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Executive Summary

The Joining Forces Joint Land Use Study (JLUS) is a collaborative process among local, state, and regional jurisdictions; the public; federal, state, and regional agencies; and military installations within the North Texas region. The JLUS will present recommendations for consideration by local and state governments to promote compatible development that protects public health, safety, and welfare, and the ability of the military to accomplish its vital training and operational missions. The study is designed to create dialogue around complex issues such as land use, economic development, infrastructure, environmental sustainability, and the operational demands and mission changes of military entities. The intent of the study is to highlight common interests such as economic growth, more efficient infrastructure, healthier and safer environments, improved quality of life, and the protection of Department of Defense (DoD) and civilian investments.

The Final JLUS Report will provide a series of recommendations to guide future decisions and policy actions by public agencies, military installations, and other Joining Forces partners. The purpose of the Existing Conditions Report is to describe the regional military installations and surrounding communities, and identify preliminarily existing compatibility issues within the study area.

The Joining Forces study area consists of the major military training facilities and related airspace in the North Texas region and surrounding communities (See Table 1 and Figure 1). Military installations included in the study are Naval Air Station Fort Worth, Joint Reserve Base (NAS Fort Worth, JRB); Redmond Taylor Army Heliport (RTAHP); Fort Wolters Training Center; Camp Maxey Training Center; Eagle Mountain Training Center; Brownwood and Brady Military
Operating Areas (MOAs); and Colonel Stone Army Reserve Center. The area surrounding these facilities encompasses 24,200 square miles, including portions of 18 counties and more than 60 cities or census-designated communities in proximity to military operations. The final JLUS document will produce a tailored set of compatibility recommendations to reflect the diversity of the region and its stakeholders.

Members of the planning team have collected information about existing conditions and plans for all military installations, as well as the major adjacent and affected communities. In addition, team members conducted numerous individual interviews with military and community leaders and held four public meetings in various locations around the region.

This initial investigation has identified the following key themes, as well as compatibility issues for further study in the next phase of the Joining Forces process.

- Strong support for the military mission in surrounding communities and an understanding of the positive economic impact of the installations and military missions;
- Relatively few complaints related to existing noise or operational impacts with the exception of specific pockets of noise sensitivity, particularly near RTAHP;
- Recognition that even in mature, stable communities with long-standing ties to the military, residential turnover and infill and redevelopment opportunities could bring new residents unfamiliar with military operations close to active training;
- Need to address stormwater drainage issues on NAS Fort Worth, JRB that could compromise airfield operations and safety and along corridors in the surrounding communities;
- Lack of county regulatory tools, such as zoning, to address even modest growth on unincorporated land in rural areas;
• Strong westward growth trajectory within the region that could bring new development to previously rural areas surrounding installations and to areas underlying MOAs;
• Effectiveness of existing coordination mechanisms, such as the Regional Coordination Committee Development Review Web Tool and ongoing military outreach around NAS Fort Worth, JRB;
• Successful implementation of zoning overlay tools around NAS Fort Worth, JRB in the Cities of Benbrook and Fort Worth and sound attenuation guidelines in other communities;
• Presence of sensitive environmental resources around Fort Wolters and Camp Maxey and resulting training constraints at Camp Maxey;
• Specific encroachment challenges related to noise, land use, and airspace at RTAHP;
• Absence of formal channels of communication and coordination outside of the NAS Fort Worth, JRB portion of the region and a desire for increased military-civilian outreach and coordination in communities surrounding RTAHP, Camp Maxey, and Fort Wolters;
• Risk of trespass onto military lands from adjoining recreational amenities or residential areas;
• Risk of wildfires around Fort Wolters and Camp Maxey;
• Need for strategies to address emerging challenges related to energy infrastructure siting (wind farms) especially in unincorporated areas and UAS operations near airfields; several cities indicated interest in operating drones for law enforcement or other public purposes within the currently prohibited five-mile buffer around the NAS Fort Worth, JRB airfield;
• Opportunities for better coordination and sharing of military resources across installation boundaries; and
• Support for additional compatibility measures previously identified but not yet implemented, such as real estate disclosure.

1. Purpose and Background

A Joint Land Use Study (JLUS) is a collaborative process among local governments, military installations, citizens, and other stakeholders to identify and help mitigate and prevent encroachment issues that may affect current and future military missions and nearby communities. Encroachment occurs when conditions outside the military installation limit the ability of the military to perform its mission safely and effectively, or when military operations diminish quality of life in surrounding areas. This JLUS effort for the North Texas region—Joining Forces—seeks to facilitate dialogue around common interests and strengthen community-military compatibility through communication, education, and the planning process.

1.1 Joining Forces Goals

Joining Forces builds on the momentum of ongoing regional planning initiatives and prior compatibility studies. Reflecting the size, complexity, and economic dynamism of the region, the goals of this study are to:

• Balance the region’s strong population growth and development with protection of the military operational capabilities;

• Address encroachment issues associated with emerging technologies, such as renewable energy and unmanned aerial systems;
- Maintain the long-term viability and positive economic impact of military facilities in North Texas; and

- Carry forward specific recommendations from the 2008 JLUS for Naval Air Station Fort Worth Joint Reserve Base (NAS Fort Worth, JRB) and foster additional partnerships across installations and communities throughout the region.

### 1.2 Purpose of Existing Conditions Report

To establish a baseline for the broader planning context, an initial step of the Joining Forces effort is to analyze current conditions in the study area. The purpose of this Existing Conditions Report is to summarize compatibility issues, trends, available tools, and priorities. Research for this report focuses on:

- Regional and community growth and land use patterns;

- Current military missions and any foreseeable mission change;

- Current land use policy and regulatory measures and ongoing compatibility initiatives; and

- Stakeholder and public input gathered to date.

Findings will inform development of recommendations in subsequent phases of the study.
1.3 Study Area

The study area consists of the major military training facilities and related airspace in North Texas and surrounding communities (See Table 1 and Figure 1). This area encompasses 24,200 square miles, including six installations, two Military Operating Areas (MOAs), and portions of 18 counties and more than 60 cities or census designated communities near military operations. It also stretches across two regional planning areas. The North Central Texas Council of Governments (NCTCOG) covers 16 counties, including three counties with a major installation (Dallas, Tarrant, and Parker). The Ark-Tex Council of Governments includes Lamar County, the fourth county that hosts a major installation.

Given the scale of the region, the JLUS process organizes the installations into functional categories based on the intensity of their activities, tenant mix, and operational missions as shown in Table 1. The high-intensity installations employ large numbers of full-time active-duty, Reservists, and civilian personnel or serve as active training centers for the Texas Military Forces. The high-intensity installations also manage ancillary sites for training purposes. The remaining facilities (i.e., not high-intensity) include maintenance sites, administrative centers, or training areas with lower impact operations. To focus effort on the most critical areas with the highest risk of encroachment, the study will conduct detailed analyses around high-intensity operations. The public outreach process also emphasizes continued collaboration and the building of partnerships between these active installations and their neighboring communities. Overall, the JLUS document will produce a tailored set of compatibility recommendations to reflect the diversity of the region and its stakeholders.
### Table 1. *Joining Forces* Installations and Local Governments

<table>
<thead>
<tr>
<th>Level of Operations</th>
<th>Installation/MOA</th>
<th>County</th>
<th>Location</th>
<th>Local Governments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High-Intensity Operations</strong></td>
<td>Naval Air Station</td>
<td>Tarrant</td>
<td>Fort Worth, TX</td>
<td>Cities of Benbrook, Fort Worth, Lake Worth, River Oaks, Sansom Park, Westworth Village, and White Settlement; Tarrant County</td>
</tr>
<tr>
<td></td>
<td>Fort Worth, Joint Reserve Base</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Redmond Taylor Army Heliport</td>
<td>Dallas</td>
<td>Dallas, TX</td>
<td>Cities of Dallas and Grand Prairie</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fort Wolters Training Center</td>
<td>Palo-Pinto / Parker</td>
<td>Mineral Wells, TX</td>
<td>City of Mineral Wells; Palo Pinto and Parker Counties</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Camp Maxey Training Center</td>
<td>Lamar</td>
<td>Unincorporated Lamar County</td>
<td>City of Paris, Powderly CDP; Lamar</td>
</tr>
</tbody>
</table>
### Ancillary Sites

<table>
<thead>
<tr>
<th>Ancillary Sites</th>
<th>County</th>
<th>Ancillary Sites</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eagle Mountain Training Center</td>
<td>Tarrant</td>
<td>Pecan Acres Designated Place, TX</td>
<td>Pecan Acres Census County</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brownwood and Brady Military Operating Areas</td>
<td>Portions of Brown, Callahan, Coleman, Comanche, Concho, Eastland, Erath, Llano, Hamilton, McCulloch, Mills, Runnels, and San Saba Counties</td>
<td>Brownwood, TX</td>
<td>Portions of Brown, Callahan, Coleman, Comanche, Concho, Eastland, Erath, Llano, Hamilton, McCulloch, Mills, Runnels, and San Saba Counties</td>
</tr>
</tbody>
</table>

### Low-Intensity Training/Maintenance Sites

<table>
<thead>
<tr>
<th>Low-Intensity Training/Maintenance Sites</th>
<th>County</th>
<th>Low-Intensity Training/Maintenance Sites</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colonel Stone Army Reserve Center</td>
<td>Tarrant</td>
<td>Fort Worth, TX</td>
<td>City of Fort Worth; Tarrant County</td>
</tr>
</tbody>
</table>
Figure 1. *Joining Forces* Regional Study Area
1.4 Formal Study Partners

NCTCOG received a grant from the Department of Defense (DoD), Office of Economic Adjustment (OEA) to coordinate the efforts of Joining Forces participants. To balance multiple community, operational, and mission needs within a large region, NCTCOG formed four Policy Committees, representing interests around each of the high-intensity installations (See Table 2). The Committees will guide the study, assisting the planning team in identifying key issues, gathering technical data, evaluating the feasibility of strategies, and developing recommendations. While the Committees will meet regularly to offer strategic direction, Joining Forces also seeks to facilitate a collaborative and inclusive process that engages residents, businesses, landowners, community groups, and other stakeholders beyond the list of formal participants.

Table 2. Joining Forces Policy Committees

<table>
<thead>
<tr>
<th>Installation</th>
<th>Stakeholder Representatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redmond Taylor Army Heliport</td>
<td>City of Grand Prairie</td>
</tr>
<tr>
<td></td>
<td>City of Dallas</td>
</tr>
<tr>
<td></td>
<td>Redmond Taylor Army Heliport</td>
</tr>
<tr>
<td></td>
<td>Texas Military Department – TX Army National Guard</td>
</tr>
<tr>
<td>Fort Wolters Training Center</td>
<td>Palo Pinto County</td>
</tr>
<tr>
<td></td>
<td>City of Mineral Wells</td>
</tr>
<tr>
<td></td>
<td>Fort Wolters</td>
</tr>
<tr>
<td></td>
<td>Mineral Wells/Palo Pinto County Area Growth Council</td>
</tr>
<tr>
<td></td>
<td>Mineral Wells Area Chamber of Commerce</td>
</tr>
<tr>
<td></td>
<td>Natural Resources Conservation Service</td>
</tr>
</tbody>
</table>
### Existing Conditions

<table>
<thead>
<tr>
<th>Location/Policy Area</th>
<th>Organizational Affiliates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camp Maxey Training Center</td>
<td>Lamar County&lt;br&gt;CITY OF PARIS&lt;br&gt;CAMP MAXEY&lt;br&gt;Texas Military Department– TX Army National Guard&lt;br&gt;Ark-Tex COG</td>
</tr>
<tr>
<td>Naval Air Station Fort Worth, Joint Reserve Base</td>
<td>CITY OF BENBROOK&lt;br&gt;CITY OF FORT WORTH&lt;br&gt;CITY OF LAKE WORTH&lt;br&gt;CITY OF RIVER OAKS&lt;br&gt;CITY OF SANSOM PARK&lt;br&gt;CITY OF WESTWORTH VILLAGE&lt;br&gt;CITY OF WHITE SETTLEMENT&lt;br&gt;TARRANT COUNTY&lt;br&gt;NAS FORT WORTH, JRB</td>
</tr>
</tbody>
</table>
2. Regional Profile

2.1 Regional Land Use and Growth Trends

North Texas is a vast mix of urban centers and suburban-style development with smaller, lightly populated communities on the edges of the metropolitan area. The dynamic Dallas-Fort Worth (DFW) core anchors the region, while rural counties define the northern and far western portions of the study area (See Figure 2).

While prior growth occurred at the region’s center and in proximity to installations such as NAS Fort Worth, JRB and the Redmond Taylor Army Heliport (RTAHP), forecasts indicate a continued expansion of development throughout the NCTCOG counties. According to the Census Bureau, the region was the second fastest-growing metro in the United States from July 2014 to July 2015, trailing only Houston. The region was also second among America’s major metros in new housing starts in 2015, behind New York. NCTCOG anticipates that the region will continue its rapid growth, with a population increase of 64 percent over the next two decades. If trends hold, the 12 counties that constitute the NCTCOG Metropolitan Planning Area (Collin, Dallas, Denton, Ellis, Hood, Hunt, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise) should add more than 4 million people, bringing the 2040 population to approximately 11 million.

