

LAND-USE AND ZONING BEST PRACTICES

Purpose

Aviation infrastructure is not only an aviation issue. It is also a land-use, infrastructure, transportation, emergency response, and community planning issue.

Airports, heliports, vertiports, drone facilities, and other aviation-related uses depend on physical sites, approach and departure areas, utilities, emergency access, transportation connections, compatible neighbors, and clear local review processes. Local governments do not control aircraft certification, pilot certification, or airspace operations, but they do play a central role in determining how aviation infrastructure fits into the community.

This brief identifies practical planning and zoning practices that communities may wish to consider when evaluating aviation-related development. These practices are drawn from FAA guidance, airport compatibility research, planning literature, Utah law, and selected state examples. They are not mandatory requirements unless adopted by the applicable jurisdiction or required by federal, state, or local law.

Best Practice 1: Start with Existing Plans

Many communities already possess the planning tools necessary to address aviation-related issues. Comprehensive plans, transportation plans, airport master plans, airport influence areas, airport overlay districts, capital improvement plans, and emergency management plans often provide a foundation for aviation planning long before a specific proposal appears (FAA 2022; McKee Miller et al. 2022).

Before creating new regulations, communities may benefit from reviewing:

- Comprehensive plans
- Transportation plans
- Airport master plans
- Capital improvement programs
- Airport overlay districts
- Emergency response plans
- Economic development plans

AAM does not always require new regulations. In many cases, existing tools can be updated and strengthened to address emerging aviation technologies.

Best Practice 2: Use Clear Definitions

Clear definitions help planners, applicants, elected officials, and the public understand what is being proposed and which review processes apply.

Communities may wish to review definitions related to:

- Airports
- Heliports
- Helistops
- Vertiports
- Drone facilities
- Public-use facilities
- Private-use facilities
- Accessory aviation uses
- Aircraft landing and takeoff areas

Definitions should be specific enough to support consistent administration while remaining flexible enough to accommodate evolving technologies (Cohen, Shaheen, and Wulff 2024).

Best Practice 3: Match the Planning Tool to the Facility

Not every aviation facility raises the same planning questions.

A public airport, hospital heliport, rooftop vertiport, public safety drone facility, and private-use landing area may require very different planning responses.

Potential tools include:

- Airport overlay districts
- Conditional use permits
- Special use permits
- Site plan review
- Development agreements
- Accessory use standards
- Disclosure requirements
- Aviation easements
- Emergency access requirements

The objective is not to regulate every facility identically. The objective is to select the planning tool most appropriate for the facility type, location, and intended use.

Best Practice 4: Focus on Compatibility Before Conflict

Compatibility planning remains one of the most effective ways to reduce future conflicts between aviation facilities and surrounding development (FAA 2022; National Academies 2010; National Academies 2019).

Questions communities may wish to evaluate include:

- Are surrounding land uses compatible?
- Are homes, schools, hospitals, or other sensitive uses nearby?
- Are approach and departure areas protected?
- Could future development constrain aviation operations?
- Are emergency access routes adequate?
- Are utility and transportation systems capable of supporting the use?

Compatibility planning is most effective when it occurs before development decisions are made.

Best Practice 5: Use FAA Coordination as Part of Local Review

FAA review and local land-use approval serve different purposes.

The FAA evaluates aviation and airspace considerations. Local governments evaluate land use, compatibility, transportation, infrastructure, emergency access, and community impacts.

Communities may wish to incorporate FAA coordination into local review processes through:

- Pre-application meetings
- Site plan review
- Conditional use permits
- Building permit checklists
- Development review procedures

Examples may include requiring applicants to provide copies of FAA Form 7480-1 notifications, FAA Form 7460-1 submissions, or FAA determinations where applicable.

FAA review can inform local decision-making, but it does not replace local authority over land use and development review (FAA 2022).

Best Practice 6: Make Conditions Measurable, Monitorable, and Practical

Conditional use permits, variances, development agreements, and site plan approvals are often used to address site-specific concerns.

Conditions tend to work best when they are:

- Clear
- Objective
- Measurable
- Monitorable
- Practical to administer

Examples may include:

- Emergency access requirements
- Lighting and marking requirements
- Utility coordination requirements
- FAA coordination documentation
- Site maintenance requirements
- Contact information updates
- Operational assumptions tied to project approval

Communities may wish to avoid conditions that rely entirely on subjective interpretation or that cannot realistically be monitored over time.

Best Practice 7: Plan for Monitoring and Administration

Approval is not the end of the planning process.

Communities should understand how aviation-related approvals will be administered over time.

Questions may include:

- Who verifies compliance?
- How often is compliance reviewed?
- What information should be maintained?
- What happens if operations change?
- What happens if ownership changes?
- Are emergency contacts current?

Potential tools may include:

- Periodic self-certification
- Inspection checklists
- Contact updates
- Review triggers tied to operational changes

The objective is not to create unnecessary administrative burdens. It is to ensure that approved facilities continue to operate in a manner consistent with local expectations.

