

## Chapter 1

### Introduction

This chapter provides a high-level overview of airport land use compatibility planning and its relationship to community comprehensive planning. The intent is to give the reader a basic understanding of what is meant by “compatibility” in the context of airports and neighboring land uses. The material presented here sets the stage for the compatibility planning process outlined in [Chapter 2](#).

In this chapter, you will learn about:

- The different types of airports in Washington State.
- What types of development are incompatible with airports.
- How incompatible development can affect airports.
- How to deal with compatibility issues.

### Airports in Washington State

This guidebook focuses on Washington’s 138 public-use, general aviation airports and seaplane bases, as state law is directed at protecting them from incompatible land use. Washington’s airports are part of the communities they serve and are integral parts of the state’s transportation system. Airports range in size from the busiest airline airports in the metropolitan areas to community airports serving businesses and other private aircraft to small landing strips in outlying locations. There are airports in virtually every county and in or near most cities and towns in the state. The state’s airports provide a wide range of services to pilots, passengers, and the general public.



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All airports that serve general aviation activity are considered “general aviation airports” under the Growth Management Act (GMA).

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## Economic Importance of Airports

Airports are valuable transportation assets and economic engines. They are crucial on a local, statewide, and national level as they efficiently move people and goods. Many businesses depend on the fast and convenient links to places, people, and products that airports provide.

The magnitude of this impact is impressive: approximately 17 million passengers now land and take off from a Washington airport every year and more than 600,000 tons of air cargo pass through our state airports. According to a 2001 study, the aviation system contributes 170,000 jobs, \$4 billion in wages, and \$18.5 billion in sales output to the Washington economy each year.

At the 2006 Washington State Governor's Economic Development Conference, transportation was identified as one of several proposed future growth strategies for Washington. Transportation, including air, rail, port, and highway, was also described as critical to continued economic development and success of the state in the global economy. The governor's strategic economic plan stressed the importance of long-term planning for Washington's transportation needs and the continued development of its economic future.

These conclusions were again emphasized by the Washington State Aviation Planning Council in its July 2009 report. The Council recognized that:

“The importance of Washington's aviation system is even greater than the revenue, employment, and sales data suggest. The state's aviation system is an essential function of its overall transportation system, which is the backbone of a vibrant and healthy economy.”

 Long-Term Air Transportation Study (LATS), *Recommendations of the Washington State Aviation Planning Council*, July 2009. [www.wsdot.wa.gov/nr/rdonlyres/6caf7b7b-37b8-44d3-b259-ab020b1ad995/0/council\\_report\\_print\\_070109\\_lowres.pdf](http://www.wsdot.wa.gov/nr/rdonlyres/6caf7b7b-37b8-44d3-b259-ab020b1ad995/0/council_report_print_070109_lowres.pdf)

 See the General Aviation Manufacturers Association report *General Aviation's Contribution to the U.S. Economy* (May 2006) available at: [www.nasao.org](http://www.nasao.org)

### Kenmore Air Harbor SPB



Kenmore Air Harbor SPB is one of Washington's 16 commercial service airports that provide scheduled passenger service. The seaplane base is home to Kenmore Air, which operates an average of 80 daily arrivals and departures. The airport also acts as a U.S. Customs Service Port of Entry. The Lake Union base serves over 70,000 resident and international passengers annually. The seaplane base contributes significantly to the state's economy and offers unique access to locations both foreign and domestic.

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WSDOT's 2001 economic study is in the process of being updated. Look for the newest data on the WSDOT Aviation website at: [www.wsdot.wa.gov/aviation](http://www.wsdot.wa.gov/aviation)

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## Airport Types and Roles

Aviation is broadly classified under three categories: airline, general aviation, and military. Airlines provide scheduled commercial service for passengers or air cargo. Flying by private aircraft, both corporate and business, is considered general aviation. Airline and general aviation activity together comprise civil aviation. The third category, military, consists of flights by aircraft operated by the various branches of the U.S. military.

Airports can be divided into the same three categories. However, just because an airport is placed in a particular category does not mean that it exclusively serves that type of aviation. For example, airports that offer scheduled passenger service are usually called commercial or primary service airports. However, all commercial or primary service airports in Washington also serve general aviation and may have some military flights as well. Even some military airports in the country are joint-use, although most—including all the ones in Washington—are restricted solely to military aircraft.