People and development do not spread evenly across the study region (See Table 3). The most densely populated is Dallas County with more than four people for each acre of land. In contrast, Palo Pinto County on the western edge of the region has 21 acres of land for every

---

1 The Explosive Northern Growth of Metro Dallas, Forbes, Jul 1, 2016
resident. Growth patterns serve as an indicator of future compatibility risk. Growth in core and inner tier counties, especially in suburbs north of the City of Dallas and to the west near Fort Worth, should be robust in the years ahead. Current trends should not significantly alter the predominantly rural character of counties to the far north and southwest. As described more fully in the individual city profiles in **Section 9**, the centrally located communities surrounding NAS Fort Worth, JRB and RTAHP are primarily built out, while land near Fort Wolters and Camp Maxey remains mostly rural. The particularly strong growth in Parker and Tarrant Counties, however, reflects both infill development opportunities and new development that could draw increased activity near military installations. The JLUS framework will help communities evaluate these growth trajectories and implement appropriate land use and communication tools in advance of development.
Figure 2. Urbanized Areas, Joining Forces Region
### Table 3. Population Trends in the *Joining Forces* Region

<table>
<thead>
<tr>
<th>County</th>
<th>2010</th>
<th>2040</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collin*</td>
<td>782,341</td>
<td>1,560,421</td>
<td>99.5%</td>
</tr>
<tr>
<td>Dallas*</td>
<td>2,368,139</td>
<td>3,357,469</td>
<td>41.8%</td>
</tr>
<tr>
<td>Denton*</td>
<td>662,614</td>
<td>1,241,681</td>
<td>87.4%</td>
</tr>
<tr>
<td>Ellis*</td>
<td>149,610</td>
<td>283,898</td>
<td>89.8%</td>
</tr>
<tr>
<td>Hood*</td>
<td>51,182</td>
<td>81,578</td>
<td>59.4%</td>
</tr>
<tr>
<td>Hunt*</td>
<td>86,129</td>
<td>131,022</td>
<td>52.1%</td>
</tr>
<tr>
<td>Johnson*</td>
<td>150,934</td>
<td>252,521</td>
<td>67.3%</td>
</tr>
<tr>
<td>Kaufman*</td>
<td>103,350</td>
<td>210,097</td>
<td>103.3%</td>
</tr>
<tr>
<td>Parker*</td>
<td>116,927</td>
<td>195,286</td>
<td>67.0%</td>
</tr>
<tr>
<td>Rockwall*</td>
<td>78,337</td>
<td>166,357</td>
<td>112.4%</td>
</tr>
<tr>
<td>Tarrant*</td>
<td>1,809,034</td>
<td>3,094,649</td>
<td>71.1%</td>
</tr>
<tr>
<td>Wise*</td>
<td>59,127</td>
<td>101,865</td>
<td>72.3%</td>
</tr>
<tr>
<td>Brown**</td>
<td>38,106</td>
<td>41,184</td>
<td>8.08%</td>
</tr>
<tr>
<td>Callahan**</td>
<td>13,544</td>
<td>15,196</td>
<td>12.20%</td>
</tr>
<tr>
<td>Coleman**</td>
<td>8,895</td>
<td>9,063</td>
<td>1.89%</td>
</tr>
<tr>
<td>Comanche**</td>
<td>13,974</td>
<td>15,640</td>
<td>11.92%</td>
</tr>
<tr>
<td>Concho**</td>
<td>4,087</td>
<td>4,322</td>
<td>5.75%</td>
</tr>
<tr>
<td>Eastland**</td>
<td>18,583</td>
<td>19,830</td>
<td>6.71%</td>
</tr>
<tr>
<td>Erath**</td>
<td>37,890</td>
<td>47,464</td>
<td>25.27%</td>
</tr>
<tr>
<td>Fannin**</td>
<td>33,915</td>
<td>39,458</td>
<td>16.34%</td>
</tr>
<tr>
<td>Hamilton**</td>
<td>8,517</td>
<td>8,593</td>
<td>0.89%</td>
</tr>
<tr>
<td>Lamar **</td>
<td>49,793</td>
<td>56,265</td>
<td>13.00%</td>
</tr>
<tr>
<td>Llano**</td>
<td>19,307</td>
<td>18,654</td>
<td>-3.38%</td>
</tr>
<tr>
<td>McCulloch**</td>
<td>8,283</td>
<td>8,949</td>
<td>8.04%</td>
</tr>
<tr>
<td>Mills**</td>
<td>4,936</td>
<td>5,352</td>
<td>8.43%</td>
</tr>
</tbody>
</table>
2.2 Regional Economic Profile

The DFW region is one of the most diverse and dynamic economies in the nation. Significant industry clusters include aviation/aerospace, finance, healthcare, high technology, logistics, and manufacturing. Military-related facilities are also major contributors to the region’s solid economic base. Installations provide direct jobs to enlisted personnel, contractors, civilians, and support staff. Additionally, personnel boost local economies by spending wages on goods and services produced in their communities. Along with active personnel, veterans compose a substantial percentage of the population, making up 6.5 percent of civilians age 18 or older in the 12-county DFW region and 9.8 percent of civilians age 18 or older in Lamar County, home of Camp Maxey.

Regionally, NAS Fort Worth, JRB generates an estimated $6.6 billion in goods and services and $2.7 billion in post-income-tax personal income. The installation supports jobs for 17,466 people, and provides direct and indirect employment to 47,256 workers. The presence of the base and nearby Lockheed Martin has elevated the region to a top aviation and aerospace hub.

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2 Naval Air Station Fort Worth Joint Reserve Base Estimated Contribution to the Texas Economy, 2015
From 2004 through 2014, employment in Tarrant County attributed to the military increased by six percent. Although no comparable economic data is available for Texas Army National Guard facilities, Camp Maxey and Fort Wolters both saw a substantial increase in use of training facilities between 2012 and 2014.

The Texas military footprint is among the largest in the United States. According to the latest analysis from the Texas Comptroller, the state’s 15 major DoD installations generate $136 billion in economic activity, support more than 800,000 jobs, and create $48 billion in personal income annually. The impact of Texas military installations ranked ahead of agriculture and just behind energy as the state’s biggest economic drivers.

2.3 Regional Energy Infrastructure

Wind generation claims a rapidly growing share of the Texas energy sector. Texas produced 10 percent of its in-state electricity from wind in 2015 and industry forecasts suggest that this percentage could rise to 37 percent by 2030. Growth in wind-powered electricity is the result of the state’s naturally windy conditions combined with incentives and strategic infrastructure investments. In 2005, the Public Utility Commission of Texas established Competitive Renewable Energy Zones to connect remote wind resources in the west to the electric grid. The $7 billion project includes construction of 3,600 miles of transmission lines and network upgrades to substations, switches, and terminals. A 2,500-mile 345-kilovolt grid will bring 18,500 megawatts (MW) of wind energy to consumers in DFW and Austin (See Figure 3).

---

4 Wind energy technology booms, increases role in Texas electricity power
Wind resource potential based on average wind speed is highest along the coast near Corpus Christi, the Panhandle region, and areas west of DFW near Abilene. However, renewable energy infrastructure could begin to spread east with changing technologies and demands. Facebook, for example, is powering its new data center in Fort Worth with energy generated solely by a 200-MW wind farm in Clay County about 90 miles west of the site.

**Figure 3. Competitive Renewable Energy Zones**

Source: Public Utility Commission of Texas

---

Energy production and transmission infrastructure, particularly tall structures such as wind turbines and transmission-line towers, can pose a collision hazard to military aircraft operations, especially in designated low-altitude Military Training Routes (MTRs). Wind turbines can also cause “clutter” on sensitive radars used by the DoD and other agencies, such as the Federal Aviation Administration (FAA). The resulting interference can cause radar to lose or misidentify aircraft targets. As described in Section 4, the DoD has established a process for evaluating the mission compatibility of proposed energy projects. The presence of renewable energy infrastructure is particularly relevant for NAS Fort Worth, JRB aircraft operating within MTRs and the training airspace defined by the MOAs. Figure 4 shows the overlap of existing and recently proposed wind energy infrastructure and aviation-related training areas. The Electric Reliability Council of Texas (ERCOT) plays a major role in managing the flow of 90 percent of the state’s electric power. Military representatives are engaging ERCOT in exploring notification processes to coordinate infrastructure decisions that could affect aviation safety.

Gas wells are another type of energy-related infrastructure that can create aviation hazards in proximity to military airfields. Personnel at RTAHP have noted the presence of gas wells at the Eagle Mountain Training Area and energy developers have proposed wells near other Joining Forces installations. Although officials denied those proposals, they indicate that the area is suitable for gas wells, and there may be additional proposals in the future.
2.4 Regional Environmental Resources

The diverse array of natural, cultural, open space and recreational resources in North Texas forms part of the unique identity and high quality of life that defines the region. These assets also pose challenges and opportunities for nearby active military operations. The presence of sensitive resources, such as threatened and endangered species or cultural and archaeological sites, can require military installations to implement management and protection measures that restrict the use of land for training purposes. As described in detail later in this section, the proximity of lakes and rivers can produce issues such as flooding that directly interfere with
operations. Nearby open space, working lands, parks, and critical habitat, however, can also highlight opportunities for highly effective conservation partnerships to preserve natural buffers around military installations (See Section 4).

2.4.1 Conservation Resources

The portion of the Joining Forces study area that is west of Dallas falls into the Cross Timbers and Prairies Ecological Region, which spreads 26,000 square miles across North Central Texas. The Nature Conservancy has identified several Priority Conservation Areas where conservation efforts would most effectively protect species and ecological systems in this area, including the Dyksterhuis Woodlands and Prairies, Fort Worth Prairies, Mineral Wells Cross Timbers, and Dogwood Cuesta. The Texas Parks & Wildlife Department has also established a Cross Timbers Wildlife District that encompasses Tarrant, Parker, and Palo Pinto Counties. The purpose of the district is to manage and conserve the natural and cultural resources of the area.

While tall grass prairie once covered the parts of the Cross Timbers and Prairies region, ranching, agriculture, and eventually urban development have degraded wildlife and habitat resources in the area, particularly around Fort Worth. Today, the East Cross Timbers sub-region has few remaining large tracts of undisturbed woodlands, making it one of the most fragmented vegetative regions in Texas. Farther west, the West Cross Timbers sub-region is relatively intact, featuring a hilly terrain, open grasslands, and brushy rangelands. Ranch holdings in Palo Pinto County, for example, are typically 300 to 400 acres in size, supporting livestock and croplands planted for grazing. Much of the sub-region contains habitat that supports populations of white-tailed deer and other wildlife species, creating prime hunting land. Fragmentation of wildlife habitat is increasing in the eastern counties of the West Cross
Timbers, such as Parker County, where landowners are selling and subdividing larger land holdings for small home-building sites, farms, and ranchettes.

North Texas is home to several endangered species, including federally listed bird species such as the black-capped vireo and golden-cheeked warbler. The golden-cheeked warbler is a small, migratory songbird, often known as the goldfinch of Texas. It lives in 33 counties in central and southern Texas, covering an area roughly east of Fort Worth and Austin and west toward Big Bend National Park. The warbler’s natural habitat includes tall forests of juniper and hardwood trees. The counties within the Brownwood and the Brady MOAs and Fort Wolters contain warbler habitat.

The black-capped vireo is a small and endangered bird that has a habitat zone west of Fort Worth with proximity to Joining Forces military installations. Similar to the golden-cheeked warbler, habitat for the vireos includes hardwoods like oak. However, the birds also can be found in less-dense wooded areas and open grassy areas.

Biologists previously sighted the federally endangered American burying beetle (ABB) in the Camp Maxey area. The presence of this endangered species had placed much of the acreage of the installation under environmental restrictions. However, in 2015, the U.S. Fish & Wildlife Service issued a new Biological Opinion that found no designated critical habitat and declared that TXARNG’s military training activities at Camp Maxey and the implementation of its Integrated Natural Resources Management Plan are unlikely to jeopardize the ABB. Because of
these findings, the U.S. Fish & Wildlife Service has lifted training and maintenance restrictions on Camp Maxey but calls for continued monitoring of the species in the area.

Numerous open spaces, parks, and major water bodies have adjacency to Joining Forces military operations. Mountain Creek Lake sits immediately to the southeast of the RTAHP in the City of Dallas. Similarly, Lake Worth bounds a portion of NAS Fort Worth, JRB on its northern perimeter. The 640-acre Lake Mineral Wells State Park and Trailway is just south of Fort Wolters. The Pat Mayse Lake reservoir and Wildlife Management Area lie to the north of Camp Maxey in Lamar County. Nearby lakes and open spaces act as natural buffers around installations but can also increase public access to military lands or training areas, attract recreational activity near training, or cause development pressure on nearby privately held lands. Open rangelands are also more prone to wildfires, particularly during drought conditions. In 2011, the Possum Kingdom fire burned 6,500 acres and destroyed 39 homes in Palo Pinto County. Although an investigation determined that military training was not the cause of this blaze, the use of vehicles, equipment, and ordnance, in general, contributes to the higher risk of wildfires.

