Overlay Runway 5-23 (Design)	$172,230
8	Phase 2 – Runway 5-23 PAPI and HIRL Edge Lights (Design)	$68,480
Fiscal Year 2013		
13	Phase 3 – Overlay Runway 5-23	$1,274,570
14	Phase 3 – Runway 5-23 PAPI and HIRL Edge Lights	$632,310
15	Phase 2 – GA T-Hangar Access Taxilanes & Apron (Design)	$100,660
16	Phase 2 – MALSR – Land Acquisition	$378,500
17	Phase 3 – MALSR (Design)	$85,000
18	Phase 2 – Corporate Hangar (Design)	$81,860
19	Phase 2 – Install T-Hangars (12 units; Design)	$84,880
20	Phase 1 – Mobile Jet Refueler (3,000 gal) – Vehicle Specs	$25,000
Fiscal Year 2014		
21	Phase 4 – MALSR	$376,850
22	Phase 3 – GA T-Hangar Access Taxilanes & Apron	$505,090

Priority	Project Description	Project Cost
23	Phase 3 – Install T-Hangars	$871,120
24	Phase 3 – Corporate Hangars	$800,430
25	Phase 2 – Mobile Jet Refueler (3,000 gal) – Procurement	$100,000

Source: North Vernon Municipal Airport

A summary of the planned capital improvements ($25,000 or more) at Freeman Municipal Airport in Seymour is presented below. The airport's priority focus is to reconstruct the main access roads from the two main State roads. These projects, including those under $25,000, total $9,090,812. All are construction project unless noted as "Design."

Table 3-3-4-4: Freeman Municipal Airport 2010–2014 CIP

Priority	Project Description	Project Cost
	Fiscal Year 2009	
2	Reconstruct Taxiway "A" to Runway 5-23	$697,400
3	Reimburse Terminal Building	$86,565
	Fiscal Year 2010	
5	Strengthen Runway 5-23 (Design)	$236,200
6	Access Road Improvements (Design)	$153,400
8	Terminal Building	$135,000
	Fiscal Year 2011	
10	Strengthen Runway 5-23	$1,699,200
11	Rehabilitate MIRLs on Runway 5-23 (Design)	$56,000
12	Access Road Improvements (13,000 ft) – Phase 1	$1, 080,800
	Fiscal Year 2012	
14	Rehabilitate MIRLs on Runway 5-23	$353,700
15	Access Road Improvements (13,000 ft) – Phase 2	$1,076,900
	Fiscal Year 2013	
16	Perimeter Security & Wildlife Control Fence (38,000 ft; Design)	$277,300
17	Access Road Improvements (13,000 ft) – Phase 3	$1, 080,800
	Fiscal Year 2014	
19	Perimeter Security & Wildlife Control Fence (38,000 ft)	$2,005,500

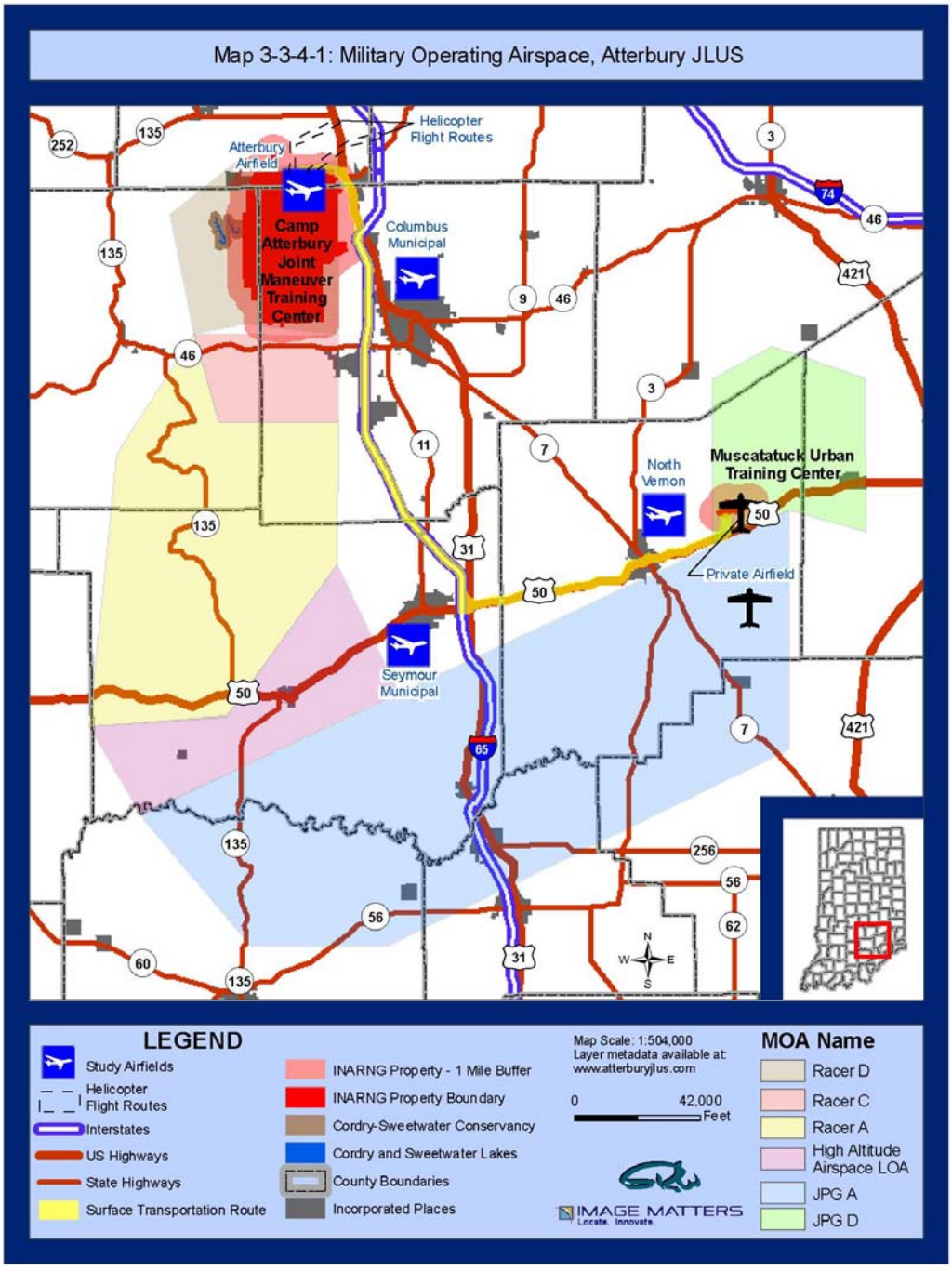
Source: Freeman Municipal Airport

Seymour has a planned runway length extension of 1000 feet. They are planning a runway strengthening pavement project for 2009.

Columbus has been successful obtaining a number of state and federal grants, having received 10 grants over the past eight years. There is a $4.5 M rehabilitation project scheduled for the main runway and a $1.5 M electrical upgrade to the runway and general lighting in 2009.

The Columbus airport is home to Spaceport Indiana. It offers military, industry and educational organizations opportunities for low cost access to telemetry, tracking, GPS, communications, guidance and air space management tools. It offers a controlled airspace and a Special Use Airspace (SUA). It has successfully launched rockets and balloons, with one balloon having achieved an altitude of 97,000 feet.

Map 3-3-4-1: Military Operating Airspace



3.3.5 Railroads

Camp Atterbury and Muscatatuck are served by railroads as well. At the entrance to Camp Atterbury, the US Government Railroad connects Camp Atterbury to the Louisville-Indiana Railroad. The Louisville-Indiana Railroad follows US 31 through Johnson County and into Bartholomew County. In North Vernon, it runs parallel and eventually intersects the CSX Railroad. The CSX Railroad follows US 50 through Jackson County and Jennings County and passes by Muscatatuck. Muscatatuck does not have a service rail into the property.

3.4 Environment

3.4.1 Conservation Land

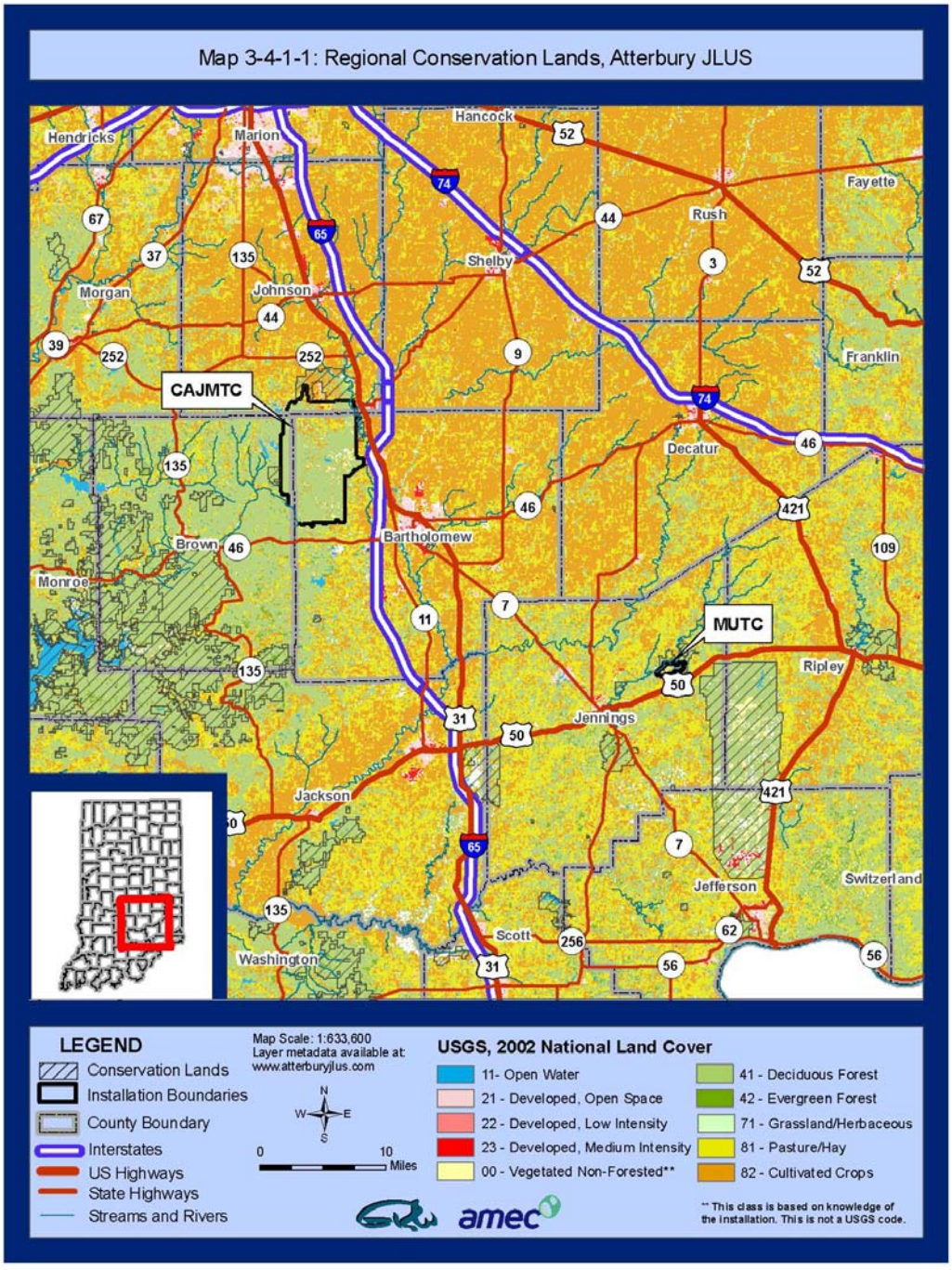
Land conservation areas within the project area are summarized in Table 1. These areas comprise approximately 9.5 percent of the study area. Note this list is meant to provide an overview of conservation lands; it is not meant to be all encompassing. Information that is more detailed is provided below for land conservation areas within the vicinity of Camp Atterbury and Muscatatuck.

Table 3-4-1-1: Overview of Conservation Lands within/near Project Area

Land Manager	Conservation Areas	Location(s)	Approximate Acreage
Indiana Department of Natural Resources (IDNR) Fish & Wildlife	– Atterbury Fish and Wildlife Area (FWA) – Azalia Bridge Public Access Site (P.A.S.) – Bell Ford P.A.S. – Brownstown P.A.S./ Public Funding Area (P.F.A.) – Brush Creek FWA – Crosley FWA – Cypress Lake P.F.A. – Driftwood P.F.A. – Grouse Ridge P.F.A. – Lowell Bridge P.A.S. – Medora P.A.S.	Bartholomew, Johnson, and Jennings Counties	12,920
IDNR Forestry	– Jackson-Washington State Forest – Morgan-Monroe State Forest – Selmier State Forest – 0Starve Hollow State Recreation Area – Vallonia State Nursery – Yellowwood State Forest	Brown, Jackson, and Jennings Counties	30,770
IDNR Nature Preserves	– Crooked Creek Nature Preserve – Hemlock Bluff Nature Preserve – Knobstone Glades Nature Preserve – Prange (Miriam & Henry) Tract – Wells Woods Nature Preserve – Youngman Woods – Vietor Woods (Whipporwill Woods)	Brown County	1,290
IDNR Parks and Reservoirs	– Brown County State Park – Monroe Reservoir – North Folk Wildlife Refuge – Ogle Hollow Nature Preserve	Brown and Jackson Counties	24,130
IDNR State Museum and Historic Sites	– T.C. Steele State Memorial and Nature Preserve	Brown County	300
Indiana University	– Lilly-Dickey Woods	Brown County	540

Land Manager	Conservation Areas	Location(s)	Approximate Acreage
Local – Bartholomew County Parks and Recreation	– Anderson Falls Nature Preserve – Dunn Stadium/County Fair Grounds – Heflen Park – Mt. Healthy Park	Bartholomew County	250
Local – Columbus Park Board	– Blackwell Park – Clifty Creek Park – Greenbelt Golf Course – Harrison Ridge Park – McCullough's Run Park – Mill Race Park – Noblitt Park – Northbrook Park – Rocky Ford Par-3 Golf Course	Bartholomew County	658
Local – New Whiteland Park Board	– New Whiteland Park	Johnson County	1
The Nature Conservancy (TNC)	– Hitz-Rhodehamel Woods – Muscatatuck River Bluffs – Sarah Lewis Guthrie Memorial Woods Nature Preserve – Tribbett's Woods Nature Preserve – Vietor Woods (Whipporwill Woods)	Brown and Jennings Counties	540
U.S. Fish and Wildlife Service (USFWS)	– Muscatatuck National Wildlife Refuge	Jackson and Jennings Counties	7,770
U.S. Forest Service (USFS)	– Hoosier National Forest	Brown and Jackson Counties	40,530

Map 3-4-1-1: Regional Conservation Lands



Camp Atterbury

Approximately 26,488 acres (80 percent) of Camp Atterbury are forested. Forest stand age and density vary greatly because prior to construction of the base in 1942, much of the land was used for agriculture, according to the U.S. Fish and Wildlife Service (USFWS). In addition to their primary function as training areas, forested portions of the installation are managed for multiple uses, including commercial timber harvest, wildlife habitat, watershed protection, recreation, and aesthetics.

The terrestrial ecosystems of Camp Atterbury exist within a context of numerous other adjacent and nearby land conservation areas. Adjacent to the north of the installation is the 5,512-acre Atterbury FWA that is owned and managed by the Indiana Department of Natural Resources (IDNR) Fish and Wildlife. To the north of the Atterbury Fish and Wildlife Area (FWA) is Johnson County Park, a 600-acre tract that is mostly dedicated to camping, picnicking, and other human-oriented recreational pursuits. Vietor Woods is a 560-acre forest protected and managed for its older growth forest habitat by the IDNR and The Nature Conservancy (TNC).

Muscatatuck Urban Training Center

The Muscatatuck site is the former Muscatatuck State Development Center (MSDC), which was used as a mental health services facility. The main landscape is considered generally flat to rolling, with paved areas and maintained lawn surrounding the campus area buildings. The eastern portion of the site is wooded and has more pronounced topography. The Brush Creek Reservoir is in the eastern portion of the site. The Vernon Fork of the Muscatatuck River flows along the northeast project site border. The site is bounded on the southwest by Pleasant Run.

The site is bordered to the north by wooded areas owned by Purdue University, including the former Brush Creek State FWA (Land transfer from the IDNR to Purdue University). The MSDC formerly owned several large tracts of property between the existing campus and US 50. These tracts were sold and are currently used by the Southeast-Purdue Agricultural Center (SEPAC - Purdue’s main campus is in Lafayette, Indiana, approximately 150 miles northwest of Muscatatuck). Researchers at SEPAC study row crops, forages, and forestry. Farmsteads and rural residences are located to the east and west of the site.

3.4.2 Local species/habitat protection efforts

The Indiana bat (Myotis sodalis) is the only federally listed endangered or threatened species in the study area (Bartholomew, Brown, Jackson, Johnson, and Jennings Counties). Indiana bat hibernacula (winter habitat) consist of caves and mines. Maternity and foraging habitats are comprised of small stream corridors with well-developed riparian woods as well as upland forests.

The Indiana bat was officially listed as an endangered species on 11 March 1967 (Federal Register [FR] 32[48]:4001) under the Endangered Species Preservation Act of 15 October 1966 (80 Stat. 926; 16 USC 668aa[c]). The Endangered Species Act (ESA) of 1973 extended full protection to the species. The U.S. Fish and Wildlife Service (1983) first published a recovery plan for the Indiana bat in 1983. A revised Indiana Bat Draft Recovery Plan was issued in April 2007. The recovery plan identifies the following objectives: (1) conserve and manage hibernacula and their winter populations; (2) conserve and manage summer habitat to maximize survival and fecundity; (3) plan and conduct research essential for recovery; and (4) develop and implement public information and outreach program.

The rayed bean mussel (Villosa fabalis) is a federally listed candidate species–candidate species are plants and animals for which the USFWS has sufficient information on their biological status and threats to propose them as endangered or threatened under the Endangered Species Act (ESA), but for which development of a proposed listing regulation is precluded by other higher priority listing activities–that is known to occur in Johnson County. A candidate species receives no statutory protection under the ESA. The USFWS encourages cooperative conservation efforts for these species because they are, by definition, species that may warrant future protection under the ESA. A 1990 survey of freshwater mussels was conducted on streams of the Sugar Creek and East Fork White River drainages that occur within the CAJMTC boundaries (Harmon, 1990). During this survey, recently dead rayed bean mussels were identified within the CAJMTC boundary. This species habitat is characterized as streams with gravel or sand bottom and a swift current.

3.4.3 Environmentally Sensitive Land

A total of 13 winter hibernacula (11 caves and two mines) in six states were designated as critical habitat (specific geographic areas, whether occupied by listed species or not, that are determined to be essential for the conservation and management of listed species, and that have been formally described in the Federal Register) for the Indiana bat in 1976 (FR, Volume 41, No. 187). In Indiana, two winter hibernacula are designated critical habitat, including Big Wyandotte Cave in Crawford County and Ray's Cave in Greene County. Neither of these caves is in the vicinity Camp Atterbury or Muscatatuck; the closest, Ray's Cave, is approximately 40 miles from Camp Atterbury.

While no critical habitat occurs within the study area, large tracts of forest land, riparian corridors, and hibernacula within the project area are environmentally sensitive areas. These areas should be maintained to the extent feasible during land use planning. By protecting and maintaining forests and riparian corridors, regional water resources protection and conservation benefits would also be recognized.

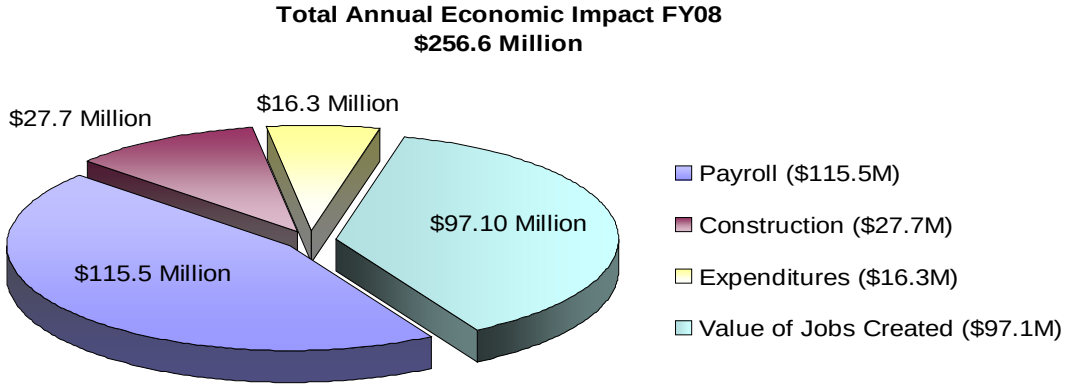
3.5 Economic Impact

The total economic impact of Atterbury and Muscatatuck on the surrounding region is measured in four categories: annual payroll, annual expenditures, construction contracts, and value of jobs created. Payroll includes direct employment of military and civilian personnel. Expenditures include spending on supplies, services and material. Selected construction contracts are highlighted below. The value of jobs created is an estimate of the indirect benefits to the region resulting from a large employer spending at the levels of direct expenses in salary, expenditures, and construction. For fiscal year 08, payroll is $115.5 M, expenditures are $16.3 M, construction is $27.7 M, and value of jobs created is $97.1 M, for a total economic impact of $256.6 M.

Table 3-5-1-1: Total (Estimated) Economic Impact FY08

Consideration	Amount (million)
Payroll	$ 115.5
Construction	$ 27.7
Expenditures	$16.3
Value of Jobs Created	$97.1
TOTAL Economic Impact	**$ 256.6**

With growth in mind, it is likely that there will be a significant financial impact due to job creation, and living expenditures. The chart below is another representation of Table 3-5-1-1.



When measuring economic impact, it is important to consider that full-time employees, and families of employees, of Atterbury and Muscatatuck, whether military or civilian, live, shop, go to school, and recreate in the local communities. Map 3-5-1-1, found on the following pages, shows the distribution of employees by zip code. The employee distribution is representative of another facet of economic impact, and supports that a

majority of employees of the installations live in the communities that are a part of this study.

Table 3-5-1-2 is the estimated growth beyond FY 2009:

Table 3-5-1-2: Estimated Economic Growth Beyond FY09

Current	Future
FY01	FY09
Jobs – 100 Seasonal Use Impact - $9M	Jobs – 2,782 Daily Users – 10,236 Estimated Economic Impact - $428.3M
FY08 (11 Jul 08)	FY12
Jobs – 2,032 Daily Users – 3,500 Estimated Economic Impact - $256.6M	Jobs – 4,766 Daily Users – 12,036 Estimated Economic Impact - $616.8M
	FY09-12
	MILCON - $156.8M (+)

Source: Muscatatuck Center for Complex Operation: Camp Atterbury Joint Maneuver Training Center & Muscatatuck Urban Training Center – Presentation by General Tooley – Fall 2008

FY 08 (ending 31Jul08) recapped a $295.9M spend on construction projects. FY 09 – 12 is predicted to show a $156.8M (+) spend on MILCON (military construction). As the facilities continue to grow, the need for new (or modified) facilities also continues to grow. Table 3-5-1-3 is representative of the expected growth in MILCON spending for the FY09 – 12 plans. These projects are recently approved / in progress projects in FY 2009:

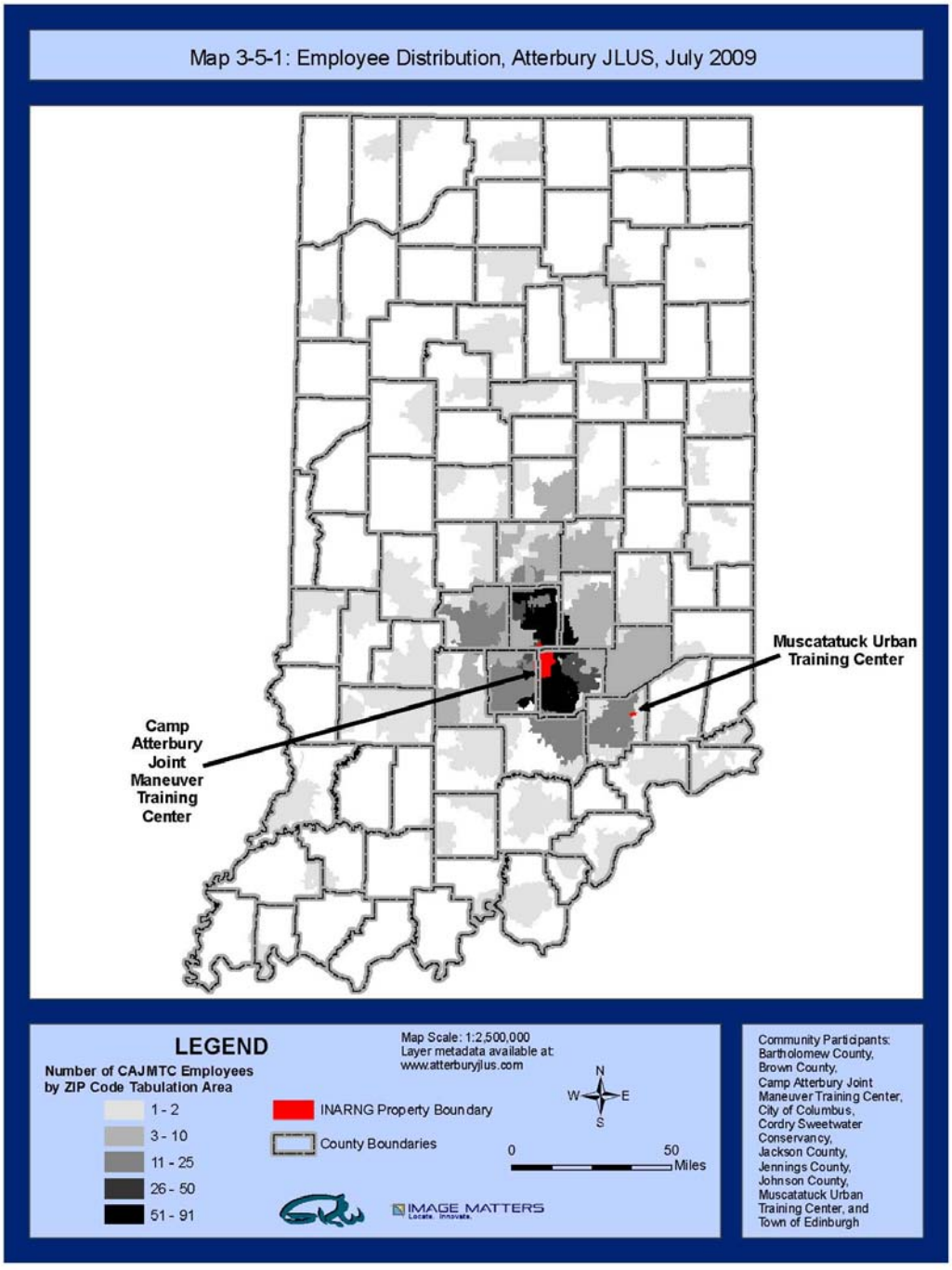
Table 3-5-1-3: Muscatatuck - Impact of FY09 Construction Projects

Project	Amount ($)
Highway Overpass	650K
Patriot Academy Dorms	6.2M
DFAC & Embassy	2.68M
Destroyed Buildings	550K
New Barracks	1.5M
Multipurpose Bldg	689K
Network Operations Center	550K
Security Fence	5M
Patriot Academy School Upgrade	1.4M
Bldgs 56, 57, 58 Upgrade (Barracks)	270K
3 Storage Buildings	18K
Special Purpose Training Bldg	698K
Lumber for Market St. Construction	140K
Total Impact of identified construction projects:	**+/- 20.16M**

Source: Muscatatuck Center for Complex Operation: Camp Atterbury Joint Maneuver Training Center & Muscatatuck Urban Training Center – Presentation by General Tooley – Fall 2008

Muscatatuck reports that the amount spent in FY08 was $41,393.91 locally and that in FY09 $34,539.19 (as of Spring 2009) has been spent locally. This represents the likelihood of exceeding the amount spent in FY08 as there are many projects currently moving forward and planned for FY09.

