A Joint Land Use Study (JLUS) is a collaborative planning effort among active military installations, surrounding communities, and other affected agencies to identify and address compatibility issues facing the region. The JLUS program is an interjurisdictional partnership and planning process funded by the Department of Defense (DOD) Office of Economic Adjustment (OEA) and the Colorado Department of Local Affairs. The Pikes Peak Area Council of Governments (PPACG) was the sponsor and managed the grant and study process.

The JLUS process encourages residents, local decision-makers, and installation representatives to study compatibility issues in an open and public forum. The goal is to balance military and community interests by identifying encroachment issues that affect civilian communities and military installations. The resulting recommendations are intended to reduce or mitigate potential conflicts while accommodating growth, sustaining the economic health of the region, and protecting public health and safety.

COLORADO SPRINGS REGIONAL JLUS

Although the study title includes denotes the largest city in the region, communities and five installations within the four-county study area were involved:

- **El Paso County**
  - City of Colorado Springs
  - City of Fountain
  - City of Manitou Springs
  - Town of Calhan
  - Town of Ellicott
  - Town of Green Mountain Falls
  - Town of Monument
  - Town of Palmer Lake
  - Town of Ramah

- **Fremont County**
  - City of Cañon City
  - City of Florence
  - Penrose
  - Town of Brookside
  - Town of Coal Creek
  - Town of Rockvale
  - Town of Williamsburg

- **Pueblo County**
  - Avondale
  - Beulah
  - Colorado City Metropolitan District
  - City of Pueblo
  - Pueblo West Metropolitan District
  - Town of Boone
  - Town of Rye

- **Teller County**
  - City of Cripple Creek
  - City of Victor
  - City of Woodland Park
  - Divide

Military installations:

- The Air Force Academy (AFA)
- Fort Carson
- Peterson Air Force Base (PAFB)
- Cheyenne Mountain Air Force Station (CMAFS)
- Schriever Air Force Base (SAFB)
Executive Summary

The purpose of this JLUS is to create a community-driven, cooperative, strategic planning process among the five installations, the local municipalities, and other stakeholders within the four-county region. This study considers how the region can plan for a future that ensures successful growth, economic health, and continued military operations for all five installations.

Figure 1.1
COLORADO SPRINGS REGIONAL JLUS STUDY AREA

Colorado Springs Regional Joint Land Use Study

MPO: metropolitan planning organization; COG: council of governments

The JLUS planning process supports effective communication and establishes recommended strategies and actions for military participation and stakeholder coordination in community development review and planning. It includes an interjurisdictional implementation plan to augment the JLUS recommendations. Within Chapter 10 “Implementation Plan,” each listed action includes a responsible party and supporting roles for partnering stakeholders. These recommended actions should include land use planning principles and practices that balance potentially conflicting interests.
What makes this study different from other JLUS projects is the wide scope needed to cover five distinct military installations and the different approaches used to explore compatibility issues and develop recommended strategies. The process began by identifying 17 potential compatibility issues (defined in Chapter 3) through research, discussions with military installations and local officials, and public outreach to understand which issues were applicable to each installation and each community.

**JLUS GOALS AND OBJECTIVES**

**Goals**
This JLUS process encourages local governments and stakeholders, together with the state of Colorado, to:

- Work closely with the military installations to implement measures that avoid and mitigate incompatible civilian development that may impair the continued operational utility of the military installations.
- Preserve and protect the public health, safety, and welfare of those living near an active military installation.
- Increase public awareness of the military missions within this region and provide context for how the installations are a part of the regional economy.

**Objectives**
Three key objectives, described below, are designed to achieve these goals and serve as the basis for the implementation strategies and actions provided in Chapter 10.