General aviation airports serve many roles in support of a wide range of users including:

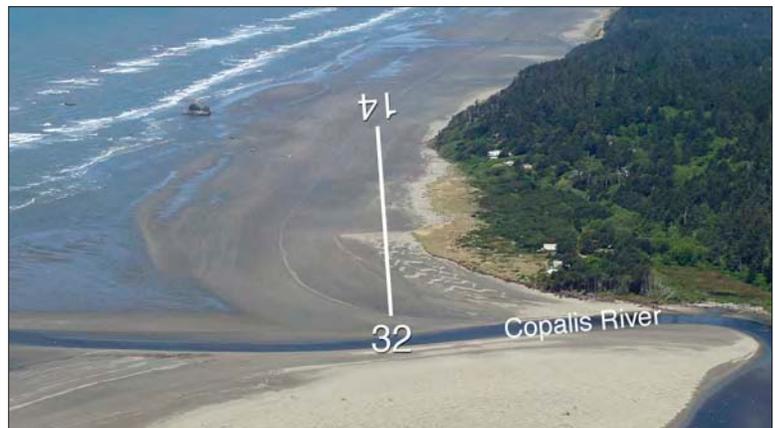
- Local companies that use aircraft for essential business travel.
- Businesses that provide aviation-related services at the airport to pilots and their aircraft.
- Specialized aviation businesses or functions such as aerial photography, agricultural applications, and transmission line inspection.
- Flight instructors and students.
- Visiting pilots and their passengers traveling to the local community for business, personal, or recreational reasons.
- Sheriffs and police departments with air patrol and support units.
- Pilots and aircraft owners that fly for personal business or recreational purposes.

## Military Airports



While the focus of this guidebook is on civil airports, the importance of military air bases to nearby communities should not be overlooked. These facilities are essential for national defense. In addition, they often are the primary economic generators of their communities. Maintenance of compatible land uses is a factor considered when decisions are made to continue, realign, or close a military base. [RCW 36.70A.530](#) requires jurisdictions to notify the commander of the military installation of its intent to amend its comprehensive plan or development regulations that address lands adjacent to military installations to ensure those lands are protected from incompatible development.

## Copalis State Airport



Located on the beach in Grays Harbor County, Washington. It is the only airport in the U.S. that is located on an ocean beach. Landing is only available during [low tide](#).

## Airports and Disaster Relief

Washington's airports are critical resources during emergencies. General aviation airports and aircraft also play central roles in post disaster response. Airports provide a base for a variety of emergency functions. Additionally, airports are especially important when emergencies or disasters damage or prevent the use of other transportation modes. Emergencies may include extreme weather, earthquakes, flooding, wildfire, mudslides, tsunamis, forest fires, volcanic activity, etc.

Aviation facilities and aviation assets may serve emergency functions, including:

- Emergency air medical transportation
- Rapid insertion of medical teams and relief workers
- Evacuation
- Firefighting
- Search and rescue operations
- Logistical and supply chain support to surrounding communities
- Base of operations
- Access to communities when ground transportation is disrupted

The importance of Washington's air transportation in post disaster response is accentuated by the state's unique geographic and topographical features, which produce an unusually high reliance on aviation. Given this fact, maintaining a healthy and robust aviation system is key to our state's ability to respond swiftly in times of need.

### *Chehalis, Washington*



### *Search and Rescue*



### *Fire Suppression*



### *Mt. St. Helens*



## State and National Aviation Systems

Each airport in our state is part of a greater aviation system, just as individual roads are part of an extensive highway system. Both the state and federal governments have identified and classified the airports that have particular importance within the state and national aviation systems.

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An airport's sponsor's acceptance of federal or state grant funds obligates the sponsor to meeting certain grant assurances as described in this chapter.

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**Table 1-1**



| Classification      | No. of Airports | Description   |
|---------------------|-----------------|---|
| Commercial Service  | 16              | Accommodates at least 2,500 scheduled passenger enplanements per year for at least three years.                                     |
| Regional Service    | 19              | Serves large or multiple communities; all NPIAS Relievers; at least 40 based aircraft and 4,000-foot-long runway (some exceptions). |
| Community Service   | 23              | Serves a community; at least 20 based aircraft; paved runway.   |
| Local Service       | 33              | Serves a community; fewer than 20 based aircraft; paved runway.   |
| Rural Essential     | 38              | Other land-based airports, including residential airparks.  |
| Seaplane Bases      | 9               | Identified by FAA as a seaplane base, unless it is a commercial service airport.  |
| <b>System Total</b> | <b>138</b>      |   |

