

# EXECUTIVE SUMMARY

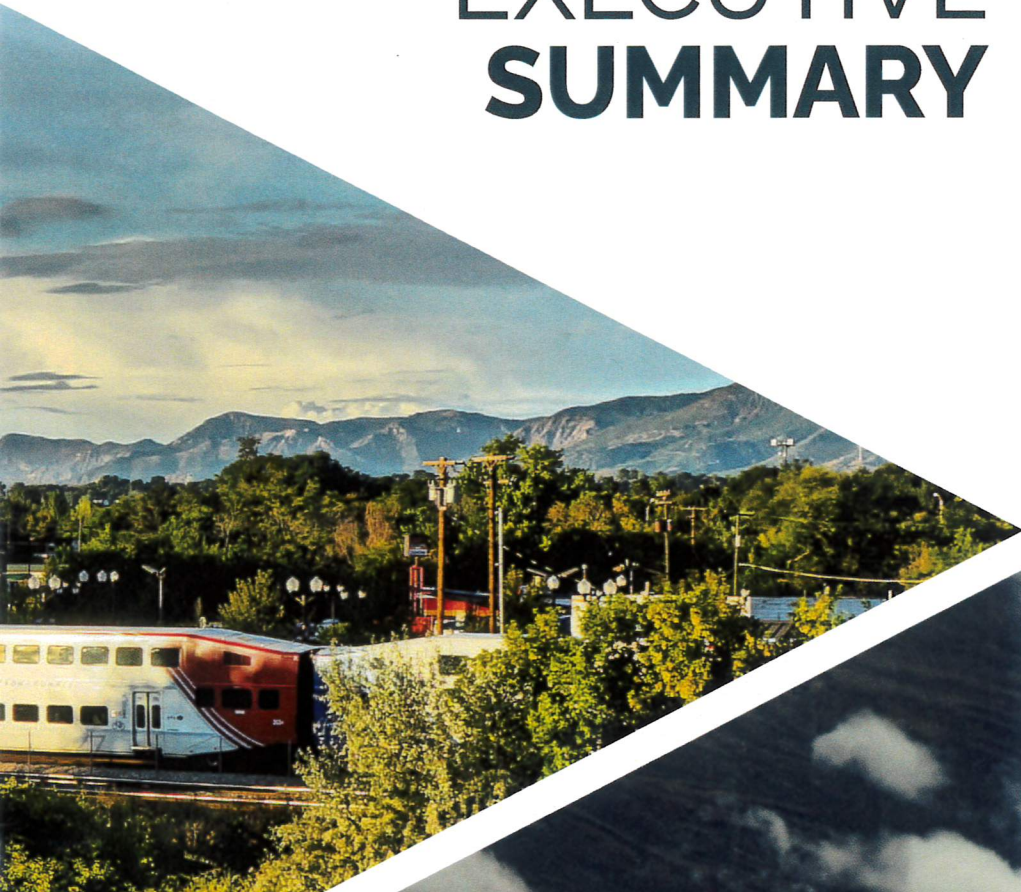


Photo by Chad Thomas

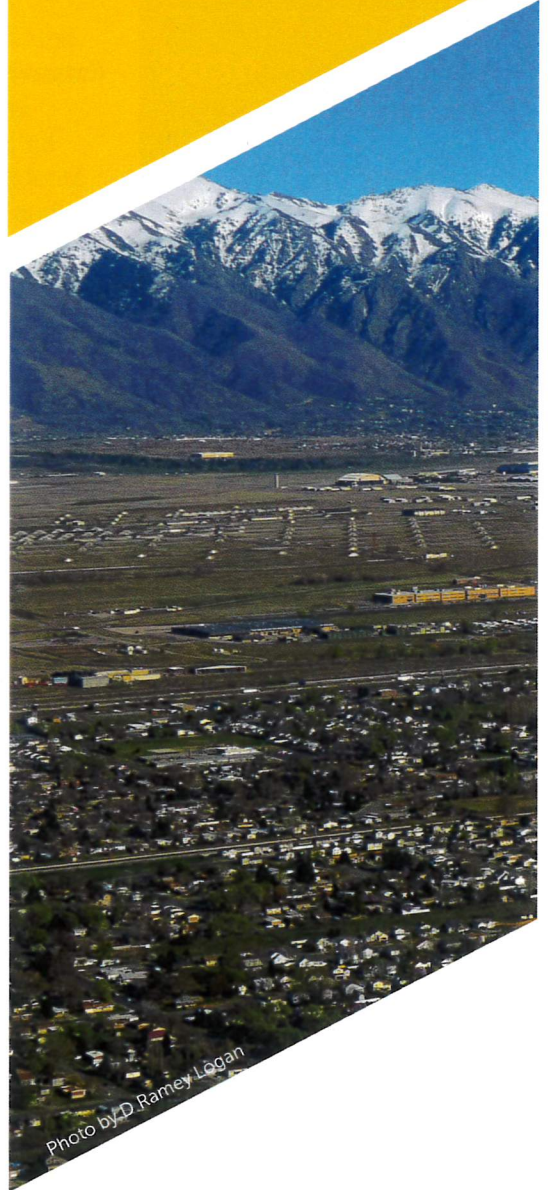


Photo by D Ramey Logan



## What is the Hill AFB Compatible Use Plan?

The Hill Air Force Base (AFB) Compatible Use Plan (CUP) is a collaborative planning effort between:

