



FORT DRUM JOINT LAND USE STUDY

Fort Drum Joint Land Use Study Overview

The Fort Drum Joint Land Use Study (JLUS) was a collaborative planning effort between Fort Drum, surrounding communities, and other partners including local agencies, organizations, and the public to identify and address compatibility issues. The JLUS was developed under the guidance of three main objectives.

UNDERSTANDING – Increase communication and understanding between Fort Drum and the surrounding community about the economic and physical relationship between Fort Drum and its neighbors.

COLLABORATION – Promote collaborative planning between all parties in order to achieve compatible development.

ACTIONS – Develop strategies for avoiding or reducing the impacts of incompatible land uses between the community and military operations.

The development of the project was guided by two committees composed of a wide variety of stakeholder representatives.

Steering Committee – Provided guidance, accepted the study design, offered policy recommendations, and accepted the final draft as meeting the requirements of the grant.

Technical Working Group – Assisted in the identification and assessment of compatibility issues, provided feedback on report development, and assisted in the development and evaluation of implementation strategies and tools.

Public Involvement – The public provided input throughout the process and played a key role in the development of the JLUS via public workshops, the project website, and during the Public Draft review period.

Why is it Important to Partner with Fort Drum?

It is important to partner with Fort Drum on relevant and long-range planning projects to ensure viability and sustainability of the military training missions and economic impact that the installation provides now and into the future. As the largest single-site employer in New York State, Fort Drum employs over 18,000 full-time people, and contributed approximately \$1.2 billion to the regional economy in Fiscal Year 2016. In addition to being a significant economic generator for the region, Fort Drum is a strategic asset in the nation's defense. Fort Drum engages in many public outreach efforts to make the installation part of the local and regional community, including special events, parades, and fire department and police support to local jurisdictions, and the local community provides important services such as education and healthcare.

 **72,000**

Approximate population supported by Fort Drum, including military personnel, family members, civilians, and retirees (*estimated Fiscal Year 2016*)

 **\$1.6 B**

Estimated direct and indirect economic impact from Fort Drum to Jefferson, Lewis, and St. Lawrence counties in Fiscal Year 2016

 **25,151**

Estimated direct and indirect jobs created by or to support Fort Drum in Fiscal Year 2016

Fort Drum Military Compatibility Areas and Military Influence Areas

A key to guiding and educating stakeholders on compatible development and activities without overregulating is the establishment of Fort Drum Military Compatibility Areas (MCAs) and Military Influence Areas (MIAs), which identify geographic areas where Fort Drum operations may impact local communities and vice versa. The term MCA is used to identify locations within Fort Drum's operational footprints (noise and airfield safety) around the installation where specific land uses are either compatible or incompatible with the type of operations. The term MIA is used to identify broad areas around Fort Drum that are influenced by operations at the installation, where certain types of land uses could impact Fort Drum's operations, such as causing vertical obstructions or interfering with radar systems. There are two MCAs and two MIAs. The two MCAs are Safety and Noise. The two MIAs are Airspace and Radar.

The recommended strategies within the Fort Drum MCAs and MIAs are designed to accomplish five objectives:

- 1 Promote an orderly transition between community and military land uses so that land uses remain compatible.
- 2 Maintain operational capabilities of Fort Drum.
- 3 Promote an awareness of the size and scope of military training areas to protect areas outside Fort Drum (e.g., important air space) used for training purposes.
- 4 Inform the local community of compatibility recommendations within the designated areas that are part of the JLUS.
- 5 Protect public health, safety, and welfare.

