Land development in the vicinity of airports can be regulated by federal, state, or local municipalities, or it may be unregulated. When land use controls in the airport environs are in place, they are there to protect airports from certain land uses that are not compatible with airport operations or possible expansion needs. The first form of potential encroachment is from structures (either man-made or natural) that, due to their height, may create a hazard for aircraft. Generally, height obstructions most often occur within three miles of an airport.

The second form of possible encroachment is incompatible land development. Incompatible land use may increase public concerns related to environmental and safety issues or heighten the perception of aircraft noise or aircraft accident potential. Tall structures and/or incompatible land use can endanger people on-board aircraft, as well as people on the ground. Local municipalities that fail to take appropriate actions to promote a safe operating environment for airports within their jurisdiction could be exposed to legal liability.

While not all airports included in the system plan are eligible for FAA funding, FAA guidelines for promoting land use compatibility in the airport environment still reflect best practices. Two FAA documents, 14 CFR Part 77 Objects Affecting Navigable Airspace (Part 77) and 14 CFR Part 150 Airport Noise Compatibility Planning (Part 150), can be researched for more specifics on height restrictions and land use compatibility for airports.

Part 77 defines areas around airports that need to be protected from tall structures and provides guidance on activities in the airport environment that could compromise safe and/or compatible airport operations. Activities that cause electrical interference, generate smoke or steam, create glare, or attract wildlife, including landfills, are all considered to be incompatible activities in the airport environs.

Information for 14 CFR Part 150 indicates that activities that are sensitive to noise should also be avoided in areas near airports, as should activities that draw large concentrations of people.

**EXAMPLE FAA 14 CFR PART 77 SURFACES**

The size of each airport’s Part 77 Surfaces differ as a result of the number of runways, the length of the runways and the specific approach to each runway end. Further, Part 77 surfaces are three dimensional extending from the sides and ends of each runway at different slopes.
SYSTEM PLAN IDENTIFICATION OF LOCAL AIRPORT MUNICIPALITIES

As part of the Kansas City Regional Aviation System Plan, the Mid-America Regional Council (MARC) gathered information on current and future land use in the environs of each study airport. This information for Gardner Municipal Airport is summarized in this document.

For each airport included in the system plan, a 10-mile area around each airport was identified and all political jurisdictions within this area were mapped. The accompanying map shows those jurisdictions that are within 10 miles of Gardner Municipal Airport. In addition, research was also performed to identify each jurisdiction that reports they have: 1) adopted a land use plan for areas near the airport and 2) adopted height restriction zoning that follows guidelines in 14 CFR Part 77.

CURRENT STATUS OF ENCROACHMENT PROTECTION

<table>
<thead>
<tr>
<th>Airport</th>
<th>NPIAS Airport</th>
<th>Planning Jurisdiction(s)</th>
<th>Adopted Height Restriction Ordinance</th>
<th>Land use Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gardner Municipal</td>
<td>Yes</td>
<td>Gardner, KS</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Edgerton, KS</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Johnson County, KS</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
EXISTING LAND USE
The current land use designation for Gardner Municipal Airport is public/semi-public land use. The existing land uses in the airport vicinity include vacant/agricultural, public/semi-public, residential, and parks/open space.

FUTURE LAND USE
Future land uses include public/semi-public, industrial/business park, commercial, residential, office, and parks/open space.
A conversation about land use is incomplete without consideration of undeveloped areas and natural resources. The Natural Resources Inventory (NRI) is a tool available in the Kansas City region to help communities evaluate policy, land use and development decisions in a larger context. The NRI is a Geographic Information Systems database of land cover types, soils, topography, hydrography and other resource information for the Kansas City metropolitan area. More information and downloads are available online at www.marc.org/NRI.

The accompanying map describes the types of land cover around Gardner Municipal Airport, both developed and undeveloped. Areas to the north and east of the airport are primarily developed, while areas to the south and west are undeveloped. As such, the airport presents significant opportunities to protect both natural resources and agricultural lands in the airport vicinity.

For a variety of reasons (general low density of development, lack of significant impervious surfaces, and open areas needed to meet safety guidelines), airports contribute to preserving open space. Conservation of open space and natural areas can contribute to airport land use compatibility and the enhancement of the region's environmental resources.

PROTECTING AND PROMOTING TRANSPORTATION RESOURCES

Protecting and promoting the transportation resources in MARC’s nine-county planning area is a one of the agency’s primary responsibilities. This includes advocating for compatible land use around general aviation airports.

The responsibility for ensuring height-compatible development rests with all responsible parties, including the airport and all nearby local jurisdictions. If a proposed development near an airport is 200 feet or more above ground level, the FAA must be notified. Part 77 surfaces are complex because they are three-dimensional, and the size of the surface is specific to each runway/airport. FAA's Central Regional Office (816-329-2605) is the best resource for airports and municipalities to obtain more detailed information on restricting the height of objects in the airport environs. The FAA can help determine if any of Part 77 surface pose a hazard to aircraft, airspace or navigational aids.

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http://www.faa.gov/airports/central/engineering/part77/
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www.MARC.org