Map 3-5-1-1: Employee Distribution



4.0 Compatibility & Potential Impacts

4.1 Impacts of Existing Conditions

4.1.1 Land Use Analysis

Incompatible land uses put pressure on military installations and the surrounding communities. The burden imposed on military bases by development may affect military readiness and limit the military's ability to use fully its training and testing facilities for their intended purposes. Military operations may have a negative impact on the use and enjoyment of private property outside the installation. To avoid these outcomes, it is important to plan for mutual, compatible development.

Although both Camp Atterbury and Muscatatuck are located in rural areas of southern Indiana, the surrounding communities and industries continue to grow and expand. Future use and development of privately owned land surrounding the installations is an issue that should be addressed. The installations and the surrounding communities have tools to help minimize incompatible uses. These include: comprehensive plans, zoning, subdivision regulations, and public policy. These tools are implemented at the local level, by the legislative bodies. Local jurisdictions should be cognizant of the relationship between the use of these adjacent properties and military operations.

In order to maintain a good relationship, both the installation and the surrounding communities are to work together to address land use issues that may have adverse impacts on operations of the military installation and the health, safety, and welfare of the citizens in the surrounding communities.

Compatibility Factors

The purpose of identifying compatibility factors is to characterize areas of potential incompatibility in order to improve future planning efforts. Planning for compatibility is a long-term strategy that benefits the community as a whole. There are three categories of compatibility factors: man-made, natural resources, and competition for scarce resources.

Man-Made
- Land Use
- Safety Zones
- Vertical Obstruction
- Local Housing Availability
- Infrastructure Extensions
- Anti-Terrorism / Force Protection
- Noise
- Vibration
- Dust / Smoke / Steam
- Light and Glare
- Alternative Energy
- Air Quality
- Frequency Spectrum
- Public Trespassing
- Cultural Sites
- Legislative Initiatives
- Interagency Coordination

Natural Resources
- Water Quality / Quantity
- Threatened & Endangered Species
- Marine Environments

Competition for Scarce Resources
- Scarce Natural Resources
- Land, Air and Sea Spaces
- Frequency Spectrum Capacity
- Ground Transportation Capacity

Among the most common are safety/security, noise, and other performance impacts such as light and dust. Compatibility criteria are established to avoid any noise and safety hazards, and more specifically to:

1. Limit exposure of people and noise-sensitive activities to high noise levels, and
2. Limit concentrations of people and safety-sensitive activities in areas of highest probable accident impact.

Land uses that are incompatible with high levels of noise and any kind of safety hazard include:

1. Land uses within high-noise zones. Noise sensitive uses include:
    a. Residences and hotels, hospitals, and nursing homes.
    b. Places where people gather or go seeking quiet, such as libraries, churches, museums, cultural centers, theaters, hotels, outdoor auditoriums, and concert halls.

2. Land uses that result in concentrations of people are at risk of being a safety hazard, including:
    a. Residences and similar uses where people reside, such as hotels and nursing homes.

b. Employment uses with a high density of employees such as offices and labor-intensive industrial use.
c. Uses where people may gather in large numbers such as churches, schools, shopping centers, retail establishments, bars and restaurants, auditoriums, sports arenas, and spectator sports.

3. Land uses that have special safety considerations include the following:
    a. Uses involving significant quantities of hazardous materials or explosives.
    b. Critical public health and safety uses, such as hospitals, fire stations, and police communications facilities.
    c. Landfills and agricultural row crops that attract large flocks of birds.

Land use and land cover classification systems have been developed in order to help identify similarities among uses, and to help make conclusions regarding land use compatibility/development potential for a specific study. Tables 4-1-1-1 (acres) and 4-1-1-2 (percent) are land cover classifications for land within the one mile buffer, by county. Land cover classifications include one or more land uses.

Table 4-1-1-1: Land Cover Acreage in 1 Mile Buffer

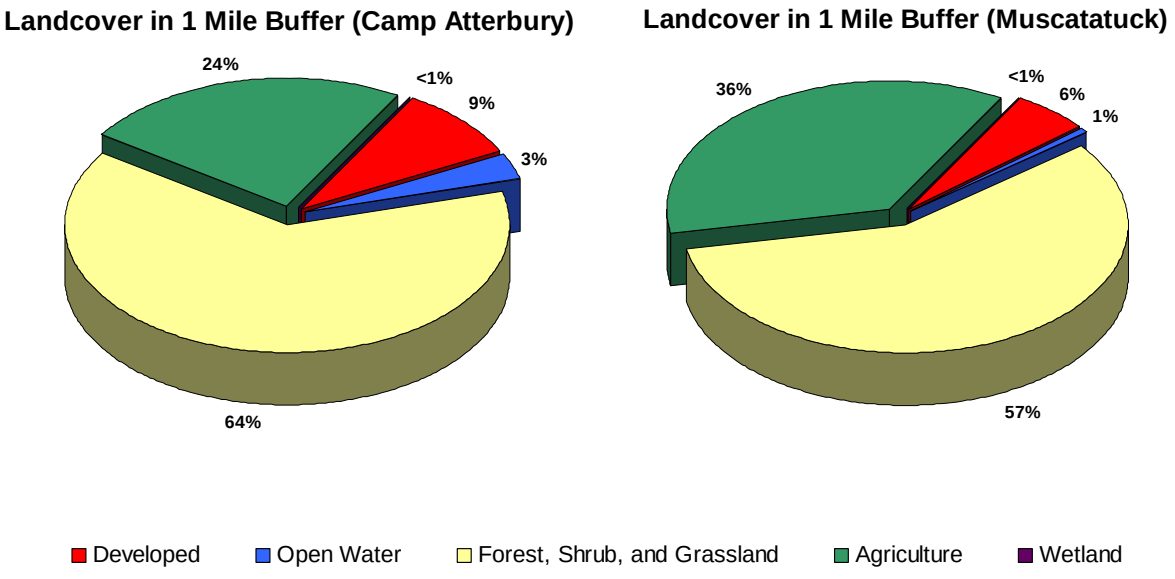
		Developed, Open Space	Developed, Low Intensity	Developed, Medium Intensity	Developed, High Intensity
Atterbury	Johnson	1,009	157	43	8
Atterbury	Bartholomew	666	113	33	10
Atterbury	Brown	85	5	0	0
Atterbury	Total	1,759	274	75	18
Muscatatuck	Jennings	260	51	13	3

		Open Water	Forest, Shrub / Scrub & Grassland	Agriculture	Wetland	Total
Atterbury	Johnson	239	3,515	1,960	17	6,946
Atterbury	Bartholomew	281	5,138	3,472	5	9,717
Atterbury	Brown	247	6,022	105	2	6,466
Atterbury	Total	768	14,674	5,537	24	23,129
Muscatatuck	Jennings	34	3,426	2,158	6	5,950

Table 4-1-1-2: Land Cover Percentage in 1 Mile Buffer

		Developed, Open Space	Developed, Low Intensity	Developed, Medium Intensity	Developed, High Intensity
Atterbury	Johnson	14.5	2.3	0.6	0.1
Atterbury	Bartholomew	6.9	1.2	0.3	0.1
Atterbury	Brown	1.3	0.1	0.0	0.0
Atterbury	Total	7.6	1.2	0.3	0.2
Muscatatuck	Jennings	4.4	0.8	0.2	0.1

		Open Water	Forest, Shrub / Scrub & Grassland	Agriculture	Wetland	Total
Atterbury	Johnson	3.4	50.6	28.2	0.2	100.0
Atterbury	Bartholomew	2.9	52.9	35.7	0.1	100.0
Atterbury	Brown	3.8	93.1	1.6	0.0	100.0
Atterbury	Total	3.3	63.4	23.9	0.1	100.0
Muscatatuck	Jennings	0.6	57.6	36.3	0.1	100.0



Definitions of terms (National Land Cover Dataset):

Developed, Open Space - Includes areas with a mixture of some constructed materials, but mostly vegetation in the form of lawn grasses. Impervious surfaces account for less than 20 percent of total cover. These areas most commonly include large-lot single-family housing units, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes.

Developed, Low Intensity -Includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 20-49 percent of total cover. These areas most commonly include single-family housing units.

Developed, Medium Intensity - Includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 50-79 percent of the total cover. These areas most commonly include single-family housing units.

Developed, High Intensity - Includes highly developed areas where people reside or work in high numbers. Examples include apartment complexes, row houses and commercial/industrial. Impervious surfaces account for 80 to100 percent of the total cover.

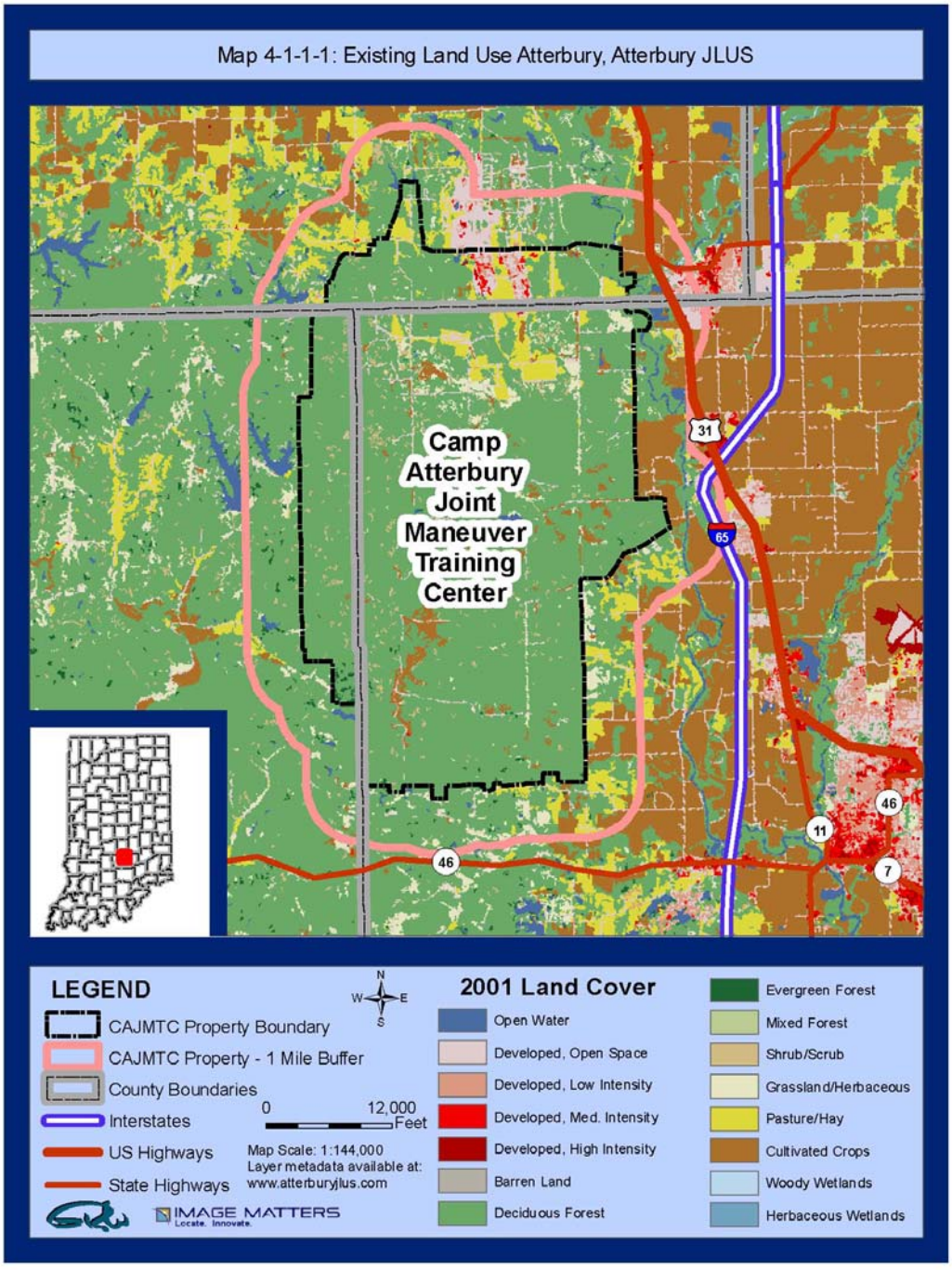
Open Water - All areas of open water, generally with less than 25% cover or vegetation or soil.

Forest, Shrub/Scrub and Grassland - Deciduous Forest, Evergreen Forest, Mixed Forest, Shrub/Scrub, Grassland/Herbaceous. This area includes everything from grazing land with grammanoid or herbaceous vegetation covering 80% of total vegetation and shrubs less than 5 meters tall covering 20% of total vegetation, to areas dominated by deciduous and/or evergreen trees greater than 5 meters tall and covering greater than 20% of total vegetation.

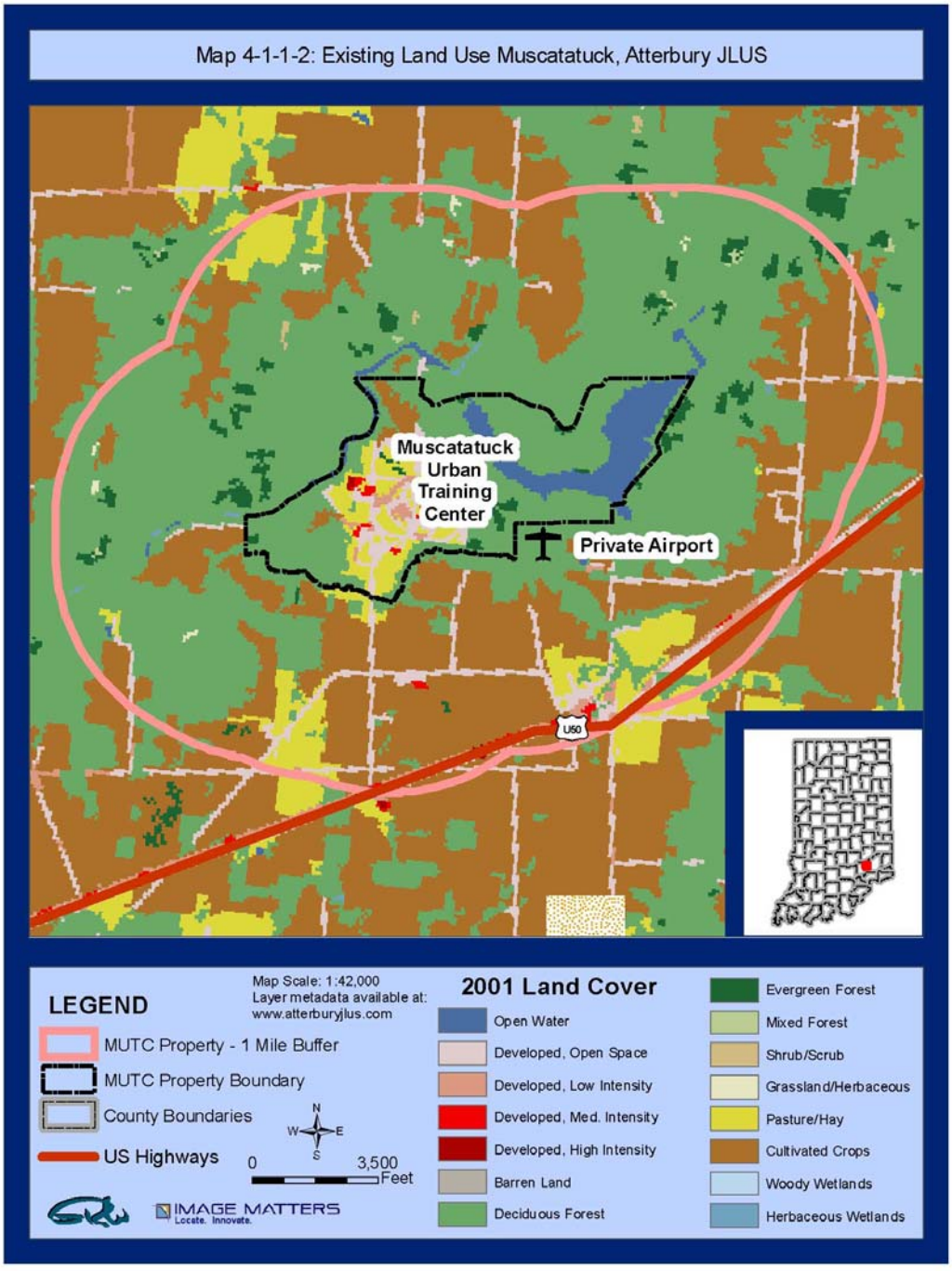
Agriculture - Includes both pasture/hay and cultivated crops, which are either areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle, or areas used for the production of annual crops, such as corn, soybeans, vegetables, tobacco, and cotton, and also perennial woody crops such as orchards and vineyards. This class also includes all land being actively tilled.

Wetlands – Areas where forest or shrub land vegetation accounts for greater than 20 percent of vegetative cover and the soil or substrate is periodically saturated with or covered with water as well as areas where perennial herbaceous vegetation accounts for greater than 80 percent of vegetative cover and the soil or substrate is periodically saturated with or covered with water.

Map 4-1-1-1: Existing Land Use Atterbury



Map 4-1-1-2: Existing Land Use Muscatatuck



4.1.2 Zoning in the One Mile Buffer

Bartholomew County

- Land in the northwest corner of the county, along the southern border of Edinburgh and the western boundary of Atterbury, is within a flood hazard zone and is compatible with current military operations. Although flood plains are susceptible to development, they provide a natural buffer to development in that area and are potential areas of conservation. Zoning in the floodplain is mostly Agriculture: General Rural.
- The majority of Bartholomew County zoning in the buffer is Agriculture: General Rural (AG) and Agriculture: Preferred (AP) and is compatible with current military operations. There is some potential for agricultural land to be developed as the area grows and zoning changes take place. Property owners with livestock should take noise into consideration in how they manage their animals.
- Other zoning districts within the one-mile buffer include: Commercial: Community Center (CC), Regional Center (CR); Industrial: Light (I1); and Residential: Rural (RR) and Single-Family 1 (SF1). These areas are relatively small. Residential zoning within the one-mile buffer is addressed later as potentially incompatible with military operation noise; proximity to Atterbury should be taken into consideration as the area develops.

Table 4-1-2-1: Bartholomew County Zoning District Densities in 1-Mile Buffer

Zoning District	Allowed Density	Notes
Agriculture: General Rural (GR)	1 unit per acre	
Agriculture: Preferred (AP)	1 unit per acre	
Commercial: Community Center (CC)	1 unit per minimum lot size of 10,000 sq. ft.	Shopping centers, office complexes and multi-family residential developments with coordinated parking areas and pedestrian systems may have unlimited primary structures on any one lot; maximum lot coverage 65%.
Commercial: Regional Center (CR)	1 unit per minimum lot size of 15,000 sq. ft.	Shopping centers, office complexes and multi-family residential developments with coordinated parking

		areas and pedestrian systems may have unlimited primary structures on any one lot; maximum lot coverage 75%.
Industrial: Light (I1)	1 unit per minimum lot size of 22,000 sq. ft.	Combined industrial operations with coordinated parking areas and pedestrian systems may have unlimited primary structures on any one lot; maximum lot coverage 75%.
Residential: Rural (RR)	1 unit per acre – septic 1 unit per 20,000 sq. ft. - sewer	
Residential: Single-Family 1 (SF1)	Gross density of 2.5 units per acre	Minimum lot size of 12,000 sq. ft.

Table 4-1-2-2: Bartholomew County Zoning Acreage 1-Mile Buffer

Bartholomew County Zoning District Name	**ACRES**
Agriculture: General Rural (AG)	6,811
Agriculture: Preferred (AP)	1,049
Commercial: Community Center (CC)	96
Commercial: Regional Center (CR)	4
Industrial: Light (I-1)	39
Residential: Rural (RR)	40
Residential: Single-Family 1 (RS1)	30
Bartholomew Zoning Jurisdiction - Total	8,069
Edinburgh/Bartholomew/Columbus Joint District Jurisdiction	
Industrial: General (I-2)	2.0
Edinburgh Zoning Jurisdiction	
All Zones - Total	1,301

Table 4-1-2-3: Edinburgh Zoning in Bartholomew County Acreage 1-Mile Buffer

Edinburgh Zoning Jurisdiction in Bartholomew County	ACRES
Agriculture (AG)	6
ENCLOSED INDUSTRY (EI)	85
FLOOD PLAIN (FP)	839
GENERAL BUSINESS (GB)	46
LOCAL BUSINESS (LB)	2
PARK AND GREENBELT (PG)	61
LOW DENSITY (R2)	5
MEDIUM-LOW DENSITY (R3)	157
MEDIUM DENSITY (R4)	58
MEDIUM DENSITY RESIDENCE (R5)	36
ROADSIDE BUSINESS (RB)	6
Edinburgh Zoning Jurisdiction	
All Zones - Total	1,301

Brown County

- Land in the Cordry Sweetwater Conservancy District contains Lake Residence zoning in the buffer. Cordry Lake appears to be mostly built out: there are no buildable lots remaining in the one-mile buffer.
- There are permitted densities for districts within the buffer, which can be found in the Brown County Zoning Code and are compatible with current military operations.

Table 4-1-2-4: Brown County Zoning within 1 Mile Buffer

District Name	ACRES
Accommodation Business (AB)	4
Flood Plain (FP)	434
Forest Reserve (FR)	4,533
Industrial (I)	10
Lake Residence (LR)	557
Secondary Residence (R2)	753

Jennings County

- Purdue and Department of Natural Resources land comprises a majority of land in the buffer.
- Butlerville, containing Residential, Commercial, and Heavy Industrial zoning is within the buffer and may or may not be compatible with current military operations.
- Other land is zoned almost completely agriculture.
- The campground near Muscatatuck is a grandfathered Special Use in an Agricultural zone. Any land use changes would require Plan Commission hearings.
- The trailer park near Muscatatuck is grandfather zoned multi-family.

The Southeast Purdue Agricultural Center (SEPAC), located within one mile surrounding Muscatatuck, has approximately 2,500 acres of land management. The land is used for research and demonstration areas to grow corn, soybeans, and wheat. Additional land is used for forestland and tree plantations. A small acreage is also devoted to horticultural crops. Research at SEPAC concentrates on grain crops, forages, forestry, and horticulture. Approximately 50 different research projects are being conducted at SEPAC at any one time. The research projects involve over 30 Purdue professors, graduate students, and technicians (Purdue Agricultural Centers www.agriculture.purdue.edu).

Johnson County

- Johnson County zoning districts within the one-mile buffer include: Agriculture (AG), State Land, Local Park Land, Single-Family Residential 1 (R-1), Single-Family Residential 2 (R-2), One- and Two-Family Residential (R-3), Rural Residential (R-3), Neighborhood Business (B-1), and Community Business (B-2). Undeveloped residential zones within Johnson County and Prince's Lakes are addressed later as potentially incompatible with military operation noise in Section 4.1.4; proximity to Atterbury should be taken into consideration as the area develops. Undeveloped Suburban Residential zoning in the northeast of Edinburgh is within the one-mile buffer.
- Approximately 76% of the Edinburgh Buffer, of which a part is in the one-mile buffer, is in a floodplain or flood hazard zone, constraining development opportunities.
- The Prince's Lakes Zoning Area contains undeveloped Residential zoning within the one-mile buffer.
- The R-2 zoning of Johnson County, closest to Camp Atterbury, is a relatively small area (approx. 31 acres), and is almost entirely built out.
- Areas susceptible to development:
    - Suburban Residential – relatively large area of land, of which only a portion is in the one mile buffer (Edinburgh)
    - Residential (R-1) – relatively small area at 2 units per acre (Prince's Lakes)
    - Rural Residential (R-R) – relatively small area at 1 unit per acre (Prince's Lakes)
    - Agriculture (AG) – relatively large area with low density allowance (Edinburgh, Princes' Lakes)
    - Buffer (BUF) – the portion of the Edinburgh Buffer that is not in a flood zone, mentioned above as Suburban Residential

Johnson County zoning classes found within the one-mile buffer are shown in Table 4-1-2-5.

Table 4-1-2-5: Johnson County Zoning Class Densities in 1 Mile Buffer

Code	Class	Max Density / Note
A-1	Agricultural District	1 unit per 10acres
R-R	Rural Residential	1 unit per 1 acre
R-1	Single-Family Residential	2 units per 1 acre
R-2	Single-Family Residential	3.5 units per 1 acres
R-3	One- and Two-Family Residential	6 units per 1 acre
B-1	Neighborhood Business	May include all types of dwellings
B-2	Community Business	2 acres if lot is on septic. No multi-family dwellings

The breakdown of Johnson County and Edinburgh Zoning in the one-mile buffer can be found in Table 4-1-2-6.