EXECUTIVE SUMMARY

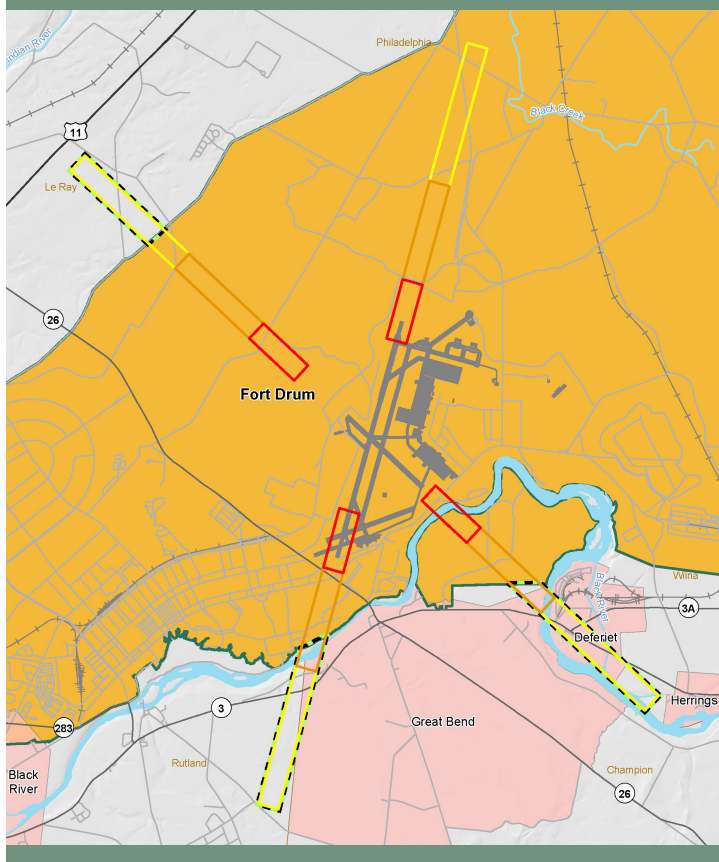
More information about the compatibility issues and recommendations that were a part of the Fort Drum JLUS can be found in the JLUS Supporting Information document and JLUS Report.

To obtain an electronic copy of the JLUS documents or for additional information, visit: www.FortDrumCompatibility.org

or contact: **Development Authority of the North Country**

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Watertown, NY 13601
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Safety MCA



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Source: Fort Drum 2017

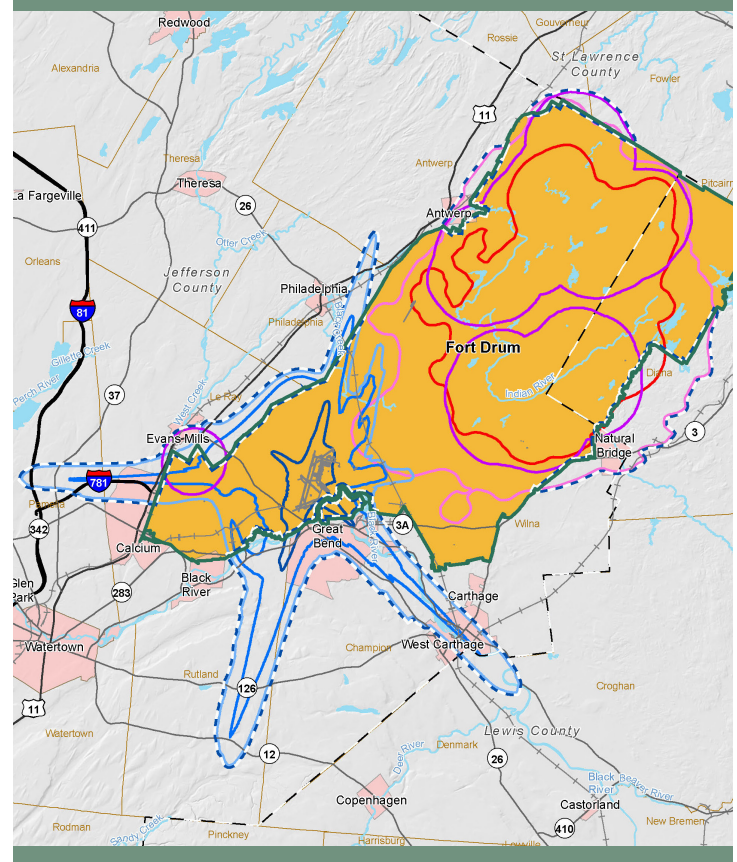
The Safety MCA endorses compatible land use types and densities / intensities within the Clear Zones (CZs) and Accident Potential Zones (APZs) I and II of Wheeler-Sack Army Airfield's runway. The location of each CZ and APZ is based on the airfield layout and air operations. It overlays portions of the communities of LeRay, Rutland, Great Bend, Champion, and Deferiet.

The Safety MCA is needed to prevent the development of incompatible land uses in areas with the greatest potential for an aircraft mishap. These safety zones were identified based on the military's guidance that defines CZs and APZs as areas where an aircraft mishap is most likely to occur (in the unlikely event that one was to occur). Within the CZ, most types of land use are incompatible with aircraft operations. Compatibility guidelines preclude land uses that concentrate large numbers of people (such as homes, apartments, hospitals, churches, and schools) from being constructed within the APZs.