Various public agencies and non-profit organizations work to protect open space, working lands, habitat, and species in North Texas through conservation easements, technical and financial assistance to landowners, policy initiatives, and the management of land resources. The Texas Parks & Wildlife Department (TPWD), the Natural Resources Conservation Service (NRCS), and The Nature Conservancy all have an active presence in the Joining Forces region. The TPWD, NRCS, the Noble Foundation, Texas AgriLife Extension Service, and the Grazing Lands Conservation Initiative in Texas have participated in wildfire post-recovery planning in Palo Pinto County.
Figures 5 through 8 show major environmental features in the Joining Forces region. Table 4 lists the environmental conditions displayed on the maps. The presence of these sensitive resources near installations offers opportunities to explore conservation partnerships to create buffers.

**Table 4. Major Environmental Features in Joining Forces Region**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historic points, sites, districts,</td>
<td>These sites include those with national and/or state historic designations.</td>
<td>Texas Historical Commission</td>
</tr>
<tr>
<td>or cemeteries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closed landfills</td>
<td>Permitted and unauthorized sites were identified by Texas State University for the Texas Commission on Environmental Quality.</td>
<td>NCTCOG</td>
</tr>
<tr>
<td>Existing landfills</td>
<td>These sites are identified by NCTCOG land use data.</td>
<td>NCTCOG</td>
</tr>
<tr>
<td>Streams</td>
<td>These sites include all feature types identified by the medium resolution dataset from the National Hydrography Dataset.</td>
<td>National Hydrography Dataset</td>
</tr>
<tr>
<td>Impaired streams and lakes</td>
<td>These sites include Category 5 impaired waterbodies—those that don’t meet standards for water quality or at least one of their designated uses is threatened by pollution.</td>
<td>Texas Commission on Environmental Quality</td>
</tr>
<tr>
<td>Lakes</td>
<td>These data include major lakes.</td>
<td>NCTCOG and National Hydrography Dataset</td>
</tr>
<tr>
<td>Category</td>
<td>Description</td>
<td>Source</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Wetlands and wet prairie</td>
<td>Three datasets were combined to provide the most inclusive data possible.</td>
<td>National Wetlands Inventory, National Land Cover Database 2011, and Ecological Mapping Systems of Texas (Texas Parks &amp; Wildlife Department)</td>
</tr>
<tr>
<td>FEMA flood zones</td>
<td>These locations include 100-year flood zones.</td>
<td>Federal Emergency Management Agency</td>
</tr>
<tr>
<td>Parks or natural areas</td>
<td>These areas are natural areas or designated local, state, or national parks that are potentially undevelopable.</td>
<td>NCTCOG and National Land Cover Database</td>
</tr>
<tr>
<td>TNC Priority Conservation Areas</td>
<td>These areas have been identified by The Nature Conservancy as priority areas to protect and preserve species and ecological systems.</td>
<td>The Nature Conservancy</td>
</tr>
<tr>
<td>Watershed Protection Plans</td>
<td>These locations include existing and planned watershed protection plans for non-point source water pollution.</td>
<td>Texas Commission on Environmental Quality</td>
</tr>
<tr>
<td>USGS Protected Areas Database</td>
<td>This inventory includes public parks and protected open space. Protected areas that duplicated other layers were not included.</td>
<td>U.S. Geological Survey Gap Analysis Program</td>
</tr>
<tr>
<td>Brownfields</td>
<td>Contaminants, hazardous substances, or pollutants may be located at these sites.</td>
<td>Environmental Protection Agency Region 6</td>
</tr>
<tr>
<td>TMDL Bacteria Implementation Plan</td>
<td>The Greater Trinity River Bacteria TMDL Implementation Plan seeks to reduce</td>
<td>NCTCOG</td>
</tr>
</tbody>
</table>
bacteria loading in river segments and tributaries in the plan area.

<table>
<thead>
<tr>
<th>Conservation easements</th>
<th>These locations have been voluntarily submitted to the National Conservation Easement Database, which does not include all conservation easements.</th>
<th>National Conservation Easement Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wildlife Management Areas</td>
<td>These protected areas preserve habitats and wildlife that are typical of ecoregions in Texas.</td>
<td>Texas Parks &amp; Wildlife Department</td>
</tr>
<tr>
<td>Significant Stream Segments</td>
<td>These streams segments have been identified as having unique ecological value.</td>
<td>Texas Parks &amp; Wildlife Department</td>
</tr>
<tr>
<td>Solid waste sites</td>
<td>Municipal solid waste sites include registered and permitted landfills and associated sites.</td>
<td>Texas Commission on Environmental Quality</td>
</tr>
</tbody>
</table>
Figure 5. Environmental Features around Camp Maxey
Figure 6. Environmental Features around Fort Wolters
Figure 7. Environmental Features around NAS Fort Worth, JRB
Figure 8. Environmental Features around Redmond Taylor Army Heliport
The presence or potential presence of archaeological resources in an area can also limit military and other activities, or place restrictions on them. Figure 9 shows the results of a study around NAS Fort Worth, JRB to predict the relative likelihood that a location will contain prehistoric sites eligible for the National Register of Historic Places and thus require mitigation measures. Aggregate archaeological liability predictive scores represent the likelihood for surface-level prehistoric sites and deep prehistoric sites. Table 5 describes the aggregate scores.

**Table 5. Potential Archaeological Liability Predictive Scores**

<table>
<thead>
<tr>
<th>Aggregate Score</th>
<th>Relative Likelihood for Surface-Level Prehistoric Sites</th>
<th>Relative Likelihood for Deep Prehistoric Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>No score</td>
<td>Negligible</td>
<td>Negligible</td>
</tr>
<tr>
<td>1</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>2</td>
<td>Low</td>
<td>Moderate</td>
</tr>
<tr>
<td>3</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>4</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td>5</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>6</td>
<td>Moderate</td>
<td>High</td>
</tr>
<tr>
<td>7</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>8</td>
<td>High</td>
<td>Moderate</td>
</tr>
<tr>
<td>9</td>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>
Figure 9. Potential for Archaeological Resources, NAS Fort Worth, JRB

Legend
- NAS Fort Worth, JRB
- Roads
- Lakes

AICUZ Boundaries
- NAS JRB
- Clear Zones
- Accident
- Potential Zone 1
- Accident
- Potential Zone 2

Noise Contours Decibel DNL
- <65
- 65
- 70
- 80
- 85

Texas Historical Commission Data
- Historic points, sites, districts, cemeteries

TexDOT Potential Archaeological Liability Maps*
- 1
- 2
- 3
- 4
- 5

* None of this area scored a ‘3.’ For a description of the scores, please see accompanying text.

Miles
0.5
1

September 2, 2016
2.4.2 Watershed Resources

Bodies of water surround NAS Fort Worth, JRB with Lake Worth on the north and the West Fork of the Trinity River on the east. Farmers Branch Creek flows through the installation. Two large circular box culverts connect 7.2 square miles of contributing area, four square miles of which are within the City of White Settlement, which links to the remainder of the overall basin area of 11.4 square miles. Construction of these box culverts is assumed to pre-date the 2009 Federal Emergency Management Agency (FEMA) map (Map Number of 48439C0170K, Revised September 25, 2009). A levee on the east side of the West Fork of the Trinity River protects portions of the River Oaks community from a 100-year flood event.

The communities around NAS Fort Worth, JRB fall within the Lower West Fork Trinity Watershed. This watershed encompasses 55 communities, covering approximately 1,513 square miles and portions of Dallas, Ellis, Hood, Johnson, Parker, Tarrant and Wise Counties. According to FEMA, the Lower West Fork Trinity Watershed has experienced a high number of disaster declarations in the last 60 years. The Farmers Branch Creek sub-Watershed contains the Cities of White Settlement, Fort Worth, River Oaks, and Westover Hills.

Upstream development in surrounding communities contributes to flooding issues on the airfield of NAS Fort Worth, JRB, posing a direct threat to operational readiness. A specific focus of Joining Forces is to identify best practices to reduce the risk of flooding on the runway or in nearby areas. Participants ranked drainage and flooding as the highest priority compatibility issue at the initial Joining Forces public meeting held in River Oaks in August 2016 (See Section 11). Attendees in particular noted flooding issues along the State Highway 183 corridor near Roberts Cut Off Road and along State Highway 199.
2.4.3 FEMA Flood Zones

Figure 10 displays FEMA Flood Insurance Risk Zones in the NAS Fort Worth, JRB area. The zones indicate areas of high risk for flooding with Zone A representing an area with a one percent annual chance of flooding and a 26 percent chance of flooding over the life of a 30-year mortgage. Zone AE, which includes a portion of the base, indicates that there has been a prior study of flooding in the area.

Figure 10. FEMA Flood Zones, NAS Fort Worth, JRB
2.4.4 Existing Stormwater Planning Studies

Flooding has been an ongoing challenge for the region, prompting numerous studies and floodplain management activities. NCTCOG is a FEMA Cooperating Technical Partner (CTP), allowing collaboration with FEMA to maintain current flood hazard information. In 2013, FEMA and NCTCOG began the Discovery process for the Lower West Fork Trinity Watershed. The purpose of the effort was to gather information about local flood risk, flood hazards, mitigation plans, mitigation activities, flooding history, development plans, and floodplain management to help communities identify and protect areas of risk. The resulting study rated the Farmers Branch Creek sub-Watershed as high risk for flooding. FEMA will use the prioritization rankings list to determine targeted action items, potential projects, and multi-year flood risk project plans within the Lower West Fork Trinity Watershed. The report also lists flood risk identification as a potential project for Farmers Branch-West Fork Trinity. There are also a number of hazard mitigation plans throughout the Lower West Fork Trinity Watershed, including the City of Benbrook and the City of Fort Worth (the plan covers the communities of Lake Worth, River Oaks, Sansom Park, Westover Hills, Westworth Village, White Settlement, and unincorporated Tarrant County).

Previous NCTCOG corridor master plan efforts, specifically State Highway 183 (River Oaks Boulevard) and State Highway 199 (Jacksboro Highway) have assessed flooding issues related to NAS Fort Worth, JRB. The drainage assessment for the SH 199 Corridor Master Plan studied the corridor running NW to SE, just NE of NAS Fort Worth, JRB along the banks of the West Fork of the Trinity River, and then crossing near the Panther Island Bypass Channel, and Clear Fork Trinity River. It identifies surface drainage along the SH 199 corridor as poorly defined with inadequate drainage collection, minimal storm drain inlets, and insufficient upstream and on-system capture areas, which may flood the roads. The study detailed 14 outfalls, which
have varying capacity from <2-year frequency to 100-year frequency, and many of which contained silt. Two creeks were identified: the Menefee Creek (647 acres) – 5-year Capacity and the WF-5 tributary (473 acres) – 2-year capacity. These creeks will see flooding during large events along SH 199 at the confluence of Menefee Creek and Stream WF-5, and where SH 199 crosses the unnamed creek. Three large bridges are along SH 199: West Fork of Trinity River, Panther Island Bypass Channel, and Clear Fork of Trinity River, which all convey the 100-year floods.

Comments collected from public meetings in River Oaks indicate that several locations along SH 183 are also prone to flooding and that there are issues regarding the sizing of stormwater facilities. Currently, the corridor is characterized by wide swaths of impervious cover, consisting of roadway pavement and parking areas, which limit infiltration of stormwater and generate both high volumes of stormwater runoff and high loadings of stormwater pollutants. In addition, in certain locations, box culverts or storm sewers crossing under River Oaks Boulevard may be undersized, limiting the conveyance of water under the roadway and causing elevated water surface elevations on the upstream side of the roadway that may contribute to both roadway and structural flooding during severe rain events. Existing internal drainage along the corridor typically consists of incised roadside or median ditches, connected across intersections and driveways by culverts.

As a result, the SH183 Corridor Master Plan recommended that immediate short-term solutions from the Texas Department of Transportation would be necessary, including re-grading ditches and cleaning out culverts along the highway. Long-term solutions for flooding in River Oaks include a regional drainage and hydrology study and preliminary engineering to improved facilities.
3. Federal, State, and Regional Policy Context for Compatibility

3.1 Federal Initiatives

DoD entities have a variety of planning, financing, and communication mechanisms available to reduce the impacts of operational activities and coordinate planning with surrounding communities. While some of these measures are currently in place within the Joining Forces region, gaps in the current implementation of compatibility tools highlight opportunities for JLUS recommendations.

3.1.1 Joint Land Use Study

In 1985, the DoD initiated the JLUS program to create a community-based framework for compatible land use planning around military installations. The DoD’s OEA funded Joining Forces as part of this program. As of 2015, 120 defense communities across the United States have completed a JLUS. The communities around NAS Fort Worth, JRB conducted a JLUS in 2008, laying the foundation for this current effort (See Section 3.4.3).

3.1.2 AICUZ and Encroachment Action Plan

The DoD established the Air Installation Compatible Use Zone (AICUZ) program to define areas of high noise and accident potential and recommend compatible land uses. Using accident data from all military airfields, the AICUZ identifies three zones with a higher statistical risk of an aircraft accident: the Clear Zone (CZ), Accident Potential Zone I (APZ I), and Accident Potential Zone II (APZ II). These zones extend from each end of the runway. The probability of an
incident is highest in the CZ and declines with distance from the runway in the APZ I and APZ II.