- Layton City, project sponsor
- Clearfield City
- Ogden City
- Riverdale City
- Roy City
- South Ogden City
- South Weber City
- Sunset City
- Uintah City
- Washington Terrace City
- Davis County
- Weber County
- Tooele County
- Hill AFB
- Utah Test and Training Range
- Little Mountain Test Facility
- Regional, state and federal agencies
- Other interested and affected stakeholders

The purpose of the CUP is to identify and minimize or prevent compatibility issues between Hill AFB, the Utah Test and Training Range (UTTR), Little Mountain Test Facility, and surrounding communities, while promoting new compatible growth and economic development. The CUP includes in-depth analyses of potential issues and culminates in a set of recommended strategies to help protect the installations' military mission, communities' economic vitality, and public health, safety, and quality of life.

### What is Compatibility?

Compatibility, in relationship to military readiness, is the balance and/or compromise between community and military needs and interests.

## About Hill AFB and its Relationship to the Region

**Hill AFB** is the nation's third largest Air Force base by population and size. Home to the 75th Air Base Wing, it hosts three aircraft squadrons operating state-of-the-art F-35 aircraft and further headquarters the Ogden Air Logistics Complex and the Intercontinental Ballistic Missile Systems Directorate.

Tasked with providing mission-ready airmen and equipment and outstanding support to Team Hill, the base operates the **Utah Test and Training Range** – the largest contiguous block of overland supersonic-authorized restricted airspace in the contiguous United States – and the **Little Mountain Test Facility** used for simulation testing of nuclear hardness, survivability, reliability, and electromagnetic compatibility.

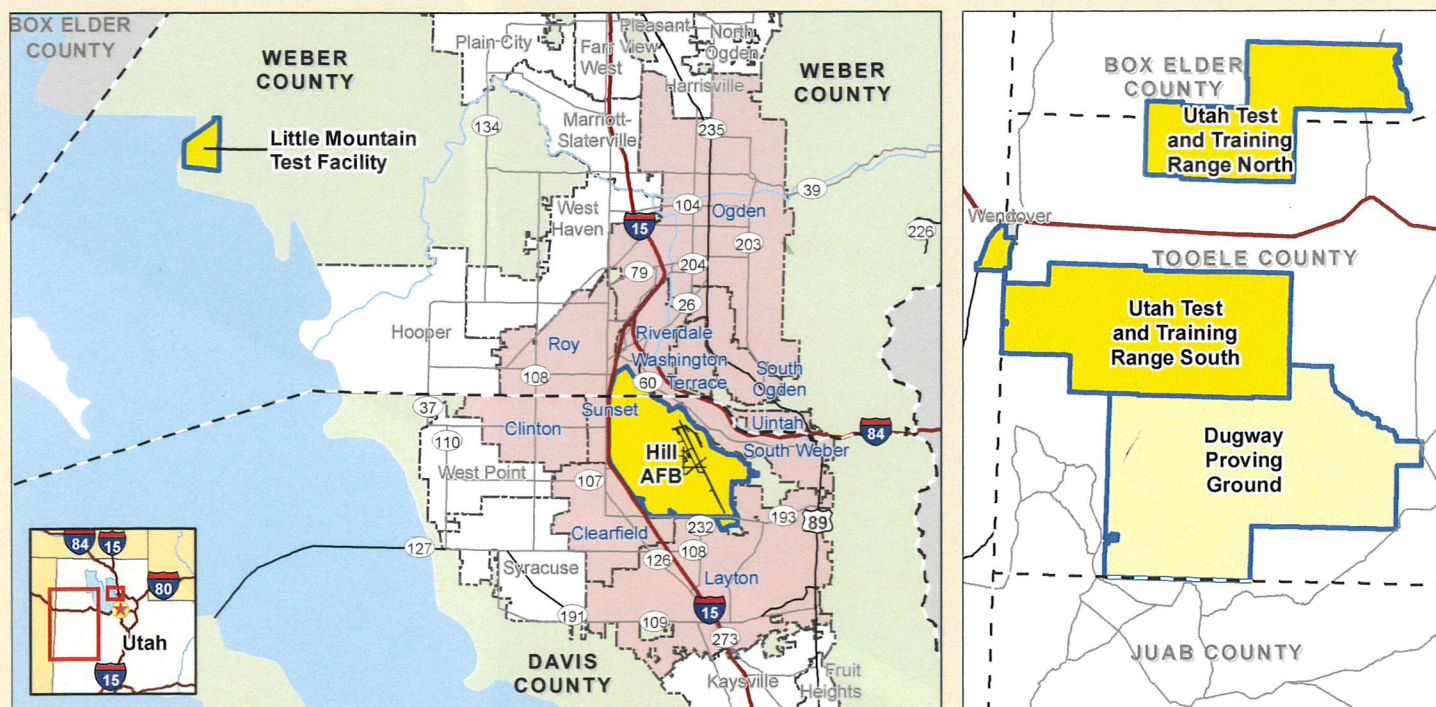
Hill AFB has had a presence in the community since 1939 when first established as the Ogden Air Depot, making significant economic and cultural contributions to the area since that time. The base has grown alongside the **surrounding communities in the Wasatch Front**, where current **population and economic growth** trends are expected to continue and may bring new residents unfamiliar with military operations and development goals that pose challenges for Hill AFB and communities, alike.

