



Vance Brand Municipal Airport



AIRPORT MASTER PLAN

JVIATION[®]



2.13.8 Light Emissions and Visual Impacts

Federal regulations do not specifically regulate airport light emissions; however, the FAA does consider airport light emissions on communities and properties in the vicinity of the airport. A significant portion of light emissions at airports are a result of safety and security equipment and facilities. The airport has four primary sources of light including:

- Medium Intensity Runway Lighting (MIRL): white lights outlining the runway and classified by the intensity or brightness the lights are capable of producing
- Medium Intensity Taxiway Lighting (MITL): blue lights outlining the taxiways and classified by the intensity or brightness the lights are capable of producing
- Visual Approach Slope Indicator (VASI) system: arrangement of red and white lights offering descent guidance to approaching aircraft
- Airport beacon: rotating green and white light used to locate the airport after dark

All four sources of light aid in the safety of operations at the airport and produce an insignificant amount of light on the surrounding communities. Furthermore, the MIRLs, MITLs, and VASIs are pilot controlled, meaning, the lights are activated by approaching pilots and do not remain on throughout the night when there is no activity. Nighttime operations at LMO are very infrequent in relation to daytime operations, so the lights typically remain off for most of the night.

2.13.9 Noise

Noise from aircraft operations is a critical consideration for airport development and operations. Any actions that may change runway configurations, aircraft movements, aircraft types, or flight patterns, may alter the noise impacts on the communities in the vicinity of the airport and must be carefully examined. 65 Day-Night Level (DNL) noise contours will be developed during this master plan for the current and ultimate (20 year) time frames. The FAA has adopted the DNL metric as the official way to measure noise impacts. The following is an excerpt from Chapter 17 of the FAA *Environmental Desk Reference for Airport Actions* document:

DNL is the standard Federal metric for determining cumulative exposure of individuals to noise. In 1981, FAA formally adopted DNL as its primary metric to evaluate cumulative noise effects on people due to aviation activities.

(1) Past and present research by the Federal Interagency Committee on Noise (FICON) verified that the DNL metric provides an excellent correlation between the noise level an aircraft generates and community annoyance to that noise level;

(2) DNL is the 24-hour average sound level in decibels (dB). This average is derived from all aircraft operations during a 24-hour period that represents an airport's average annual operational day;



(3) It is important to note that due to the logarithmic nature of noise, the loudest noise levels control the 24-hour average; and

(4) DNL adds a 10 dB noise penalty to each aircraft operation occurring during nighttime hours (10 p.m. to 7 a.m.). DNL includes that penalty to compensate for people's heightened sensitivity to noise during this period. This penalty contributes heavily to an airport's overall noise profile.

Noise issues and abatement procedures are covered in detail in **Section 2.4.9**.

2.13.10 Water Quality

The Clean Water Act³¹ provides the federal government the “authority to establish water quality standards, control discharges, develop waste treatment management plans and practices, prevent or minimize the loss of wetlands, location with regard to an aquifer or sensitive ecological area such as a wetland area, and regulate other issues concerning water quality.”

The City of Longmont has developed several initiatives to preserve and improve the quality of the city's water so that it can continue to support the city's demand for water, recreation, agriculture, aquatic life, and other uses now and in the future. Some of the initiatives include:

- Watershed Management Plan
- Participation in “Keep it Clean Partnership” – a collaborative effort to protect water quality
- Water Conservation - rebates and community education
- Pollution Prevention - community education and disposal resources
- Maintain all required Storm Water Management Plan documentation

³¹ U.S. Code, 1977 The Clean Water Act, 33 U.S.C. §1251-1387