Table 4-1-2-6: Johnson County and Edinburgh Zoning Acreage in 1 Mile Buffer

JOHNSON COUNTY ZONING CLASS	ACRES
MILITARY	4,255
PARK (STATE LAND)	3,015
PARK (LOCAL LAND)	483
AGRICULTURE (A-1)	487
RURAL RESIDENTIAL (R-R)	251
SINGLE FAMILY RESIDENTIAL (R-1)	380
SINGLE FAMILY RESIDENTIAL (R-2)	86
1- AND 2-FAMILY RESIDENTIAL (R-3)	27
NEIGHBORHOOD BUSINESS (B-1)	16
COMMUNITY BUSINESS (B-2)	19
PRINCE'S LAKES ZONING AREA	711
EDINBURGH ZONING AREA	1,119
EDINBURGH ZONING AREA - DETAIL	
ENCLOSED INDUSTRIAL (EI)	29
FLOODPLAIN (FP)	442
LOCAL BUSINESS (LB)	13
PARK AND GREENBELT (PG)	58
SINGLE FAMILY (R1)	437
MEDIUM-LOW DENSITY (R3)	38
MEDUIM DENSITY (R4)	44
MEDIUM DENSITY RESIDENCE	33
ROADSIDE BUSINESS	25
TOTAL	1,119

Edinburgh and Adjacent Areas in Bartholomew and Johnson Counties

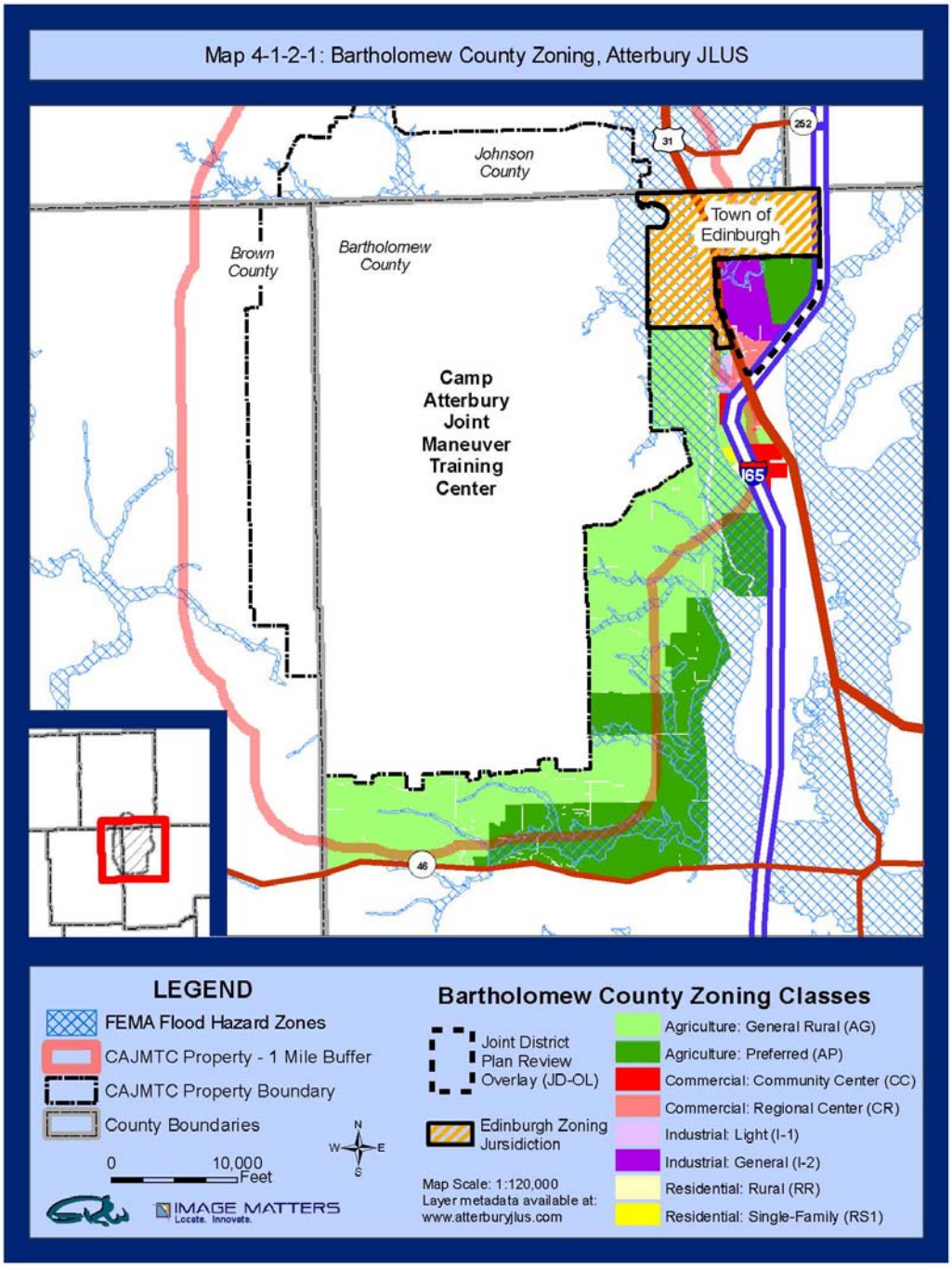
There were discrepancies in the zoning information provided for the study in the area around Edinburgh. The Town of Edinburgh provided the Edinburgh Zoning Map posted in Town Hall. The Johnson County Zoning maps show an area titled Edinburgh Buffer in the legend. The Edinburgh Zoning map provided by the Town did not cover all the area listed as Edinburgh Buffer in Johnson County and Non-jurisdiction Area in Bartholomew County.

Subsequent to the analysis, on the final week of the study, another Edinburgh Zoning map was provided. It covered much of the area for which information was lacking, including the Edinburgh Buffer in Johnson County, the Non-jurisdiction Area in Bartholomew County, and some area in Shelby County. The two source documents are on the CD in the References directory under Edinburgh.

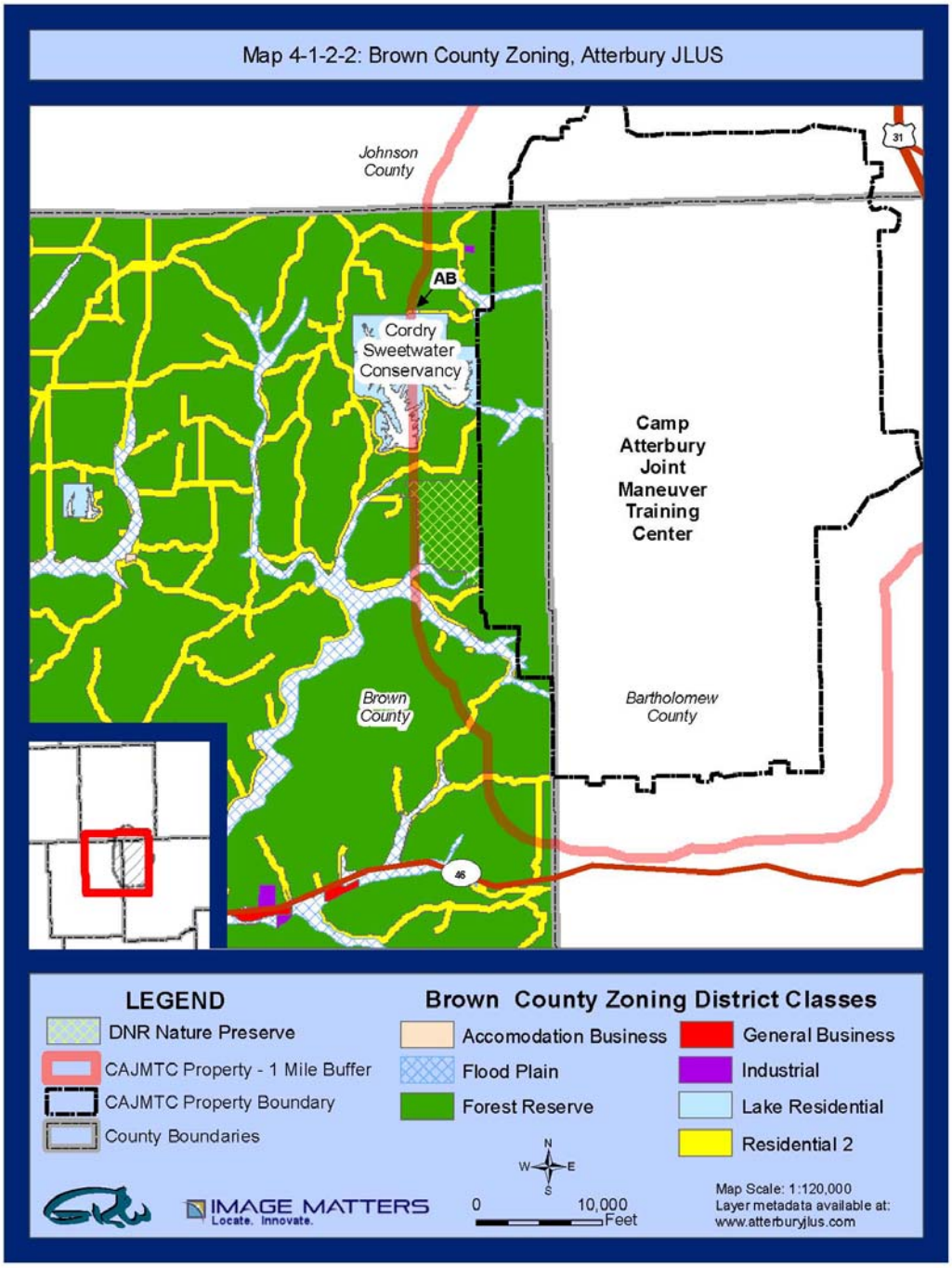
Map 4-1-2-3 is a compilation of the two source documents, incorporating last minute adjustments. The reader should consult local officials to verify actual zoning in the Edinburgh area. Much of the underlying zoning in the Johnson County Edinburgh Buffer is Suburban Residence (R1) and some is Open Industry (OI).

- The residential zoning in the area surrounding Edinburgh within the 1-mile buffer around Atterbury is potentially incompatible with military operations.
- The Open Industry zoning in the 1-mile buffer around Atterbury is compatible with current military operations.

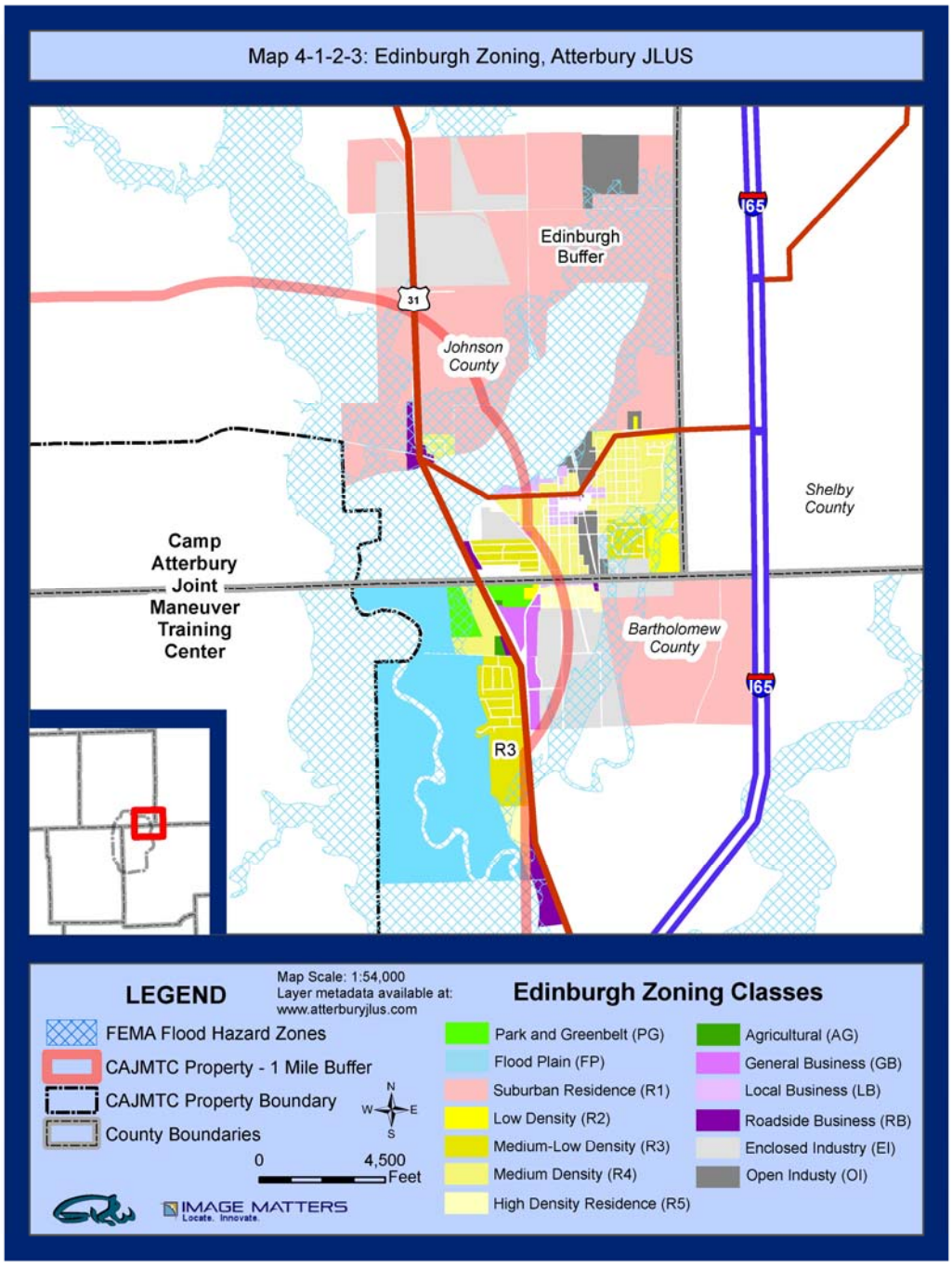
Map 4-1-2-1: Bartholomew County Zoning



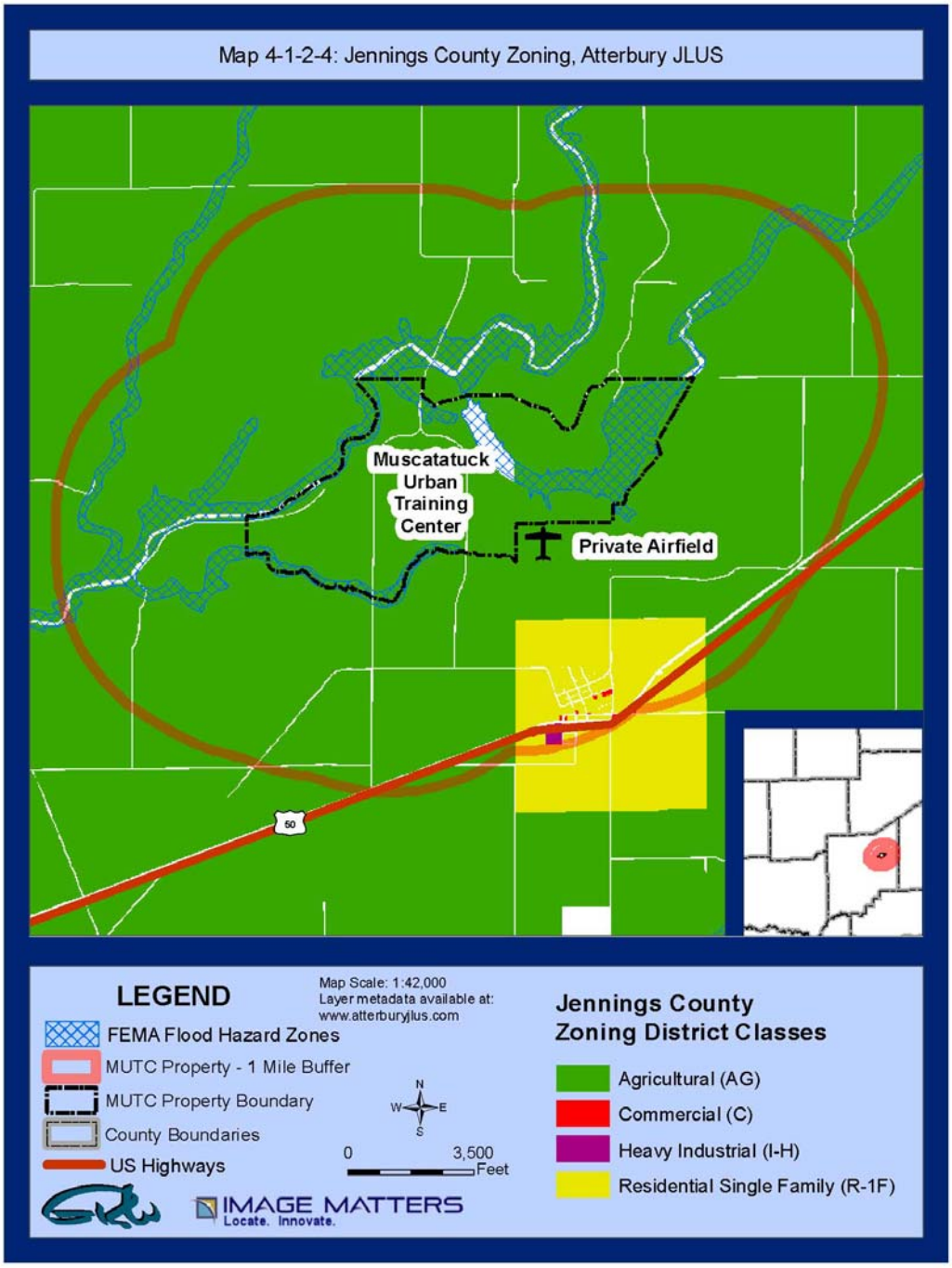
Map 4-1-2-2: Brown County Zoning



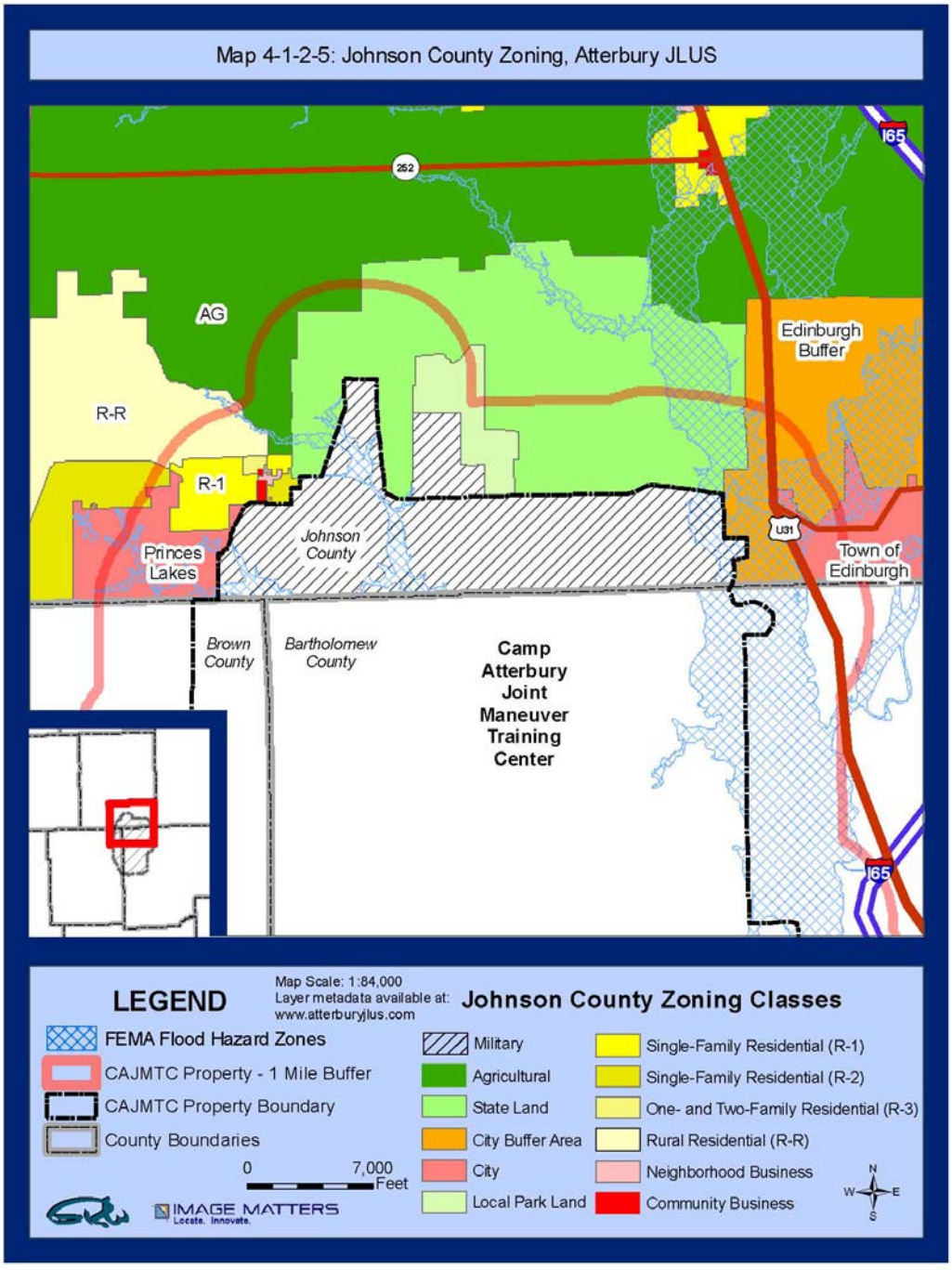
Map 4-1-2-3: Edinburgh Zoning



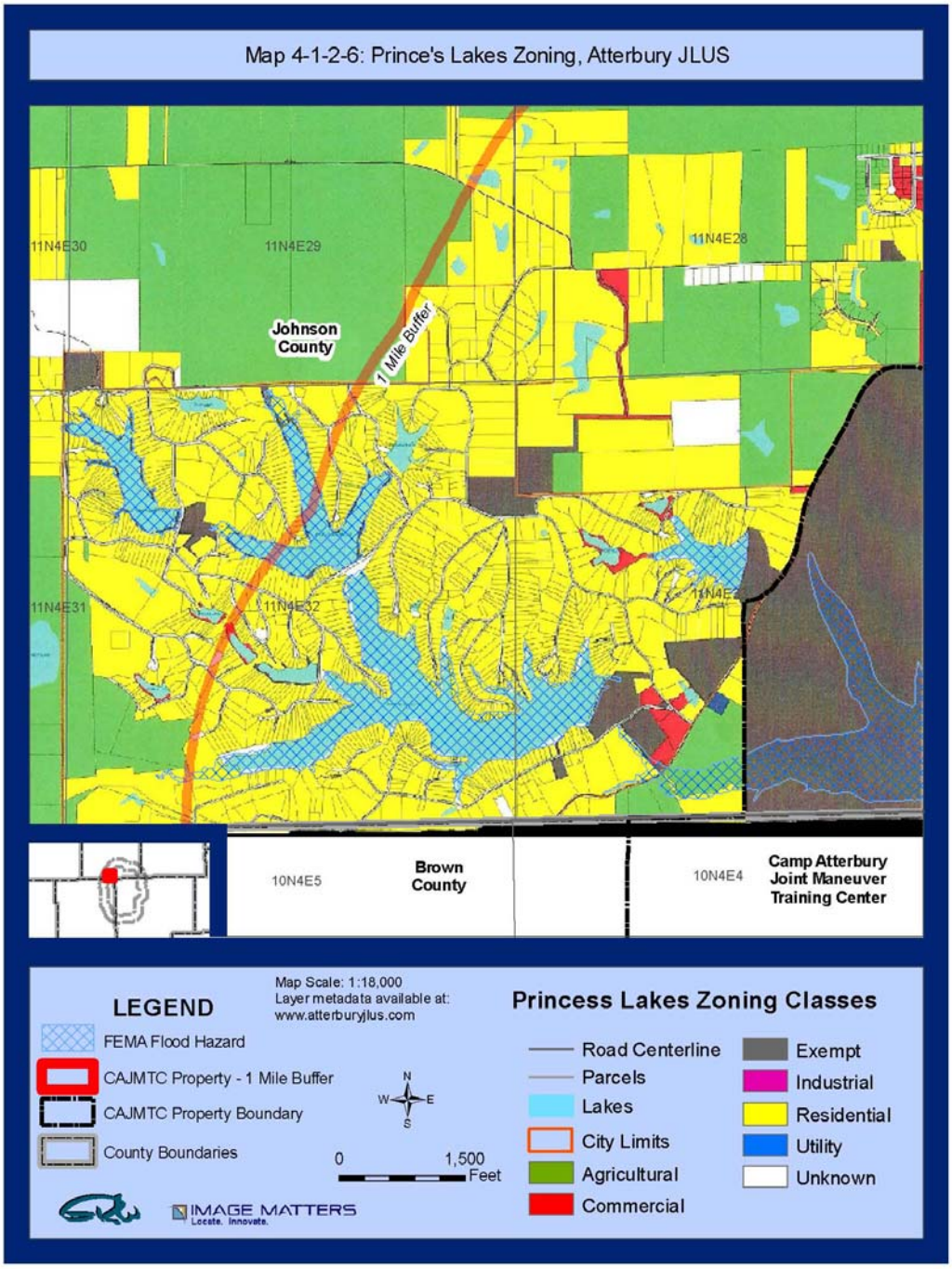
Map 4-1-2-4: Jennings County Zoning



Map 4-1-2-5: Johnson County Zoning



Map 4-1-2-6: Prince's Lakes Zoning



4.1.3 Safety

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 4-1-3-1 through 4-1-3-6 show each airport, Columbus, North Vernon, and Seymour, with safety zones overlaying two views, the first with an aerial photograph, the second 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. The guidelines can be found in “What are Accident Potential Zones?” published by the Army:

(http://chppm-www.apgea.army.mil/dehe/morenoise/TriServiceNoise/document/apz.pdf).