The need to meet these goals while protecting operational areas and activities central to mission viability and defense readiness, makes critical collaborative, compatibility planning.

Regional Population Growth	
Year	Population
2020	361,537
2030	405,040
2040	433,686
2050	480,073

Source: Wasatch Front Regional Council, Population Projections, June 2020

## Project Study Area



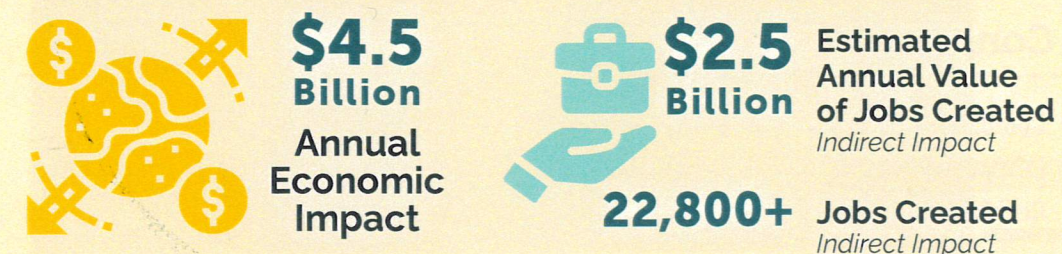
HILL AIR FORCE BASE — COMPATIBLE USE PLAN

## Team Hill Personnel

22,566 Hill AFB Total Personnel Employed



## Annual Economic Impact



### 32%

Project Study Area population growth between 2020 and 2050

Source: Wasatch Front Regional Council, Population Projections, 2020

## COMPATIBILITY FACTORS

### SOCIAL FACTORS

- Communication/Coordination
- Cultural Resources
- Legislative Initiatives
- Housing Availability
- Public Services
- Public Trespassing

### RESOURCE FACTORS

- Air Quality
- Biological Resources
- Frequency Spectrum Capacity
- Land/Air Space Competition
- Scarce Natural Resources
- Resiliency
- Water Quality/Quantity

### DEVELOPMENT FACTORS

- Anti-Terrorism/Force Protection
- Dust/Smoke/Steam
- Energy Development
- Frequency Spectrum Impedance
- Infrastructure Extension
- Land Use
- Light and Glare
- Noise
- Roadway Capacity
- Safety
- Vertical Obstructions
- Vibration

# Compatibility Assessment

The goal of compatibility planning is to promote a mutually supportive and collaborative environment in which both military installations and local communities thrive. For the Hill AFB CUP, 25 compatibility factors – or types of compatibility challenges – were assessed to identify all current and potential future issues in the project Study Area.

## How Compatibility Issues Were Identified



**19** factors determined to have Compatibility issues

**45** total compatibility issues identified

# Implementation Plan Overview

The set of recommended strategies for mitigating and preventing compatibility issues is the heart of the CUP. They are the result of a collaborative planning process and represent a true consensus-based plan. The Hill AFB CUP is a realistic, coordinated approach to compatibility planning that was developed through stakeholder engagement and support throughout the process. The resulting strategies are practical and uniquely tailored to each military facility and community's needs and circumstances. Establishing a Hill CUP Partnership Committee to oversee strategy implementation, maintain efficient and effective coordination among stakeholders, and enhance long-term coordination will be critical to success.

*All of the strategies developed during the CUP process are described in detail in Chapter 6 of the Hill AFB CUP. The recommendations presented here constitute key actions that were developed and agreed to by the CUP partners.*

## Types of Strategies Considered

- Acquisition
- Coordination/Communication
- Regulations
- Easement
- Process
- Master Plan/General Plan
- Education/Awareness
- Planning
- Policies
- Partnership
- Legislation
- Real Estate Disclosure
- Study
- Zoning

## Where Strategies Apply: Military Compatibility Areas

Military Compatibility Areas (MCAs) are geographic areas where Hill AFB operations may impact local communities and, conversely, where local activities may affect Hill AFB facilities ability to carry out their missions. They are areas in which the combined effects of a specific military operation and/or activity occurs, or could occur, and represent the geographic extent of an installation's impact in a region.

MCAs are primarily based on impact zones defined in the Hill AFB Air Installation Compatible Use Zone (AICUZ) study but also include other areas such as the Bird/Wildlife Aircraft Strike Hazard compatibility area.

The Hill AFB CUP MCAs specifically target geographic areas where certain CUP strategies are to be applied, ensuring locations that are not experiencing a specific compatibility issue are not adversely impacted by strategies inappropriate for them.