To depict the noise impacts of aircraft, the AICUZ expresses average decibel levels over a 24-hour period (day-night average sound level or DNL). Generally, average noise exposure of 65 decibels or higher can cause conflicts with noise-sensitive uses, such as housing or schools. Figure 11 shows air safety zones and noise contours around NAS Fort Worth, JRB. AICUZ land use guidelines promote compatibility by discouraging people-intensive and noise-sensitive development in areas with exposure to higher safety risks or noise. It should be noted that, while the AICUZ identifies zones with a higher likelihood of impact, noise or aircraft incidents could occur in other areas.

The Navy has also developed an Encroachment Action Plan (EAP) process to address encroachment challenges around Navy installations and ranges. The EAP is an internal Navy tool that identifies factors limiting operational capabilities and establishes action steps and partnering strategies to reduce conflicts. NAS Fort Worth, JRB has prepared an EAP.

3.1.3 Readiness and Environmental Protection Integration

The DoD’s Readiness and Environmental Protection Integration (REPI) program reduces the risk of encroachment by authorizing the Military Services (Army, Navy, Marine Corps, and Air Force) to enter into agreements with eligible entities, such as local governments, non-governmental organizations, and willing land owners, to secure conservation easements on property with conservation value near a military installation or military airspace. The agreements enable organizations to acquire, on a cost-shared basis, development interests in the properties of voluntary sellers. The property owner typically continues to hold the title for the land, but receives monetary compensation and tax breaks to maintain the encumbered
property in a highly limited use that preserves habitat and other sensitive environmental resources.

All REPI partnerships require an agreement between the military and an eligible entity, such as a state or local government or private conservation organization, cost sharing between the military and a partner to acquire a land interest or easement, voluntary participation by the landowner, and an assurance that the protected land maintains compatible land use or habitat preservation.

The Army implements REPI authority through its Army Compatible Use Buffers (ACUB) program. The Navy develops an Encroachment Partnering program as a key component of its overall Encroachment Management Program. Installations identify mission priorities, submit projects for funding, identify partners and willing sellers, establish and maintain partner agreements, conduct transactions, maintain real property interests, and report accomplishments to the DoD. To date, Fort Bliss, Fort Hood, Joint Base San Antonio (Camp Bullis), and Camp Swift have implemented REPI-related projects in Texas.

In 2013, the U.S. Departments of Agriculture, Defense, and the Interior established the Sentinel Landscapes Partnership initiative. Sentinel Landscapes seek to preserve working or natural lands, such as farms, ranches, and forests, to achieve the complementary goals of strengthening local economies, conserving habitat and natural resources, and protecting the vital missions of nearby military installations. Texas A&M University and the Texas A&M AgriLife Extension Service are leading state efforts to leverage the Sentinel Landscapes program and other conservation efforts to sustain military missions through private land stewardship of working lands. Potential statewide partnerships with the Texas Commander’s Council and Joining Forces stakeholders include developing a strategic plan for supporting and protecting
Texas military missions, exploring opportunities to initiate place-based pilots, and preparing nomination documentation to establish Texas Sentinel Landscapes projects.

3.1.4 Department of Defense Siting Clearinghouse

With the growth of the renewable energy sector, the DoD is increasingly called on to evaluate the compatibility impacts of wind, solar, transmission, and other projects on military activities. Created in 2010, the Siting Clearinghouse establishes a “one-stop-shop” to review energy proposals and explore mitigation strategies. The mission of the Clearinghouse is to protect DoD mission capabilities from incompatible energy development by collaborating with DoD entities and external stakeholders.

The Clearinghouse oversees both a formal and informal project review process. The formal process usually begins with the referral of a project to the DoD through the FAA’s Obstruction Evaluation/Airport Airspace Analysis program. The informal process begins when other federal departments and agencies or a state or local government, an Indian tribe, or a landowner elevates a proposed project for review. Informal reviews are only advisory and the DoD does not prepare an authoritative position on the project.

In both the formal and informal review processes, the Clearinghouse provides information about the proposed project to experts in the various Military Services and other DoD entities. After qualitative and quantitative analyses, the Clearinghouse compiles responses into a single DoD position for consideration by the permitting agency.
3.1.5 Unmanned Aircraft System Policies

Unmanned Aircraft Systems (UAS), commonly referred to as drones, are an increasing encroachment risk to military installations. The availability of smaller, affordable drones on the market is spurring rapid growth of commercial applications, as well as hobbyist activity. UAS can create physical hazards, such as midair strikes with aircraft, or pose security and safety threats by flying near military personnel or over sensitive operational areas. Incidents involving unauthorized and unsafe use of small, remote-controlled aircraft have risen dramatically. Pilot reports of interactions with suspected unmanned aircraft across the United States have increased from 238 sightings in all of 2014 to 780 from January to August of 2015.6

Like traditional aircraft, the FAA regulates UAS to ensure safety in flight and on the ground. The FAA has issued new pilot and operating rules that took effect August 29, 2016 for unmanned aircraft weighing less than 55 pounds. The rules restrict drone use to visual line-of-sight operation during daylight hours at a maximum altitude of 400 feet above ground level and a maximum speed of 100 miles per hour. Recreational operators must give notice for flights within five miles of an airport to the airport operator and air traffic control tower. Regulations prohibit recreational operations in Class B airspace around most major airports without specific air traffic permission and coordination. Given the relative lack of guidance and the dispersed, small-scale nature of hobbyist operations, local law enforcement has struggled to recognize and limit UAS threats. The FAA has emphasized partnerships with local law enforcement agencies to identify and prevent unauthorized or unsafe drone operations.

6 State and Local Regulation of Unmanned Aircraft Systems (UAS) Fact Sheet
States and local jurisdictions are increasingly exploring regulation of UAS through ordinances. Federal rules allow states and local governments to enact specific drone rules and enforcement policies within their jurisdictions. In 2015, for example, the City of Los Angeles amended its municipal code to regulate drones.\(^7\) However, to ensure a consistent federal framework for the regulation of airspace, local ordinances that ban hobbyists from operating small drones within city limits or within certain distances of landmarks should consult with the FAA and align provisions with federal rules.

### 3.2 State Programs

The State of Texas has also created entities and programs to protect and promote military missions through advocacy, communication, and compatibility planning.

#### 3.2.1 Texas Military Preparedness Commission

Established in 2003, the Texas Military Preparedness Commission (TMPC) seeks to protect, expand, and attract new installations, military missions, and defense-related businesses in the State of Texas. The TMPC administers two financial and technical assistance programs designed to aid defense communities: the Defense Economic Adjustment Assistance Grant Program and the Texas Military Value Revolving Loan Fund. The state has also formed the Texas Commander’s Council (TCC), a consortium of the commanding officers of the military installations. The commanding officer of NAS Fort Worth, JRB is a participating member of the group. The TCC coordinates with the TMPC on a variety of issues affecting the state’s military installations, including encroachment management.

3.2.2 Texas Military

The Texas Military consists of the Texas Army National Guard (TXARNG), the Texas Air National Guard (TXARNG), the Texas State Guard, Domestic Operations Task Force and the Office of the Executive Director. The Adjutant General of Texas administers all branches under the command of the Governor. The TXARNG serves a dual state and federal mission, supplying personnel in response to domestic events, such as emergencies, as well as support for active-duty Army operations abroad. The state has approximately 19,000 TXARNG soldiers. The TXARNG staffs three of the major installations in the Joining Forces study area: Camp Maxey, Fort Wolters, and RTAHP.

3.3 State Regulatory Context

State law determines many of the strategies available to local governments seeking to promote compatibility around installations. Zoning is a common mechanism for reducing conflicts by controlling the intensity or type of development near military operations. The State of Texas, however, does not explicitly grant counties the authority to zone unincorporated land. County planning commissions in Texas can exercise the right to review and approve plats of subdivisions based on a plan for the economic and physical development of the county. With the exception of NAS Fort Worth, JRB and RTAHP, which are within urban settings, much of the rural land surrounding Joining Forces installations is unincorporated and therefore not subject to zoning laws.

The inability to zone unincorporated land has generated much debate over the years with critics maintaining that it deprives counties of a basic tool to address rapid growth or specific development impacts. One option for expanding county land use controls is to seek legislation that allows targeted zoning powers over specific unincorporated areas based on location,
population, or physical features. Using this approach, counties could pursue the authority to enact specialized zoning in proximity to military operations.

Beyond zoning, states often play a role in facilitating notification and coordination on real estate, development, and infrastructure decisions that could affect military-civilian compatibility. States, for example, can require owners to disclose the proximity of property to an installation prior to sale.\(^8\) Currently, Texas state law does not require real estate agents to disclose the proximity of installations, though some agents in the region inform prospective buyers of nearby installations.

States can also mandate advisory consultation between installations and local governments on community development proposals or establish a process to coordinate the siting of major infrastructure systems, such as renewable energy. Texas Local Government Code, for example, states that local governments in the San Antonio and Wichita Falls area must seek comments and analysis from base or facility authorities if the community determines that a proposed ordinance, rule, or plan may affect an installation or military exercises or training activities.\(^9\) The code also requires communities to notify a military base or defense facility of a proposed structure in an area within eight miles of the boundary line of the installation.\(^10\) The applicability of these requirements depends on the size of the defense community. As currently written, the code’s consultation requirements are not applicable to the Joining Forces installations. There are no formal requirements in place to notify installations of wind energy

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\(^8\) Virginia Residential Property Disclosure Act (Title 55, Chapter 27 of the Code of Virginia
\(^9\) Sec. 397.005. Consultation with or Notification to Military Base or Defense Facility Authorities: Proposed Ordinance, Rule, or Plan.
\(^10\) Sec. 397.006. Consultation with or Notification to Military Base or Defense Facility Authorities: Proposed Structure.
infrastructure, particularly in outlying areas that could impair the safe use of airspace. This JLUS can explore opportunities to formalize and expand consultation between military and civilian partners.

The TCC has expressed support for legislative actions that would expand and strengthen available compatibility tools, such as formal, enforceable notification processes and the early review of potential structures and developments. The TCC also encourages establishing funding mechanisms to purchase rights or restrictive easements for non-conservation lands near installations.

As described in Section 9, zoning remains a viable tool for cities seeking to control land use and development characteristics around installations. Generally, a city’s ordinances are valid and enforceable only within its corporate limits. However, extraterritorial jurisdiction (ETJ) provisions grant cities authority to enact some regulations on contiguous unincorporated land. The size of a city's ETJ varies according to its population, ranging from one-half mile for communities with less than 5,000 people, to five miles for cities greater than 100,000 in population.

3.4 Regional Partnerships

Regional entities and their local partners have also been very active in planning for compatibility with military operations in North Texas, particularly around NAS Fort Worth, JRB.
3.4.1 North Central Texas Council of Governments

NCTCOG is a voluntary association of local governments, established to assist communities in planning for common needs, cooperating for mutual benefit, and coordinating for sound regional development. NCTCOG serves a 16-county area centered around Dallas and Fort Worth and has over 230 member governments, including counties, cities, independent school districts, and special districts. NTCOG’s programs include community services, emergency preparedness, environment and development, research and information, workforce development, and transportation. The Transportation Department of NCTCOG coordinates compatibility initiatives around the region’s military installations, including the Joining Forces study.

3.4.2 2008 Joint Land Use Study

A foundational collaborative effort was the 2008 JLUS, involving the Cities of Benbrook, Fort Worth, Lake Worth, River Oaks, Westworth Village, and White Settlement, as well as Tarrant County. That JLUS recommended a series of strategies to reduce the risk of encroachment around NAS Fort Worth, JRB with an emphasis on the following immediate implementation steps:

- Establish an Oversight Committee to monitor changes and to work closely with the base on land use and encroachment issues;
- Revise and continue to enforce current regulatory requirements such as zoning and building codes to minimize encroachment and noise issues;
- Institute noise level reduction measures and a sound attenuation program for those incompatible structures located in the 65 decibel (dB) DNL (denotes average day/night noise levels) noise contour or higher;
• Establish a real estate advisory service for the noise-affected area; and
• Initiate land protection and/or acquisition in the CZ.

3.4.3 Joint Land Use Study Implementation

As an outgrowth of the 2008 JLUS, study partners along with the NCTCOG formed the Regional Coordination Committee (RCC). The RCC serves as a collaborative forum for developing, implementing, and monitoring programs and policies that enable the continued coexistence of the installation and communities. Members of the RCC include local government staff and elected officials; NAS Fort Worth, JRB; Lockheed Martin; and community groups. Since 2008, the RCC has worked to pursue 17 implementation action items resulting from the JLUS process. Among the critical, early implementation items was creation of the RCC Development Review Web Tool. This web-based tracking tool acts as a clearinghouse to discuss various community projects, including parcel-specific zoning changes, height obstructions, site plan applications, and special exceptions. It also provides a forum for reviewing broader long-term actions, such as comprehensive plan updates, zoning ordinance language, and capital improvement plans for public buildings.

In 2012, NCTCOG used a grant from the U.S. Department of Housing and Urban Development to prepare the Planning for Livable Military Communities (PLMC) study for local government
partners in proximity to the base. The study developed regional economic development strategies and explored options to improve housing opportunities; enhance area corridors; and expand mobility choices, including bike and pedestrian and public transportation. The plan highlighted additional strategies that communities could implement to promote compatibility with the base, such as adopting the most recent building codes to provide better sound attenuation; considering a zoning overlay to encourage compatible land uses in areas of high noise and safety concerns; and focusing new development in city cores. Following the PLMC effort, partners formed the West Tarrant Alliance to advance the shared economic interests of the county’s western communities.