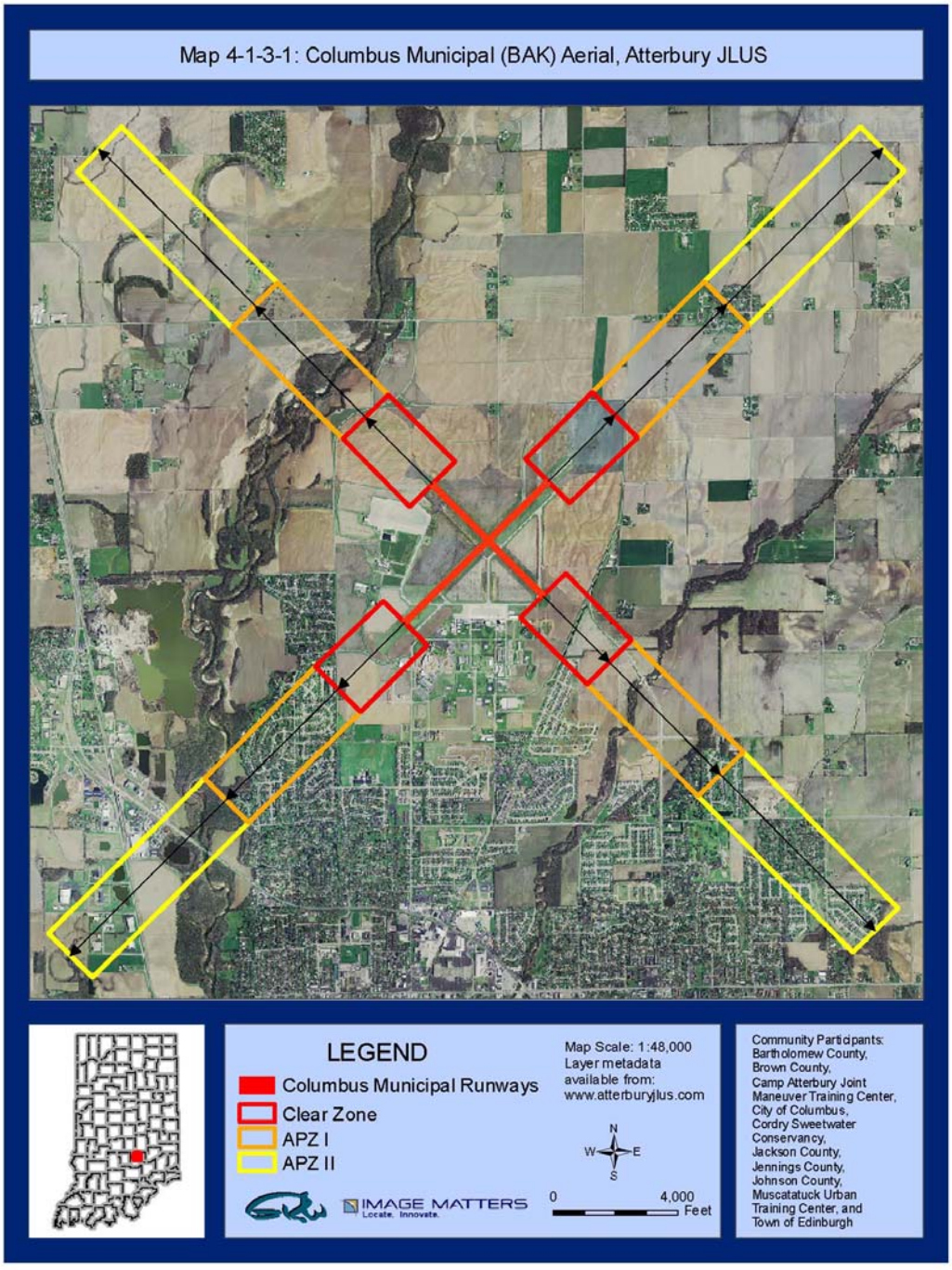
Table 4-1-3-1: Safety Zone Land Use Compatibility

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)	❍	▲	●

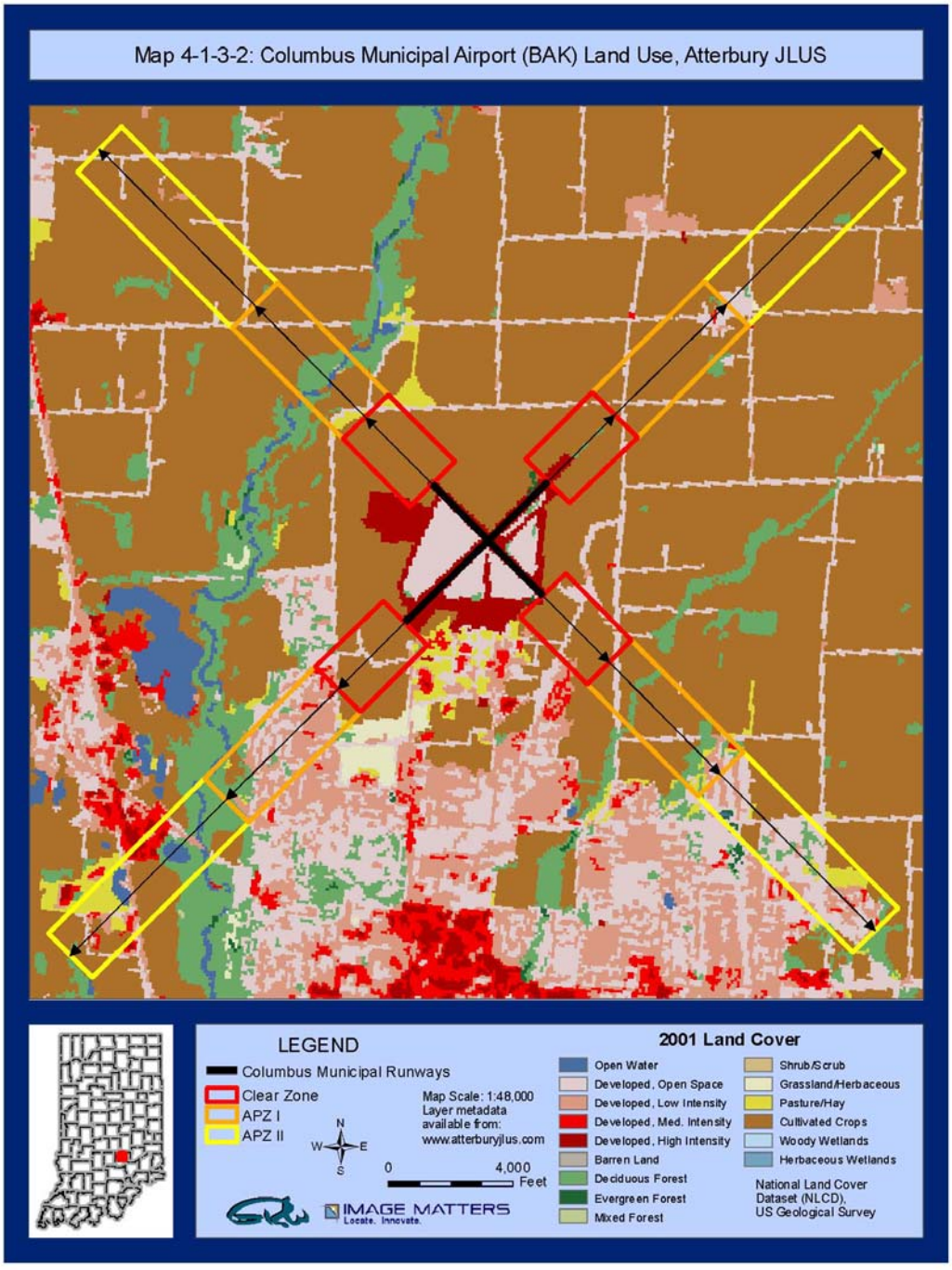
❍ Compatible	▲ Conditionally Compatible	● Incompatible

Source: "What are Accident Potential Zones?" http://chppm-www.apgea.army.mil

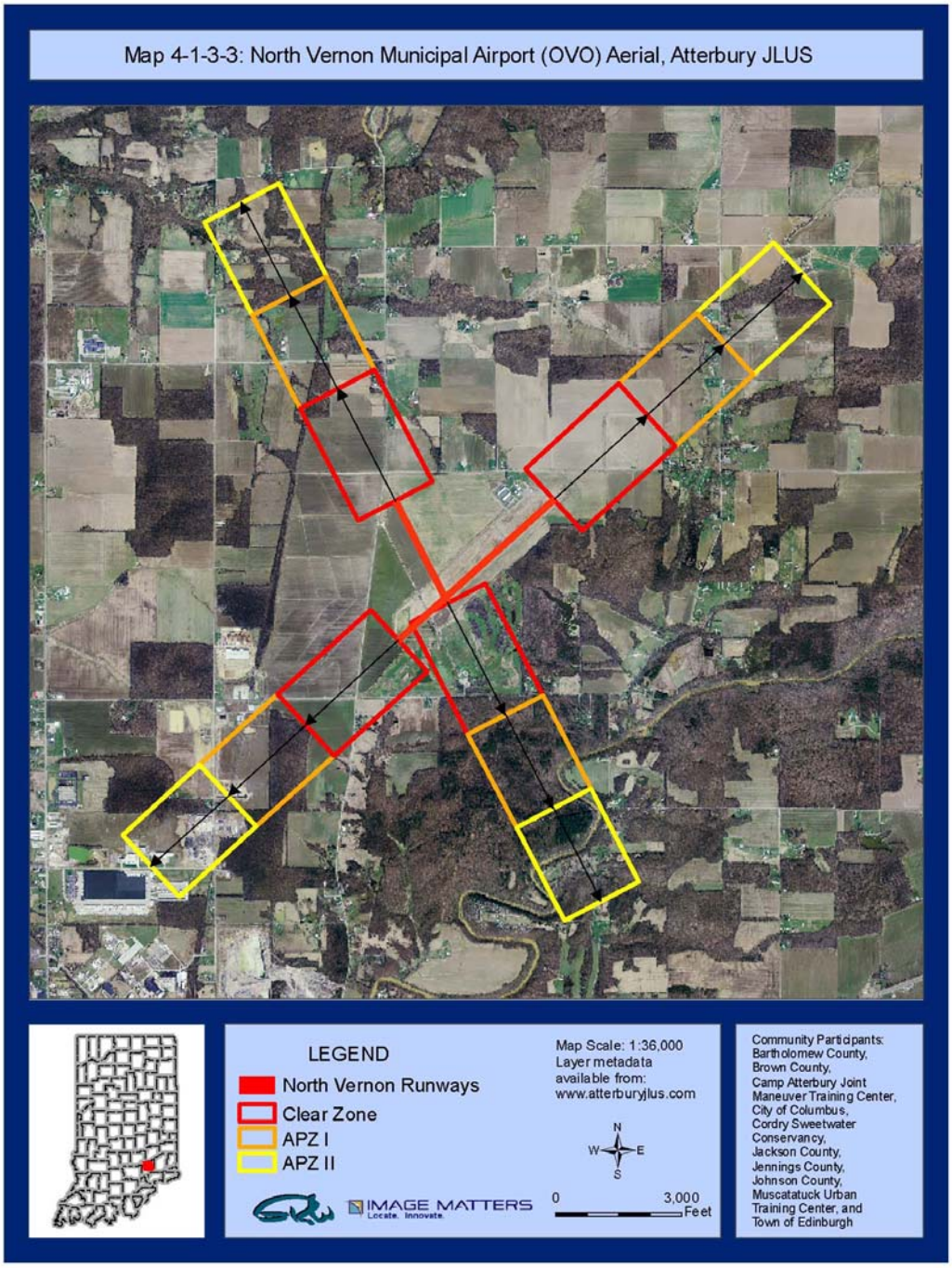
Map 4-1-3-1: Columbus Municipal Airport Aerial



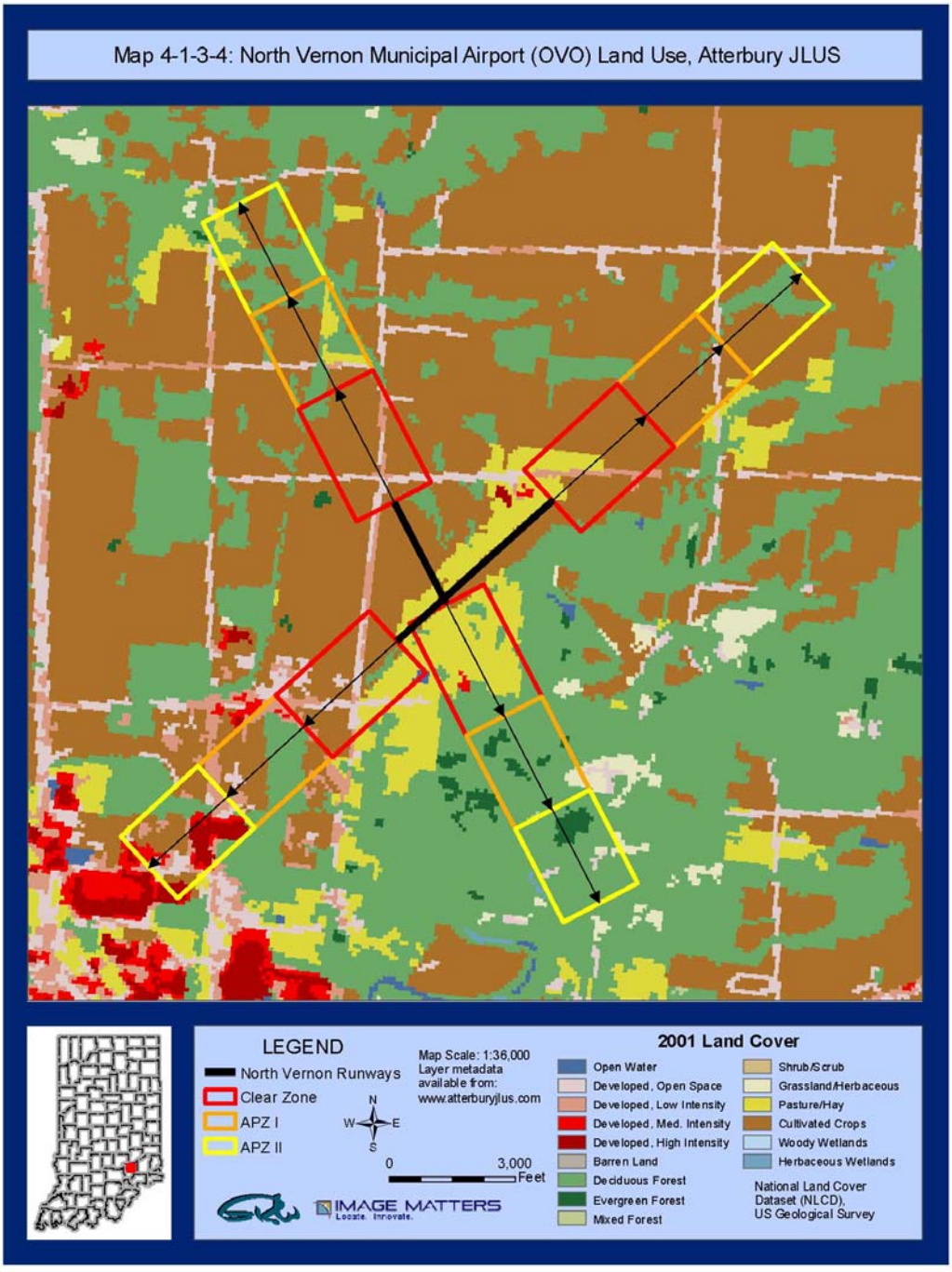
Map 4-1-3-2: Columbus Municipal Airport Land Use



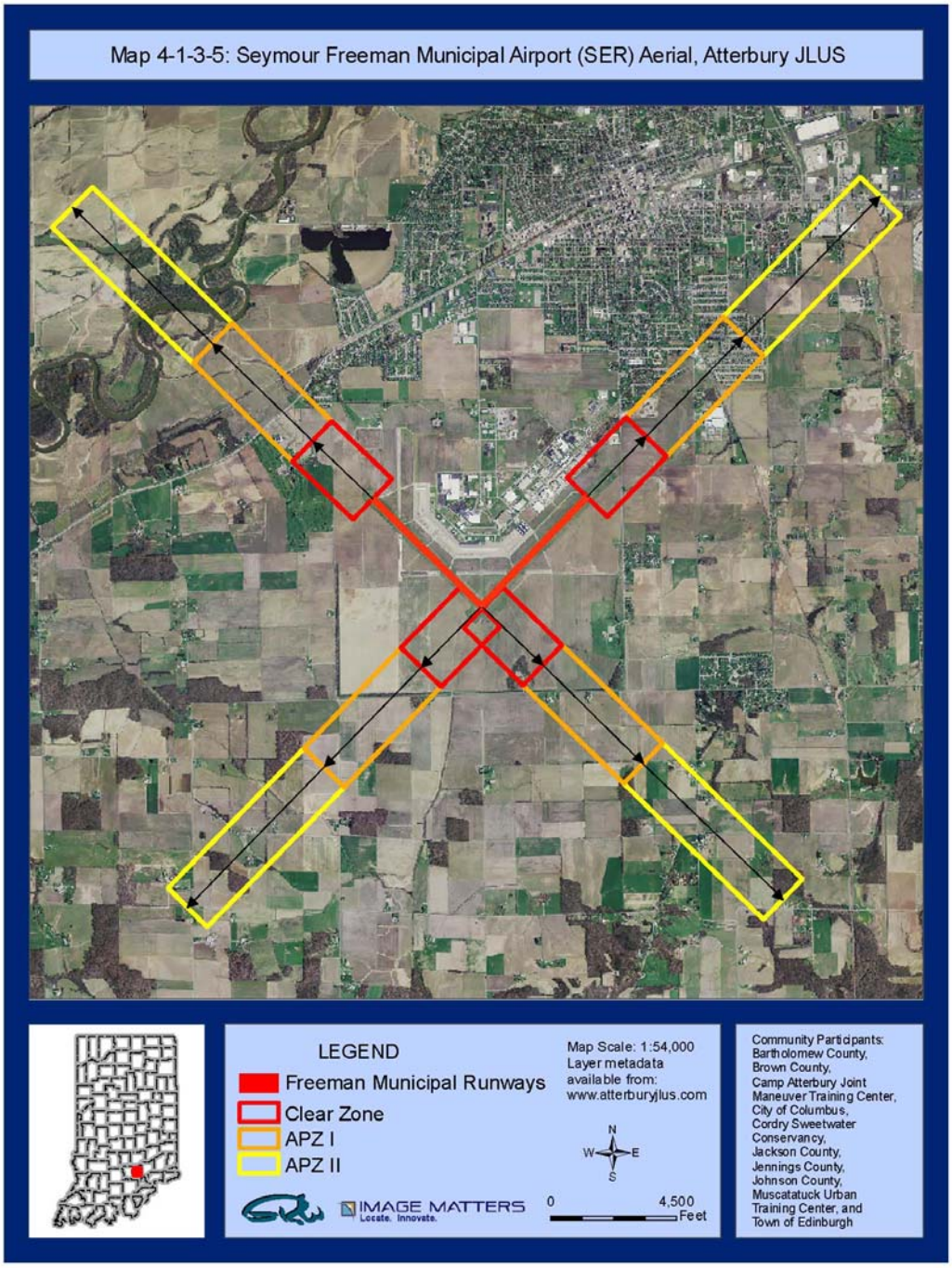
Map 4-1-3-3: North Vernon Municipal Airport Aerial



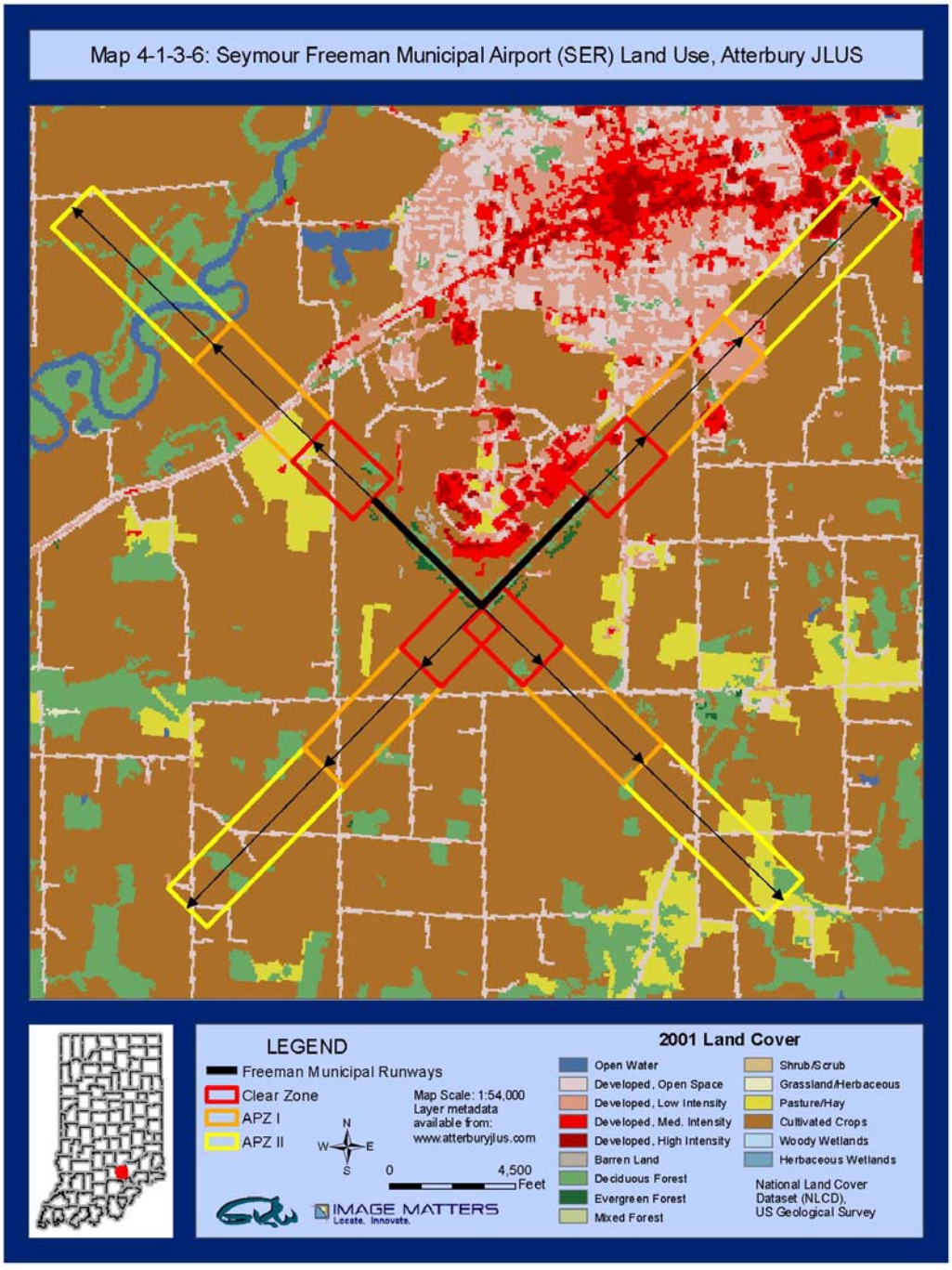
Map 4-1-3-4: North Vernon Municipal Airport Land Use



Map 4-1-3-5: Seymour Freeman Municipal Airport Aerial



Map 4-1-3-6: Seymour Freeman Municipal Airport Land Use



4.1.4 Noise

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

To understand better what noise levels, in decibels (dB) are acceptable to the average person, Table 4-1-4-2 shows the level of noise emitted from everyday things and producers of noise possibly found at a military installation.

Table 4-1-4-2: Everyday Things Noise Levels

Sound	Decibel (dB) Level
Soft whisper	30
Refrigerator	40
Light traffic	50
Daytime sound	55
Noisy restaurant	70
Vacuum cleaner	75
Washing machine	78
Blow dryer	80
Lawn Mower	90
Roar of a crowd	90
Leaf blower	102
Subway train screech	115
Rock concert	120
Thunderclap	120
.22 caliber rifle	130
Low flying aircraft	140
Jet take-off	140
Firecracker	140
Shotgun	170
Rocket launch	180

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 and a basic explanation of how noise is measured.

Day-Night Sound Level (DNL) is a measurement of sound exposure average with a 10 decibel (dB) "penalty" inflicted on sounds occurring between the hours of 2200 and 0700 (a particularly intrusive time when people are usually sleeping). The DNL may be A-weighted (ADNL) or C-weighted (CDNL) depending on the noise being measured. This average is calculated over a "year," or typically 250 (for active military) and 104 (National Guard) training days. Noise from transportation vehicles and aircraft, small arms, and any continuous noise sources are defined as A-weighted noise, not to be confused with large arms noise and explosives, defined as C-weighted noise that may have additional adverse effects at the same decibel (dB) level.

For this study, C-weighted Day-Night Sound Levels (CDNL) are being used. This is due to the availability of data, and the guidelines according to the Federal Interagency Committee on Urban Noise, as described on the next page.

PK15 is peak sound level that is likely to be exceeded only 15% of the time (i.e., 85% certainty that sound will be within this range). This is intended for land use planning consideration of impulsive noise, and single event noise.

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.

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.

Table 4-1-4-3: Army Noise Zones in C-weighted Day-Night Sound Levels

Noise Zone	CDNL
LUPZ	57 - 62
Zone I	< 62
Zone II	62 - 70
Zone III	> 70

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/FICON13.pdf).

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

	LUPZ		Zone II		Zone III	
Land Use	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

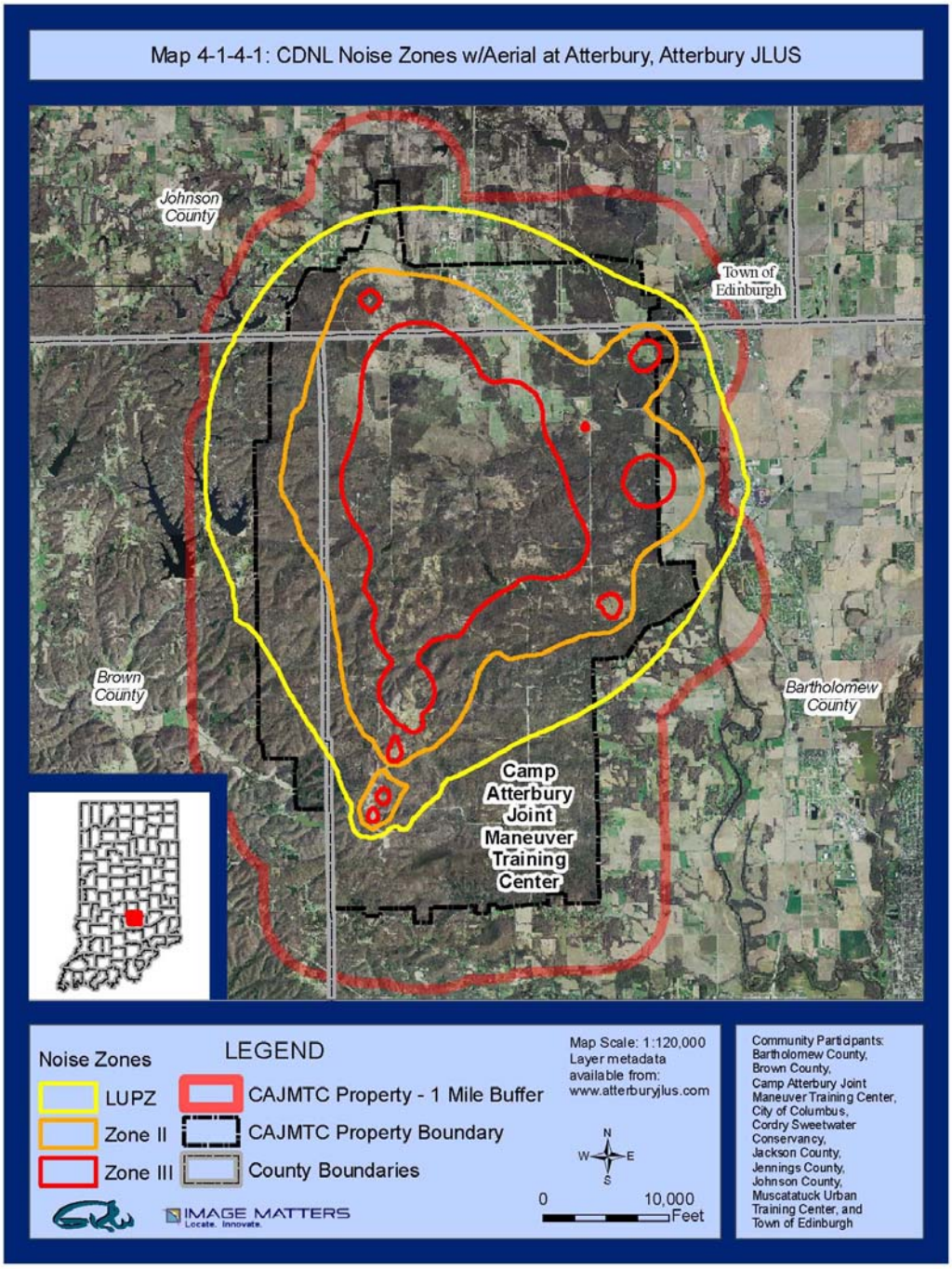
Camp Atterbury notifies the public of training practices in "Local Community Advisories," an example is shown below:

> *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.*

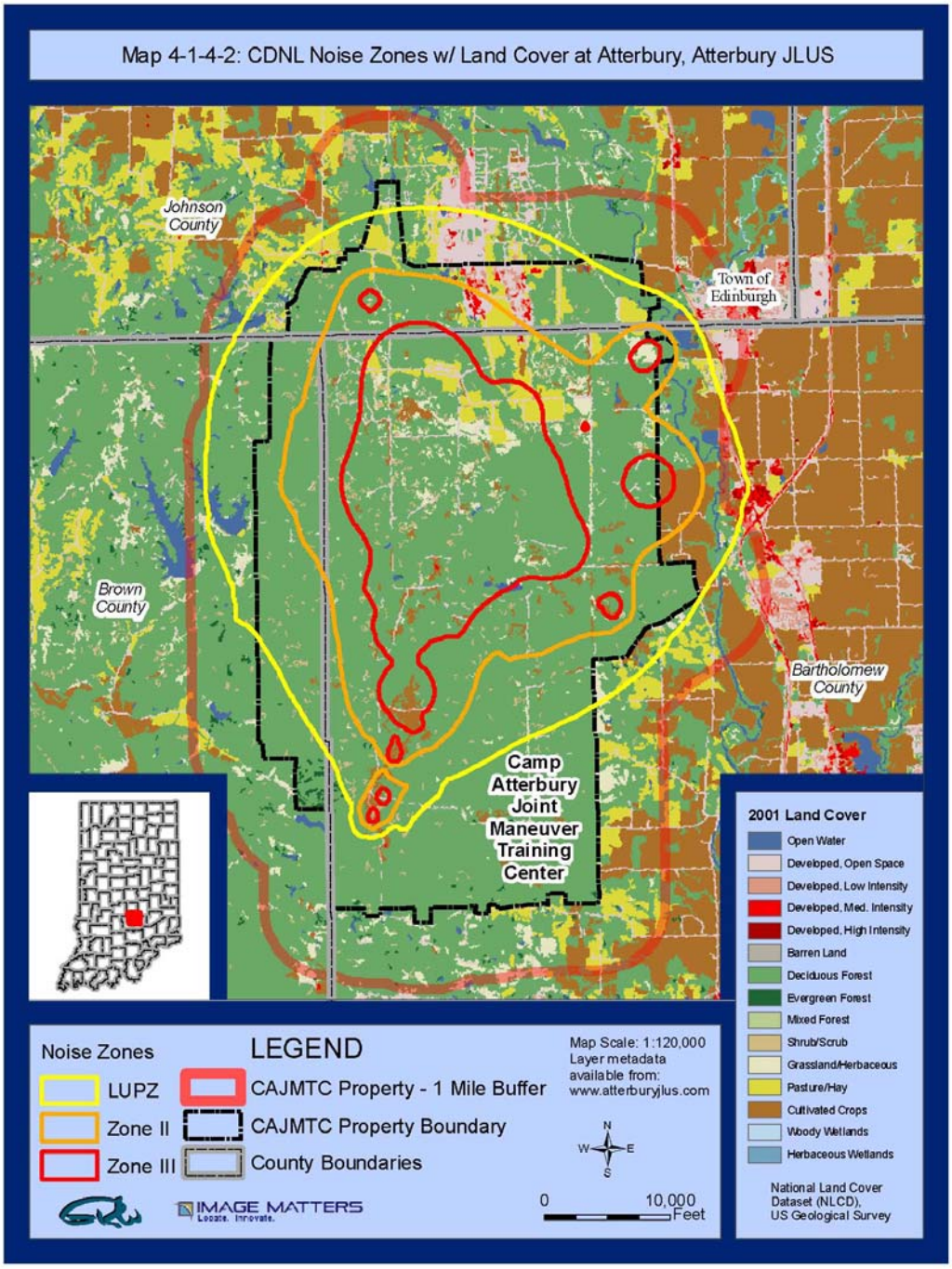
In general, local governments already consider noise compatibility when discussing commercial, industrial, and residential development within the community, particularly in relation to local airports. These guidelines, along with the noise levels provided by the installations, will help in expanding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

Noise sources associated with the noise contours shown on the following maps are described in the metadata associated with the files and is available for review to interested parties.