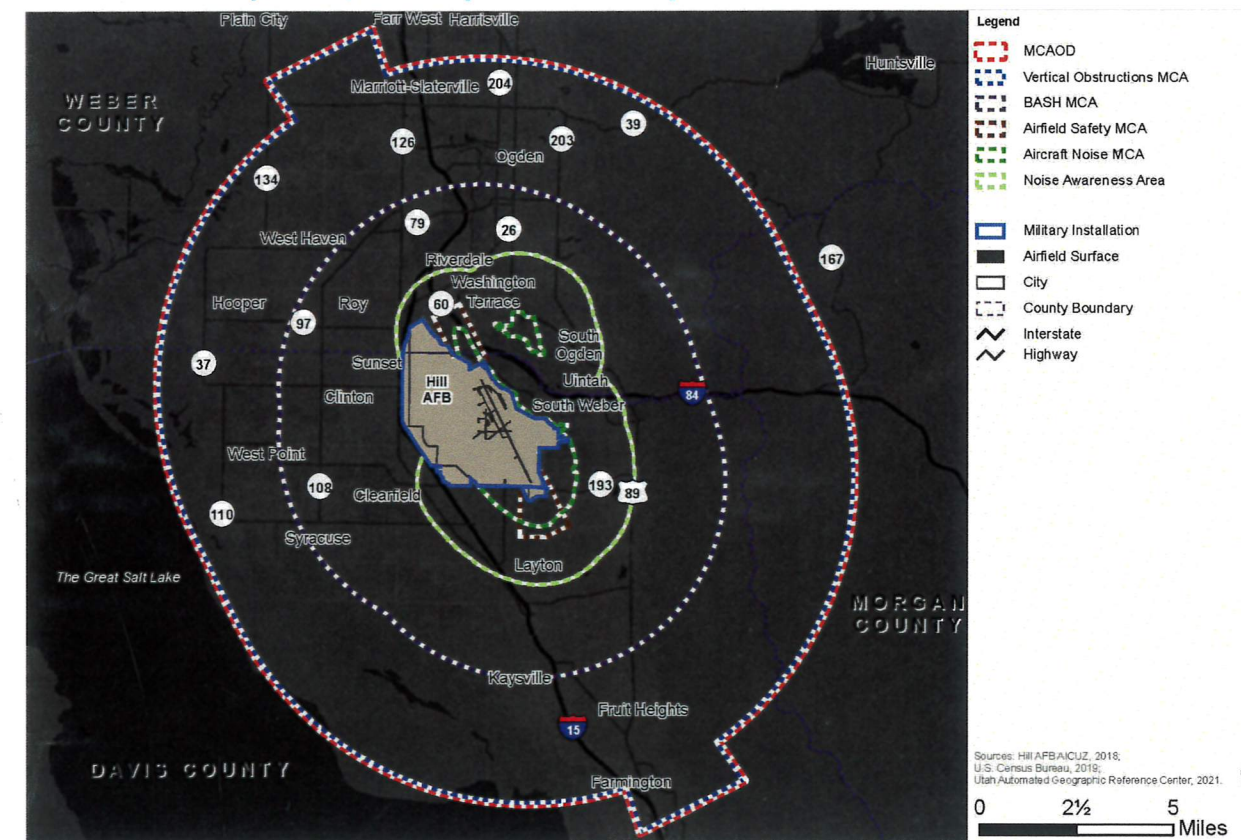
- Hill AFB Aircraft Noise MCA
- Hill AFB Airfield Safety MCA
- Hill AFB Bird/Wildlife Aircraft Strike Hazard MCA
- Hill AFB Vertical Obstruction MCA

## Military Compatibility Area Overlay District

The Hill AFB Military Compatibility Area Overlay District (MCAOD) is defined by the outermost MCA boundary when all Hill AFB MCAs are combined. The MCAOD is a

planning area where strategies can be applied to address specific compatibility issues.

## Hill AFB Military Compatibility Area Overlay District and its MCAs



# Key Issues and Strategies in the MCAs

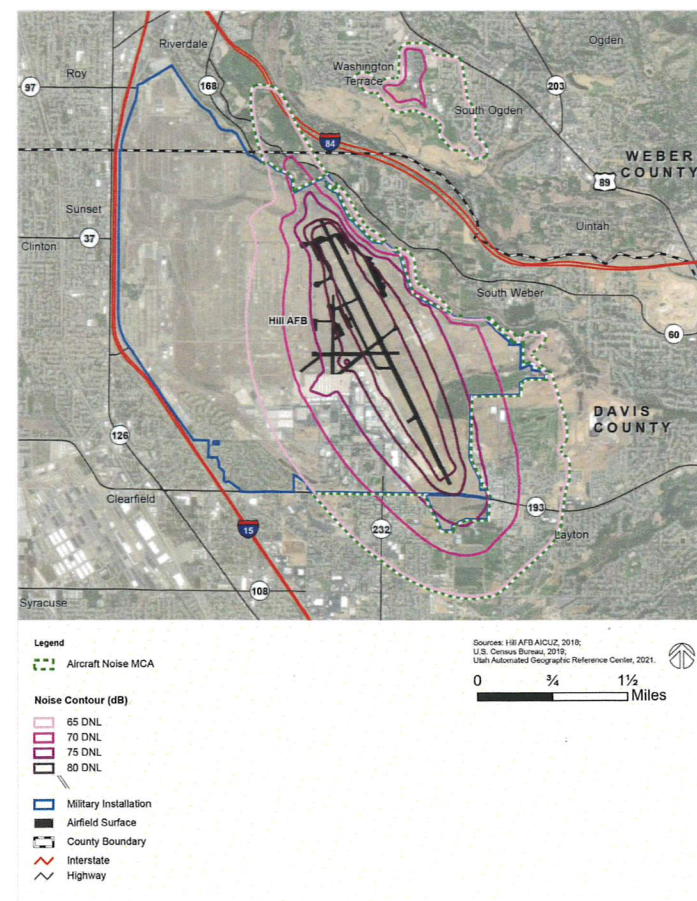
## Noise MCA

The Hill AFB Aircraft Noise MCA includes all land outside the installation and within the noise contours that are identified in the 2018 Hill AFB AICUZ study. The Noise MCA is where aircraft noise has been modeled in the surrounding communities and where aircraft noise is experienced the greatest.

