



# Compatibility Factors

## What is Compatibility?

Compatibility in relationship to military readiness is the balance and/or compromise between community and military needs and interests. The goal of compatibility planning is to promote an environment where both entities can coexist successfully. Wright-Patterson Compatible Use Plan will assess 25 potential compatibility factors to identify all current and potential issues.



**Air Quality (AQ)**  
The primary air quality compatibility concerns are pollutants that limit visibility, may impact health, and/or limit future changes in operations at an installation or in a region.



**Anti-Terrorism/Force Protection (ATFP)**  
Anti-Terrorism / Force Protection relates to the safety of personnel, facilities, and information on an installation from outside threats. Methods to protect the installation and its supportive facilities can impact off-installation uses.



**Biological Resources (BIO)**  
Biological resources include federal- and state-listed species (threatened and endangered) and the habitats they depend on. These resources can include areas such as wetlands and migratory corridors that support these species. The presence of sensitive biological resources may require special development considerations and should be included early in the planning process.



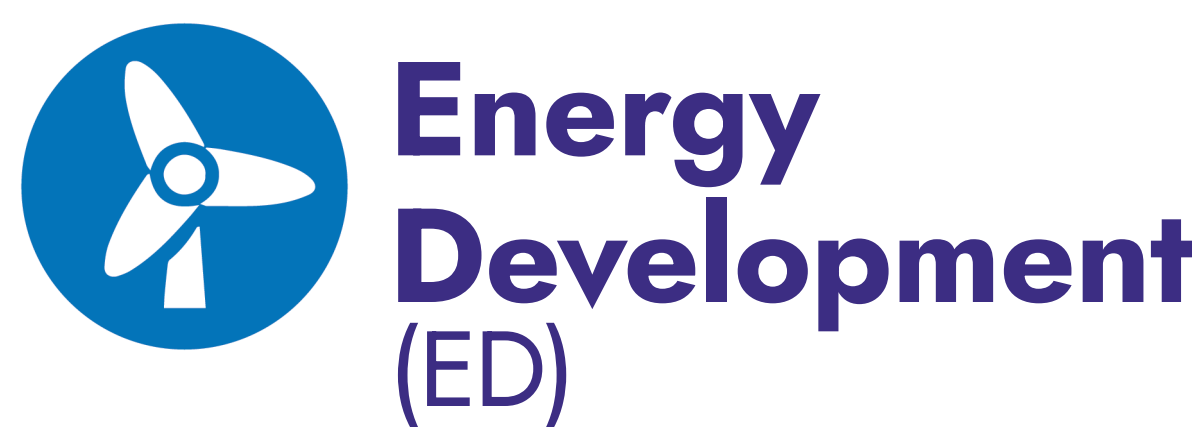
**Communication/Coordination (COM)**  
Community/coordination relates to the level of interaction on compatibility issues among military installations, jurisdictions, land and resource management agencies, and conservation authorities.



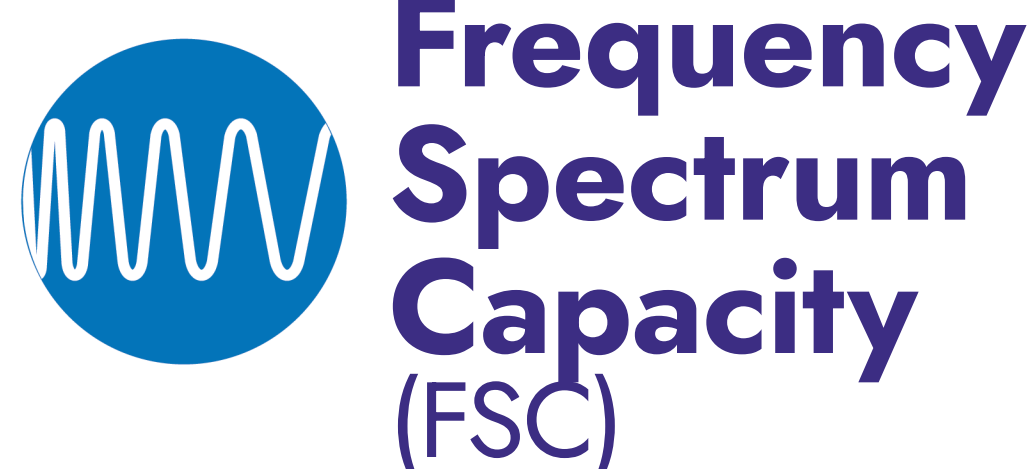
**Cultural Resources (CR)**  
Cultural resources include objects, structures, sites, and natural features or landscapes of significance to people traditionally associated with them. The presence of cultural resources in an area may prevent or constrain development and should be considered early in the planning process.