As a complementary effort to PLMC, NCTCOG also conducted a transportation assessment around NAS Fort Worth, JRB to facilitate safe and efficient access to the base and prevent further disruption of the area’s overburdened transportation network.

Though much of the prior compatibility effort in the region has focused on NAS Fort Worth, JRB, a specific goal of Joining Forces is to expand collaborative partnerships and best practices to other defense communities in North Texas. In building the groundwork for broader, longer-term collaboration across all communities, the RCC has indicated its support for state legislation that promotes compatible developing through the following tools:

- Creating effective methods to initiate dialogue between project developers, military bases, and City, County, and State Officials prior to development for certain proposed activities (e.g. wind turbines, communications towers, sensitive land uses, etc.) that may adversely affect military operations;
- Enhancing communication efforts to inform current and potential residents who may be affected by military operations (similar to HB 1639 84R) and;
• Supporting collaboration between local governments, the state, and the Federal Aviation Administration to advance regulations to ensure safe operations of unmanned aircraft vehicles

NCTCOG, as the Metropolitan Planning Organization responsible for transportation planning in the region, has undertaken numerous projects to enhance access to NAS Fort Worth, JRB and improve area roadways (See Figure 10).

Figure 10. Transportation Projects, NAS Fort Worth, JRB, October 2016
4. NAS Fort Worth, Joint Reserve Base Profile

4.1 History

Naval Air Station Fort Worth, Joint Reserve Base began in 1932 as Tarrant Field. In 1941, the U.S. government selected the site adjacent to the field as a Consolidated Aircraft factory for the assembly of B-24 Liberator bombers, beginning a tradition of aircraft production that continues today at Lockheed Martin. After World War II, the newly designated Carswell Air Force Base (AFB) became one of the few Strategic Air Command installations and transitioned through a number of bombers, such as the B-36 Peacemaker, B-52 Stratofortress, and the B-58 Hustler. Over the years, the base contributed resources and trained pilots in support of major conflicts around the globe.

In 1991, the Base Realignment and Closure Commission selected Carswell AFB for closure. The site closed in 1993. A year later, the installation became a Naval Air Station Joint Reserve Base operated under Commander, Navy Installations Command. Numerous Navy Reserve, Marine Corps, Air Force, and Air National Guard resources relocated to the base.

Source: www.cnic.navy.mil/regions/cnrse/installations/nas_jrb_fort_worth.html
Figure 11. NAS Fort Worth, JRB and Surrounding Communities
4.2 Installation Mission and Operations

NAS Fort Worth, JRB’s mission is “to provide joint training capabilities to enable War Fighter readiness while sustaining personnel and families’ needs, future compatibility and inculcating a culture of safety.” The primary responsibility of NAS Fort Worth, JRB is to ensure combat readiness by training and equipping aircrews and aviation ground-support personnel. The base hosts 40 separate commands that represent the U.S. Navy, U.S. Marine Corps, U.S. Army, U.S. Air Force, and TXANG. Approximately 9,900 personnel operate at the 2,300-acre base, including active-duty military personnel, Guardsmen, Reservists, and civilians. These personnel conduct an average of 2,000 air operations each month. Operations take place between 7 a.m. and 11 p.m. Table 6 shows the squadrons and aircraft at the base. Pilots from NAS Fort Worth, JRB use airspace in the Brady and Brownwood MOAs, which are about 70 miles southwest of the base by air travel (See Section 8). The base also hosts a number of transient aircraft. The adjacent Lockheed Martin facility shares the base runway for manufacturing and testing activities.

Table 6. NAS Fort Worth, JRB Squadrons and Aircraft

<table>
<thead>
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<td>3</td>
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<tr>
<td>VMFA</td>
<td>F-18</td>
<td>4</td>
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<tr>
<td>VMGR</td>
<td>KC-130J</td>
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* Possible Transition to 10-15
The U.S. Air Force has identified NAS Fort Worth, JRB as a candidate site for basing of the F-35 aircraft. The Air Force will make a basing decision in 2017.

**4.3 Initial Compatibility Concerns**

NAS Fort Worth, JRB affects and interacts with several cities in Tarrant County: Fort Worth, Benbrook, Lake Worth, River Oaks, Sansom Park, Westover Hills, Westworth Village, and White Settlement (See Figure 11). Air safety zones (CZ, APZ I, and APZ II) extend to the north off the base. To the south, APZ I and APZ II cross the installation boundary into the community. High average levels of aircraft noise extend north and south from the runway with lower noise exposure spreading farther into the community.

Several of the surrounding communities have adopted overlays to address air safety and noise impacts (See Section 9). In general, community and stakeholder feedback indicates that aircraft noise around NAS Fort Worth, JRB does not significantly affect quality of life. Staff has noted that, in the previous 12 months, the base received 10 noise-related complaints, eight of which did not originate from NAS Fort Worth, JRB operations. Base aircraft, however, may generate noise impacts when conducting training activity in outlying airspace, affecting communities in the far southwestern portion of the study area (See Section 8).

Initial compatibility concerns for NAS Fort Worth, JRB revolve primarily around new development pressures and flight obstructions. Even though current residents are relatively accustomed to existing noise, increasing infill development and redevelopment activity in surrounding communities could place more people in proximity to aircraft noise. Similarly, residential turnover in nearby mature neighborhoods could attract new residents without ties to the base or familiarity with the area’s long military history. Mission change could also alter the existing noise environment. As noted earlier, the NAS Fort Worth, JRB is a candidate site
for basing of the F-35. Though noise varies based on operational characteristics, the F-35 aircraft is in general marginally louder than the F-16. In addition, the engines of this 5th generation fighter operate at another frequency that could produce differing perceptions of nuisance in the community. On the air safety side, portions of the APZs within Lake Worth to the north and White Settlement to the south do not have regulatory overlays in place to control development intensity or land use type in areas of higher accident risk.

Other community impacts relate to stormwater and transportation. Upstream development in the community contributes to flooding issues on the airfield, posing a direct threat to operational readiness. As described earlier, renewable energy infrastructure, particularly wind turbine developments, can pose a threat to air safety near the base and in MTRs to the southwest. The base has also had sightings of UAS in the area, which create a flight and security hazard.

Overall, NAS Fort Worth, JRB has used various tools to reduce encroachment challenges with its neighbors. The base has conducted encroachment-related planning through the AICUZ, EAP, and JLUS and has maintained an active presence in ongoing coordination activities, such as the RCC. Surrounding communities express strong support for base personnel and operations.
5. Camp Maxey Training Center Profile

5.1 History

The U.S. government activated Camp Maxey in 1942 for training infantry during World War II, including the 102nd Infantry Division and the 99th Infantry Division. During the war, the installation could accommodate almost 45,000 soldiers and held German prisoners of war. However, by the end of 1945, the government had deactivated Camp Maxey and the TXARNG acquired the installation in 1949. The U.S. Army Corps of Engineers flooded a portion of Camp Maxey to create Pat Mayse Lake in the 1960s, thus reducing the installation’s size.

5.2 Installation Mission and Operations

The TXARNG staffs Camp Maxey with 18 full-time personnel on site. Camp Maxey provides combat readiness training for up to battalion-sized elements for TXARNG units in the northeastern part of the state, including:

- Military police training;
- Light Infantry Training;
- Small Unit Tactics and Engineer training;
• Several firing ranges, including 9 millimeter (mm) pistol range, 5.56 mm Pop Up Range, 5.56 mm Zero Range, 7.62 or 5.56 mm fixed machine gun range, and a 40 mm Grenade range;
• Land Navigation Course;
• Confidence Course;
• Nuclear Biological Chemical chamber;
• Mobility, counter mobility, survivability and construction operations;
• Mobile Operations and Urban Training (MOUT) site;
• A Unit Training Equipment Site where the motor pool is maintained;
• A buried Ammunition Supply Point; and
• Storage for 8,000 gallons of fuel.

Trainees who visit Camp Maxey include units from the TXARNG, U.S. Army Reserve, U.S. Navy, U.S. Army, and U.S. Marine Corps Reserve, as well as personnel outside of the DoD. The 2nd detachment of Garrison Training Center Command is the main user. Usage tends to be highest on drill weekends from March through October with typically at least one unit participating every weekend. Camp Maxey has experienced a 67 percent increase in use since 2012, with 32,516 personnel training at the site in 2014.

TXARNG Chinooks from RTAHP fly into Camp Maxey once or twice a year; Black Hawks also occasionally use the site. There is an informal Landing Zone (LZ) in the cantonment (developed) area near U.S. 271.

Camp Maxey faces operational constraints due to size and environmental issues. The acreage at the installation is not sufficient to accommodate necessary training, requiring units to travel to other facilities around the state. The TXARNG has expressed interest in securing approval
from the U.S. Army Corps of Engineers (USACE) to conduct helicopter water exercises at Pat Mayse Lake and designating formal landing and drop zones. Following a 2015 Biological Opinion on the status of the ABB from the U.S. Fish & Wildlife Service, Camp Maxey can resume controlled burns and the cutting of grass on previously restricted parts of the installation. (See Section 2.3).

5.3 Initial Compatibility Concerns

The 6,650-acre Camp Maxey is less than 10 miles north of the City of Paris, neighboring the unincorporated community of Powderly (See Figure 12). Part of the Surface Danger Zone (SDZ), which predicts the area in which a projectile will land by direct fire or ricochet, falls outside of the installation boundary. Camp Maxey has an agreement with the USACE to lease the affected land outside of the boundary. The range fan is five meters too short to accommodate 50 caliber weapons training. Currently, there is minimal residential development surrounding the installation with a very low-density subdivision, Beaver Creek, close to the boundary, and manufactured houses in Powderly near range operations. Personnel are not aware of noise or other complaints from residents. Any northward shift of interest in residential development, however, would place new houses closer to Camp Maxey.

Compatibility issues include:

- The primary land use incompatibility facing Camp Maxey results from adjacency with Pat Mayse Lake. The installation boundary does not extend to the shores of the lake, preventing Camp Maxey from fully securing its northern perimeter. Hunters entering from adjacent recreational lands regularly trespass onto Camp Maxey, posing a safety risk for themselves, as well as soldiers in the training areas. Stakeholders have also
noted that deer stands placed on U.S. Army Corps of Engineers property are sometimes oriented toward the installation, creating a firing hazard.

- The City of Paris holds an easement for use of an on-base road; however, many people not associated with the City use the roadway, potentially interfering with operations.
- The lack of firebreaks between Camp Maxey and surrounding areas has meant that fires have spread onto the installation property in the past.
- Stakeholders also cited roadway related compatibility issues. Increasing traffic activity associated with a mulch business near Camp Maxey’s main gate also conflicts with gate traffic. The physical condition of the easement road that runs through the installation has deteriorated due to ambiguity over maintenance responsibilities. U.S. 271 is a four lane divided highway with access from I-30 in Texas to I-40 in Oklahoma. The remaining 10.4 miles of divided highway on U.S. 271 should be complete in August 2017, offering adequate capacity for brigade level movements.
- General aviation activity over the eastern portion of the installation exposes low-flying aircraft to firing hazards during range operations. Stakeholders have also noted that a lack of signs and wayfinding makes the installation less identifiable to both visiting units and the public.

Camp Maxey has held open-house events in the past but has not conducted community outreach activities recently. The installation maintains a strong relationship with the USACE Southwestern Division, Fort Worth District and coordinates with the Tulsa District of the Corps, which controls nearby Hugo Lake.
Figure 12. Camp Maxey and Surrounding Communities
6. Redmond Taylor Army Heliport Profile

6.1 History

The RTAHP occupies the area formerly known as Hensley Field and Naval Air Station, Dallas (NAS Dallas). The City of Dallas established Hensley Field in 1929 as a training site for Reserve pilots of the then-U.S. Army Air Corps. The facility became NAS Dallas in 1943, providing primary flight training for aviators in the Navy, Marine Corps, and Coast Guard. In 1946, the United States established a Naval Reserve training program at NAS Dallas. Hensley Field passed from the command of the U.S. Air Force to the U.S. Navy in 1949, but the field continued to host air operations for the Air Force Reserve, the TXARNG, and the USAF Civil Air Patrol. The Base Realignment and Closure Commission selected the installation for closure in 1993. In 1998, NAS Dallas closed, but the site continues to serve as a military installation, with the City of Dallas leasing the site to TXARNG and Army Reserve Complex tenants.

6.2 Installation Mission and Operations

The RTAHP is on the west side of the former Hensley Field (NAS Dallas). The heliport is an approximately 110-acre lease, housing the Dallas Army Aviation Support Facility #3, the 2-149th Aviation Readiness Center, and the Field Maintenance Shop #16. Approximately 200 Soldiers and Singapore Air Force personnel staff the site on a daily basis. Another 250 military personnel train during drill weekends. The Republic of Singapore Peace Prairie Program also operates on the site under a separate lease.
The TXARNG operates eight CH-47 Chinooks on site for cargo and troop transport training. The helicopters fly to Kenneth Copeland Airfield in Tarrant County, Fort Wolters in Mineral Wells, and Camp Bowie in Brownwood. The Royal Singapore Air Force (RSAF) conducts training with six Chinooks. Combined, the TXARNG and RSAF units fly approximately eight hours per day, typically Monday through Friday but with occasional weekend flights. Frequent nighttime operations occur Monday through Thursday. In addition to their wartime mission, RTAHP personnel fight wildfires with the Texas Forestry Service and assist local and state authorities during natural disasters such as hurricanes and floods.