The Noise MCA includes a recommended Noise Awareness Area buffer that extends 1.5 miles outward from the 65 dB noise contour where, though not modeled, can also have impacts on noise sensitive land uses. Strategies for addressing noise impacts are recommended within the Noise Awareness Area.

Key Issues	Key Strategies
<p><b>Noise</b></p> <p><b>Incompatible development within Hill AFB noise contours</b></p>	<ul style="list-style-type: none"> <li>CUP Partner Communities should update their general plans and amend zoning ordinances and municipal codes to include sound attenuation standards for noise sensitive land uses.</li> <li>Hill AFB should involve communities in future AICUZ updates.</li> <li>Hill AFB should prepare an annual noise report that summarizes all noise disturbance calls and their resolution received during the calendar year.</li> <li>CUP Partner Communities should position for and participate in the Department of Defense Office of Local Defense Community Cooperation Community Noise Mitigation Program for assistance when the program is established.</li> </ul>
<p><b>Noise impacts from Hill AFB operations may extend beyond designated noise contours</b></p>	<ul style="list-style-type: none"> <li>CUP Partner Communities should consider adopting a noise buffer extending 1.5 miles from the outer extent of the Hill AFB noise contours, as captured in the Noise MCA, and include it in their general plan future land use maps and zoning maps for public awareness.</li> <li>The Air Force should update the noise model used to assess noise exposure from military aircraft operations at Hill AFB for F-35 aircraft once the new Advanced Acoustic Model software is approved by the DoD Noise Working Group.</li> </ul>

## Hill AFB Aircraft Noise MCA



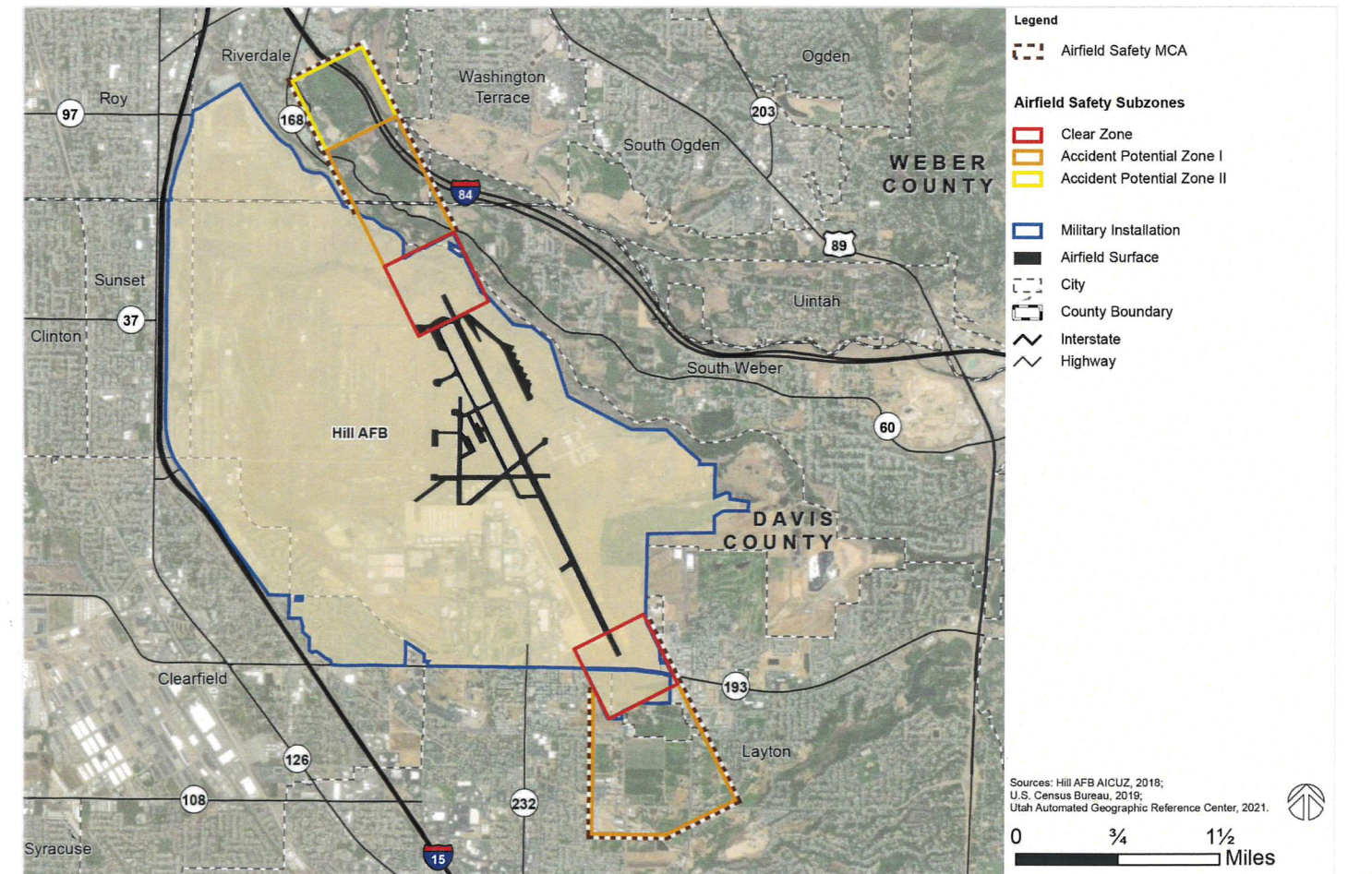
## Airfield Safety Zone MCA

The Hill AFB Airfield Safety MCA includes all land outside the Hill AFB boundary and within runway Accident Potential Zones (APZs) I and II, as defined by the 2018 AICUZ study. Because these areas are statistically where an aircraft mishap is most likely to occur, if one were to