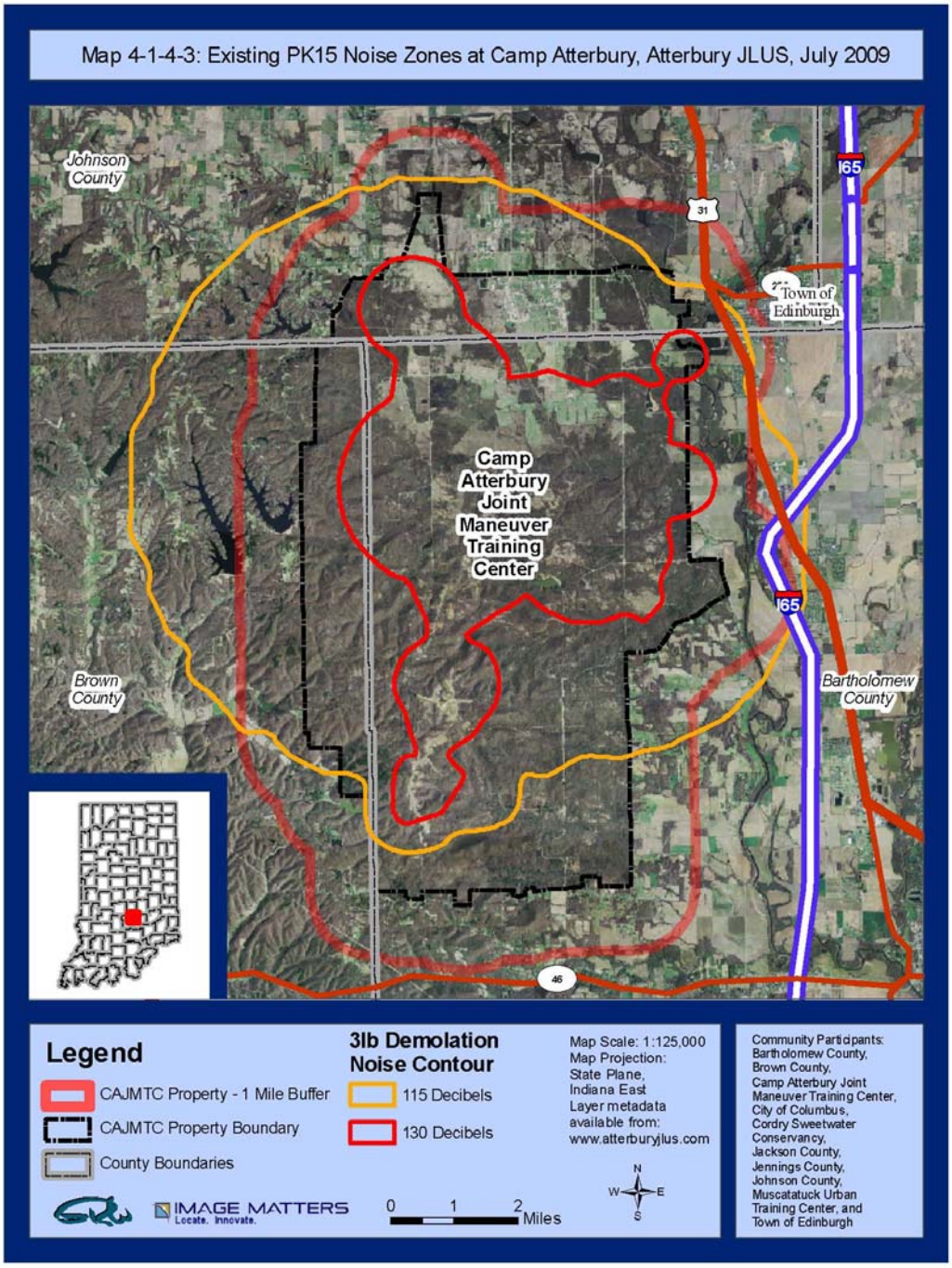
Map 4-1-4-1: CDNL Noise Zones w Aerial at Atterbury



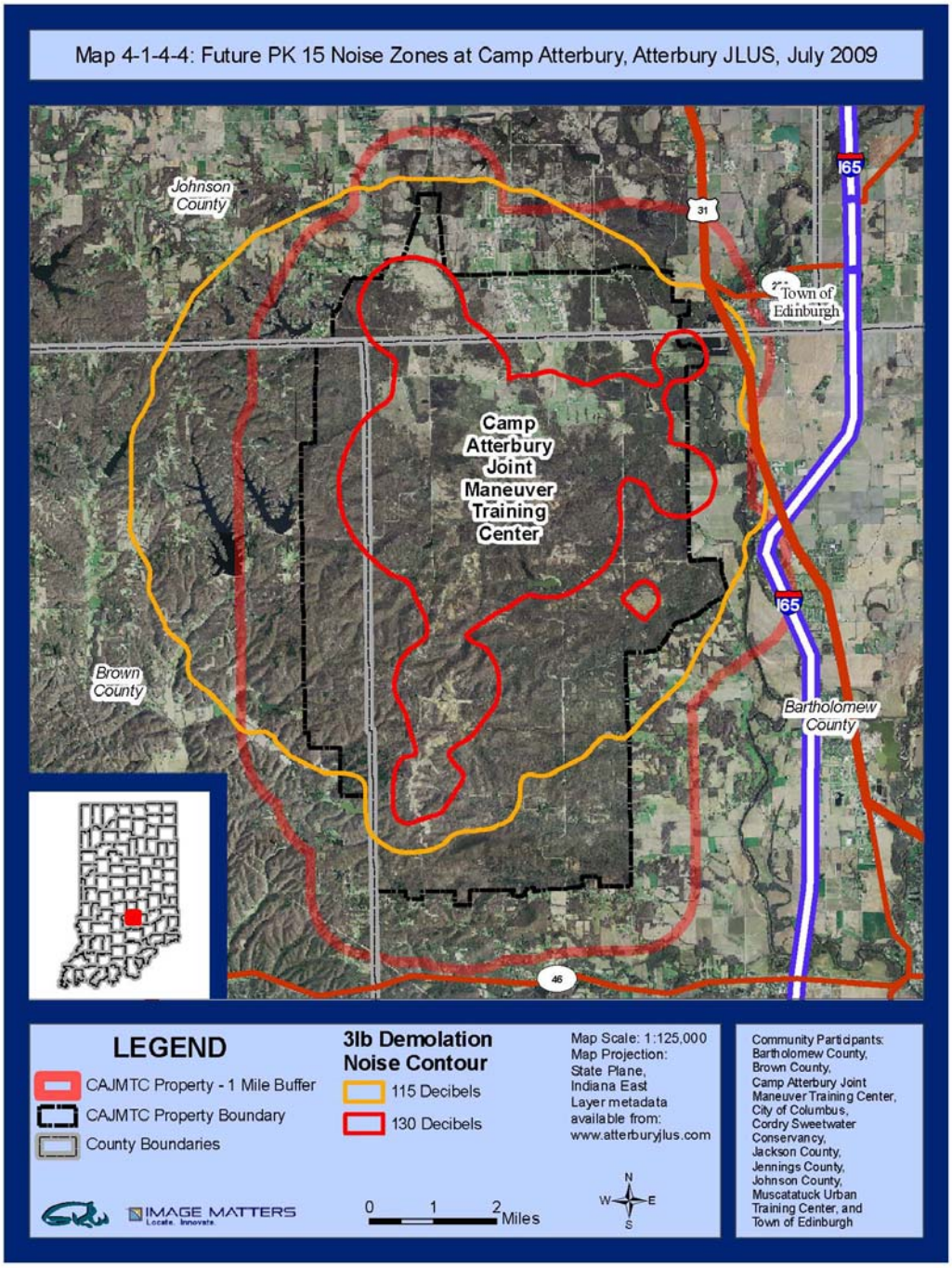
Map 4-1-4-2: CDNL Noise Zones w/ Land Cover at Atterbury



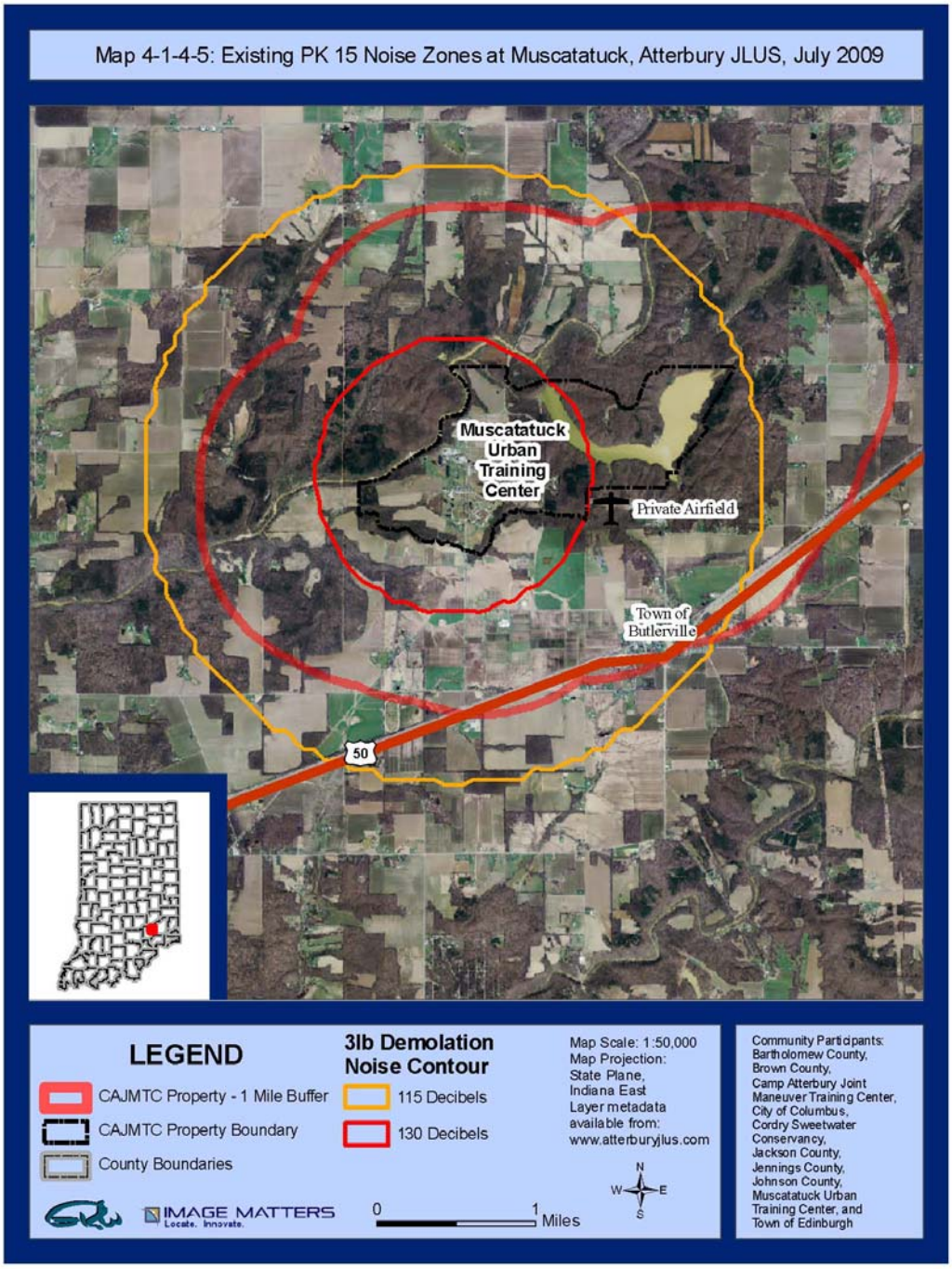
Map 4-1-4-3: Existing PK 15 Noise Zones at Camp Atterbury



Map 4-1-4-4: Future PK 15 Noise Zones at Camp Atterbury



Map 4-1-4-5: Existing PK 15 Noise Zones at Muscatatuck



4.1.5 Lighting

It is essential that modern military training involve night activities with pilots and ground forces using night vision goggles, designed to operate away from civilian light sources. Extraneous lighting from commercial and other civilian uses interferes with night training exercises. Stray light can cause an aviator temporarily to lose night vision. Lights directed upward are particularly onerous to pilots.

Hooded light fixtures that direct light down to the ground, where it is needed, can help reduce light pollution that may interfere with training missions.

As an urban training area, Muscatatuck may not require light standard adoption since most urban areas of operation may be expected to have ambient light.

4.1.6 Findings

Land Use

Land surrounding Camp Atterbury and Muscatatuck, within the one-mile buffer, is predominantly agricultural and/or or has some topographical or physical constraint to development as shown on Maps 4-2-2-1 and 4-2-2-2. This means the installations have some protection from incompatible land use and have become assets to the community as a whole.

While the general character of the communities is rural, a review of existing land use surrounding the installations identifies some areas of concern in other areas, including: safety, noise, transportation, and environmental concern.

Safety

As shown in Maps 4-1-3-1 through 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, and a yellow (pasture/hay) on Map 4-1-3, 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.

Noise

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.

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.

Transportation

The Indiana Department of Transportation, in the *U.S. 50 North Vernon Corridor Planning and Environmental Assessment Study*, identifies several potential issues relating to the use of U.S. Highway 50 for military purposes. The following are several points of concern taken from that report:

- In the year 2000 and 2006, the percent of truck traffic on US 50 through North Vernon and from North Vernon to the Jennings/Ripley County Line exceeded statewide standards for urban and rural principal arterials.

- Between the years 2000 and 2030, truck traffic on US 50 is forecasted to grow 141% to 368% increasing the percentage of trucks. Between years 2000 and 2030, daily truck traffic could increase from 1,754 trucks to 5,052 trucks west of North Vernon, 2,109 to 5,471 trucks through North Vernon, and 1,303 trucks to 4, 571 trucks east of North Vernon.

- The MUTC will train an additional 3,000 to 4,000 military personnel on a continual basis. While these personnel will be temporarily housed at the installation and will not leave the installation during training, they will arrive in convoys one weekday of each week. During an eight-hour period of one weekday, convoys of 11 to 20 vehicles with heavy equipment will arrive and depart the installation on 5 to 10 minute intervals. There is a high probability that traffic signals will be pre-empted as convoys pass through North Vernon during an eight-hour period. During this weekday, traffic flow through North Vernon will experience ever-increasing unacceptable traffic conditions as convoy traffic from 2007 increases to the year 2013. The accommodation of convoy traffic appears to be impractical with the existing roadway system unless the convoys are dispersing throughout the week during night hours.

Findings from Public Meetings/Comment

Summary of Comments for North Vernon Meeting and Muscatatuck area - Based on the comments collected, a major concern surrounding Muscatatuck Urban Training Center is noise. Noise levels and timeframes were significant issues addressed in several of the comments. The military operation noise between 2200 hours and 0700 hours is problematic and many voiced their hopes for a resolution.

Out of the ten comments submitted regarding travel in the area, seven showed concern with the north/south road access. Four mentioned they had trouble accessing their farmland due the width of guardrails or the closure of gates.

Summary of Comments for Edinburgh and Camp Atterbury area - Noise in the Camp Atterbury area has not been a major issue. Six of the nine comments praised Atterbury for the respect they had shown by keeping the noise to a minimum. Some community members stressed keeping noise levels the same as the military installation experiences future growth.

Findings from Local Leader and Military Personnel Surveys

Summary of Local Leader Survey

Based on the surveys collected, there are many unknowns about how Muscatatuck Urban Training Center has affected and is affecting the surrounding community. By contrast, an overwhelming majority of the local leaders agreed that Camp Atterbury is a significant contributor to their local economy.

Local leaders around both Camp Atterbury and Muscatatuck believe the military has plans in place to expand at the respective installations.

Regarding the Transportation Plan, most respondents considered the current and future use adequacy at both Camp Atterbury and Muscatatuck as "Unknown."

Notably, over half (52%) agreed that additional overlay zones are needed to protect community resources or special districts.

More than half (52%) feel that land use controls surrounding the installation are adequate.

More than half, 58%, believe their Comprehensive Plans recognize Atterbury, and 28% believe their Comprehensive Plans recognize Muscatatuck as a significant local resource; and in fact, none of the comprehensive plans of surrounding communities recognize Atterbury or Muscatatuck as a significant local resource.

Summary of Military Personnel Survey

The results from the military personnel surveys reflect that the overwhelming majority of the responders (98%) feels welcome and feels supported in the community. They expressed similar feelings for the military installation and its function.

The results show that most responders (where applicable) thought the local area provided adequate housing, schools, childcare, healthcare, entertainment, and commercial outlets for their needs.

Information regarding the public meetings/comments and the surveys can be found in Section 2.2 of this report.

4.2 Analysis of Future Impacts

4.2.1 Future Land Use Analysis

Existing land use incompatibilities may not be severe in most cases surrounding Camp Atterbury and Muscatatuck, but it has been determined that continued growth surrounding both Camp Atterbury and Muscatatuck is highly probable as a result of population growth and military operational expansion. Therefore, increased demand for housing may place pressures on the market to convert farmland into housing and supporting commercial development. Although currently the availability of land may be abundant, places like Columbus and Edinburgh will continue to expand their boundaries to include land that is currently unincorporated rural lands adjacent to the installation.

Road expansions may increase pressures to develop along corridors that may already be at risk of being incompatible. It is important to note that installation personnel, state, county, and city personnel, and others are not opposed to growth, transportation corridor expansions, or other forms of improvement in the area. Military personnel use the roads, live in the homes, and shop at the stores outside of the installations, just as other citizens in the area. It is important to recognize areas of potential impact in order to plan for and implement strategies that will facilitate the growth without having adverse impacts on the military mission or the surrounding communities.

Development in areas could affect the training and deployment mission of the installations. Housing nearer the border of Camp Atterbury for example, may have an effect on the training exercises of the military.

The US 31 and SR 46 corridors merit special note. US 31, from its interchange with I-65 northward to its intersection with Hospital Road/SR 252 would make a clean boundary separating commercial and residential development from land that would be appropriate to preserve, along the northwest border of Atterbury in Bartholomew and Johnson County. Much of the area is floodplain, limiting development opportunities. Commercial development on the west side of US 31 may be an appropriate use. Residential should be discouraged west of US 31 (see Section 5.0 Implementation Plan).

Similarly, along SR 46 in Bartholomew and Brown Counties, south of Atterbury, it would be appropriate to limit residential uses north of SR 46, to manage possible incompatible uses on the Atterbury south property line.

4.2.2 Development Constraints

There are certain development constraints that need to be considered in order to make proper land use decisions surrounding Camp Atterbury.

Table 4-2-2-1: Atterbury Development Constraints Acreage in 1 Mile Buffer

Region of 1-Mile Buffer	Total Area in 1-Mile Buffer	Constraint Types				Total Development Constraints*	Developable Land
		Flood Zones	Managed Areas	Lake / Pond	Cordry Sweetwater Conservancy		
Bartholomew County	9,720	2,990	719	101		3,046	6,674
Brown County	6,470	156	869	214	830	2,069	4,401
Johnson County	6,945	1,251	3,852	154		4,584	2,361
Entire Buffer	23,134	4,396	5,439	469	830	9,698	13,436

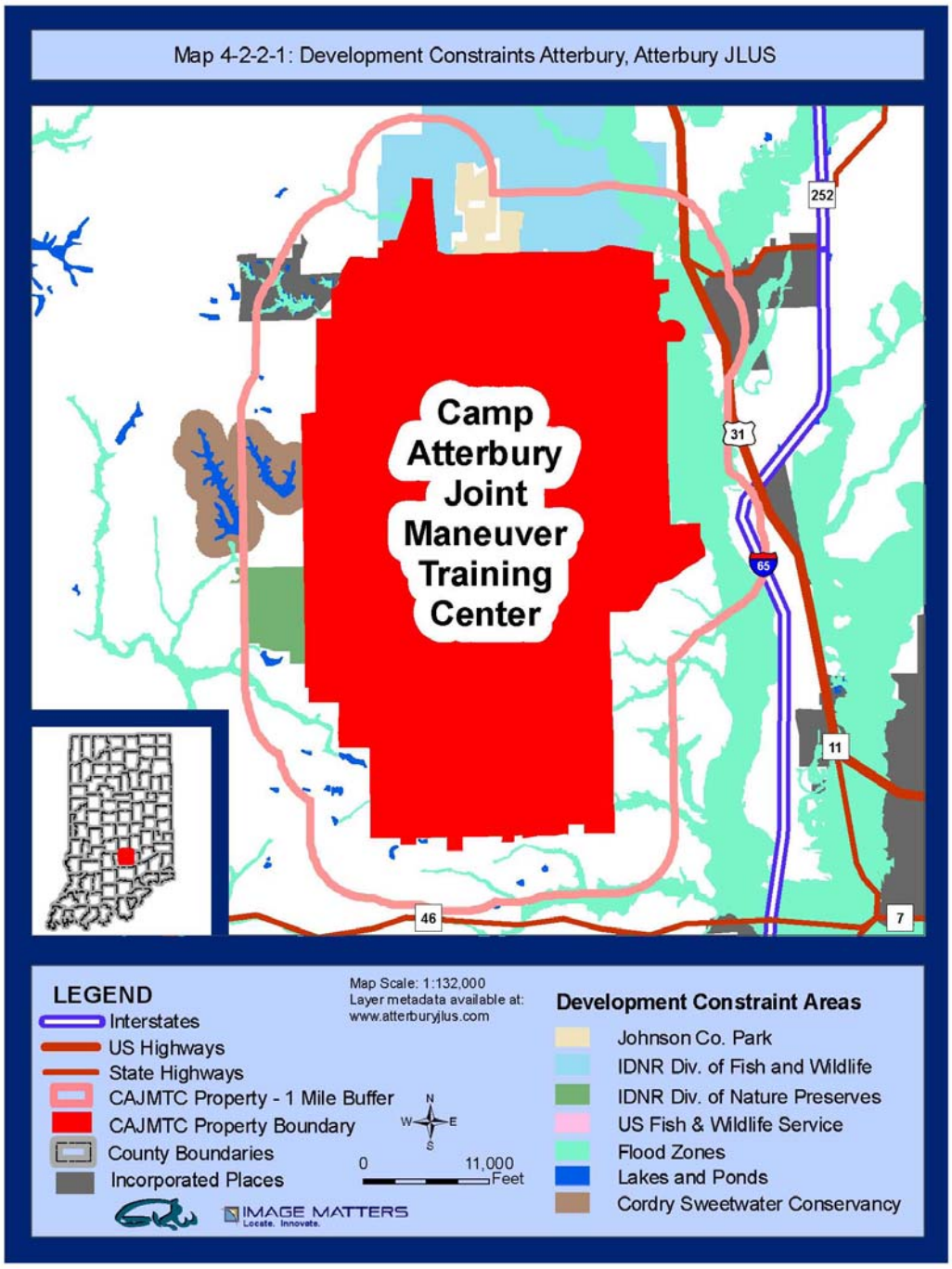
* Different Constraint Types may overlap in extent (e.g., a lake can be located in a managed area), thus the Total Development Constraints does not necessarily equal the sum of the individual Constraint Types.