- **Understanding.** Convene community and military representatives to study the issues in an open forum, considering both community and military viewpoints and needs. This includes public outreach and input.
- **Collaboration.** Encourage cooperative land use and resource planning between military installations and surrounding communities so that future community growth and development are compatible with military training and missions while reducing the military’s operational impacts on adjacent lands and allowing sustainable economic growth. Collaboration between communities and the military to accommodate future military mission growth as it occurs.
- **Actions.** Provide a set of recommendations and strategies for local jurisdictions, agencies, and the military to use in solving the compatibility issues identified and discussed throughout this process.
The Policy Committee, Technical Committee, and issue-specific working groups guided the direction of the JLUS. Federal agencies and military installations participated as non-voting members of committees and working groups to inform the process as needed.

The Policy Committee consisted of elected officials from local communities, legislative representatives, state and federal agency representatives, and military personnel. Its role was to represent the participating communities and interests during this process, provide guidance to JLUS staff, approve all actions pertaining to the study (including the creation of the Technical Committee and working groups), and provide a review of the final study document.

The Technical Committee consisted primarily of planning and land use officials from local governments and military installations. This committee provided recommendations to the Policy Committee, technical review of strategies and material created by working groups, and an in-depth review and critique of the study document as it was created.

Nine issue-specific working groups formed by the Policy and Technical Committees throughout the JLUS process delved into the subject matter to discuss compatibility issues and identify potential strategy recommendations. These working groups, listed below, were made up of various stakeholders, including but not limited to local government and military representatives, other stakeholder groups, and residents.

- Air Force Academy Flight Training
- Agriculture/Conservation
- Land Use and Development Review
- Monument Creek Watershed (formed as a stakeholder group by other entity)
- New Santa Fe Trail
- Public Communication
- Regional Airspace
- Southern Stormwater
- Transportation

Rosters of the Policy and Technical Committees can be found in Appendix B.
JLUS INPUT PROCESS

Leadership
The initial phase of the study included meetings with local leaders, military installation representatives, key stakeholders, and contacts to gather information.

Public Engagement and Review
PPACG collected public input from residents in 2016 with an online survey and telephone town hall focused on reaching those living in rural areas. Four public input meetings were held during 2017 and 2018. The final stage in the report process involved opening the draft report to public comment by posting the report and comment forms online for three weeks in November 2018. The Policy Committee voted to accept the study and report as complete on December 19, 2018.

COMPATIBILITY ISSUES
The Colorado Springs Regional Joint Land Use Study (JLUS) considered a variety of compatibility issues that relate to impacts of military operations and community growth on one another. The 17 issues examined during the course of this study are shown in Table 3.1. These issues illustrate the many ways in which military personnel and civilians have shared interest in many resources, including, but not limited to, air, land, water, and infrastructure.

Table 3.1
COMPATIBILITY ISSUES - OVERVIEW

<table>
<thead>
<tr>
<th></th>
<th>AIR FORCE ACADEMY</th>
<th>FORT CARSON</th>
<th>PETERSON AFB</th>
<th>CHEYENNE MOUNTAIN AFS</th>
<th>SCHRIEVER AFB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Coordination</td>
<td>x</td>
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<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Land Use Regulations</td>
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<tr>
<td>Safety Zones</td>
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<td>x</td>
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<tr>
<td>Vertical Obstructions</td>
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<td>Security</td>
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<tr>
<td>Noise and Vibration</td>
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<td>x</td>
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<tr>
<td>Dust/Smoke</td>
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<td>Light and Glare</td>
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<tr>
<td>Transportation</td>
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<tr>
<td>Utility Infrastructure</td>
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<tr>
<td>Stormwater</td>
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<tr>
<td>Airspace</td>
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<tr>
<td>Frequency Spectrum</td>
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<td>Water Supply</td>
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<tr>
<td>Air Quality</td>
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<tr>
<td>Wildfire</td>
<td>x</td>
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<td>x</td>
<td></td>
<td>x</td>
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<tr>
<td>Noxious Weeds</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

Note: x indicates issue studied related to this installation.
KEY ISSUES AND IMPLEMENTATION

Table 4.1
COMPATIBILITY ISSUES - REGIONAL

KEY REGIONAL ISSUES:

1. **Regional Coordination** – Working to maximize the effectiveness of coordination across multiple military installations, local jurisdictions, community organizations, and residents is crucial to effectively address all other JLUS challenges.