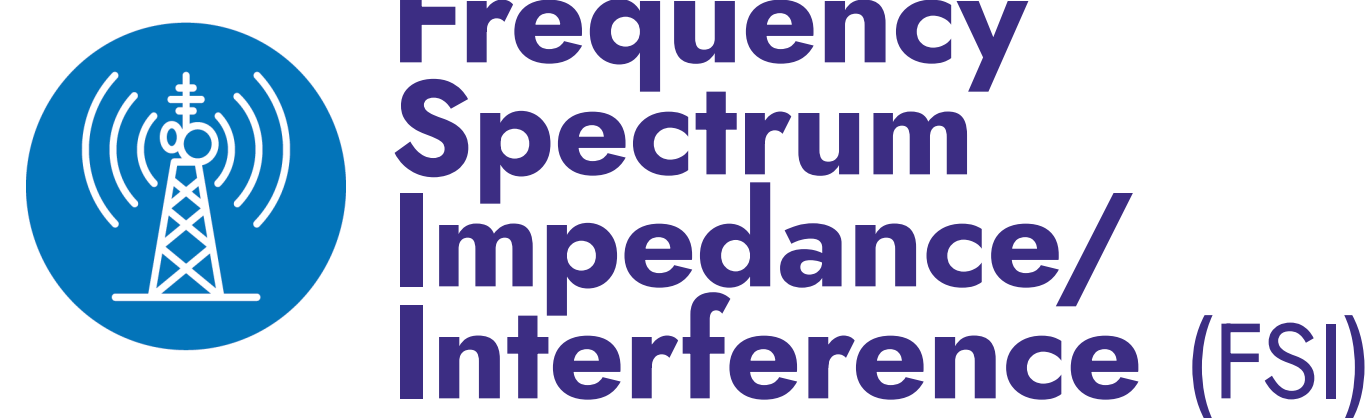
**Dust/Smoke/Steam (DSS)**  
Dust and smoke can be created by fire, ground disturbance, military operations, industrial activities, or other similar processes. Dust, smoke, and steam present compatibility issues if sufficient in quantity to impact military flight operations or impact surrounding communities.



**Energy Development (ED)**  
Development of energy sources, including renewable sources, can create compatibility issues related to glare (solar energy), vertical obstruction (wind energy), or radar interference (wind energy).



**Frequency Spectrum Capacity (FSC)**  
Frequency spectrum capacity is critical for maintaining existing and future missions and communications on installations. Limited frequency spectrum capacity can also impact civilian cell phone usage and other technology.



**Frequency Spectrum Impedance/Interference (FSI)**  
Frequency spectrum impedance and interference refers to the interruption of electronic signals by a structure or object (impedance) or the inability to distribute or receive a particular frequency due to competition for the same or similar frequencies (interference).



**Housing Availability (HA)**  
Housing availability relates to the supply and demand for housing in a region. It also includes the competition for housing that may result from changes in the number of military personnel or the supply of military family housing provided by the installation.



**Infrastructure Extensions (IE)**  
The extension or provision of infrastructure (roads, sewer, water, etc.) in the vicinity of a military installation can be a compatibility concern. Although infrastructure can enhance the operations of the installation by providing needed services, expanded infrastructure can encourage incompatible growth near the installation.



**Land/Air Space Competition (LAS)**  
The military manages or uses land and air space to accomplish testing, training, and operational missions. These resources must be available and of a sufficient size, cohesiveness, and quality to accommodate effective training and testing. Military and civilian air operations can compete for limited air space, especially when airfields are close to each other. Use of this shared resource can impact future growth in operations for all users.



**Land Use (LU)**  
The basis of land use planning relates to the government's role in protecting public health, safety, and welfare. County and local jurisdictions' general plans and zoning ordinances are effective tools for avoiding or resolving land use compatibility issues. These tools ensure the separation of land uses that differ significantly in character. Land use separation also applies to properties where the use of one property may impact the use of another. For instance, industrial uses are often separated from residential uses to avoid impacts related to noise, odors, lighting, etc.



**Legislative Initiatives (LEG)**  
Legislative initiatives are federal, state, and local laws and regulations that may have a direct or indirect effect on a military installation's ability to conduct current or future missions. They can also constrain development potential in areas surrounding the installation.