happen, limiting uses and intensity of development that encourage the congregation of people can protect the public health, safety, and welfare of people on the ground. The location of each safety subzone is based on the airfield layout and current air operations.

Key Issues	Key Strategies
<p><b>Safety</b></p> <p><b>Existing and potential incompatible development in Hill AFB safety zones</b></p>	<ul style="list-style-type: none"> <li>Layton, Riverdale, and South Weber Cities should consider amending their zoning ordinances for development in the safety zones to incorporate DoD land use recommendations from the 2018 Hill AFB AICUZ study.</li> <li>CUP Partner Communities might consider utilizing the Transportation and Land Use Connection program and grant from the Wasatch Front Regional Council to assist with transportation options and potential land use changes near Hill AFB that align with Hill AFB safety zones recommendations.</li> </ul>

## Hill AFB Airfield Safety MCA



# Key Issues and Strategies in the MCAs

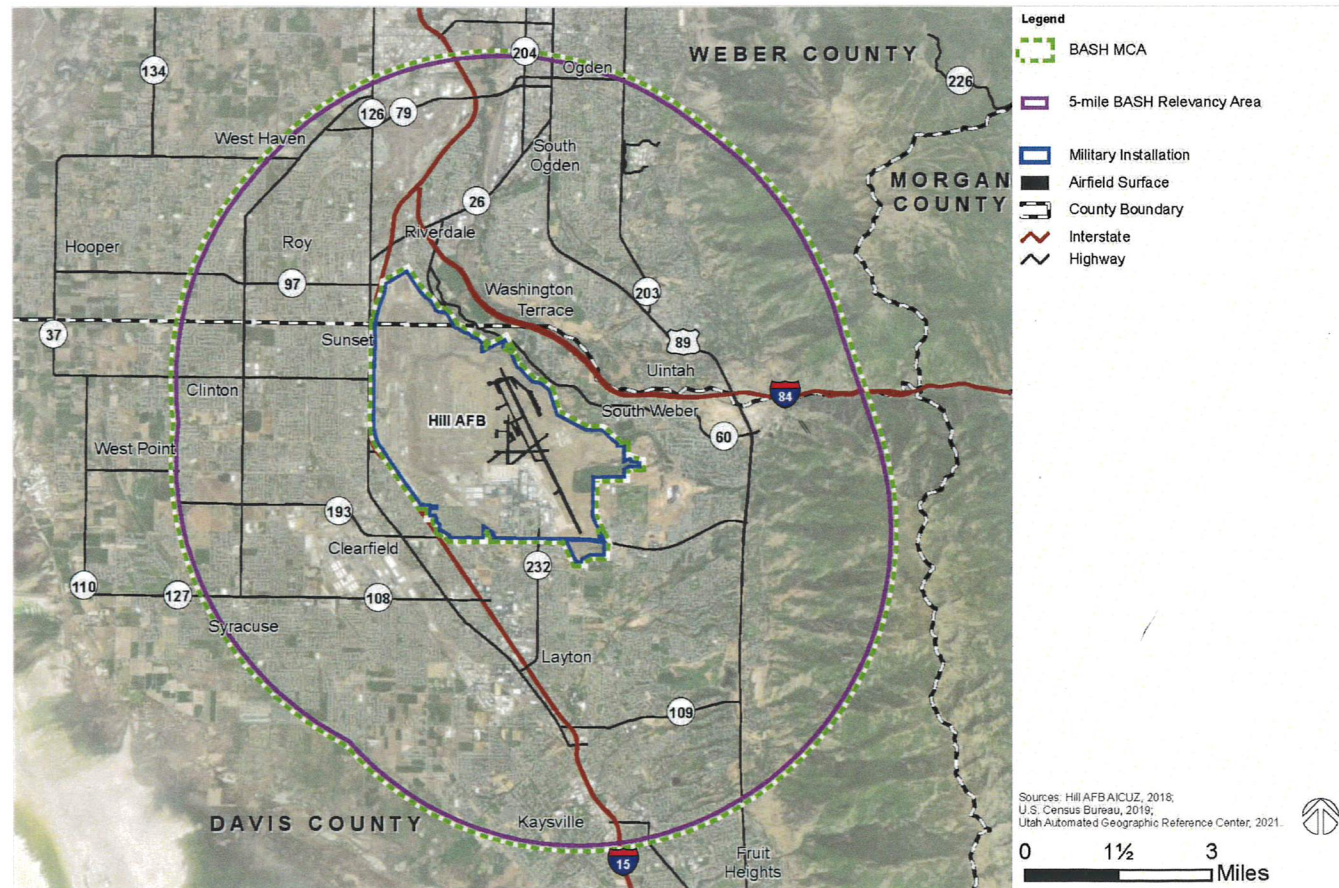
## Bird/Wildlife Aircraft Strike Hazard MCA

The Hill AFB Bird/Wildlife Aircraft Strike Hazard (BASH) MCA is an FAA recommended boundary extending five (5) statute miles from the air operations area at Hill AFB. The BASH MCA is an area where measures can

be taken through site design and controlling land uses to reduce bird and wildlife attractants around Hill AFB. Bird and wildlife strikes with aircraft can pose serious safety concerns, including potential loss of life and aircraft.