2. **Transportation** – Adequate transportation will affect development and services for military installations and drive adjacent land uses that can affect their missions.

3. **Stormwater** – Stormwater management can exacerbate runoff, degrade stream stability and water quality, and increase flood risks.

4. **Water Supply** – Water plans at the state and regional level have identified future water supply gaps, efficiencies that can be achieved, and planning efforts to encourage best practices.

5. **Wildfire** – Fires affect buildings and infrastructure and damage watersheds and other natural areas. This can also result in flash flooding and mudslides.

Table 5.1
AIR FORCE ACADEMY COMPATIBILITY ISSUES

KEY ISSUES:

1. **Land Use Regulations** – Ongoing issues created by incompatible development adjacent to the Air Force Academy are not addressed in land use regulations.

2. **Noise and Vibration** – Aircraft noise from the Air Force Academy flight training is a major concern for nearby residents.

3. **Transportation** – A designated alternative route for the New Santa Fe Trail does not exist for when the trail is closed due to security threats, flood damage, or maintenance.

4. **Stormwater** – Numerous regional stormwater projects within the Monument Creek watershed would occur within drainages that impact the Air Force Academy.

5. **Airspace** – Regional changes to airspace and the development of wind turbines has affected the Air Force Academy flight training and flight patterns.

6. **Wildfire** – Wildfires on and near the Air Force Academy have the potential to disrupt training exercises.

Table 6.1
FORT CARSON COMPATIBILITY ISSUES

KEY ISSUES:

1. **Land Use Regulations** – Ongoing issues created by incompatible development should be addressed in land use regulations.

2. **Noise and Vibration** – Noise and vibrations from weaponry (along with smoke and dust) can affect adjacent property owners and communities.

3. **Transportation** – Land on the northern portion of the eastern boundary could be developed and affect traffic at Gate 19; additional traffic on Academy Boulevard could also affect gate traffic. More capacity is needed for rail transportation.

4. **Stormwater** – Flows across the cantonment area downstream from Cheyenne Mountain Air Force Station (AFS) and adjacent to Pikes Peak Community College (PPCC) can affect the installation.

5. **Airspace** – Vertical obstructions and development of residential areas can affect helicopter flight. Fort Carson has experienced issues in the past related to landing zones in Teller and Fremont counties.


7. **Wildfire** – Wildfires in and around Fort Carson are an ongoing concern.
Table 7.1

PETE RSON AFB COMPATIBILITY ISSUES

<table>
<thead>
<tr>
<th>KEY ISSUES:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Land Use Regulations</strong> – Residential land use and zoning pose safety concerns within accident potential zones (APZs), including developments proposed along Troy Hill Road.</td>
</tr>
<tr>
<td>2. <strong>Safety</strong> – Peterson AFB Bird/Wildlife Aircraft Strike Hazard (BASH) program personnel conduct approximately 6,000 wildlife dispersals annually around the airfield.</td>
</tr>
<tr>
<td>3. <strong>Transportation</strong> – Future road capacity is a concern as development occurs around the installation and future mission operations increase travel demand. Development along Powers Boulevard, Marksheffel Road, and U.S. Route 24 may impact missions.</td>
</tr>
</tbody>
</table>

Table 8.1

CHEYENNE MOUNTAIN AFS COMPATIBILITY ISSUES

<table>
<thead>
<tr>
<th>KEY ISSUES:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Land Use Regulations</strong> – Existing residential development in the Broadmoor Bluffs neighborhood creates most of the compatibility issues, primarily trespassing, airspace use, and the need for fire mitigation on properties along the installation perimeter.</td>
</tr>
<tr>
<td>2. <strong>Transportation</strong> – Viable routes between Peterson Air Force Base (AFB) and Cheyenne Mountain AFS via State Highway 115 and North American Aerospace Defense Command (NORAD) Road must be maintained during wildfire or other emergencies.</td>
</tr>
<tr>
<td>3. <strong>Stormwater</strong> – Development north of NORAD Road could increase stormwater runoff onto the road and State Highway 115 if not properly mitigated.</td>
</tr>
<tr>
<td>4. <strong>Airspace</strong> – Civilian use of airspace (including unmanned aircraft systems (UAS) near Cheyenne Mountain AFS) increases the risk of a midair collision and surveillance of the missions at the installation.</td>
</tr>
<tr>
<td>5. <strong>Frequency Spectrum</strong> – Cheyenne Mountain AFS must regularly work with local and regional spectrum users to mitigate potential spectrum interference.</td>
</tr>
<tr>
<td>6. <strong>Wildfire</strong> – Wildfire management in the Broadmoor Bluffs neighborhood varies from house to house and poses a fire risk to the neighborhood and the installation. Management of the surrounding forestlands will require moth and beetle mitigation.</td>
</tr>
</tbody>
</table>