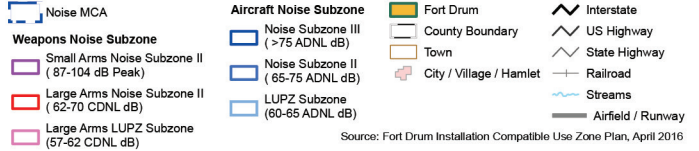
Key recommendations include:

- Add safety zones to community, county, and Development Authority of the North Country maps
- Create zoning overlays for communities in Wheeler-Sack Army Airfield's safety zones
- Develop deed notifications for future land sales and exchanges

Noise MCA



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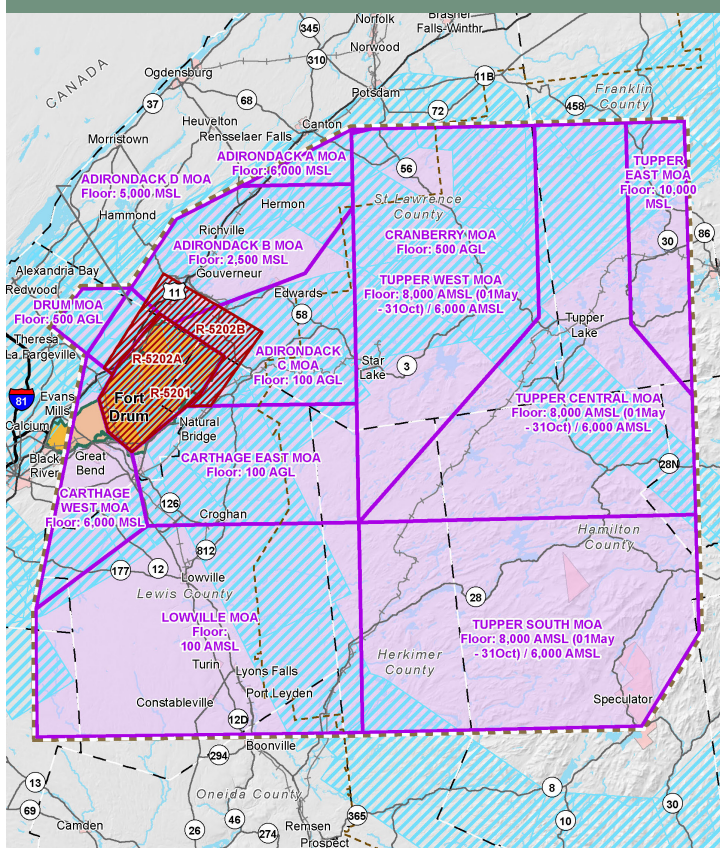
Source: Fort Drum Installation Compatible Use Zone Plan, April 2016

The Noise MCA includes all land located off-installation within Fort Drum's modeled noise contours for small arms weapons, large arms and demolitions, and aircraft activity at Wheeler-Sack Army Airfield (WSAAF). It overlays portions of the communities of Fowler, Antwerp, Philadelphia, LeRay, Evans Mills, Calcium, Rutland, Champion, Great Bend, Deferiet, West Carthage, Carthage, Wilna, Natural Bridge, and Diana. Residential and other noise-sensitive land uses within this MCA may be recommended to consider sound attenuation measures to reduce interior noise impacts and achieve a maximum interior sound level of 45 dB DNL. Without proper sound attenuation to reduce interior sound levels, uses such as residential and other noise sensitive user groups, including schools, healthcare facilities, and churches, are considered incompatible within areas that experience noise levels of 65 dB DNL or greater.

Key recommendations include:

- Signage alerting of Fort Drum location and operations
- Consider properties within Jefferson County's Agricultural Districts for Army Compatible Use Buffer priority areas
- Create zoning regulations within noise zones
- Real estate disclosures
- Incorporate sound attenuation and noise reduction measures in building codes