The Grand Prairie Armed Forces Complex is on the east side of the field, serving as an administrative center for several U.S. Armed Forces branches. Facilities include a headquarters building and a large vehicle maintenance area. The TXARNG also houses its 176th Engineer Brigade at the complex. The east side of the installation does not host any aviation assets.

Aviation units at RTAHP log about 1,100 to 1,200 flight hours per year. Activity may increase slightly in the near future and the site could add up to six UH-60 aircraft, depending on the training needs of the Texas Military Forces.

### 6.3 Initial Compatibility Concerns

The RTAHP is directly adjacent to residential areas in the Cities of Dallas and Grand Prairie (See Figure 13). These close-in neighborhoods pose both noise- and security-related issues and constrict available training space.

Specific compatibility issues include:

- To reduce noise exposure in the community, the aviation units use half of the local traffic pattern, avoiding incompatible areas, including development southwest of the
base. Two significant recent routing adjustments in the remaining airspace further limit opportunities for realistic training and more complex air maneuvers.

- City officials have cited some noise complaints related to helicopter operations from residents in the Redbird community of Dallas. Most noise complaints are around airfields when units practice approaches. A deed restriction in a nearby addition of the Mountain Creek neighborhood requires disclosure of noise exposure.

- The direct adjacency of housing to the installation and the use of private security at the entry have raised ongoing security concerns. In addition, all traffic heading to and from the installation, including heavy vehicles, must travel through a neighborhood of single-family homes, creating a nuisance for residents. The bridge just inside the installation gate is aging and may require repair.

- Officials also noted examples of trespassing with people cutting fencing to gain illegal access to the facility.

Recent proposals could result in additional land use conflicts. Development pressure in the vicinity includes proposed housing at the former Triumph Aerostructures site just to the north; commercial/potential mixed-use development south of Mountain Creek Lake; the continued growth of residential areas to the north, west, and south of the field; and the potential for the redevelopment of current warehouse uses to the east and south.

Commercial and general aviation, flight obstructions, and UAS activity also create challenges for RTAHP operations. The proximity of the busy Class B airspace of the Dallas-Fort Worth International Airport and Dallas Love Field imposes altitude restrictions on flights and reduces the ability of RTAHP units to vary routes. The City of Dallas recently rejected a proposal for a gas well to the southeast of the heliport due to concerns that it would be a flight hazard. Gas
wells are present at the Eagle Mountain Training Area. Installation personnel have also reinforced that UAS activity is an increasing security and encroachment issue for air operations.

The tenants operating in the two complexes at RTAHP lease facilities from the City of Dallas. The city and neighboring businesses use parts of the vacant runway for vehicle storage and police driver training, limiting operational use and causing liability concerns. To date, military and community stakeholders have not participated in a formal process to coordinate on compatibility issues. Continued challenges and the risk of more operational constraints, however, have heightened RTAHP’s interest in building stronger relationships with surrounding communities.
Figure 13. RTAHP and Surrounding Communities
7. Fort Wolters Training Center Profile

7.1 History

The Texas National Guard established Camp Wolters in 1925. During World War II, the site grew from 2,350 acres to 9,850 acres, for a time serving as the largest infantry replacement training center in the United States. It also housed German prisoners of war. After the war, the government deactivated the camp and it became an Air Force base in 1951 with the mission of training Air Force engineers. In 1956, Camp Wolters reverted to the U.S. Army to house the United States Army Primary Helicopter School. The camp achieved designation as a permanent military base in 1963, acquiring its current name of Fort Wolters. At its training peak in the Vietnam era, the installation featured three active heliports and 25 staging fields. The federal government deactivated the installation in 1973. The site now houses a TXARNG training center, along with industrial park uses, a branch of Weatherford College, and a summer camp for the Civil Air Patrol.

Source: AECOM
7.2 Installation Mission and Operations

The Maneuver Training Center – Light at Fort Wolters provides pre-mobilization and sustainment training for all northern TXARNG units west of I-35. This training includes:

- 24-kilometer Improvised Explosive Device defeat route along the perimeter of the facility;
- Mobile Operations and Urban Training sites;
- Simulations, including small arms training and known-distance ranges;
- Hand grenade qualification;
- Nuclear Biological Chemical chamber;
- Forward Operating Base simulation;
- Acreage for bivouac and maneuver training;
- A UTES where the motor pool is maintained (can also serve as a maintenance facility to support habitual users);
- A State Shop for maintenance; and
- Storage for 14,000 gallons of fuel.

The installation supports Special Forces, Airborne, and Joint Training operations, including airdrops and air landings from the 136th Texas Air National Guard (TXANG) unit out of NAS Fort Worth, JRB. Operations involve heavy drops, light drops, and personnel drops. Fort Wolters is the closest training site for units from NAS Fort Worth, JRB.

Fort Wolters has a staff of 25 full-time personnel, but an increasing volume of military personnel visit the facility each year. Drill weekends from March through May see the highest levels of activity. In 2014, 48,745 total visitors came to Fort Wolters (47,309 military personnel; 1,436 non-DoD personnel), representing a 68 percent increase over 2012 activity.
7.3 Initial Compatibility Concerns

The almost 4,000-acre installation largely surrounds Lake Mineral Wells State Park and Trailway (See Figure 14). While the area is mostly rural, a small amount of residential development to the north requires aircraft flying to Fort Wolters along a north-south route to navigate between two houses. Housing to the west also brings residents close to the boundary of SDZs, which are the computer-modeled footprint for an impact area related to ammunition fired from the Fort Wolters firing ranges. These homes are within the east-west drop zone area. Future development north or west of the installation could affect C-130 drop zone run-ins. Wind energy development is also a growing compatibility concern for the area. Several wind turbines exist near the drop zone run-ins and developers have announced additional wind farms. Stakeholders also cited the presence of scattered unexploded ordnance in the area.

Though the installation is next to a large park, trespassing has not been a major issue to date. However, this proximity raises the risk of illegal entry onto military lands by hunters or other recreational users and places emphasis on opportunities for coordination with the Texas Parks & Wildlife Department.

The area is rich in natural and cultural resources. Fort Wolters is home to 52 documented archaeological sites, including historic military sites; late 19th- to early 20th-century homesteads; and Native American burial grounds and camp sites. The area also has plentiful deer hunting opportunities. Stakeholders have also noted the increasing presence of an invasive and potentially destructive feral pig population. The installation is interested in exploring an ACUB initiative to identify priorities for establishing conservation-related buffers (See Section 3.1.3).
Fort Wolters enjoys a strong collaborative relationship with the City of Mineral Wells, though interaction with the Counties of Palo Pinto and Parker is less frequent and formal. Recent consultation between the military and the city on a communications tower proposal to the west of the installation resulted in denial of the request due to concerns over aviation safety. The community of Mineral Wells is highly supportive of the nearby military mission and has expressed interest in increased operations at the installation. Fort Wolters also has a partnership with the Texas Forest Service (TFS). As part of a memorandum of agreement, the TFS is establishing an office near the Ammo Supply Point. The TFS stores firefighting equipment at Fort Wolters and conducts controlled burns on the property.
Figure 14. Fort Wolters and Surrounding Communities
8. Ancillary Sites

In addition to the four high-intensity installations profiled above, the Joining Forces study area includes the following ancillary sites that provide training assets in support of higher intensity facilities, as well as maintenance sites, administrative centers, or training areas with lower impact operations.

8.1 Eagle Mountain Lake Facility

Fort Wolters manages the Eagle Mountain Lake Facility, which is east of the Copeland Airfield in Tarrant County (See Figure 15). The largely rural Pecan Acres community is east of Eagle Mountain Lake. Personnel use the 1,212-acre site approximately six times per year for field training and bivouacking (temporary camping). Units also conduct regular helicopter confined space landings and angled maneuvers. Proposed wind turbines near the Eagle Mountain Lake Facility are a potential flight hazard. Development in Tarrant County also continues to encroach on the site.
Figure 15. Eagle Mountain Lake Facility and Surrounding Communities
8.2 Colonel Stone Army Reserve Center

The Colonel Stone Army Reserve Center (also known as Fort Worth Army Reserve Center) is off White Settlement Road in the western portion of Tarrant County. The 240-acre site supports the 370th Chemical Company, 320th Quartermaster Detachment, and the 90th Aviation Support Battalion. This facility is primarily an administrative center but also accommodates convoy, land, field, and helicopter training. Approximately 500 to 1,000 Reservists come to the facility once a month to drill. In addition, the facility also includes an Organization Maintenance Shop building, administrative areas, vault, weapons simulator, and physical fitness area.

The site falls in unincorporated Tarrant County (See Figure 16). Subdivisions built in the past decade surround the southern and western boundaries. Facility managers have also expressed concerns about traffic safety near the entrance. Continued growth could hamper operational capacity by exacerbating traffic issues and increasing the risk of noise complaints.
Figure 16. Colonel Stone Army Reserve Center and Surrounding Communities
8.3 Brownwood and Brady Military Operating Areas

Due to mission requirements and safety issues, military aircraft participating in training activities must separate from non-military aircraft. Special Use Airspace (SUA) designates the boundaries of military operations and restricts access to the area by non-military aircraft during active operations. MOAs are a type of SUA. NAS Fort Worth, JRB tenant units conduct training activities in the Brownwood and Brady MOAs, approximately 70 miles southwest of the base (See Figure 17). The MOAs also establish maximum and minimum altitudes for aircraft operations. This training airspace is operational from sunrise to 11 p.m., Monday through Friday, or as posted by FAA-issued Notices to Airmen.

The Navy owns the Brownwood MOA, which encompasses approximately 3,200 square miles of training airspace. Altitudes range throughout the area from a low of 7,000 feet above mean sea level (MSL) to a high of 18,000 feet MSL when in use. The U.S. Air Force owns the Brady MOA directly south of the Brownwood MOA. This area offers approximately 1,500 square miles of training airspace. The Brady MOA altitudes range from 500 feet above ground level to 18,000 feet MSL. The Air Force’s 301st Fighter Wing schedules use of the Brownwood and Brady MOAs.

The MOAs cover the far southwestern part of the study area, overlying portions of Brown, Callahan, Coleman, Comanche, Concho, Eastland, Erath, Llano, Hamilton, McCulloch, Mills, Runnels, and San Saba Counties.

Aircraft participating in training exercises use MTRs to access airspace. These routes designate air corridors for low-altitude, high-speed military flight traffic and training. The Air Force’s 301st Fighter Wing schedules use of MTRs to access local training areas. Commonly used MTRs are
IRs 103, 105, 123, 124, and 139; VRs 101, 104, 118, 143, 186, 1110, 1124, 1128, and 1137; and SRs 228 and 270 (See Figure 18).

Several military units throughout the country operate in the Brownwood and Brady MOAs, but primary users are from NAS Fort Worth, JRB; Dyess AFB; Randolph AFB; Laughlin AFB; Sheppard AFB; NAS Corpus Christi; Altus AFB; and Tinker AFB. Priority of use is given to local squadrons, including the Air Force Reserve, 301st Fighter Wing, which flies the F-16C Fighting Falcon; the Marine Aircraft Group 41 (MAG 41), Marine Fighter Attack Squadron (VMFA-112), which flies the FA-18 A+ Hornet; and the TXANG 136th Airlift Wing, which operates the C-130 Hercules. Personnel at NAS Fort Worth, JRB have noted an increase in activity in the MOAs with the number of annual operations rising from approximately 3,500 in 2009 to 6,000 in 2012. Factors related to use or the scheduling of airspace, however, have not adversely affected the training environment.

Training airspace is prone to noise and flight obstruction compatibility challenges. Participating aircraft can generate noise that affects nearby communities, particularly during low altitude exercises or supersonic flight operations. The Brady and Brownwood MOAs allow for supersonic flight, which produces a distinctive percussive boom as the aircraft travels in excess of the speed of sound. Aircraft can also be vulnerable to physical intrusions, such as tall structures in low-level corridors or radar interference from wind turbines. These issues suggest opportunities for additional community outreach and consultation processes to coordinate on energy infrastructure development.
Figure 17. Brownwood and Brady MOAs
Figure 18. Local Military Training Routes
9. Community Profiles

A variety of land use tools, specifically zoning, growth management policies, subdivision regulations, and transportation plans assist local governments in promoting compatibility with nearby military installations. The following analysis reviews the major existing policy documents for Joining Forces communities, with specific attention to:

- Specific development standards that require compatible development between the local community and nearby installations or airfields;
- Flexible subdivision or planned developments;
- Specific performance-based codes that regulate the development characteristics of development and redevelopment, such as sound attenuation;
- Broad land use strategies that can direct infill development and reduce greenfield development and lessen the exposure to military operational impacts due to installation proximity;
- Economic development policies that will affect the growth and development around the installations; and
- Master Thoroughfare Plans or other transportation plans that will direct future transportation priorities and networks.
9.1 Overview of Community Plans and Regulatory Policy – NAS Fort Worth, JRB

The following is a summary of general growth trends, compatibility issues, and existing compatibility tools, such as specific military overlay districts for communities surrounding NAS Fort Worth, JRB. **Table 7** lists the plans and regulatory codes analyzed.