Best Practice 8: Consider Public-Use, Private-Use, and Accessory Uses Differently

Public-use, private-use, and accessory aviation facilities may create very different planning considerations.

A public-use airport may involve broad public access and long-term infrastructure obligations.

A private-use facility may provide greater operational flexibility but still requires compatibility, emergency access, and safety considerations.

Accessory aviation uses, such as hospital heliports or aviation facilities associated with another primary use, may warrant special consideration to ensure that future operational changes remain consistent with the approved purpose.

Communities may wish to clearly identify which category applies to a proposed facility before determining the appropriate review process.

Best Practice 9: Coordinate Early

Aviation-related proposals often involve multiple stakeholders.

Potential partners may include:

- FAA
- UDOT Aeronautics
- Airport sponsors
- Facility owners
- Aircraft operators
- Public works departments
- Utility providers
- Emergency responders
- Adjacent jurisdictions
- Economic development organizations

Early coordination can identify issues before significant time and resources are invested.

Best Practice 10: Plan for Change

Emerging aviation technologies will continue to evolve.

Aircraft designs, operational concepts, charging systems, autonomy, communications systems, and supporting infrastructure may look very different ten years from now than they do today.

Communities may benefit from focusing on outcomes rather than specific technologies.

Examples include:

- Compatibility

- Safety
- Emergency access
- Infrastructure readiness
- Utility capacity
- Transportation access
- Community integration

Policies built around outcomes are often more adaptable than policies built around a single aircraft type or technology.

Common Aviation Planning Issues and Potential Policy Responses

Planning Issue	Relevancy	Potential Policy Response	Notes and Considerations
Property Control and Site Control	Ownership and site control provide long-term certainty and help prevent incompatible development near aviation facilities.	Consider acquisition, easements, development agreements, or other tools where long-term compatibility is critical.	Direct ownership may provide the greatest control, but it is not always practical or necessary.
FAA Coordination	FAA review identifies aviation and airspace considerations that may not be apparent through local review alone.	Incorporate FAA coordination into application checklists, pre-application meetings, or development review procedures.	FAA review informs local review but does not replace local land-use authority.
Airspace Obstructions	Buildings, towers, cranes, trees, and other structures may affect aviation operations.	Utilize airport overlays, height review procedures, FAA Form 7460-1 review triggers, and site plan review.	Temporary construction equipment may be just as important as permanent structures.
Approach and Departure Areas	Aircraft are most vulnerable during takeoff and landing.	Consider compatibility review, density limitations, height restrictions, and protection of critical flight areas.	The objective is not to prohibit development but to avoid creating unnecessary risk.
Land-Use Compatibility	Incompatible land uses can create long-term conflicts between aviation facilities and surrounding development.	Use comprehensive plans, overlays, conditional use permits, disclosure requirements, and compatibility review processes.	Compatibility should protect both aviation facilities and surrounding communities.

Noise	Noise remains one of the most common aviation concerns.	Consider overlays, disclosures, building standards, operational assumptions, and compatibility planning.	Community expectations often matter as much as measured noise levels.
Wildlife Attractants	Certain land uses increase the likelihood of bird and wildlife strikes.	Coordinate land-use decisions with wildlife hazard guidance and stormwater planning.	Compatibility planning should balance environmental goals with aviation safety.
Lighting, Glare, and Visual Hazards	Visual distractions can affect pilots and aviation operations.	Evaluate lighting, reflective materials, solar installations, smoke, steam, and similar features through site plan review.	Visual impacts may be site-specific and require technical evaluation.
Emergency Access	Aviation facilities require reliable access for responders.	Incorporate emergency access review into facility planning, site plan review, and permitting processes.	Particularly important for heliports, vertiports, rooftop facilities, and constrained sites.
Utility Capacity	Aviation facilities increasingly depend on electrical capacity, communications, and supporting infrastructure.	Coordinate early with utility providers and infrastructure owners.	Utility upgrades may influence project timing and feasibility.
Rooftop and Constrained Sites	Constrained locations introduce additional structural, operational, and emergency-response considerations.	Consider emergency access, structural capacity, evacuation procedures, utility routing, and surrounding land uses.	Rooftop facilities often require additional planning compared to ground-based facilities.
Public Notice and Disclosure	Community awareness helps reduce future misunderstandings and conflicts.	Consider disclosure requirements, public notice procedures, informational materials, and outreach.	Disclosure informs future occupants but does not replace compatibility planning.
Private-Use Facilities	Private-use facilities may not receive the same level of public review as public-use facilities.	Ensure local definitions and review procedures clearly address private-use facilities.	Private-use does not eliminate compatibility or safety considerations.
Accessory Aviation Uses	Hospitals, public safety facilities, industrial sites, and campuses may incorporate aviation facilities as accessory uses.	Establish clear standards describing when aviation uses are accessory and when additional review is warranted.	Operational changes over time may justify additional review.