Table 9.1

SCHRIEVER AFB COMPATIBILITY ISSUES

<table>
<thead>
<tr>
<th>KEY ISSUES:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Land Use Regulations</strong> – No incompatible development exists in areas surrounding Schriever AFB. However, creating a compatible use buffer around the installation could protect frequency spectrum and enhance perimeter security to sustain existing and future Schriever AFB missions.</td>
</tr>
<tr>
<td>2. <strong>Safety Zones</strong> – Electromagnetic frequency radiation hazard zones are an existing compatibility issue.</td>
</tr>
<tr>
<td>3. <strong>Transportation</strong> – State Highway 94 safety and capacity considerations are of significant interest for Schriever AFB personnel and residents.</td>
</tr>
<tr>
<td>4. <strong>Utility Infrastructure</strong> – Schriever AFB is interested in partnering with utility providers to improve resiliency through natural gas and electric infrastructure enhancements.</td>
</tr>
<tr>
<td>5. <strong>Airspace</strong> – Maintaining special-use airspace is necessary to provide a safety buffer between Schriever AFB’s communications systems on the surface and air traffic.</td>
</tr>
<tr>
<td>6. <strong>Frequency Spectrum</strong> – Communications spectrum considerations at Schriever AFB include line of sight, radio frequency (RF) interference, and radiation hazard zones.</td>
</tr>
<tr>
<td>7. <strong>Noxious Weeds</strong> – State and federally listed noxious plant species exist at Schriever AFB.</td>
</tr>
</tbody>
</table>
RECOMMENDED IMPLEMENTATION STRATEGIES AND ACTIONS

The Joint Land Use Study (JLUS) strategies and actions in Chapter 10 were developed through a collaborative effort among the JLUS Policy and Technical Committees, working groups, and other stakeholders. In addition to these strategies, the stakeholder relationships either formed or fostered by this process have been the most important outcome of the JLUS.

RECOMMENDED STRATEGIES:

1.1 IMPROVE COLLABORATION AMONG MILITARY AND COMMUNITY STAKEHOLDERS ON JLUS TOPICS.
1.2 UTILIZE ONLINE MAPPING AND DATA TOOLS TO ASSIST STAKEHOLDERS WITH MANAGING MISSION ENCROACHMENT ISSUES.
1.3 DEVELOP METHODS TO INFORM AND COLLABORATE WITH RESIDENTS AND COMMUNITY LEADERS TO ADDRESS COMPATIBILITY.
1.4 INCLUDE MILITARY STAKEHOLDERS IN LAND USE PLANNING PROCESSES TO ADDRESS REGIONAL COMPATIBILITY ISSUES.
2.1 ACCOUNT FOR MILITARY REQUIREMENTS IN REGIONAL UTILITY DEVELOPMENT.
2.2 MINIMIZE INCOMPATIBLE LAND USES AND DEVELOPMENT AFFECTED BY MILITARY FLIGHT OPERATIONS.
2.3 PURSUE LAND USE BUFFERING AND CONSERVATION OPPORTUNITIES TO PRESERVE MISSION.
2.4 ADDRESS TRANSPORTATION NEEDS AROUND INSTALLATIONS.
2.5 MINIMIZE IMPACTS TO MILITARY INSTALLATION PROPERTY AND NATURAL SYSTEMS FROM STORMWATER FLOWS.
2.6 PLAN FOR LONG-TERM STORMWATER AND UTILITY INFRASTRUCTURE CHALLENGES EXPECTED FROM FUTURE MISSION GROWTH.
2.7 PROTECT FREQUENCY SPECTRUM CAPACITY THROUGH LAND AND AIRSPACE BUFFERING.
3.1 COLLABORATE TO ADDRESS MISSION AND COMMUNITY IMPACTS FROM NATURAL DISASTERS.