Table 4-2-2-2: Muscatatuck Development Constraints Acreage in 1 Mile Buffer

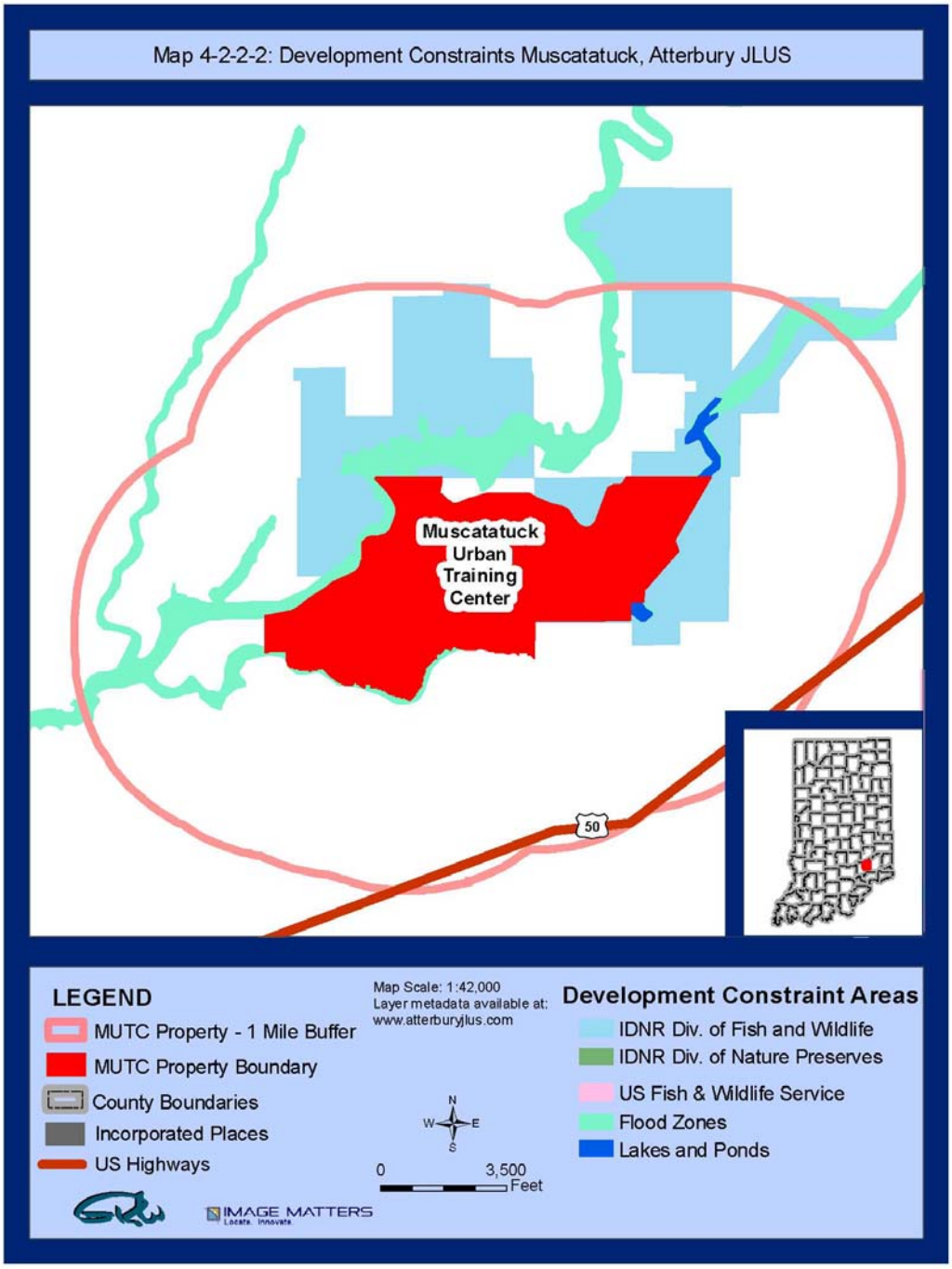
Region	Total Area in 1 mile Buffer	Constraint Types			Total Development Constraints*	Developable Land
		Flood Zones	Managed Areas	Lake / Pond		
Entire Buffer	5,950	509	1,270	22	1,575	4,375

* Different Constraint Types may overlap in extent (e.g., a lake can be located in a managed area), thus the Total Development Constraints does not necessarily equal the sum of the individual Constraint Types.

Map 4-2-2-1: Development Constraints Atterbury



Map 4-2-2-2: Development Constraints Muscatatuck



4.2.3 Environmental Concerns

Land Cover and Biological Resources – Land within the counties surrounding the installation is comprised mainly of undeveloped land. If populations were to increase as projected in surrounding counties, increased residential and commercial development would be expected and it is likely that a loss in agricultural lands will result rather than forest habitat loss. The majority of the forested land in the study area is within a conservation land area or in Brown County, which is projected to have a decrease in population. Therefore, forest impacts are anticipated to be minimal because of urban growth/expansion in the overall study area.

Increased development is likely to occur east of Camp Atterbury along the U.S. 31 corridor as well as the I-65 corridor. Small pockets of developed land are already present between the cities of Edinburgh and Columbus. These activities could result in some forest habitat loss in and around the Big Blue River and Driftwood River and their tributaries. Numerous known Indiana bat roost trees occur within the vicinity of these waterways (INARNG, 2009). Therefore, increased development could lead to both direct and indirect effects on the Indiana bat because of habitat loss and/or water quality degradation. However, because agricultural land use dominates and land planning/zoning is underway in these areas, it is anticipated that the effects to the Indiana bat will be limited.

Prime Farmland – A loss in agricultural lands and in turn prime farmland soils is anticipated with increased development. However, an effort is currently underway to limit these impacts to the extent possible as urban growth and expansion occur in the study area. Several land use management plans have been developed for portions of the study area that incorporate the need to maintain agricultural lands as development increases in the region, which should minimize the impacts to prime farmland.

In Johnson County, the U.S. 31 corridor will continue to be the primary focus of residential development along with pockets of light industrial and commercial development. This plan calls for maintaining farmland areas outside the U.S. 31 corridor.

The Columbus Indiana Comprehensive Plan, which separates the Columbus area into 13 planning areas, includes several land use planning principles pertaining to the preservation of agricultural lands as well as other natural land features. These principles include:

- Continued agricultural operations should be encouraged in the floodplain areas.
- Buffers should be provided between any new development and existing agricultural areas.
- Ensure that new development takes place in a manner that preserves natural features such as topography and wooded areas. Clustering should be encouraged.
- Plan for new parks and open space areas to accommodate a growing population.

The Jennings County Comprehensive Plan states that the majority of land in Jennings County is agricultural and it will remain agricultural for the near future (Jennings County, 1994). However, increased development in Butlerville, North Vernon and Jennings County area is anticipated. This anticipated growth would be managed through proper planning and zoning conducted at the local level.

Water Resources – Impacts to surface water features (e.g., streams, wetlands, and floodplains) and groundwater are anticipated with increased development. To minimize these impacts, land use planning efforts should consider maintaining riparian buffers along streams and rivers, preserving large wetland complexes, and avoiding development within floodplain areas. By following best management practices during and after construction, and implementing mitigation measures, as applicable, these water resources impacts can be minimized.

Air and Other Pollution Sources – Increased development would also be anticipated to increase air pollution emissions in the study area and increase the potential for water and soil pollution from hazardous wastes and materials. However, with proper planning and environmental conservation, and protection measures implemented, these impacts should be kept to less than significant levels.

Cultural Resources – A minor, adverse impact could occur to regional historic resources if new or expanded residential, commercial, or industrial development affects historic resources in the study area.

4.3 Impact Mitigation

4.3.1 Local opportunities to mitigate impacts

a. Maintain Comprehensive Plans

b. Adopt and enforce appropriate zoning and building permit regulations around the military installations and the airports

c. Adopt transportation plans to serve the economic activities of the community

d. Work cooperatively with affected stakeholders to protect the rights of property owners and preserve the military mission

e. Promote the military installation as a local resource worthy of preservation and as an economic engine

f. Use noise sensitivity and public health and safety factors in applying appropriate zoning and building regulations surrounding the military installations

g. Keep zoning maps updated and incorporate airport and military installation special circumstances on the maps

4.3.2 State opportunities to mitigate impacts

a. Protect the mission and land use of the military installation and other state and federal property

b. Provide incentives to reward business for locating near qualified military installations or military installation enhancement areas

c. Coordinate transportation improvement projects with military installation development plans

d. Mandate collaborative planning between military installations and local governments

e. Utilize Military Base Planning Council to communicate military plans to local government agencies and officials

4.3.3 Federal opportunities to mitigate impacts

a. Army Compatibility Tools

i. Installation Environmental Noise Management Plan

ii. Sustainable Ranges Initiative

iii. Joint Land Use Study program

iv. Establish Regional Partnerships

v. Range and Training Land Program

vi. Integrated Training Area Management (ITAM) Program

4.3.4 Opportunities to Mitigate Environmental impacts

On-going military training and associated mission activities can consume and potentially damage the natural resources on mission land. For this reason, the military must pro-actively manage their lands to avoid and/or minimize these impacts to ensure no net loss in training lands. The INARNG manages their training lands through the implementation of the Atterbury Integrated Natural Resources Management Plan (INRMP) and the Integrated Training Area Management (ITAM) program.

An Integrated Natural Resources Management Plan (INRMP) assimilates all aspects of installation natural resources management with the installation's military mission(s), such as: fish and wildlife management, threatened and endangered species management, water resources protection and management, wetland protection and management, forest management, fire management, invasive species and pest management, outdoor recreation, coastal zone management, and environmental awareness. An INRMP helps installation commanders manage natural resources more effectively to ensure that installation lands remain available and in good condition to support the installation's military mission. This Plan is required per the Sikes Act (16 USC §670a et seq., as amended) and the U.S. Army policy entitled *Army Goals and Implementing Guidance for Natural Resources Planning Level Surveys (PLS) and INRMP* (21 March 1997) for federally and non-federally controlled installations with significant natural resources, and is developed in cooperation with the USFWS and the State fish and wildlife agency (i.e., IDNR). The CAJMTC INRMP was last updated in 2008.

The Integrated Training Area Management (ITAM) program provides Army land managers with the capabilities to manage and maintain training and testing lands by integrating mission requirements with environmental requirements and environmental management practices. The objectives of the Army's ITAM program are to:

- Achieve optimal sustained use of lands for the execution of realistic training and testing by providing a sustainable core capability that balances usage, condition, and level of maintenance.

- Implement a management and decision-making process that integrates Army training and other mission requirements for land use with sound natural resources management.

- Advocate proactive conservation and land management practices by aligning Army training land management priorities with the Army training and readiness priorities.

The ITAM program is comprised of four proactive subprograms designed to facilitate these processes, which include:

- **Range And Training Land Analysis (RTLA)** – provides for the collecting, inventorying, monitoring, managing, and analyzing of tabular and spatial data concerning land conditions on an installation. The intent of RTLA is to collect essential natural resources baseline information that is needed to effectively manage training lands.

- **Training Requirements Integration (TRI)** - provides a decision support procedure that integrates training requirements with land management, training management, and natural and cultural resources management processes and data derived from RTLA and Army Conservation Program components. TRI matches a training activity with the most suitable site, and includes a rotation schedule for training lands. TRI also incorporates restrictions required to maintain site quality, protect significant natural resources and minimize land damage while providing a safe training environment.

- **Land Rehabilitation and Maintenance (LRAM)** – provides preventive and corrective land rehabilitation and maintenance to reduce long-term impacts of training on an installation. Training area rehabilitation uses a wide array of techniques to correct erosion features, minimize disturbance, and revegetate denuded areas. Rehabilitation areas may also be temporarily “off-limits” or protected through other restrictions. Techniques are specific to each project. Revegetation techniques use native plant species proven effective for erosion control.

  Sustainable Range Awareness (SRA) – promotes environmental stewardship stewardship and responsible use of natural resources on military lands. This educational program focuses on all land users including soldiers, leaders, civilians, and the local community, and serves to educate the public on the military mission’s natural resources needs and impacts.

Any new future operations, activities or construction that the INARNG proposes would be subject to future environmental impact analysis as required under Federal law. The INARNG would complete appropriate National Environmental Policy Act (NEPA)

documentation that evaluates the potential impacts of these additional expanded activities/locations. This subsequent analysis would equally consider all past, present, and reasonably foreseeable future actions within the Proposed Action's region of influence. Should these environmental impacts be considered significant, the INARNG would implement mitigation measures, as appropriate, to reduce these impacts to less than significant levels.

5.0 Implementation Plan

5.1 Introduction

The implementation of the JLUS recommendations will require a cooperative effort over a number of years. The plan will require local jurisdictions to work with the military in a concerted effort to avoid land use incompatibilities and preserve the military mission. Following the recommendations will protect public health, safety and quality of life while encouraging economic opportunities in the region. Land use compatibility management is the responsibility of the local jurisdictions. The local airports will be an important element. Military operational analysis and adjustments will be a critical component of the plan. The public must understand the military's economic impact and see that the military is working together to minimize areas of incompatibility. If local jurisdictions do not achieve sufficient progress in a reasonable time, the state may choose to intervene to expedite the process.

Section 5.6 contains an Implementation Matrix summarizing the Implementation Plan.

The plan makes specific recommendations to individual agencies or jurisdictions by category.

All JLUS Participants
Local Jurisdictions
Airports
State Government or General Assembly
Military or Federal Agencies

It identifies the compatibility goals and guiding principles driving the recommendation.

Preserve Military Operations
Develop Regional Partnerships
Encourage Economic Opportunities
Plan Coordination
Growth Management
Conservation
Flexible Land Use
Noise and Light Mitigation
Protect Public Health, Safety and Quality of Life

It suggests compatibility tools available for the item.

Memorandum of Understanding
Military Operations
Public Policy Initiatives
Legislation
Airport Initiatives
Noise Mitigation
Disclosures
Acquisitions

It addresses the timing and cost elements of the item.

Implementation Tiers

Tier 1	Implement within 1 year; effort minimal; initial step; potential land use incompatibility; general mission preservation.
Tier 2	Implement within 2 years; effort & resource allocation moderate; likely multi-agency involvement; second step; actual land use incompatibility; specific mission preservation.
Tier 3	Implement after 3 years; effort may be minimal to significant; # agencies may be singular to multi; implement only after other initiatives fail to produce desired results; significant land use incompatibility; critical mission preservation.

Implementation Costs

Level 1	Less than $10,000
Level 2	$10,000 to $100,000
Level 3	Greater than $100,000

It identifies the responsible agencies as either 1 = Primary, or 2 = Secondary. The responsible Agencies include:

Military or Federal Government	City of Columbus
State Government	Town of Edinburgh
Bartholomew County	Town of Prince's Lakes
Brown County	City of Seymour
Jackson County	Columbus Airport
Jennings County	North Vernon Airport
Johnson County	Seymour Airport

The following sections explain these elements.

5.2 Compatibility Goals and Guiding Principles

The implementation plan is driven by land use compatibility goals and management guiding principles. Each element may assist in assuring land use compatibility, mission preservation, or protection of public health and safety in its own way. These may be areas of opportunity to develop staff job descriptions. They may be used to state the purpose of interlocal agreements. They could further be used to identify the mission statements of the implementation authority.

Preserve Military Operations

Preservation of military operational mission is the most critical element for the military installation. It represents the use of the land in a manner appropriate for the training conducted and the occupation of the site. Significant investments have been made, and will continue, to assure the installations serve their intended purpose. The dynamics and history of each site present unique circumstances that must be addressed by JLUS participants.

Develop Regional Partnerships

Establishing regional partnerships and developing personal relationships among JLUS participants and affected stakeholders will enable transparent progress toward implementation. This includes formal partnerships established through interlocal agreements and informal partnerships established through personal networking.

Encourage Economic Opportunities

Participating agencies should consider incentives to encourage economic opportunities. As a significant land use, the military installations are economic engines for the surrounding communities. Successful implementation will encourage appropriate supporting land uses. Commercial opportunities serving the military mission should be encouraged in appropriate proximity to the property. Residential development will gravitate toward economic engines and must be properly managed to avoid incompatibilities. Additional economic opportunities exist in services, construction, and payroll taxes.

Plan Coordination

Coordination of plans among affected stakeholders will require dedicated effort and depend on the regional partnerships established. Military mission, land use planning, transportation planning, infrastructure and utility planning are all to be considered in this context.

Growth Management

Growth management refers to the responsibility of government agencies to monitor internal and external growth to avoid incompatibilities. Internal growth on the military's use of the property will be a function of the funding available for implementation programs and mission objectives. External growth, particularly land development, depends on local jurisdictions acknowledging the importance of the military installation in each of its comprehensive plans, subsequent zoning regulations, and building permit issuance.

Conservation

Conservation of undeveloped land surrounding the installations serves to protect land use incompatibilities and permits preservation of habitat. Proper management of conservation lands, particularly forest preservation, will help reduce noise impacts on surrounding property.

Flexible Land Use

Flexible land use refers to using creative land development opportunities for a particular development. Preserving green space and optimizing site design will minimize noise and environmental impacts. Encourage the use of landscaping, grading, clustering, screening, setback adjustment, building orientation or other site planning criteria.

Noise and Light Mitigation

Opportunities to reduce noise impact will help assure mission viability and help avoid land use incompatibilites. This is particularly important at Muscatatuck, where the site is relatively small and the mission evolving. Contrarily, Muscatatuck, as an urban training center where light sources should be expected, light mitigation may not be as crucial.

Protect Public Health, Safety and Quality of Life

The inherent responsibility of government agencies to protect the public drives numerous programs. Aircraft, ordnance, traffic, materials, and routine operations have the potential to create incompatibilities.

5.3 Compatibility Strategy Tools

Memorandum of Understanding

A Memorandum of Understanding (MOU) is a contract between two or more government agencies. They require approval of the governing body of the agency. They are also referred to as inter-local agreements.

An MOU is a formal agreement defining cooperation and coordination of expectations of the participating agencies. They may assign responsibilities and funding levels of the signatory agency. The MOUs for this program may be expected to outline the following issues:

- Coordination and collaboration by sharing information on specific local development proposals, such as rezoning and subdivision of land.

- Joint communication between participating jurisdictions, agencies and the military ensuring that residents, developers, business, and other local authorities have adequate information about military operations, possible impacts on surrounding lands, procedures to submit comments, and additional measures to promote land use compatibility around the military installations.

- Formal agreement on cooperative land use planning activities, such as implementation of the Camp Atterbury and Muscatatuck Joint Land Use Study recommendations.

Military Operations

Throughout this process and in the operations of the two sites, the local military leadership has shown its willingness to adjust operations to avoid incompatibilities. Their continuous evaluation of their activities and their on-going personal relationships with affected stakeholders will be a key element of a successful implementation of the JLUS recommendations.

Public Policy Initiatives

Numerous public policy initiatives are available to government agencies at all levels. These do not have to be formal to be effective.

At the federal level, the Endangered Species Act allows habitat conservation tools through the development of Natural Community Conservation Plans and Habitat Conservation Plans under section 10(a)(1)(B) of the Act. These tools identify and provide for the regional protection of plants, animals, and their habitats, while

allowing compatible and appropriate land use. These are appropriate species sustainability tools to consider.

At the state level, the Forest Legacy program and the numerous OCRA programs, described in Section 5.7 are attractive tools.

On the local level, any opportunity to engage stakeholders may produce positive results. Local understanding and enforcement of key legislative controls may require regular staff training to be most effective.

Legislation

Land use controls by local government include subdivision regulations, zoning ordinances, deed restrictions negotiated during development approval, and building code standards adapted to local conditions. Local legislation may also require real estate disclosures for areas identified to be impacted by military land uses. If local controls prove ineffective, state or federal intervention may be necessary.

Airport Initiatives

As individual economic engines, the airports have much to gain by working with the military to maximize benefits. Careful consideration will be necessary to balance the military and civilian customer bases.

Noise Mitigation

Noise mitigation measures will help assure good neighbors. Various noise mitigation measures may be employed to alleviate incompatibilities for existing and future land uses.

Construction standards and building codes that control the design, the construction process, the materials, the alteration and occupancy of structures should ensure human safety and welfare in the noise-affected zones. Buildings should be designed for structural safety and sound attenuation where appropriate.

Key considerations of sound attenuation include:

- Avoidance of noise sensitive uses within the areas identified to be existing or future noise sources.

- Discourage and legislatively prevent residential development, schools, hospitals and other noise sensitive land uses in the buffer areas surrounding the installations, as appropriate.

- Acknowledge the cumulative effect of noise on surrounding property and land uses. The Air Installation Compatible Use Zone (AICUZ) program incorporates noise levels for flight operations, but does not consider other sound generators, such as routine operations, traffic, industrial, or recreational activity.

- Daily average noise levels (DNL) are the federally suggested mechanism to establish land use controls. In some circumstances, it may be appropriate to consider peak noise levels, particularly where minimal occupancy or excessive noise activity are minimized by annual averaging.

- Retrofitting existing structures is expensive and often cost prohibitive.

Disclosures

Real estate disclosures for property transfers within the one-mile buffer and the airport safety zones are some of the most practical and effective tools to put future property owners on notice of the military operations that may not be apparent at the time of sale or site visit. They protect the buyer, seller, and sales agent from potential litigation resulting from existing and future conditions.

Acquisitions

Private property rights are constitutionally guaranteed. Property rights include the right to possess, use, develop, lease, or sell the land. These rights may be obtained through donation, easement, or purchase for public purpose. Acquisitions may incorporate any of the following:

- Fee Simple Acquisition. This represents purchasing all rights to property and includes transfer of the deed to the land. It is the most costly and will generally be used for critical mission preservation, endangered habitat preservation or open space preservation. A willing seller makes this an attractive option where the land value can be agreed.

- Fee simple/Leaseback. A government agency may purchase land outright and lease it back to private interests. It allows for agreed upon uses that are compatible with the military mission and JLUS goals.

- Conservation Easement. Conservation easements may be used to protect a buffer, natural resource, open space, or agricultural land value by preserving its current state. The owner maintains the right to use the property under agreed upon conditions of the easement. These easements may be obtained through donation or purchase. Federal tax deductions may be available under some circumstances. These may also be used to avoid noise incompatibilities. Conservation easements are a cost effective tool to avoid fee simple acquisition.

- Lease. Where landowners may not be in a position to commit permanently to other mechanisms, leases may be an appropriate tool to avoid incompatibilities. Favorable negotiated terms and long-term commitments may be reached. Leases are available for government agencies, non-profits, land trusts, or private parties.

- Management Agreements. Short-term management agreements may be appropriate mechanism to employ. They may be done while more comprehensive negotiations for additional rights are being considered. Options to purchase may be considered under this option.

- Eminent Domain. This is required where local government must acquire land from an unwilling seller for a stated public purpose. Indiana Code defines the process for various agencies having this authority. It requires land appraisals to determine fair market value. The statutes may allow for consideration of economic damages to determine value. This is the least desirable mechanism to obtain land use rights.

5.4 Implementation Tiers and Costs

Implementation Tiers

Implementation Tiers are an indication of the timing, level of effort, resource allocation, the number of agencies, the degree of land use incompatibility, and the criticality of mission preservation. Some overlap in interpretation is inherent.

Implementation tiers provide guidance on when an item should be acted upon. They are neither explicit nor exclusive guidelines. Any of the conditions identified could trigger the action. It is assumed the affected parties will work together to achieve mutually desired results.

Tier 1	Implement within 1 year; effort minimal; initial step; potential land use incompatibility; general mission preservation.
Tier 2	Implement within 2 years; effort & resource allocation moderate; likely multi-agency involvement; second step; actual land use incompatibility; specific mission preservation.
Tier 3	Implement after 3 years; effort may be minimal to significant; # agencies may be singular to multi; implement only after other initiatives fail to produce desired results; significant land use incompatibility; critical mission preservation.

Implementation Costs

The cost to implement an initiative will also affect the ability of jurisdictions to take action. The level of funding is an order of magnitude estimate for each individual agency to implement a specific initiative. It does not include staff salary costs.

Level 1	Less than $10,000
Level 2	$10,000 to $100,000
Level 3	Greater than $100,000

5.5 Recommendations

5.5.1 Recommendations for All JLUS Participants

1. Establish JLUS Implementation Authority.

   The participating agencies have put at least two years into the development of the JLUS. Establishing a formal entity to continue the effort will be a key element to future success. Initial participation should include key members of the JLUS Policy and Technical Committees and other key land use jurisdictional decision representatives that may not have actively participated in the JLUS.

   The goals of the local authority should include:

   A. Meet regularly (1 or 2 times per year minimum).
   B. Share information on issues relevant to the findings of the JLUS such as noise, safety, lighting, planning, zoning, and development of real property.
   C. Report to governing agencies on JLUS implementation progress and receive reports from local jurisdictions on individual implementation progress.
   D. Encourage economic opportunities for the region.
   E. Encourage infrastructure planning on a regional basis.
   F. Take steps to assure the recommendations of the JLUS are implemented on a timely basis.
   G. Formalize financial commitments for joint projects.
   H. Enter into contracts for service to implement mutually beneficial elements of the plan.
   I. Establish regional partnerships to preserve the military mission and meet the goals of the JLUS such as protecting public health and safety, preserving community character and other objectives of the JLUS.

   Several options exist to establish a JLUS Implementation Authority.

   A. Form an Ad-hoc Organization. This is the easiest to implement, but has limited authority. Its informality risks the possibility that the parties may not accomplish the stated objectives with limited motivation to participate.

   B. Execute an Interlocal Cooperation Agreement under I.C. 36-1-7. This is a Memorandum of Understanding that could be used to establish authority for accomplishing stated tasks. Nothing in the statute indicates that such an agreement cannot allow for contracting authority. I.C. 36-1-7-2 states “a power that may be exercised by an Indiana political subdivision…may be exercised by one or more entities on behalf of the others; or jointly by

the entities." If the entities form a separate legal entity under I.C. 36-1-7-3 then that legal entity should have contracting authority if the members specify that as one of its powers. Local jurisdictions would be advised to consult their municipal attorneys and purchasing experts about what procurement rules might apply to the newly formed entity. The agreement could possibly just spell out the procedures that would be used.

i. There are additional requirements in I.C. 36-1-7 addressing when the Attorney General must approve an Interlocal agreement and that the agreement must be recorded with the County recorder to be in effect.

C. Form a Local Development Authority under I.C. 36-7.6-2. A local development authority, once established, is a separate body corporate and politic. It is a standalone entity that can sue and be sued in its own name, enter into contracts, etc. I.C. 36-7.6-3 privides a more lengthy discussion of a local development authority's powers.

i. The requirements to form a local development authority are more stringent than for an interlocal agreement. I.C. 36-7.6-2-3 spells out the requirements. The formation of local development authorities is governed by economic growth regions (established by the state Department of Workforce Development, often referred to as workforce regions). Counties must be in the same economic growth region or be contiguous to the economic growth region to form a local development authority. The counties in the JLUS area are in three different economic growth regions. Additionally, a county can only be in one local development authority and there can be no more than two local development authorities in any particular economic growth region. The communities would have to advise if they already participate in another local development authority or how many exist in their region. While it has more powers, it might be hard to make the situation fit within the statutory parameters without special legislation.

D. Establish a Joint District for Planning and Zoning under I.C. 36-7-5.1. Activities of the joint district are limited to planning and zoning activities and would not accomplish all the objectives/duties desired for the JLUS implementation.

2. Adopt electronic data storage standards.

a. All entities should implement electronic data storage and retrieval methods for planning, zoning, building permits and other information determined to be in the common interest of the communities and the military.

i. Agree to electronic data formats for exchange between agencies.

ii. Agree to maintain appropriate data on a timely basis and exchange with other parties at agreed upon intervals.