Key Issues	Key Strategies
<b>Safety</b> <b>Incompatible land uses within Bird/Wildlife Strike Hazard area surrounding Hill AFB</b>	<ul style="list-style-type: none"> <li>Hill AFB should provide educational information to surrounding communities and landowners regarding best practices to reduce attractants for birds and wildlife that can impede safe aircraft operations.</li> <li>CUP Partner Communities should incorporate BASH land use best practices in zoning regulations.</li> <li>Hill AFB should publish the Hill AFB BASH Plan its website to assist regional partners with informed decision-making related to BASH compatibility.</li> </ul>

## Bird/Wildlife Aircraft Strike Hazard MCA



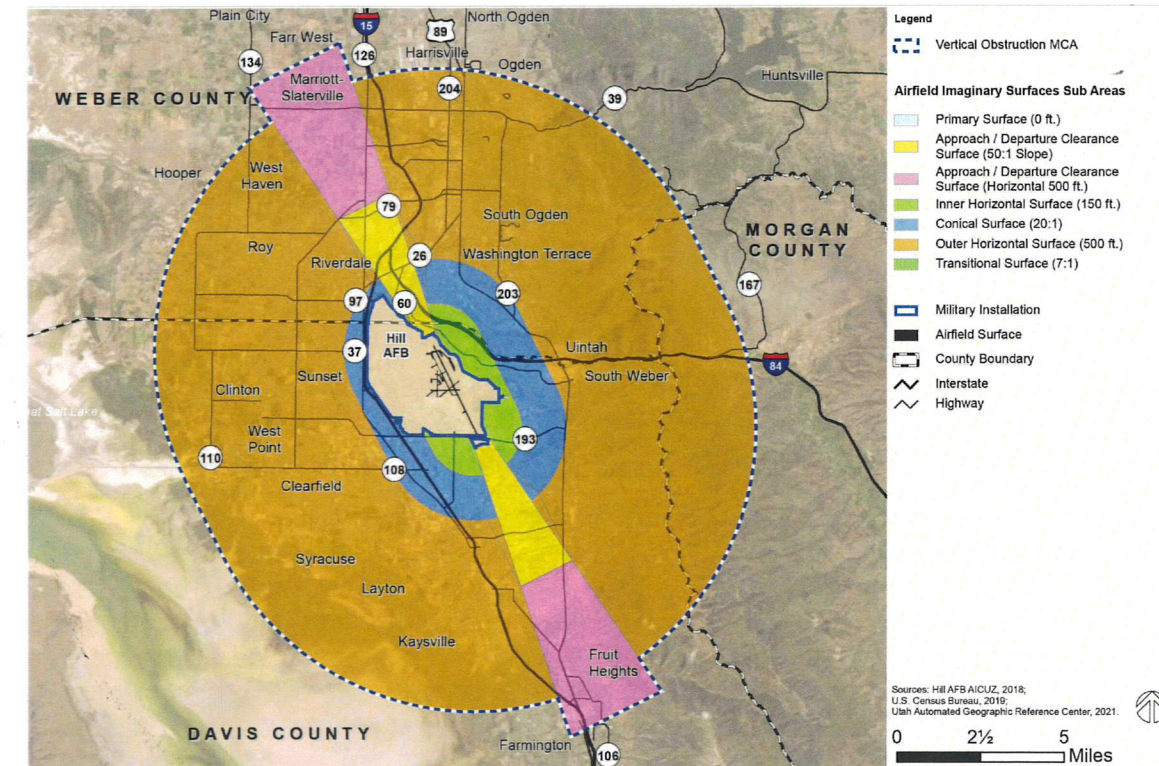
## Vertical Obstruction MCA

The Hill AFB Vertical Obstruction MCA comprises a set of imaginary surfaces based on heights at different distances surrounding the Hill AFB airfield including the approach and departure airspace corridors and other airspace around the runway. The imaginary surfaces are areas in 3-dimensional

space where the heights of natural and human-made structures can become vertical obstructions to safe pilot navigation. The Vertical Obstruction MCA can be used to educate the community about the impacts of vertical structures and implement heights for compatible development.