RECOMMENDED ACTIONS OVERVIEW:

- Transportation safety and capacity improvements (e.g., Hwy 94, rail connections).
- Develop brochures and recommended real estate disclosure language.
- Conduct in-depth land use analysis to produce maps and informational resources that support development that is compatible with military missions.
- Participate in and support the creation of the El Paso County Master Plan.
- Facilitate trail connections and multi-modal transportation.
- Natural resource conservation actions that also create buffers for military operations and mitigate stormwater and wildfire risks.
- Stand-up a “Regional Airspace” group to support existing and future flight operations through compatible development.
- Facilitate actions in support of overall military installation resiliency, particularly for energy development.
NEXT STEPS: IMPLEMENTATION ACTIONS FOR 2019 - 2020

The JLUS Report recognizes that many supportive efforts and partnerships exist but that additional actions and partnerships are needed to meet community interests and support military missions in the region. Therefore, proposed implementation is not intended to supersede existing procedures and policies governing the mandates of the military installations and the surrounding communities, but to carry out a critical set of recommended strategies and actions at a time when the region is experiencing a high level of population growth and development. Regional growth pressures translate into minimal capacity and resources to address these issues among local jurisdictions as they focus on above average demands associated with core regulatory functions. Continued collaboration is needed between local jurisdictions and community partners to implement recommendations and support the military's ability to carry out its mission requirements, including readiness, resiliency, force deployment, and innovation.

Initial Implementation Objectives
1. Convert JLUS Committees into ongoing JLUS Implementation Committees (i.e. JLUS Implementation Policy Committee; JLUS Implementation Technical Committee).
2. Work with Local Jurisdictions to Incorporate Compatibility in Updates of local Comprehensive Plans, Local Zoning Codes, and Ordinances.
3. Improve public and local stakeholder understanding of land use compatibility and military operations by developing informational resources on websites and handouts.
4. Develop sub-area plans to address land use incompatibility in the CZ and APZs for Peterson AFB and the Air Force Academy and identify options and costs to resolve encroachment.
5. Develop acceptable Real Estate Disclosure language for use by real estate professionals, developers, and relevant jurisdictions.
6. Assist local jurisdictions and conservation stakeholders with identifying and executing actions to establish installation buffers

Initial Implementation Tasks
Task 1: Stand-up JLUS Implementation Policy Committee and Implementation Technical Committee
Task 2: Military Information Brochures for Public Distribution/Web Info
Task 3: Regional Energy/Radar Site Mapping
Task 4: Peterson AFB Sub-area plan/mapping
Task 5: Air Force Academy Sub-area plan/mapping
Task 6: Develop standardized real estate disclosure language
Task 7: Identify appropriate funding mechanisms, and coordinate with relevant stakeholders and government entities to create appropriate buffers for military operations.
Task 8: Communicate and coordinate with federal, state, and local entities as JLUS information is needed to support stakeholder actions associated with the JLUS Implementation Plan.
For more information on the Joint Land Use Study Program please utilize the following resources:

1. Online location for the full Colorado Springs Regional Joint Land Use Study Report:
   http://www.ppacg.org/jlus-study-report/

2. PPACG – Joint Land Use Study website:
   http://www.ppacg.org/military/

3. Contact Us:
   Plikes Peak Area Council of Governments
   Joint Land Use Study Program
   Address: 15 S. 7th Street, Colorado Springs, CO, 80905
   Phone: 719-471-7080
   Email: jlus@ppacg.org

4. Department of Defense, Office of Economic Adjustment, Compatible Use Program:
   http://www.oea.gov/how-we-do-it/compatible-use