3. Establish GIS website for project participants.

   A. Develop and maintain a GIS system that serves as a data warehouse for planning, land use, and other information to allow participating agencies to keep informed of each other's plans and implementation schedules.

4. Execute Memorandums of Understanding to formalize JLUS implementation.

   A. The MOUs may be used as interim measures to informally implement JLUS recommendations while allowing the various parties to initiate the process of adopting local regulations. In the event the adoption of regulations does not proceed in a timely manner, the state or the military may choose to implement specific recommendations through state legislation.

   B. Add a military representative to local plan commissions and airport authorities as an ex-officio member. Adding a non-voting representative of the military to local plan commissions would fulfill the goals of IC 36-7-30.1-3 (described in Section 4.1.1) by improving the opportunity for dialog between the military and local jurisdictions. Initially, this could be done voluntarily by the local jurisdictions without the MOU. Formal requirements could be done, if necessary, through state legislation.

   C. Establish regional partnerships and adopt Memorandums of Understanding (MOU) under Indiana Code 36-1-7 Interlocal Cooperation between agencies. IC 36-1-7 permits units of government to enter into binding agreements with other government agencies. Begin negotiations to adopt MOUs with local governments, the military, and the state. Concepts to consider include:

      i. Establish the JLUS Implementation Authority

      ii. Specify actions, timelines, financial commitments, data storage and formats for information exchange

      iii. Require annual reports of land use activities potentially affecting the installation and its mission

      iv. Agree to funding levels of website development and maintenance, timely posting of information to website

v. Establish regular meeting schedules

vi. Adopt community activity calendars to inform and coordinate activities that may cause conflicts between agencies

vii. Provide jurisdictional updates on JLUS recommendation implementation progress

5. Exchange information on annual basis to communicate JLUS issues identified and encountered and to communicate land use and military operational updates.

6. Coordinate infrastructure policies to provide services and avoid incompatibilities.

   A. Meet regularly to coordinate utility and transportation planning.

   B. Coordinate infrastructure policy to provide services where land use compatibility exists and away from areas where incompatibilities may develop.

5.5.2 Recommendations for Local Jurisdictions

1. Appoint military representative to local Plan Commissions & Airport Boards.

   This item is described in recommendation 4.B, above.

2. Update Comprehensive Plans to recognize military installations.

   a. Update Comprehensive Plans through Area Plans, Policy Statements, or other appropriate mechanisms to recognize the special circumstances surrounding the military installation, to preserve its mission, to minimize incompatibilities, to promote compatibility goals, and to acknowledge its economic impact.

   b. The local jurisdiction Comprehensive Plans all need to mention the military installation in a manner that would be meaningful to make surrounding land use decisions that are defensible for preserving the military mission, protecting public health, safety, and property rights, and accomplishing stated JLUS objectives.

   c. The Comprehensive Plans should make definitive statements on the adoption of overlay zoning surrounding the military installations.

3. Implement electronic data storage and retrieval.

Local jurisdictions need to undertake a concerted effort to implement electronic data storage and retrieval systems.

A. Implement electronic data storage and retrieval for all planning, zoning, and building permit information in agreed formats for data exchange between the parties. Contractually assure that the local government unit owns the electronic data created and controls the storage and retrieval process.

4. Update zoning maps to GIS or other electronic format.

A. Update zoning maps in the areas surrounding the installations to GIS or other appropriate and agreed upon electronic formats for easy reproduction and exchange (Columbus, Edinburgh, Prince's Lakes, Seymour, Bartholomew County, Brown County, Jackson County, Jennings County, and Johnson County).

B. Add map graphics to local zoning maps to reflect the state (IC 8-21-10) and FAA standards for height restrictions with accompanying exhibits indicating the extent of the imaginary surface, which may extend 20,000 feet from the end of airport runways.

5. Provide military an annual report on the local activities of mutual interest between the parties and the expectations for the coming year.

6. Implement Military Installation Overlay Zones.

Overlay Zone Considerations

A good example of an overlay zone can be found for Ft. Campbell, Kentucky in Appendix 4.4 in OEA document *Practical Guide to Compatible Civilian Development Near Military Installations*. The ordinance contains language that is applicable for Atterbury and Muscatatuck JLUS participants to consider. It contains a thorough list of land use compatibility tables for each zone by airport accident potential zone and day-night-noise level (DNL). It establishes standards for 24-hour occupancy rates of developed property based on the safety and noise levels. It addresses building permits for non-conforming uses. It also discusses using building codes to reduce noise levels in occupied buildings.

Appendix 2.2 of the OEA guide contains complete tables of compatible land uses for noise, safety and other factors and should be consulted prior to local ordinance enactment.

The intention here is not to completely define the issues and boundaries of what overlay zones may be appropriate for each entity. It is to identify the issues

acknowledged through the JLUS study. Overlay zones are appropriate to consider to avoid land use incompatibility in the one-mile buffer, in the noise zones, and in the safety zones. The study assumes that Comprehensive Plan updates and the stakeholder discussions associated with those updates will determine the overlay zone particulars for each case.

The proposed overlay zone maps indicate 1-mile and 3-mile buffers around Atterbury and Muscatatuck for illustration only. These may or may not be the final agreed upon overlay boundaries. Generally, the 1-mile buffer is the area where land use controls are appropriate to consider, along with the noise contours. The 3-mile buffer is appropriate to consider around Atterbury for lighting controls and around Muscatatuck for the area to be canvassed coordinating helicopter flight paths. The maps show public land survey section lines to assist local leaders in evaluating the proposed overlay zone boundaries as they relate to parcels and other factors.

1. Comply with the compatibility uses for noise shown in JLUS Table 4-1-4-4.

2. Comply with the airport safety zone compatibility uses shown in JLUS Table 4-1-3-1.

3. Adopt vertical obstruction restrictions within the 1-mile buffer around the installations and within the helicopter flight paths.

4. Adapt outdoor lighting standards for agricultural, commercial, industrial, and residential zones within a 3-mile buffer of the Atterbury installation boundary to reduce light pollution affecting military operations.

5. Restrict growth in the area surrounding the military installations to land uses deemed compatible with the military mission and to protect the health, safety and quality of life of the public.

6. Restrict livestock in agricultural zones within the LUPZ contour and 115 dB peak occurrence.

7. Implement airport overlay zones based on future noise monitoring results. Establish noise and safety criteria for land uses surrounding airports in accordance with JLUS findings.

8. Allow flexible site planning such as clustering, green space preservation, Planned Unit Development or adjustment of setbacks and other controls to permit incorporating screening and sound absorbing landscaping to minimize noise impacts.

9. Require building designs that incorporate noise attenuation within the LUPZ and 115 dB contour.

10. Encourage green space and habitat preservation to increase buffer area between habitable land and noise sources.

11. Encourage forest preservation between habitable land and noise sources.

12. Limit residential densities in areas closest to noise sources and within the 1-mile buffer in accordance with JLUS findings and other appropriate resources.

13. Require real estate disclosures for land transactions within the 1-mile buffer and airport safety zones. Real estate disclosures for land use changes or building permits issued to non-compatible uses in the areas identified in the study should be adjusted from time to time. Disclosures should acknowledge installation proximity and include language waiving remonstrance against military installation operations, particularly those identified in state law such as noise pollution and telecommunications interference.

In addition to the recommendations listed above, further considerations for each individual jurisdiction may be appropriate. Please refer to Maps 5-5-2-1 through 5-5-2-6 for illustrations of the proposed overlay zones for each jurisdiction.

Bartholomew County Map 5-5-2-1

- Preserve forest and agricultural uses north of S.R. 46 from the county line into Columbus municipal boundary.
- Preserve forest and agricultural uses between Atterbury boundary and Interstate 65.
- Keep residential and noise sensitive uses east of Interstate 65.
- Develop noise-screening standards along the east boundary of Atterbury.
- Encourage land conservation in the 1-mile buffer around the Atterbury site.
- Restrict noise sensitive uses in the 1-mile buffer.

Brown County Map 5-5-2-2

- Encourage land conservation in the 1-mile buffer around the Atterbury site.

- Limit density of Residential 2 ridge top and roadway developments and incorporate real estate disclosures into plat and property transfers within the 1-mile buffer and the 115 dB contour.
- Restrict noise sensitive uses in the 1-mile buffer.

Edinburgh and Joint District Map 5-5-2-3

- Encourage land conservation in the 1-mile buffer around the Atterbury site.
- Enact building code noise attenuation for developments and new building permits issued within the LUPZ and 115 dB contours.
- Keep residential and noise sensitive uses east of U.S. 31.
- Clarify the zoning in the areas listed as Edinburgh Buffer in Johnson County.
- Restrict noise sensitive uses in the 1-mile buffer.

Jennings County Map 5-5-2-4

- Preserve agriculture uses in the 3-mile buffer.
- Enact building code noise attenuation for developments and new building permits issued within the LUPZ and 115 dB contours.
- Encourage land conservation in the 1-mile buffer around the Muscatatuck site.
- Restrict noise sensitive uses in the 1-mile buffer.

Johnson County Map 5-5-2-5

- Encourage land conservation in the 1-mile buffer around the Atterbury site.
- Enact building code noise attenuation for developments and new building permits issued within the LUPZ and 115 dB contours.
- Clarify the zoning in the areas listed as Edinburgh Buffer in Johnson County.
- Reconsider the Rural Residential and R-1 zoning in the 1-mile and 3-mile buffers.
- Restrict noise sensitive uses in the 1-mile buffer.

Prince's Lakes Map 5-5-2-6

- Encourage land conservation in the 1-mile buffer around the Atterbury site.
- Enact building code noise attenuation for developments and new building permits issued within the LUPZ and 115 dB contours.
- Restrict noise sensitive uses in the 1-mile buffer.

5.5.3 Recommendations for Airports

1. Adopt state and federal standards for height restrictions with accompanying exhibits into local zoning codes and maps.

2. Develop noise modeling at the airports incorporating military use of the airfields to assist in establishing appropriate land use and zoning at appropriate distances from the property. This may be possible through the military AICUZ program.

3. Present and support legislative actions recognizing joint use civilian/military airports special circumstances.

4. Present and support DOD, TSA, and FAA actions recognizing joint use civilian/military airports require capital development funding from multiple federal agencies.

5.5.4 Recommendations for State Government or General Assembly

1. Clarify that Atterbury and Muscatatuck are defined as military bases under IC 34-30-21 Military Bases: Immunity for Noise Pollution and Telecommunications Interference.

    a. There are no definitions included under IC 34-X-X. Atterbury and Muscatatuck are clearly included in IC 4-3-21 Military Base Planning Council statute and clearly excluded in IC 36-7-30.1 Planning and Zoning Affecting Military Bases.

2. Adopt legislation recognizing military installations are government resources worthy of special merit.

3. Consider adding Atterbury and Muscatatuck to the definition of Military Base in IC 36-7-30.1 Planning and Zoning Affecting Military Bases.

    a. Requires base commander notification for land use and building permits within 3 miles of a military base.

        i. Consider the appropriate buffer areas for base commander notification around Atterbury and Muscatatuck. 3 miles may be too large, Campbell Township in Jennings County would be an appropriate boundary to consider, and various counties around Atterbury may have opinions about appropriate distance.

        ii. Prevents local jurisdictions from taking action to allow land use changes issuing building permits within 3 miles of a base where the proposed use is determined to have an adverse impact on the operation of the military base.

4. Include Atterbury Muscatatuck JLUS Policy & Technical Committee members in Military Base Planning Council meeting invitations.

5.5.5 Recommendations for Military or Federal Entities

1. Maintain current Installation Environmental Noise Management Plan.

2. Continue to incorporate noise mitigation measures into operations.

    A. Continue using dedicated corridors and visual flight rules to minimize effects of aircraft noise.

    B. Continue using restrict aircraft altitude flying over urbanized areas to unobtrusive levels.

    C. Continue to avoid residences, buildings, and sensitive agricultural structures during flights.

    D. Continue to avoid properties where excessive noise complaints originate.

3. Assess military operations to minimize incompatibilities.

4. Work with local airport authorities on policies concerning MOAs.

5. Establish a noise monitoring system for Atterbury and Muscatatuck to assist in land use planning recommendations.

6. Develop sustainability initiatives to preserve and protect military mission, local communities, and the environment through available military programs.

7. Implement Army Compatible Use Buffer to collaborate with non-Federal agencies or private organizations to conserve land and to prevent development of critical open areas.

8. Work with state and local transportation officials to expedite US 50 North Vernon Improvements.

9. Conduct public outreach to MUTC neighbors within 3 miles to work out operational issues, especially regarding rotary wing aircraft operations.

10. Provide opportunities for North Vernon Airport input on rotary wing operations.

11. Consider adjusting military operations to respond to reasonable calls from area on noise and safety impacts.

12. Provide opportunities for public input on significant changes to military operations concerning noise, safety and quality of life issues.

13. Consider public outreach or public service announcements to inform area residents that military will try to adjust or restrict low flying aircraft and provide advance notice of restricted recreational use of Brush Creek Reservoir.

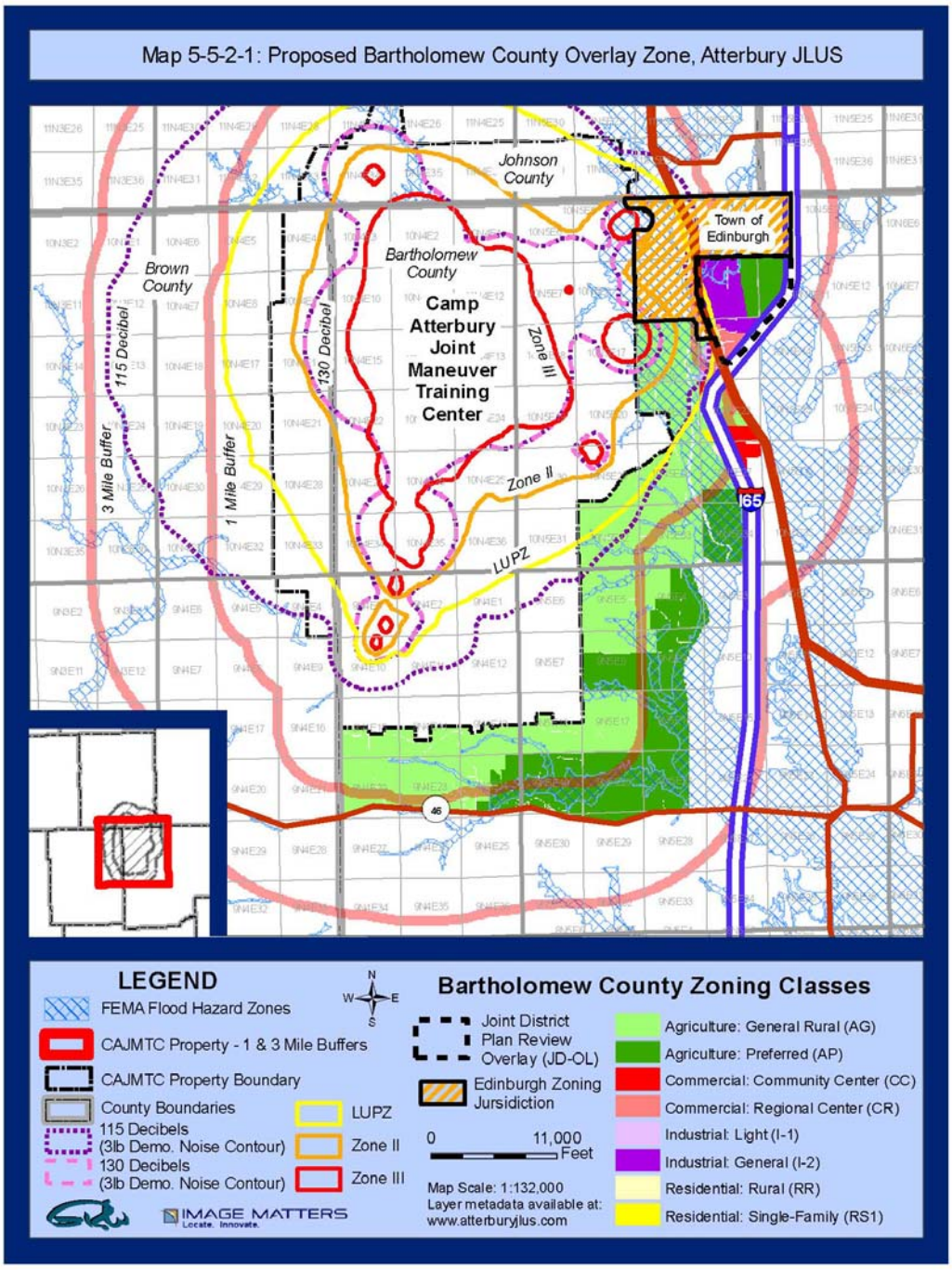
14. Continue to conduct "How to do Business with the Military" programs for local companies and organizations.

15. Assist local governments with implementation of GIS technology.

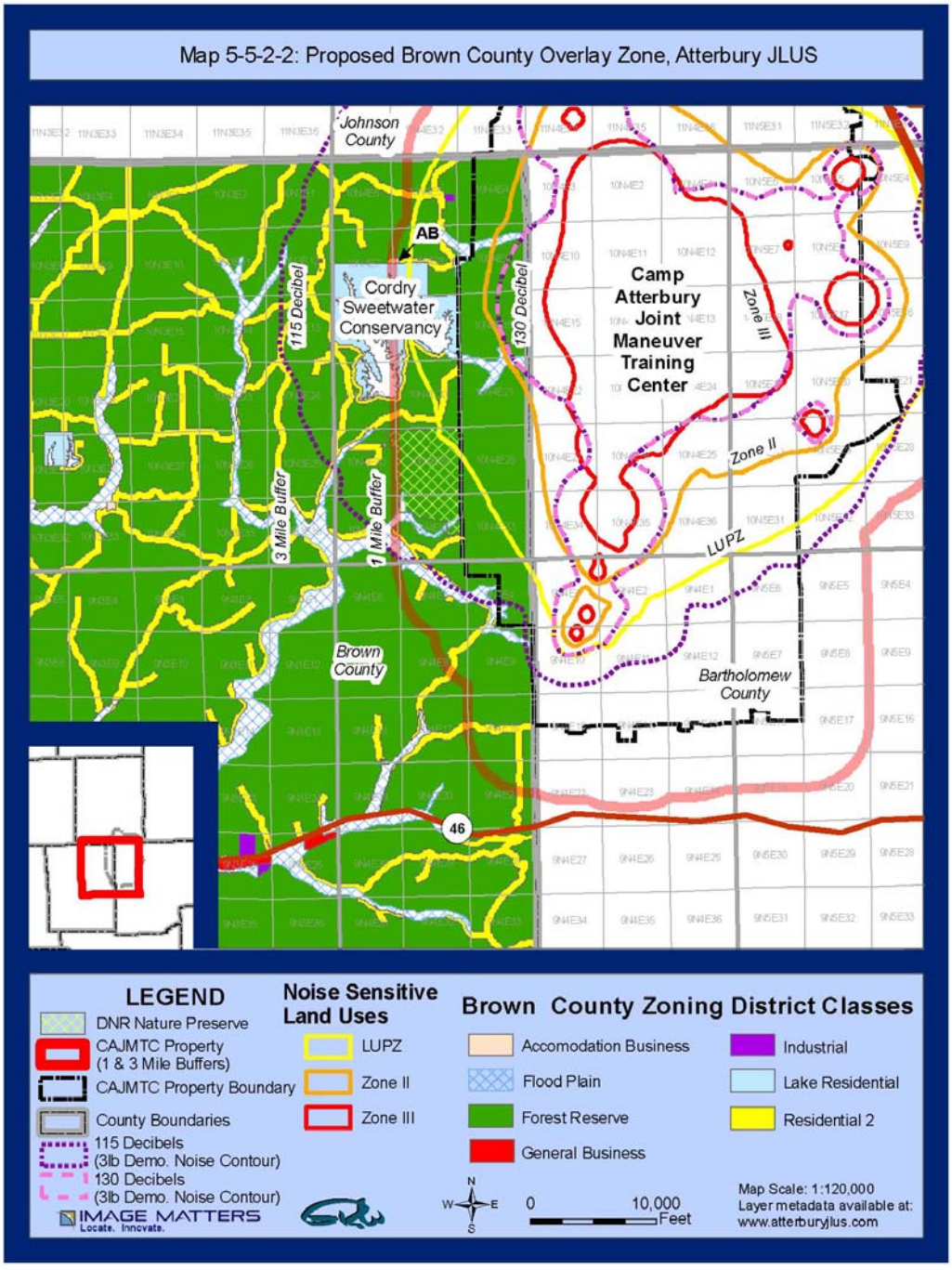
    a. Provide local governments with hardcopy maps and digital geospatial data relating dedicated flight corridors, noise contours, and provide updates as changes occur.

16. Provide local governments an annual report on the installation activities of mutual interest between the parties and the expectations for the coming year.

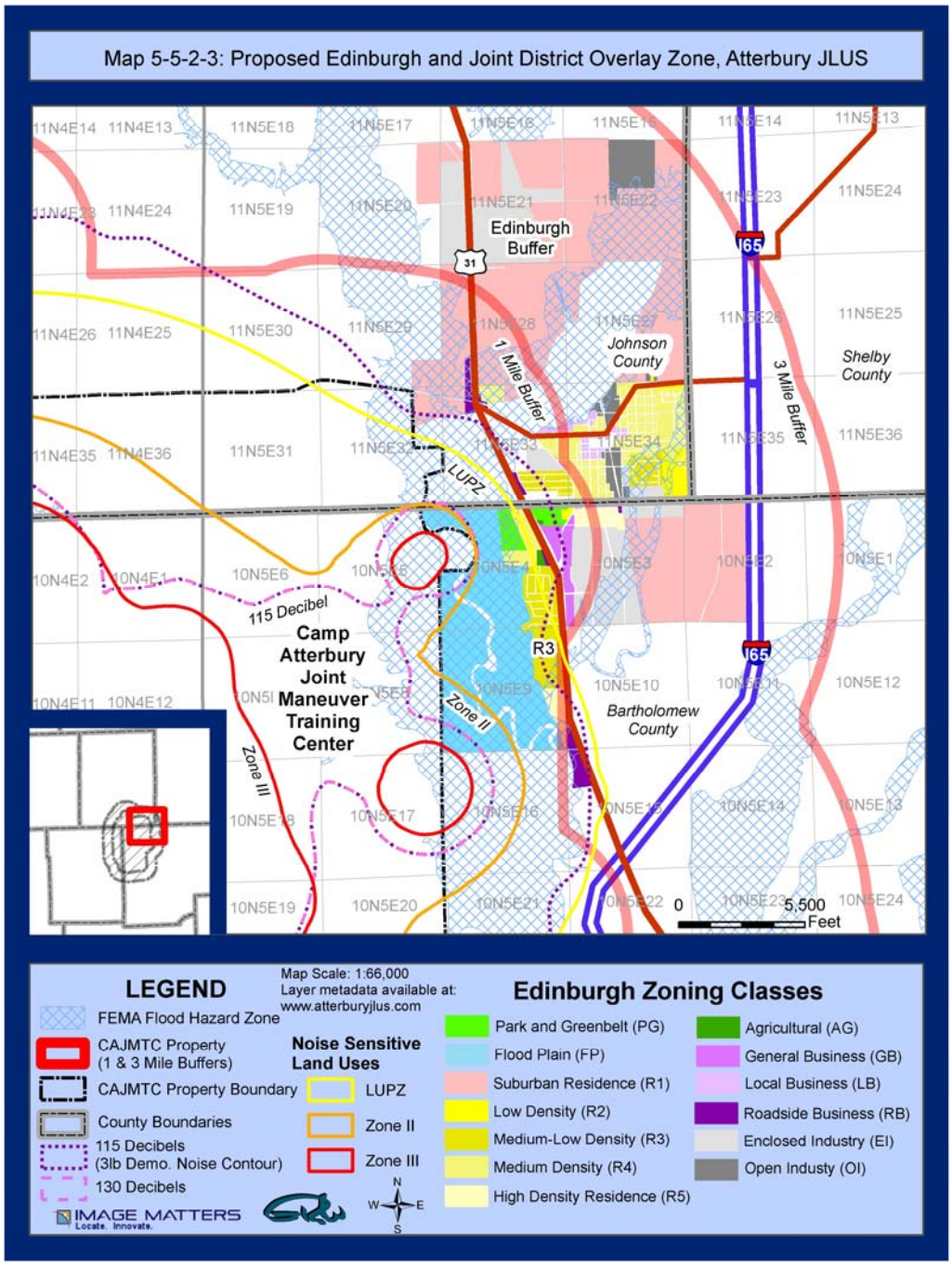
Map 5-5-2-1: Proposed Bartholomew County Overlay Zone



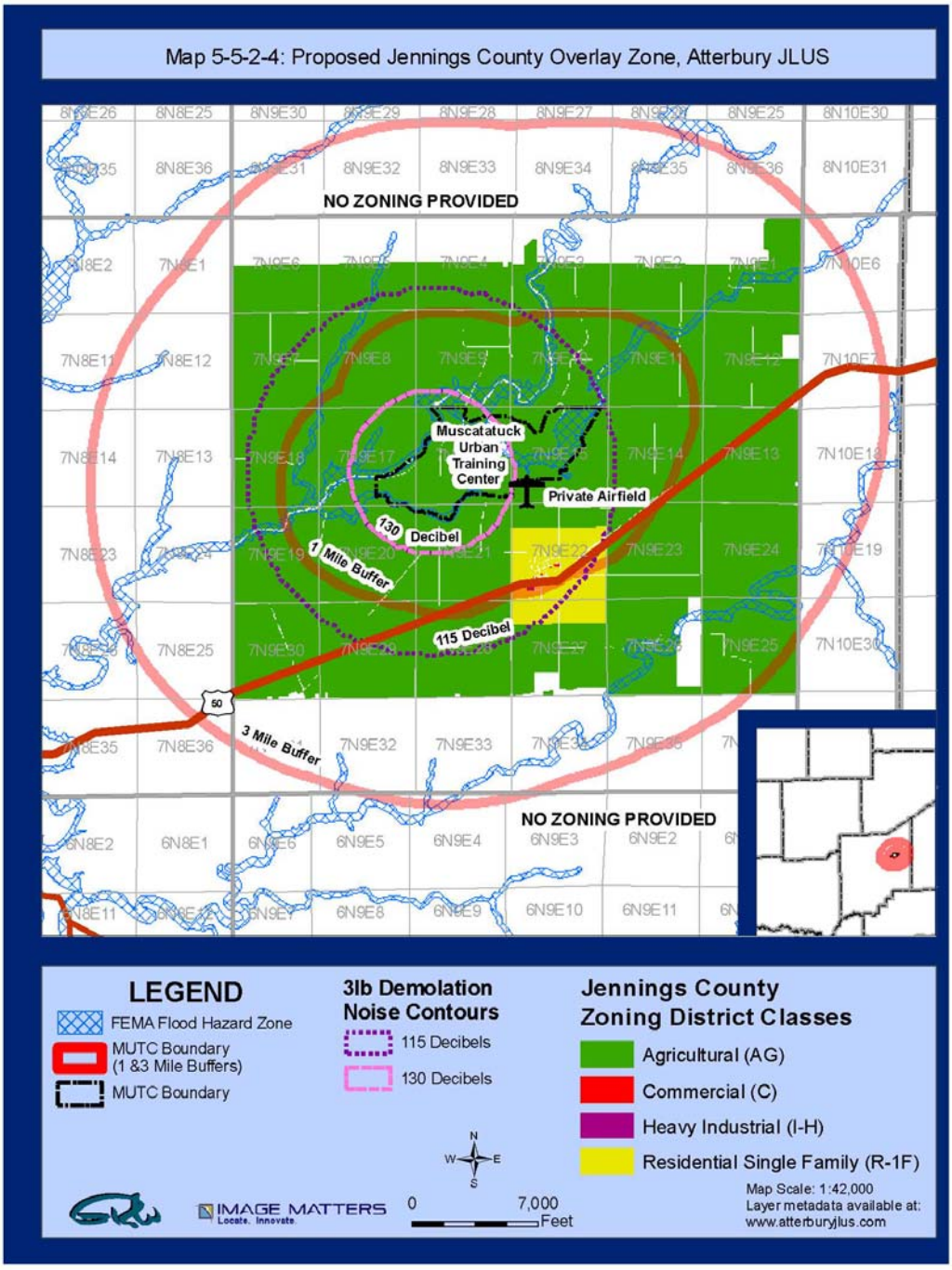
Map 5-5-2-2: Proposed Brown County Overlay Zone