Key Issues	Key Strategies
<b>Vertical Obstructions</b> <b>Need for information sharing regarding vertical obstruction requirements for airspace surrounding Hill AFB</b>	<ul style="list-style-type: none"> <li>Hill AFB should educate CUP Partner Communities on AICUZ height recommendations within the Vertical Obstruction MCA.</li> <li>CUP Partner Communities should update zoning ordinances to include height requirements specific to Hill AFB operational needs.</li> <li>Sunset City and South Ogden City should update their zoning regulations to include additional information regarding buildable heights related to Hill AFB.</li> </ul>
<b>Potential for incompatible development within Hill AFB imaginary surfaces</b>	<ul style="list-style-type: none"> <li>The Utah Public Lands Resource Development Coordinating Committee should consider including Team Hill in meetings about development with the potential to create vertical obstructions.</li> <li>CUP Partner Communities should require development applicants to submit proof of coordination with the FAA for projects subject to Code of Federal Regulations Part 77.</li> <li>Seek funding to develop a 3-dimensional imaginary surfaces model for Hill AFB to automate and thereby assist developers and local governments with determining maximum buildable heights within Hill AFB imaginary surfaces.</li> </ul>

## Hill AFB Vertical Obstruction Military Compatibility Area





## Hill AFB and Little Mountain Test Facility Key Issues and Strategies

Key Issues	Key Strategies
<b>Communication/Coordination</b>	
<b>Need for a development review process between Hill AFB and surrounding communities</b>	<ul style="list-style-type: none"> <li>Each CUP partner community should develop and adopt a Memorandum of Agreement with Hill AFB that establishes and formalizes the review process for certain types of development proposals, rezoning applications, and other land use policy or regulatory changes that may impact the military missions at Hill AFB facilities.</li> </ul>
<b>Housing</b>	
<b>Need for available, affordable housing to accommodate future increases in civilian contractors and military personnel at Hill AFB</b>	<ul style="list-style-type: none"> <li>Hill AFB, in partnership with CUP Partner Communities and the Wasatch Front Regional Council, should conduct a formal study of the local housing market to understand the range of current and anticipated housing needs, identify gaps in supply, and better support off-base housing demand.</li> </ul>
<b>Land/Airspace Competition</b>	
<b>Concern for airspace congestion and competition between Hill AFB and surrounding airports</b>	<ul style="list-style-type: none"> <li>Ogden City and Salt Lake City International Airport should coordinate with the Hill AFB airfield manager and UTTR on their respective airport master plan updates for Ogden-Hinckley Airport and Salt Lake City International Airport.</li> <li>Ogden City, Salt Lake City International Airport, Hill AFB, and the UTTR should continue to communicate any changes in aircraft operations for their respective airports, including Tooele Valley Airport, South Valley Regional Airport, and Wendover Airport.</li> </ul>
<b>Roadway Capacity</b>	
<b>Traffic congestion related to Hill AFB during peak travel times</b>	<ul style="list-style-type: none"> <li>Team Hill, Utah Department of Transportation, the Utah Transportation Commission, local communities, and the Wasatch Front Regional Council should coordinate on future roadway projects within the project Study Area and ensure that Hill AFB continues to be a part of future planning efforts.</li> <li>The Wasatch Front Regional Council should consider developing a growth management plan for Hill AFB to evaluate population growth impacts and potential opportunities associated with anticipated growth at Hill AFB, relative to the transportation system.</li> </ul>

## UTTR AFB Key Issues and Strategies

Key Issues	Key Strategies
<b>Biological Resources</b>	
<b>Sensitive species are located on and around Hill AFB and the UTTR. If their status is upgraded to threatened or endangered and protections are enhanced, military operation could be impacted</b>	<ul style="list-style-type: none"> <li>The Hill AFB Environmental Management Branch's natural resources specialist should utilize the U.S. Fish and Wildlife Service's IPaC online tool to continue to identify the threatened and endangered species and critical habitat within the Study Area.</li> </ul>
<b>Dust/Smoke/Steam</b>	
<b>Potential for dust that is related to arid conditions to impact operations at the UTTR</b>	<ul style="list-style-type: none"> <li>Hill AFB should continue to identify locations where activities that produce high amounts of dust occur near the UTTR. Hill AFB and the UTTR should notify surrounding communities when dust-producing activities are impacting military operations.</li> </ul>
<b>Energy Development</b>	
<b>Potential for wind energy development to create frequency interference for Hill AFB and the UTTR</b>	<ul style="list-style-type: none"> <li>The UTTR and Hill AFB should continue to work with the Utah School and Institutional Trust Lands Administration to coordinate renewable energy development on state land within ten miles of the installations.</li> </ul>
<b>Frequency Spectrum Impedance</b>	
<b>Need to protect frequency spectrum at the UTTR caused by interference of external sources</b>	<ul style="list-style-type: none"> <li>Hill AFB and the UTTR should coordinate with Rocky Mountain Power regarding potential impacts from transmission lines and proposed transmission lines surrounding the UTTR.</li> </ul>

## Next Steps → Implementing the CUP

The CUP is not an enforceable plan, but rather a set of recommended strategies. The key to successfully implementing the strategies is the establishment of a CUP Partnership Committee to oversee execution. Through this committee, local jurisdictions, the Air Force, federal and state agencies, and other interested parties can continue their initial collaborative efforts to establish procedures, recommend or refine specific actions for members, and

adjust strategies over time to ensure the CUP is responsive to changing needs and continues to help stakeholders resolve key compatibility issues in the future. Concurrent with the efforts of the CUP Partnership Committee, each project partner is responsible for establishing their own course of action to implement the strategies that are unique to their circumstances through the collaboration of their leadership, planners, and the public.



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This Plan was prepared under contract with Layton City, Utah, with financial support from the Department of Defense Office of Local Defense Community Cooperation. The content reflects the views of the key Compatible Use Plan partners involved in developing the plan and does not necessarily reflect the views of the Department of Defense Office of Local Defense Community Cooperation.