**Table 7. NAS Fort Worth, JRB Community Plans and Codes**

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9.1.1 City of Benbrook

The City of Benbrook is approximately two miles southwest of NAS Fort Worth, JRB. In 2014, Benbrook had a population of 21,898. The city is generally a quiet, residential community. Benbrook Lake, a major recreational amenity in southwestern Tarrant County, forms the southern border and is a major natural amenity for the community.

The zoning regulations reflect the community’s overall low-density, single-family, and primarily suburban character. Zoning focuses commercial development along Benbrook Boulevard (U.S. 377) and limits industrial activity to the north side of I-20. The high number of parkland acres in the southern portion of the city reflects the proximity of Benbrook Lake.

The city has been an active partner in promoting compatibility with NAS Fort Worth, JRB. In 2014, Benbrook adopted the “NAS” Overlay District to encourage compatible uses in areas with noise exposure of 65 dB or higher based on the most recently adopted AICUZ for the installation. In addition to the zoning restrictions contained within the underlying district, the ordinance requires sound attenuation for uses such as schools, religious facilities, museums, and libraries and prohibits one- and two-family dwellings and multi-family units. Exceptions to

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11 2014 ACS 5-Year Community Survey, U.S. Census Bureau
the residential prohibition include one-, two- or multiple-family dwellings constructed or occupied on the date of ordinance adoption, or any existing platted lot that is zoned for one-, two- or multiple-family dwellings provided that construction methods achieve an inside sound level reduction of 30 dB.

Adopted in 2010, Benbrook’s Comprehensive Plan outlines future development priorities for the city. The development principles seek a balance of new structures and protection of existing neighborhoods. The Future Land Use plan for Benbrook indicates that much of the city will retain it low-density single-family character, particularly to the north and south. Further, the intersection of Benbrook Boulevard and I-20 will remain a commercial and medium-density residential node. The development around Benbrook Lake will be community facilities and parks, notably Dutch Branch Park and Holiday Park.

9.1.2 City of Fort Worth

According to the 2015 census estimates, Fort Worth has a population of 833,319, making it the western population anchor of the DFW region. Aviation noise of 65 dB and above affects significant portions of western Fort Worth, generally north and south of NAS Fort Worth, JRB.

Adopted in 2016, Fort Worth’s Comprehensive Plan focuses on the development of higher-density residential and mixed uses. The goals put a priority on growth that supports transit-oriented development and urban villages—clusters of denser, walkable development throughout the city. As the population of Fort Worth increases, the city will encourage residential development/redevelopment that is more urban, walkable, and transitional between lower-density residential. More than 70 percent of the city’s 350 square miles is developed. The city has seen strong residential growth in recent years and anticipates that future
development will focus along I-35W in the north, Chisolm Trail Parkway to the south, and the planned TEX Rail commuter rail line, which will connect downtown Fort Worth to the Dallas-Fort Worth International Airport. Generally, much of the city’s future growth is in areas where flight altitudes are high enough to minimize noise exposure.

Fort Worth has implemented strong regulatory tools to protect community safety and the operational integrity of the base. The Comprehensive Plan calls for the avoidance of residential and higher-density mixed uses in the APZs of NAS Fort Worth, JRB. In 2013, the city adopted an Airport Overlay District and Compatible Use Zone sub-districts for land falling in the CZs and north and south APZs. The districts limit the concentration of people and govern the height of structures to minimize airspace hazards. Other provisions add development standards and guidelines to restrict uses that cause electrical interference with navigational signals or radio communications, create glare or excessive lighting, produce emissions, or attract birds and other wildlife.

Fort Worth City Council adopted the Mobility and Air Quality Plan in 2009 to prepare for an increased population and the resulting impacts on traffic congestion, mobility, and air quality. The plan proposes commuter rails that would meet in downtown Fort Worth: the Johnson County Corridor line would travel south to Cleburne; the Aledo-Fort Worth corridor would travel westward to Aledo (south of I-30); the Fort Worth-Denton corridor would travel northeast to Denton; the Fort Worth-Midlothian corridor would travel southeast to Midlothian; the Fort Worth–Dallas line would travel eastward to Dallas (south of I-30); and the southwest-northwest corridor would connect downtown to Dallas-Fort Worth International Airport.
9.1.3 City of Lake Worth

The City of Lake Worth is north of NAS Fort Worth, JRB on the north banks of Lake Worth, a major regional amenity. In 2014, the city had a population of 4,671 people. Portions of the APZs extend to the north from the airfield at NAS Fort Worth, JRB into the city.

Lake Worth consists of predominantly single-family residential uses in its northern and western areas. Large pockets of commercial uses are found south of Azle Avenue and north of SH 199 (Lake Worth Boulevard). Industrial uses are north of SH 199 and west of I-820.

The city is approximately 2.5 square miles in size and is generally built out with a stable population but an expanding commercial base along its major corridors. Future land uses show some additional residential in the south and north, and a greater concentration of commercial uses near Azle Boulevard and SH 199. Lake Worth also has a major mixed use development proposal.

Adopted in 2013, Lake Worth’s Comprehensive Plan notes that the proximity of NAS Fort Worth, JRB creates noise and air safety challenges for development in the city. The Lake Worth Comprehensive Plan Vision Report (2013) encourages development/redevelopment to be compatible with base operations. In June 2013, the City Council adopted development standards that call for increased sound attenuation for structures within the noise contour.

9.1.4 City of River Oaks

The City of River Oaks is east of NAS Fort Worth, JRB and abuts the City of Fort Worth to its east and northeast. River Oaks is approximately 1.9 square miles in area, and has no ETJ due
to its proximity to other cities. The city boundary is outside of the minimum 65 dB of noise contours related to aviation at NAS Fort Worth, JRB.

The city began as a bedroom community due to its proximity to Carswell AFB. Over the years, it remained a prime location for installation personnel. However, most of the housing stock dates from the late 1940s. River Oaks works very closely with NAS Fort Worth, JRB to promote new businesses in the community and improve housing opportunities. The city has cited some challenges related to drainage along SH 183 and the surface condition and capacity of Meandering Road and the Roberts Cut Off Road/River Oaks Boulevard area.

Commercial development in River Oaks concentrates along the River Oaks Boulevard (SH 183) corridor. This route is a major arterial for base traffic. Castleberry Athletic Complex/YMCA Camp Carter is near NAS Fort Worth, JRB. Camp Carter sits on roughly 350 acres along the Trinity River, and includes an equestrian center and horseback riding area, as well as baseball and softball fields for the Castleberry Independent School District.

Over 70 percent of the city consists of single-family housing, while commercial activity makes up nearly six percent of the existing land area. The majority of zoning in River Oaks is residential with commercial structures along River Oaks Boulevard and Roberts Cut Off Road.

Currently, the city is nearly built out, meaning that developmental changes can only occur through redevelopment of existing commercial and residential properties. As redevelopment occurs, the city plans to incorporate noise reduction construction elements. Any anticipated future development growth will likely locate adjacent to the Trinity River, which stretches from Camp Carter to the River Oaks Water Plant.
Mobility 2040: The Metropolitan Transportation Plan for North Central Texas identifies SH 199, a major arterial in the city, as a funded improvement corridor to receive complete streets infrastructure components, including sidewalk improvements, bicycle lanes, shared use paths, transit stops, designated bus lanes, and pedestrian crossings. Recent Master Plans for both SH 199 and SH 183 outline revitalization options and mobility improvements for these aging corridors. The Cities of Sansom Park and River Oaks view the redevelopment of the corridors as essential first steps in the revitalization of their communities, providing new and more attractive places to live for military personnel.

9.1.5 City of Sansom Park

Sansom Park is northeast of NAS Fort Worth, JRB and directly north of the City of River Oaks. As of 2014, the city had a population of 4,825 residents. Commercial uses concentrate along Jacksboro Highway (SH 199), which connects the city to I-820 in the north and SH 183 to the south.

Nearly 63 percent of the city’s existing land use is residential with 17 percent remaining vacant. Plans call for the development of land within the city limits north of Rosen Park on the east side, outside of noise-affected areas. Future land uses in Sansom Park will remain mostly single-family residential with some planned development south of SH 199 and west of Skyline Drive adjacent to Heartland Health Care Center-Fort Worth. Redevelopment, particularly commercial uses, will cluster along Jacksboro Highway and Azle Avenue. The city is outside of the minimum 65 dB noise contour of NAS Fort Worth, JRB but residents may still experience noise from military aircraft.
As in River Oaks, SH 199 is a major arterial in Sansom Park and Mobility 2040 identifies it as a funded improvement corridor to receive complete streets infrastructure components. The SH 199 Corridor Master Plan also outlines overall corridor improvements.

9.1.6 Town of Westover Hills

The Town of Westover Hills is approximately 1.5 miles southeast of NAS Fort Worth, JRB with a 2014 population of 718 residents. At only 0.7 of a square mile, the city is dominated by single-family residential development. The existing demographics, small land area, and land use mix reflect a stable, upscale residential enclave with minimal future growth. Westover Hills abuts the noise contours of NAS Fort Worth, JRB. However, most of the town is outside of the minimum noise contours of 65 dB. Variance requirements and ordinances, in general, require development to be consistent with the town’s current large-lot residential character.

9.1.7 City of Westworth Village

The City of Westworth Village is on the banks of the Trinity River, five miles west of downtown Fort Worth. In 1941, the same year construction began on the base, the Westworth Village incorporated. According to 2014 census estimates, the City of Westworth Village has a population of 2,541 people. Just over 20 percent of its current total land acreage is single-family housing and approximately 29 percent reflects existing parks and open space. The majority of Westworth Village’s single-family housing is within the eastern portion of the city. Commercial land use is on SH 183, which connects NAS Fort Worth, JRB to the City of Westworth Village.
Portions of the city are within the CZ and APZs I and II, and fall within all noise contours from 65 to 85 dB. Anticipated future development and commercial growth are likely to be along Westworth Boulevard (SH 183) near Roaring Springs Road. In addition, single-family residential is also planned near Westworth Boulevard (SH 183) and McNaughton Lane. Planned commercial development along east Westworth Boulevard falls within the 65 to 70 dB noise contours of the base. Additionally, any residential development north of Westworth Boulevard and west of McNaughton Lane partially falls within the 65 dB noise contours.

The current zoning states that the city shall consider the appropriateness of all uses, construction standards, and dimensional standards (including height) of any property, which may be within the AICUZ of NAS Fort Worth, JRB. The city has also amended its code to adopt the 2012 Edition of the International Building Code, which provides for greater structural energy efficiency, as well as better indoor sound attenuation.

9.1.8 City of White Settlement

The City of White Settlement is at the western edge of Fort Worth at the intersection of I-820 and I-30. The catalysts for the city’s growth include the establishment of Carswell AFB, the development of the commercial industry in Fort Worth, and the construction of the Dallas-Fort Worth International Airport. The city, with a population of 16,116, is known for its family-friendly park facilities and neighborhoods that cater to residents and personnel who work at Lockheed Martin and NAS Fort Worth, JRB.

Single-family residential land use makes up nearly 40 percent of the city with commercial comprising about 11 percent of land use. The majority of White Settlement’s retail and commercial land uses are along the southern edge of the city and along Cherry Lane and White
Settlement Road. Currently, most of the existing land use is in the 65 to 85 dB DNL noise contours of NAS Fort Worth, JRB. The majority of the vacant land is in the southwestern portion of the city adjacent to I-30 and I-820.

9.1.9 Tarrant County

Tarrant County organized in the 1850s with a population around 660, which is 2,700 times smaller than the approximate 1.8 million residents today. The county is home to Fort Worth—one of the region’s and nation’s fastest growing cities—and includes many fast-growing suburbs. While it is seeing rapid growth, Tarrant County does not have the authority to implement or enforce zoning, development, or building codes in its unincorporated areas. If a city has adopted building and development codes in its ETJ, then the city’s regulations apply in those areas. In addition to its proximity to NAS Fort Worth, JRB, the county is also near the Eagle Mountain Training Center along the northern portion of Eagle Mountain Lake and the Colonel Stone Army Reserve Center, off White Settlement Road in the western portion of the county.

Tarrant County is seeing redevelopment along Camp Bowie West Boulevard. Strong growth also continues to the west of Fort Worth. Walsh is a 7,267-acre mixed-use master plan site on I-30, 13 miles west of Fort Worth and approximately 11 minutes driving time from Lockheed Martin and NAS Fort Worth, JRB. The vision calls for nine million square feet of retail and office and a build-out of over 15,000 homes with an estimated population of over 50,000 people (See Figure 19). The plan envisions the site as a regionally significant research and technology hub and lifestyle center for North Texas. The grand opening is scheduled for April of 2017. Aircraft returning to NAS Fort Worth, JRB from training exercises in the Brady and Brownwood
MOAs to the southwest will fly over the community but at higher altitudes that should minimize noise exposure.

**Figure 19. Walsh Concept Plan**
9.2 Overview of Community Plans and Regulatory Policy – Redmond Taylor Army Heliport

The following is a summary of growth trends, compatibility issues, and existing compatibility tools for communities surrounding RTAHP. Table 8 lists the plans and regulatory codes analyzed.