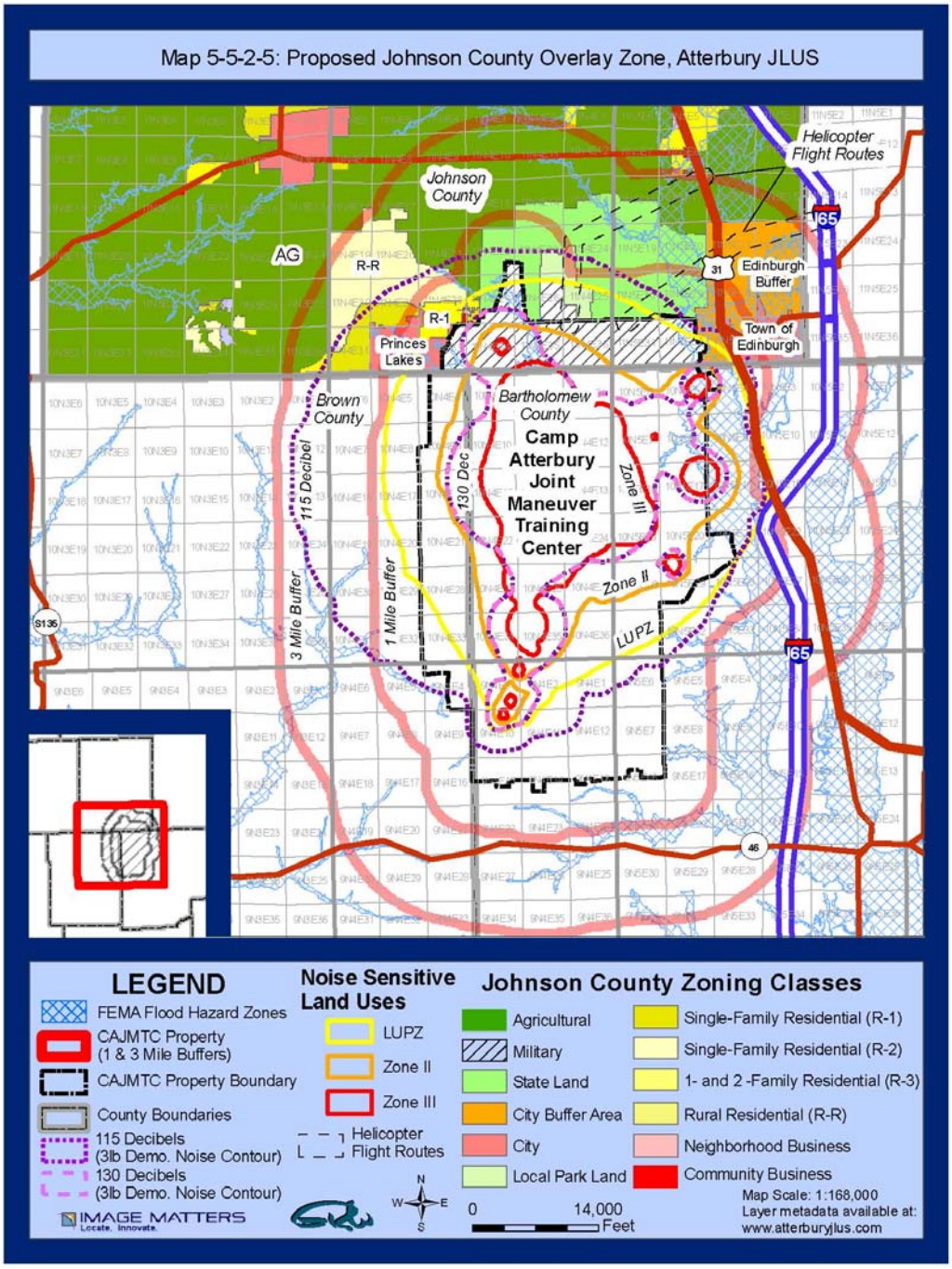
Map 5-5-2-3: Proposed Edinburgh and Joint District Overlay Zone



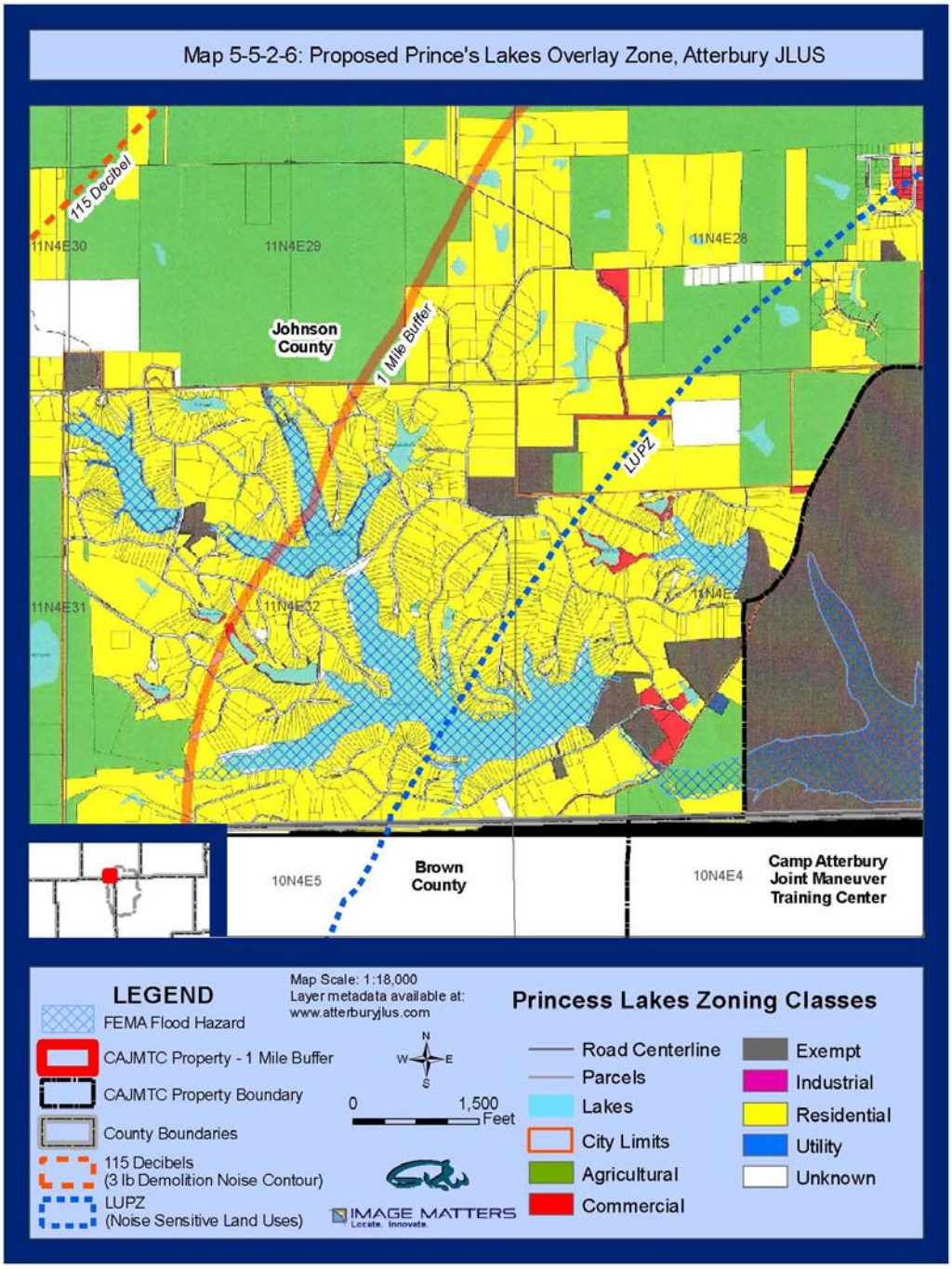
Map 5-5-2-4: Proposed Jennings County Overlay Zone



Map 5-5-2-5: Proposed Johnson County Overlay Zone



Map 5-5-2-6: Proposed Prince's Lakes Overlay Zone



5.6 Implementation Matrix

THIS PAGE INTENTIONALLY LEFT BLANK

5.7 Potential Funding Sources for Implementation Plan

Community Development Block Grants (CDBG) Overview

Rural communities have many pressing needs that require outside financial assistance. Through the Indiana Office of Community and Rural Affairs, Indiana requests federal funds to help rural communities with a variety of projects such as sewer and water systems, community centers, health and safety programs, and many others. The funds help communities improve their quality of life and ensure the health and safety of their citizens. Community leaders can find the CDBG application and deadline below.

Through these funded programs, OCRA helps to sustain Indiana rural communities.

Community Focus Funds (CFF)

CFF Grants are funded with federal Community Development Block Grant (CDBG) dollars from the U.S. Department of Housing and Urban Development (HUD). The goal of the CFF program is to encourage communities with eligible populations to focus on long-term community development. Community leaders can determine whether a project is a good candidate for the Community Focus Fund based on the following criteria:

- The area to be served has a substantial low- and moderate-income population (51% or greater) or is designated a slum or blighted area by local resolution.
- The project addresses the long-term planning and development efforts for the community.
- The funds granted will have a significant impact on the proposed project.
- The project is ready to proceed and will be completed within 18 months after being awarded.

Eligible CFF projects include, but are not limited to:

- Water projects;
- Sewer projects;
- Storm drainage projects;
- Infrastructure in support of housing projects;
- Senior centers;
- Daycare centers;
- Community centers;
- Downtown revitalization;

- Historic preservation;
- Libraries;
- Healthcare centers;
- Special needs buildings; and
- Fire stations/Firetrucks.

Community Economic Development Fund (CEDF)

A primary focus of the Indiana Office of Community and Rural Affairs is to assist Indiana's rural residents in improving their quality of life as they promote successful and sustainable rural communities. CEDF grants are funded with federal Community Development Block Grant (CDBG) dollars from the U.S. Department of Housing and Urban Development (HUD).

Most economic development activities are undertaken for the purpose of job creation or retention. Most job creation or retention activities are classified as eligible under one of several economic development-oriented categories.

Microenterprise Assistance Program

Microenterprise Assistance Grants are funded with Federal Community Development Block Grant (CDBG) dollars from the U.S. Department of Housing and Urban Development (HUD).

The goal of the MAP program is to encourage rural communities to focus on long-term community development. Eligible projects will be designed to assist micro-enterprise businesses owned by low-to-moderate income persons and/or microenterprise businesses that will create jobs for low-to-moderate income persons.

Planning Grant

Planning Grants are funded with Federal Community Development Block Grant (CDBG) dollars from the U.S. Department of Housing and Urban Development (HUD). The goal of the program is to encourage communities to plan for long-term community development. Community leaders can apply for projects relating to such issues as infrastructure, downtown revitalization, and community facilities. This is a good resource to get the Comprehensive Plans updated. To be competitive, projects must demonstrate:

- They meet a goal of the Federal Act;
- The particular planning initiative addresses established long-term community priorities;
- The funds granted will have a significant impact on the overall project;
- The community has a strong commitment to the project; and

- The project is ready to proceed upon the grant being awarded and will be completed within 12 months.

Urgent Need

Urgent need grants are funded with federal Community Development Block Grant (CDBG) dollars from the U.S. Department of Housing and Urban Development (HUD). An activity must be designed to alleviate existing conditions, certified by the local government and determined by the state to pose a serious and immediate threat to the health or welfare of the community. Urgent need grants will be considered if the threat is of recent origin or recently became urgent, the state grant recipient is unable to finance the activity on its own, or if other sources of funding are not available to carry out the activity.

Indiana Main Street (IMS) Overview

Indiana Main Street (IMS) was established to provide economic revitalization and professional assistance to participating communities. IMS encourages the revitalization and restoration of downtown areas in Indiana cities and towns. As the traditional heart and hub of government, commerce, justice and social interaction, the downtown business district portrays a city's overall image.

Four Point Approach

The Indiana Main Street Four Point Approach involves:

1. **Design**: Enhancing the physical appearance of the commercial district by rehabilitating historic buildings, encouraging supportive new construction, developing sensitive design management systems and long-term planning. The look of downtown, its streets, signs, buildings and store interiors is unique to each Indiana community. Main Street's goal is to work with all these elements to create a friendly, attractive place that will draw in visitors and businesses.

2. **Organization**: Building consensus and cooperation among the many groups and individuals involved in the revitalization process. To ensure a self-reliant, broad-based, long-lasting downtown revitalization program, the entire community must rally around the idea. Cooperation from both the public and the private sector is critical to achieve visible results. In addition, a separate staff and business solely dedicated to downtown revitalization is key to achieving long-term, large-scale results.

3. **Promotion**: Marketing the commercial district's assets to customers, potential investors, businesses, local citizens, and visitors. To keep investors, visitors, and businesses coming downtown, Main Street must reshape the community perspective of downtown as a hub of activity. Successful downtown image campaigns, as well as promotional activities that build upon the community's unique heritage and culture send a consistent, compelling message promoting the downtown area.

4. **Economic Restructuring**: Strengthening the district's existing economic base while finding ways to expand it to meet new opportunities and challenges from outlying development. Main Street's ultimate goal is to create downtowns that are economically viable. Researching the regional market and consumer trends give Main Street organizations a realistic picture of what market mix will work for their downtown. Based on their research, Main Street organizations can begin stabilizing existing businesses and recruiting new businesses to fill the gaps.

2009 Regional Workshops and Community Exchanges

Community Exchanges are a venue for Main Street communities to discuss issues facing their downtowns and create possible solutions. These exchanges are an opportunity for all Main Street communities to network with each other and visit other Main Street communities. 2009 dates were: June 12: Logansport/Walton, September 12: Madison, September 16: Marion, October 17: Lawrenceburg.

Regional Workshops are an opportunity for Main Street communities to learn new ways to enhance their program and downtown area. A variety of topics are discussed, such as volunteer management, event budgets, work plans, social media, and other topics of interest. 2009 dates were: June 5: Rising Sun, June 17: Warsaw, August 6: Newburgh (CST), August 21: Frankfort, September 9: Peru.

Broadband Internet

The Indiana Office of Community and Rural Affairs (OCRA) understands that access to broadband Internet is an essential economic tool for people in all communities. To help bridge the gaps that exist between urban and rural broadband availability, OCRA collaborates with other state and federal agencies to facilitate deployment.

Connecting Rural Indiana 2008: Policy, Programs, and Progress

Lt. Governor Skillman and the Indiana Office of Community and Rural Affairs (OCRA) hosted a statewide broadband conference, Connecting Rural Indiana 2008: Policy, Programs, and Progress, on Tuesday, August 19, 2008 from 9:00 a.m. – 4:30 p.m. at the Hyatt Regency hotel in downtown Indianapolis.

Conference Presentations:

The Greene County, North Carolina Story - Transforming Communities and Lives through Broadband
Misty Chase, Director of the Beyond Tobacco Program
Greene County, North Carolina

State of Indiana Broadband Deployment
Ron Keen, Director of Telecommunications
Indiana Office of the Utility Consumer Counselor

Additional resources for high speed communications

Indiana Office of the Utility Consumer Counselor
Web site: http://www.in.gov/oucc
Broadband provider tool: http://www.in.gov/ai/appfiles/oucc_provider
Email: uccinfo@oucc.IN.gov
Phone:1.888.441.2494 Toll Free or 317. 232.2494 Voice/TDD

USDA RUS Telecom Programs
Web site: http://www.usda.gov/rus/telecom/index.htm
Contact: Allen DeForest
Email: Allen.deforest@wdc.usda.gov
Phone: 812.825.3727 or 812.320.3812 (cell)

Federal Communications Commission and USDA Joint Federal Wireless Outreach Initiative
Web site: http://wireless.fcc.gov/outreach/index.htm?job=home

Federal Communications Commission Rural Health Care Pilot Program
Web site: http://www.usac.org/rhc/

Indiana Telehealth Network led by the Indiana Rural Health Care Association
Web site: http://www.indianaruralhealth.org/

Universal Service (assistance for telecommunications for high cost areas, schools, libraries, health care, and low-income households)
Web site: http://www.usac.org/

Other links of interest
An Interim Report on the Economic Impact of Telecommunications Reform in Indiana
Web site:
http://www.bsu.edu/digitalpolicy/media/pdf/2008ExecutiveSummary.pdf

Full Report:
http://www.bsu.edu/digitalpolicy/media/pdf/V2_DPI_Final_Master.pdf

Forest Legacy Program

Valuable, Beautiful Forests--Forever

Forest Legacy is a program established by Congress as part of the 1990 Farm Bill. It helps identify and protect environmentally important forestlands that are threatened by conversion to non-forest uses.

Indiana's Forest Legacy Program will identify environmentally important forests and protect them by purchasing the development rights from willing sellers. The owners retain all other rights, including the right to harvest timber and sell or bequest the remaining rights.

Once purchased, the development rights are held by the state in perpetuity. Federal funding can be used for up to 75% of the purchase price for the development rights.

The Indiana Forest Stewardship Coordinating Committee identified six Legacy Areas in Indiana in 1998. The U.S. Forest Service approved an Assessment of Need for the Legacy program in December 1998.

The DNR Division of Forestry is accepting nominations for Forest Legacy parcels within the designated Legacy Areas.

Financial Assistance from USDA

The following financial assistance programs are available to landowners to improve Indiana wildlife habitat. To learn more about each program, please download the information and contact the respective agency in charge of the program.

USDA, NRCS - United States Dept. of Agriculture, Natural Resources Conservation Service

Wildlife Habitat Incentives Program (WHIP) The USDA, Natural Resources Conservation Service administers this program. WHIP is a technical and financial assistance program that reimburses up to 75 percent of eligible expenses incurred by a landowner for the development of wildlife habitat specified in an approved application. Maximum reimbursement cannot exceed $25,000.

Wetlands Reserve Program (WRP) The USDA, Natural Resources Conservation Service administers this program. WRP is a voluntary program that provides technical and financial assistance to eligible landowners for the restoration of wetlands and associated upland habitat. The level of financial assist is dependent upon the enrollment option selected by the landowner. Options include 10-year restoration agreements, 30-year conservation easements, and permanent easement

Environmental Quality Incentives Program (EQIP) The USDA, Natural Resources Conservation Service administers this program. EQIP is a voluntary program that provides technical and financial assistance to eligible agricultural producers for establishing conservation practices to protect soil and water quality. Assistance is targeted to livestock and related natural resource concerns, including wildlife habitat. EQIP reimburses landowners up to 75 percent of eligible expenses incurred by the landowner for installation of conservation practices specified in an approved application.

Conservation Reserve Enhancement Program (CREP) The USDA, Farm Services Agency administers this program with technical assistance provided by the Natural Resources Conservation Service. The program is a voluntary land retirement program that enables eligible agricultural lands to be enrolled at any time into buffer practices to address soil erosion and water quality in specifically targeted watersheds. The program provides financial assistance incentives and annual payments that exceed those available through Continuous CRP. This program targets agricultural lands adjacent to watercourses in the following watersheds: Tippecanoe, Highland/Pigeon, and portions of the Upper White, including Tipton, Hamilton, Madison, Marion, and Hancock Counties.

Conservation Reserve Program (CRP) General Sign-Up Program The USDA, Farm Services Agency administers this program with technical assistance provided by the Natural Resources Conservation Service. The program is a voluntary land retirement program that enables eligible agricultural lands to be enrolled, during specific sign-up periods, into various conservation cover types that address soil erosion, water quality, and wildlife habitat. The program provides annual payments commensurate with contract length (10 to 15 years) and 50 percent cost-share for the establishment of the conservation cover and other needed conservation practices.

Conservation Reserve Program (CRP) Continuous Sign-Up Program The USDA, Farm Services Agency administers this program with technical assistance provided by the Natural Resources Conservation Service. The program is a voluntary land retirement program that enables eligible agricultural lands to be enrolled at any time into buffer practices to address soil erosion and water quality. Many of the practices can also be designed to improve wildlife habitat. The program provides annual payments in excess of those available through General

CRP, and incentive payments and cost-share assistance commensurate with contract length (10 to 15 years) and conservation practice selection.

Indiana DNR, Division of Fish and Wildlife

Pheasant Habitat Incentive Program - New program To help address the decline in pheasant populations, the Indiana Division of Fish and Wildlife has designated priority areas to focus on pheasant habitat management. A professional wildlife biologist will provide each eligible landowner with a habitat management plan for their property. The pheasant habitat development program will then provide up to 90 percent of the cost of the recommended practices. Additionally, landowners willing to enroll their land in federal land retirement programs will be eligible for a one-time signing.

Quail Habitat Incentive Program - New program To help improve quail population numbers, the Indiana Division of Fish and Wildlife has designated priority areas throughout southern Indiana to focus on quail habitat management. The Division will offer eligible landowners within the priority areas a variety of incentive payments to encourage the development and maintenance of quality quail habitat.

Classified Forest and Wildlands Program his program provides a property tax reduction to landowners enrolling 10 or more acres of forest, grassland, shrub land or wetland. The landowner must follow a management plan approved by the District Forester to remain in compliance with the program. A legal description of the acreage must be prepared by a registered surveyor and recorded in the County Recorder's Office. The assessed value of classified lands is reduced to $1 per acre for property tax purposes.

Game Bird Habitat Development Program To participate in this program a landowner must own or control 10 or more acres to participate. The program is a financial assistance program that reimburses a portion of the expenses incurred by a landowner for developing bobwhite quail, ring-necked pheasant, ruffed grouse or wild turkey habitat, specified in management plan prepared by the District Wildlife Biologist. The program may reimburse up to $100 per acre of habitat created, not to exceed 40 acres of development.

Wildlife Habitat Cost-Share Program To participate in this program a landowner must own or control 10 or more acres. The program is a financial assistance program that reimburses a portion of the expenses incurred by a landowner for developing wildlife habitat, specified in management plan prepared by the District Wildlife Biologist. The program may reimburse up to 90 percent of the costs, not to exceed $1,000.

Game Bird Partnership Program The Indiana Division of Fish and Wildlife administers this program in partnership with local Pheasants Forever and Quail

Unlimited chapters and The National Wild Turkey Federation. The program is a financial assistance program that reimburses a portion of the expenses incurred by a landowner for developing bobwhite quail, ring-necked pheasant, or wild turkey habitat. The Division of Fish and Wildlife contributes up to 50 percent of the reimbursable costs, not to exceed $100 per acre and $1,000 per landowner. The sponsoring partnership organization also contributes funds, materials or labor towards the completion of the project.

N.E. Wetland/Grassland Restoration Program The U.S. Fish and Wildlife Service administers this program in partnership with Ducks Unlimited and the Indiana Division of Fish and Wildlife. The program is a financial assistance program that reimburses landowners up to 100 percent of the expenses incurred for the restoration of wetlands and the establishment of native grasses. Qualifying projects must be located in one of the following northeastern Indiana counties: Elkhart, Kosciusko, LaGrange, Steuben, Noble, DeKalb, Whitley, or Allen.

U.S. Fish and Wildlife Service

Partners For Fish and Wildlife Program The U.S. Fish and Wildlife Service administers this program. The program provides financial assistance to private landowners through voluntary cooperative agreements for the restoration of wetlands and other habitats of significant importance to Federal trust species. Landowners sign an agreement to retain the restoration project for at least 10 years.

Acronyms and Abbreviations

AAF	Army Airfield
ACUB	Army Compatible Use Buffer
ADNL	A-Weighted Day-Night Average Sound Level
AFB	Air Force Base
BAK	Columbus Municipal Airport
BLM	Bureau of Land Management
BRAC	Base Realignment and Closure
CACTF	Combined Arms Collective Training Facility
CAJMTC	Camp Atterbury Joint Maneuver Training Center
CDNL	C-Weighted Day-Night Average Sound Level
CIP	Capital Improvement Program
DA	Department of the Army
dB	Decibel(s)
dBA	Decibels, A-Weighted
dBC	Decibels, C-Weighted
dBP	Decibels, Unweighted Peak
DFIRM	Digital Flood Insurance Rate Map
DNL	Day-Night Average Sound Level
DoD	Department of Defense
EPA	Environmental Protection Agency
ESRI	Environmental Systems Research Institute - GIS
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FGDC	Federal Geographic Data Committee
FICUN	Federal Interagency Committee on Urban Noise
FORSCOM	United States Army Forces Command
FW	Fixed-wing Aircraft
FWA	Fish and Wildlife Area
FY	Fiscal Year
GIS	Geographic Information System
IDNR	Indiana Department of Natural Resources
IFR	Instrument Flight Rules
IGS	Indiana Geological Survey
INARNG	Indiana Army National Guard
IONMP	Installation Operational Noise Management Plan
ITAM	Integrated Training Area Management

JLUS	Joint Land Use Study
LUPZ	Land Use Planning Zone
MOA	Military Operating Airspace
MOU	Memorandum of Understanding
MRLC	Multi-Resolution Land Characteristics
MSDC	Muscatatuck State Development Center
MUTC	Muscatatuck Urban Training Center
NEPA	National Environmental Policy Act
NFDC	National Flight Data Center
NLCD	National Land Cover Dataset
NLR	Noise Level Reduction
NZ	Noise Zone
NZ I	Noise Zone I
NZ II	Noise Zone II
NZ III	Noise Zone III
OEA	Office of Economic Adjustment
ONMP	Operational Noise Management Plan
OVO	North Vernon Municipal Airport
PK15	Peak Noise Level
REPI	Readiness and Environmental Protection Initiative
RFI	Request for Information
RW	Rotary-wing Aircraft (i.e., a helicopter)
SER	Seymour Municipal Airport
SFHZ	Special Flood Hazard Zone
SONMP	Statewide Operational Noise Management Plan
TDR	Transfer of Development Rights
TIGER	Topologically Integrated Geographic Encoding & Referencing
TNC	The National Conservancy
UFC	Unified Facilities Criteria
USACHPPM	U.S. Army Center for Health Promotion and Preventive Medicine
USAF	U.S. Air Force
USFWS	U.S. Fish and Wildlife Service
WPA	Works Progress Administration