Monitoring and Enforcement	Conditions are only effective if compliance can be verified.	Use clear permit conditions, reporting requirements, inspection procedures, or review triggers when appropriate.	Conditions should be measurable, monitorable, and practical to administer.
Future Technology Changes	Aviation technologies continue to evolve.	Focus policies on outcomes such as compatibility, safety, access, and infrastructure readiness rather than specific aircraft types.	Avoid writing regulations that become obsolete as technology changes.
Vertiports and Emerging Aviation Facilities	New facility types may not fit neatly within traditional zoning frameworks.	Consider overlays, conditional use permits, performance standards, and compatibility review.	FAA guidance, local planning objectives, and evolving standards should all be considered.
Drone Facilities and UAS Operations	Drone facilities may support a wide range of missions with different infrastructure needs.	Match review requirements to the aircraft, mission, operating environment, and facility characteristics.	The absence of formal standards does not eliminate the underlying planning considerations.

Additional Resources

A. Core Federal Resources

These are the resources planners should consult when evaluating aviation-related proposals, reviewing compatibility issues, or coordinating with aviation agencies.

FAA Advisory Circular 150/5190-4B, Airport Land Use Compatibility Planning

Provides guidance on airport-compatible land uses, airport influence areas, safety considerations, and local planning tools used to reduce conflicts between aviation facilities and surrounding development.

FAA Form 7480-1, Notice of Landing Area Proposal

Used to notify the FAA of proposed airports, heliports, vertiports, and other aviation facilities. Often serves as the starting point for FAA aeronautical review.

FAA Form 7460-1, Notice of Proposed Construction or Alteration

Used to evaluate structures that may affect navigable airspace. Communities may encounter this process when reviewing tall structures, towers, lighting, or developments near aviation facilities.

FAA Engineering Brief 105A, Vertiport Design

Current FAA guidance for vertiport planning and design, including facility layout, safety areas, utility considerations, and operational assumptions.

FAA Advisory Circular 150/5390-2D, Heliport Design

Provides design guidance for heliports and helistops, including touchdown areas, safety areas, access, lighting, and rooftop facilities.

B. Research and Planning Resources

These resources provide planning concepts, compatibility tools, and implementation guidance.

ACRP Report 27: Enhancing Airport Land Use Compatibility

Provides practical tools and policy approaches for improving compatibility between aviation facilities and surrounding development.

ACRP Research Report 206: Guidebook on Effective Land Use Compatibility Planning Strategies for General Aviation Airports

Focuses on local planning strategies, implementation tools, and compatibility planning practices for general aviation airports.

ACRP Research Report 243: Urban Air Mobility: An Airport Perspective

Explores how airports may support emerging aviation technologies and discusses planning considerations associated with AAM infrastructure.

PAS Report 606: Planning for Advanced Air Mobility

Provides planner-focused guidance on integrating AAM into local land-use, transportation, infrastructure, and development review processes.

Airports as Connected Activity Centers (UDOT Research Report UT-22.08)

Examines how airports can function as transportation, economic development, workforce, logistics, and community assets rather than isolated aviation facilities.

C. Utah Statutes and Regulatory Resources

Utah Airport Zoning Act (Utah Code Title 72, Chapter 10, Part 4)

Establishes Utah's framework for airport influence areas, airport overlay zoning, and local compatibility planning.

UDOT Division of Aeronautics

Provides aviation planning resources, airport development assistance, state aviation programs, and technical support for Utah communities.

D. Related Toolkit Resources

The following companion resources were developed as part of the Utah Department of Transportation AAM Community Engagement and Policy Toolkit and should be read alongside this document.

Infrastructure, Land Use, and Place

Explains how aviation facilities fit into transportation systems, utility systems, development patterns, and the built environment.

From Compatibility to Integration: Aviation and Community Planning

Discusses airport compatibility planning, airport influence areas, airport overlays, and how aviation facilities can support broader community goals.

Airport and Aviation Compatibility Ordinance Framework

Provides example policy tools, implementation options, ordinance concepts, and compatibility approaches communities may adapt to local conditions.

Environmental and Noise Mitigation Strategies

Addresses aircraft noise, environmental considerations, compatibility planning, and public expectations.

Public Safety and Emergency Preparedness Guide

Discusses responder preparedness, emergency access, facility planning, training, and aviation-related incident response.

Governance, Roles, Authority, and Coordination

Explains the responsibilities of local governments, airport sponsors, operators, state agencies, federal agencies, and other stakeholders.

Closing Guidance

Land-use and zoning best practices are not about saying yes or no to aviation proposals. They are about creating a clear, predictable, and practical review process.

Communities that understand their existing plans, use clear definitions, coordinate early, apply appropriate planning tools, and establish meaningful review criteria are often better positioned to support aviation opportunities while protecting community interests.

As aviation technologies continue to evolve, the planning questions remain familiar: Is the site appropriate? Are surrounding uses compatible? Can emergency responders access the facility?

Are utilities adequate? Are conditions practical to monitor? Does the proposal support community goals?

Strong planning helps communities answer those questions before conflicts become harder to solve.