Airspace MIA



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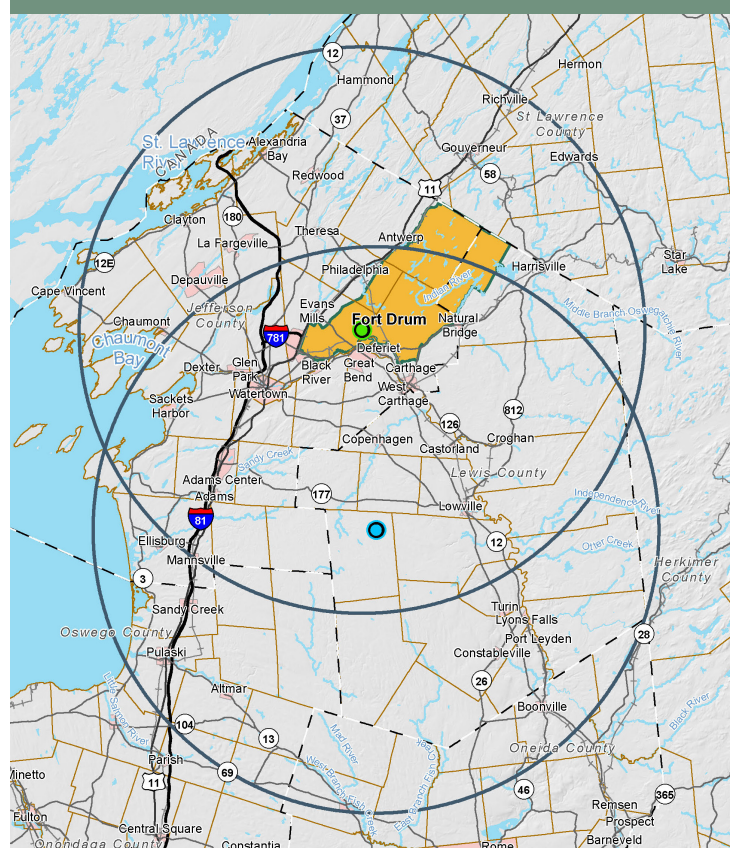
Source: National Geospatial-Intelligence Agency, Cycle 1601, 2016; Fort Drum, 2016

The Fort Drum Airspace MIA is composed of the Military Operating Areas (MOAs), restricted airspace, and Military Training Routes (MTRs) around Fort Drum. MOAs consist of airspace with defined vertical and lateral limits established for the purpose of separating certain military training activities from Instrument Flight Rules traffic. MTRs allow the military to conduct low-level, high-speed training. The purpose of developing and charting MTRs on maps is to make non-participating aircraft aware of the presence of high-speed military air traffic in the vicinity. Restricted Airspace designates areas where ongoing or intermittent activities occur that create usual and often invisible hazards to aircraft. Restricted airspace is specifically designated in areas where flight or ground activities must be confined as they could be considered hazardous to non-participating aircraft. It is important to keep these areas clear of vertical obstructions and other hazards to ensure a safe operating environment for military pilots.

Key recommendations include:

- Develop a Fort Drum airspace needs model
- Develop template zoning law language that local communities can incorporate to regulate heights
- Include Fort Drum on tower siting and review process
- Provide education on "Dark Sky" standards

Radar MIA



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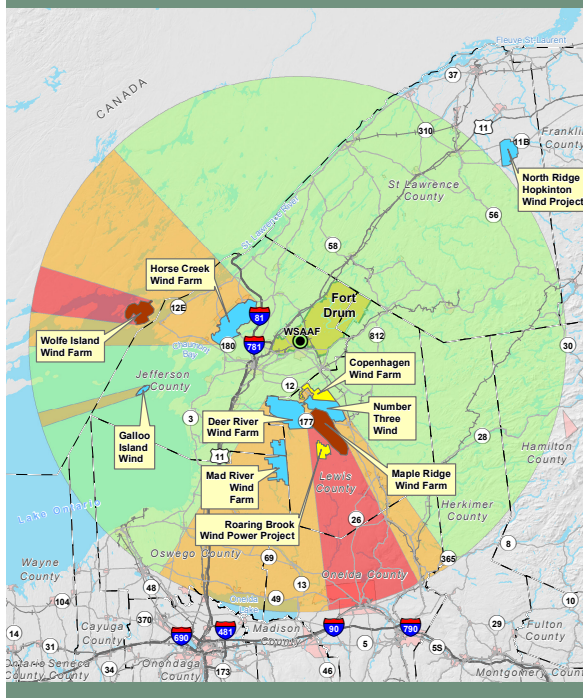
Source: Fort Drum, 2017

The Fort Drum Radar MIA is made up of a 30-mile radius around Fort Drum's Digital Airport Surveillance Radar (DASR) at WSAAF and the DOD-owned Doppler weather surveillance radar WSR-88D (KTYX). Each radar provides important operational capabilities for the missions at Fort Drum and Watertown International Airport and can be impacted by various types of development such as tall structures and industrial wind energy development, depending on their location relative to the radar site. This MIA serves to provide awareness of areas where certain types of development may impact the radar facilities and where such development should be monitored and coordinated with Fort Drum to minimize impacts.