**Light and Glare (LG)**  
Light sources from communities at night can cause excessive glare and illumination, impacting the use of military night vision devices and air operations. Conversely, high intensity light such as generated from airfield lighting and needed in military areas may have a negative impact on an adjacent community.



**Noise (NOI)**  
Sound that reaches unwanted levels is referred to as noise. The central issue with noise is its impact, or perceived impact, on people and animals (wild and domestic). Exposure to high noise levels can have a significant impact on human activity, health, and safety.



**Public Services (PS)**  
Public services concerns include the assurance that adequate services such as police, fire, emergency services, parks and recreation, and water/wastewater/stormwater infrastructure are of good quality and available for use by the installation and surrounding communities as the area develops. The supply and demand of these public services in the event of emergency situations is also considered.



**Public Trespassing (PT)**  
This factor addresses public trespassing on a military installation, whether intentional or unintentional.



**Resiliency (RE)**  
Military installation resilience refers to the capability of a military installation to prepare for and minimize the effects of extreme weather events, wildfires, or changes in environmental conditions, as well as variables that can adversely affect transportation, logistics, and resources outside of a military installation that are needed to maintain, improve, or rapidly reestablish installation operations.



**Roadway Capacity (RC)**  
Roadway capacity relates to the ability of existing freeways, highways, arterials, and local roads to provide adequate mobility and access between military installations and their surrounding communities.



**Safety (SA)**  
Safety zones are areas in which development should be more restrictive due to the higher risks to public safety. Issues to consider include accident potential zones, weapons firing range safety zones, and explosive safety zones.



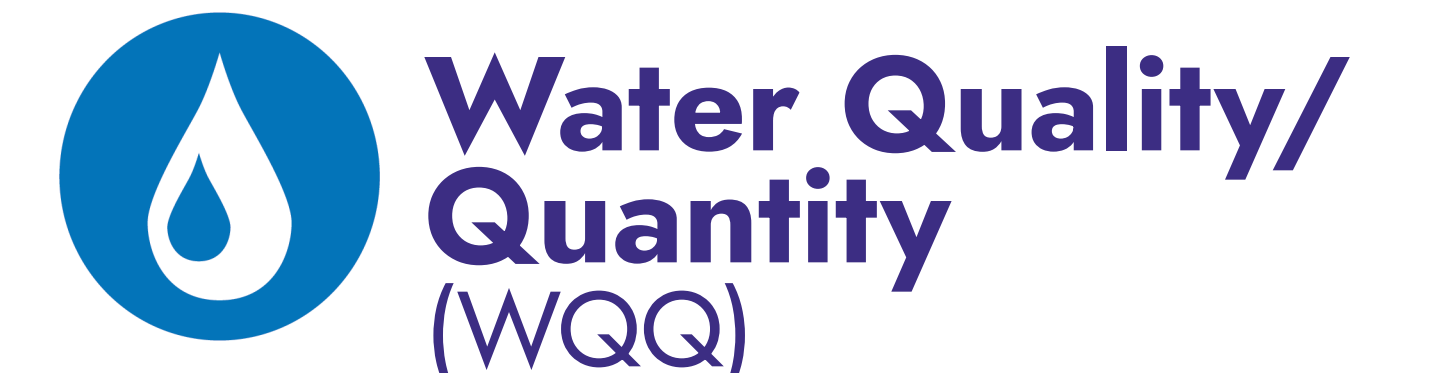
**Scarce Natural Resources (SNR)**  
Public and commercial access to, and use of, scarce natural resources such as oil, natural gas, minerals, and water that are located on military installations, within military training areas, or on public lands historically used for military operations can impact military land and resource utilization and operations.



**Vertical Obstructions (VO)**  
Vertical obstructions are created by buildings, trees, structures, and other features that encroach into airspace used for military operations. Vertical obstructions can present safety hazards for both the public and military personnel.



**Vibration (V)**  
Vibration is an oscillation or motion that alternates in opposite directions and may occur as a result of an impact, explosion, noise, mechanical operation, or other change in the environment. Vibration may be caused by military and/or civilian activities and can impact quality of life.



**Water Quality/Quantity (WQQ)**  
The assurance that adequate supplies of quality, potable water are available for use by the installation and surrounding communities is a concern with growth and development. Water supply for agricultural and industrial use is also considered under this compatibility factor.