Table 8. RTAHP Community Plans and Codes

<table>
<thead>
<tr>
<th>Geographic Area Covered</th>
<th>Title</th>
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<tbody>
<tr>
<td>Dallas, Texas</td>
<td>forwardDallas! Comprehensive Plan</td>
</tr>
<tr>
<td>Grand Prairie, Texas</td>
<td>City of Grand Prairie Comprehensive Plan</td>
</tr>
<tr>
<td>Grand Prairie, Texas</td>
<td>Unified Development Code</td>
</tr>
<tr>
<td>Dallas, Texas</td>
<td>Neighborhood Plus</td>
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<tr>
<td>Dallas, Texas</td>
<td>The GrowSouth Plan</td>
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</tbody>
</table>

9.2.1 City of Dallas

The RTAHP is in a far western portion of the City of Dallas. Dallas is the third largest city in Texas, behind Houston and San Antonio, and the ninth largest city in the United States. Adopted in 2006, forwardDallas! serves as a policy document for future development in the city and focuses on seven core elements: housing, land use, environment, transportation, neighborhoods, economic development, and urban design.

Trends indicate that Dallas will continue to attract new residents and jobs but will grow at a slower rate than suburbs and exurbs throughout the region. The city aims to expand
homeownership and support denser and more diverse housing stock to increase the number of residents. Additionally, according to forwardDallas!, the areas of Dallas near RTAHP will see an increase in both residential and commercial density. The southern sector of the city and areas near the heliport have the city’s largest area of available land to support future development.

Adopted in 2015, the goal of Neighborhood Plus is to facilitate the development and maintenance of sustainable neighborhoods throughout Dallas. The plan outlines strategic goals, including alleviating poverty, fighting blight, attracting and retaining the middle class, expanding homeownership, and enhancing rental options.

Dallas neighborhoods adjacent to the installation are part the City’s GrowSouth Plan. This initiative is a comprehensive strategy to create sustainable growth in the southern portions of Dallas. The city seeks to make the southern area a focal point of development investment and population growth. With successful implementation of this plan, the neighborhoods closest to RTAHP could experience population increases, new commercial development, and an influx of jobs.

The City of Dallas owns the RTAHP complex and leases facilities to the current military tenants. Officials have cited challenges with infrastructure maintenance on the site and the connection of former on-installation systems to existing municipal services. Given that the land comprises the single largest redevelopment site in Dallas, the city has explored re-use opportunities. There are no current long-term plans for re-use of the facility but the city continues to evaluate all options. The property would be likely to continue in an industrial or industrially-compatible use.

9.2.2 City of Grand Prairie
Grand Prairie is in far western Dallas County and far eastern Tarrant County just west of the City of Dallas. According to the Grand Prairie Future Land Use map, the areas closest to RTAHP are expected to remain residential. Large areas of the northern parts of the city are floodplain and marshland, constraining future development. Grand Prairie has access to two large lakes – Joe Pool Lake and Mountain Creek Lake. Joe Pool Lake offers ample recreational opportunities, including parks and water activities.

Adopted in 2010, Grand Prairie's Comprehensive Plan serves as a 20-year plan to guide growth and development. The city aims for development that contains a mix of land in support of sustainable economic growth and a range of opportunities for living, recreation, shopping, and business. Development in Grand Prairie will focus south of I-30 and along Joe Pool Lake and Mountain Creek Lake. According to the Plan, most residents currently live north of Joe Pool Lake, indicating that future development growth will occur to the south. In addition, the city has prioritized retaining access to recreational amenities. There are no explicit policies in the Plan addressing compatibility with RTAHP. Grand Prairie officials have expressed interest in greater communication on installation activities and long-term plans for the complex.
9.3 Overview of Community Plans and Regulatory Policy – Fort Wolters

Fort Wolters affects the City of Mineral Wells and Palo Pinto County. Parker County officials indicated minimal interaction and compatibility issues with the installation. The following is a summary of plans and growth priorities for the City of Mineral Wells. Given the rural nature of the area, Palo Pinto and Parker Counties do not have comprehensive or strategic plans. Table 9 lists the plans and regulatory codes analyzed.

Table 9. Fort Wolters Community Plans and Codes

<table>
<thead>
<tr>
<th>Geographic Area Covered</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>Mineral Wells</td>
<td>Discover Downtown: A Development Plan for Historic Downtown Mineral Wells</td>
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</table>

9.3.1 City of Mineral Wells

Mineral Wells has a rich history as a destination, beginning as a resort community due to the presence of mineral springs in the area. As of 2014, 15,362 residents lived in the city. In 2015, Mineral Wells released a downtown redevelopment plan in part to capitalize on the reinvestment opportunity associated with the historic Baker Hotel. Upon successful implementation of the plan, the city core will serve as a growth catalyst with a pedestrian-oriented square, urban park, and an outdoor event center. No current city planning documents address compatibility with Fort Wolters.
Mineral Wells also provides tax and other incentives to industrial businesses seeking relocation. Potential locations for development include land north of the Fort Wolters business park. Other opportunities are in the southern portions of the city. The city is near the Wolters Industrial Park, formerly a part of the military installation. Rural, unincorporated county land is closer to active military operations.

The city owns and operates Mineral Wells Airport, a public use aviation facility about three miles from the central business district and readily accessible from SH-180 and I-20. The airport serves primarily general aviation aircraft. The 6,000-foot main runway supports large aircraft operations, such as the Boeing 737, DC-9, and the Lockheed Hercules C-130, as well as corporate jets and other general aviation and military aircraft.

Mineral Wells actively supports the military mission and city leaders have indicated support for any potential expanded operations at Fort Wolters.

**9.4 Overview of Community Plans and Regulatory Policy – Camp Maxey**

Camp Maxey affects several communities in Lamar County, including the City of Paris and the unincorporated area of Powderly. Given its predominantly rural nature, Lamar County lacks comprehensive or strategic planning documents. Table 10 lists the plans and regulatory codes analyzed.
### Table 10. Camp Maxey Community Plans and Codes

<table>
<thead>
<tr>
<th>Geographic Area Covered</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>City of Paris</td>
<td>Code of Ordinances</td>
</tr>
<tr>
<td>Northeast Texas/Western Arkansas</td>
<td>Ark-Tex Regional Public Transit Coordination Plan</td>
</tr>
</tbody>
</table>

#### 9.4.1 Community of Powderly

Powderly is a small, census-designated community in unincorporated Lamar County, north of Paris, Texas and 4.5 miles south of the Oklahoma border. This predominately rural, agricultural area has a population of approximately 1,100 residents and is the closest to Camp Maxey training operations among Lamar County’s communities.

#### 9.4.2 City of Paris

In 2014, the population in the City of Paris was 25,023. The city is a major contributor to railroad operations, livestock, and agriculture in Lamar County. Paris is in the process of developing a major trail network throughout the county, known as Trail de Paris, which will connect to other amenities in the area, such as parks and lakes.

The existing land use in Paris is largely low-density residential. Land use to the west of the city is a mix of parks and recreation, light industrial, and low-density residential. Residential is primarily within the central portion of the city, north and south of U.S. 82. Most of the city is built out. However, there are infill opportunities and areas throughout the city that are available for development.
Cox Field Airport, which is the former airbase for Camp Maxey, is on a 1,600-acre site adjacent to U.S. 271 approximately five miles east of Paris. Cox Field opened in August of 1943 for use by the U.S. Army Air Forces as a training base but reverted to the City of Paris at the end of the war. This TXDOT/City of Paris aviation asset is currently undergoing improvements and will assist with fixed or rotary wing landings. The Kiamichi Railroad (KRR), part of the Genesee Wyoming companies, connects to the BNSF, Kansas City Southern, and Union Pacific lines. KRR is interested in placement of a rail head for Camp Maxey to accommodate the freight movement needs of the installation.

10. Other Study Area Partners

Along with the military installations and local governments, other stakeholders play a key role in promoting compatibility in the Joining Forces region.

10.1 Lockheed Martin

The Lockheed Martin facility adjacent to NAS Fort Worth, JRB shares the installation runway for manufacturing and testing activities. Lockheed Martin is a leading global aerospace, security, and innovation company. The firm has 13,700 employees with a $1.4 billion payroll.

In 2001, Lockheed Martin won the design competition for the X-35 in the Joint Strike Fighter Program. The X-35 has now evolved into the current F-35 Lightning II program. The F-35 Lightning II is a 5th Generation fighter, combining advanced stealth capabilities and technology with fighter aircraft speed and agility. In August 2016, the U.S. Air Force announced that the
new squadron of F-35A Aircraft achieved Initial Operational Capability (IOC). This is the second plane in the F-35 Lighting II program to reach IOC. Over the program lifecycle, Lockheed Martin will produce three variants of the aircraft: F-35A, F-35B, and F-35C. The aircraft will gradually replace many of the current fighter aircraft used by the U.S. Air Force, U.S. Navy, U.S. Marine Corps, and other partner countries.

The Lockheed Martin facility has transitioned to a high rate of Joint Strike Fighter production. After $1 billion in investments, the plant will produce one aircraft per day or approximately 17 per month. Along with production, Lockheed Martin conducts flight testing, which can generate noise impacts on surrounding areas, particularly during aircraft hovering. Lockheed Martin faces encroachment challenges similar to NAS Fort Worth, JRB, including concerns related to wind turbines, lighting, and UAS operations.
11. Community and Stakeholder Engagement

11.1 Stakeholder Interviews

In addition to Policy Committee meetings and document review, the planning team conducted face-to-face or telephone interviews with key stakeholders in the public, private, and community sectors to establish priorities for the study, gather data, and identify challenges and opportunities for further study. Stakeholders represented the following entities:

- City of Benbrook
- City of Dallas
- City of Fort Worth
- City of Grand Prairie
- City of Lake Worth
- City of Mineral Wells and Palo Pinto County
- City of Paris and Lamar County
- City of River Oaks
- City of Westworth Village
- City of White Settlement
- Parker County
- Tarrant County
- Natural Resources Conservation District
- Lockheed Martin
- Naval Air Station Fort Worth, JRB
Stakeholders cited a wide variety of themes and issues, including:

- Strong support for the military mission in surrounding communities and an understanding of the positive economic impact of the installations;
- Relatively few complaints related to existing noise or operational impacts with the exception of specific pockets of noise sensitivity particularly near RTAHP; but recognition that residential turnover and infill opportunities could bring new residents unfamiliar with military operations near active operations;
- Existing mutual aid agreements for emergency response;
- Potential for increasing infill development and land use transitions in mature communities to introduce incompatibilities even within stable built out areas;
- Lack of county regulatory tools to address even modest growth in rural areas;
- Strong westward growth trajectory within the region;
- Effectiveness of existing coordination mechanisms, such as the RCC Development Review Web Tool and ongoing base outreach around NAS Fort Worth, JRB;
- Successful implementation of zoning overlay tools around NAS Fort Worth, JRB in the Cities of Benbrook and Fort Worth;
• Absence of formal channels of communication and coordination outside of the NAS Fort Worth, JRB portion of the region and a desire for increased military-civilian outreach in communities surrounding RTAHP, Camp Maxey, and Fort Wolters;
• Need for strategies to address emerging challenges related to energy infrastructure especially in unincorporated areas and UAS operations near airfields; and
• Support for additional compatibility measures such as real estate disclosure.

11.2 Public Input Opportunities

The JLUS is an inclusive, community-driven process that seeks to engage a broad cross-section of residents, workers, local businesses, community groups, landowners, and local and state governments. Major input opportunities include large format meetings and online content and exercises available on the project website: www.JoiningForcesNTX.org/.

The planning team conducted four public meetings in Grand Prairie, River Oaks, Paris, and Mineral Wells in August 2016. The meetings were part of the initial phase of community outreach conducted for the study designed to introduce the JLUS planning process and identify critical issues in the Joining Forces region. Facilitators asked participants to prioritize a list of initial compatibility concerns related to:

• Noise from aircraft
• Noise from training ranges
• Development near installation
• Aviation safety
• Use of airspace (e.g., general aviation aircraft or unmanned aerial systems/drones)
- Tall structures in low-level aircraft routes (communication towers, gas wells, wind turbines and transmission lines)
- Frequency spectrum interference (e.g. radio communication)
- Installation/facility perimeter security
- Recreational access/public use of military land
- Drainage/flooding
- Light pollution/glare
- Circulation/traffic access around installation
- Wildfire
- Water resources
- Environmental resources
- Endangered species and critical habitat
- Cultural resources (e.g., historic sites)
- Coordination/Communication between military and community
- Accommodating military-related growth

Participants also identified any additional issues not listed among the initial factors and indicated the location of issues on base maps. Attendees at the Mineral Wells meeting near Fort Wolters highlighted minor compatibility issues related to development near the installation, the effect of tall structures on aviation, and the presence of cultural resources. They also stressed a desire to accommodate expanded operations at Fort Wolters.

Residents around NAS Fort Worth, JRB in attendance at the River Oaks meeting noted compatibility issues stemming from local stormwater/flooding, development around the base, and circulation and traffic access. Attendees also expressed support for continued military-related growth in the surrounding communities.
At the Camp Maxey meeting in Paris, participants highlighted issues related to transportation access around the installation, as well as nearby development. Given limited attendance and input at the RTAHP meeting, the planning team will be conducting additional outreach in the Grand Prairie and Dallas areas.

The planning team and Policy Committees will draw from input received at these meetings and throughout the process to refine study findings and recommendations. A summary document of public involvement will include additional detail on meeting activities and results.