Key recommendations include:

- Update local comprehensive plans with policies for renewable energy development
- Consider alternative energy Federal Funding Opportunity for regional mapping
- Adopt renewable energy ordinances
- Proactively identify alternative energy development areas that would result in little to no impact on the radar operations
- Consider easements for weather radar no-build zone

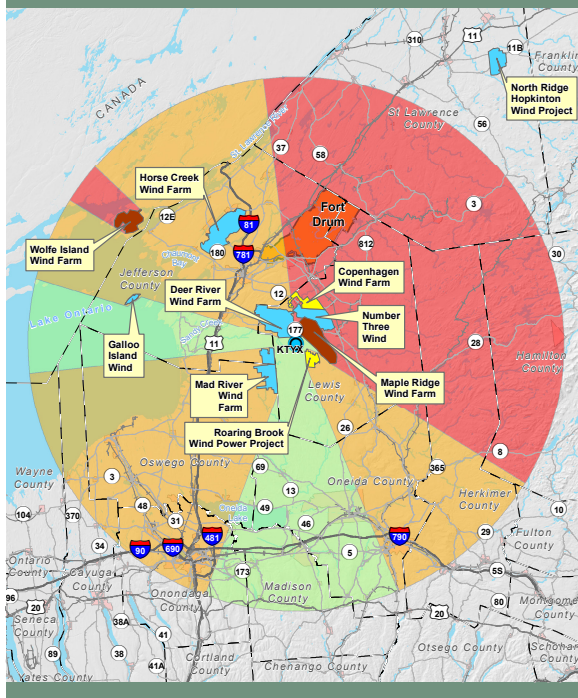
Aviation Surveillance Radar Impacts from Wind Energy Projects



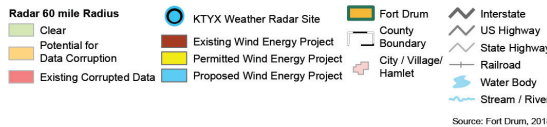
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Weather Radar Impacts from Wind Energy Projects



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Existing and potential future wind energy development impacts to Fort Drum's Digital Airport Surveillance Radar at Wheeler-Sack Army Airfield and KTYX Weather Surveillance Radar in Montague were identified as the most important compatibility issues to assess and work to mitigate. There are existing impacts from current wind energy development. There are seven proposed new wind energy projects near the radar sites that could cause additional impacts. There is a potential for data degradation within the line-of-sight of the field of view of the two radar sites, as shown to the left. These maps are meant only for reference purposes to show the line-of-sight view of the radar sites and how industrial wind energy projects could potentially impede them. Actual impacts to the radar's functionality will depend on a variety of factors such as turbine layout, heights, elevations, and distances from the radar.

Other Key Fort Drum JLUS Recommendations

The following is an overview of some of the other key Fort Drum JLUS recommendations.



Biological Resources

- Utilize Army Compatible Use Buffer (ACUB) and Readiness and Environmental Protection Integration (REPI) programs for additional conservation
- Coordinate the protection and conservation of sensitive species on a regional level



Coordination / Communication

- Establish a Fort Drum Compatibility Committee
- Develop and maintain a publicly accessible GIS web-based portal for the region
- Include local planning staff on Fort Drum Real Property Planning Board
- Develop a Fort Drum community / military compatibility reference guide
- Develop a Fort Drum smartphone app to relay information to the public



Land / Air Spaces

- Explore partnering opportunities to use state-owned property, parks, and forests for non-intensive training
- Utilize ACUB lands for wetland mitigation credits or endangered species habitat



Land Use

- Add a Fort Drum element to local comprehensive plans
- Fort Drum Encroachment Working Group to review compatibility issues between Fort Drum and local jurisdictions
- Encourage natural resource preservation and conservation easements



Vibration

- Prepare a property damage claims package for property owners

The Fort Drum JLUS was prepared under contract with the Development Authority of the North Country, with financial support from the Office of Economic Adjustment, Department of Defense, and New York State Senator Patricia Ritchie. The content was developed through a collaborative stakeholder process, and does not necessarily reflect the views of the Office of Economic Adjustment.