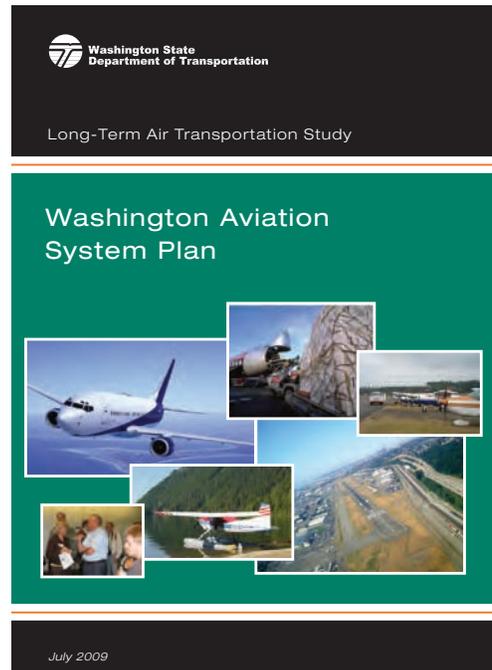
## Washington Aviation System Plan

The *Washington Aviation System Plan*, or WASP, encompasses public-use airports that have statewide significance. The 2009 WASP includes 138 airports.

The WASP divides public-use airports into six classifications based on the characteristics of the airport and geographic area it serves. The WASP classification of airports is used to help set airport improvement funding assistance consistent with the level of service provided.

All airports in the state’s aviation system, whether large or small, may play an essential role in disaster mitigation and later recovery efforts.

The number of airports in each of the six classifications is shown in [Table 1-1](#).



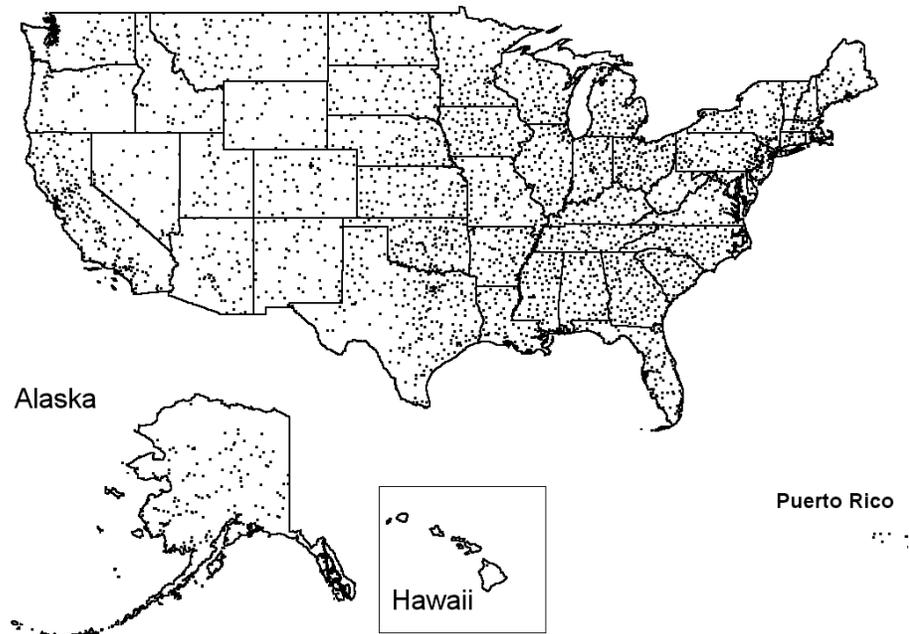
## National Plan of Integrated Airport Systems

Nearly half of all public use airports in Washington are considered to be nationally significant.

This national system of airports is known as NPIAS, the *National Plan of Integrated Airport Systems*. The NPIAS is largely used to determine an airport’s eligibility to obtain federal improvement grants under the Airport Improvement Program (AIP). It also includes estimates of the amount of AIP money needed to fund infrastructure development projects that will bring the NPIAS airports up to current design standards and add capacity to the system.

The FAA is required to provide Congress with a five-year estimate of AIP eligible development every two years.

**NPIAS Airports**



 A copy of the NPIAS can be found at: [www.faa.gov/airports\\_airtraffic/airports/planning\\_capacity/npias](http://www.faa.gov/airports_airtraffic/airports/planning_capacity/npias)

Under the federal airport classification system, airports are designated as primary airports, commercial service, reliever, or general aviation based upon the type of service they provide to the community. Airports that are designated primary airports provide scheduled passenger service and have more than 10,000 annual enplanements. Commercial service airports have between 2,500 and 10,000 annual enplanements. Reliever airports provide general aviation access to large metropolitan areas attracting smaller GA aircraft away from busy commercial airports to enhance the commercial airports' efficiency, capacity, and safety. Washington has 65 airports listed in the 2009–2013 NPIAS.

### Who operates Washington's airports?

Of the 138 public-use airports in Washington, almost 80 percent are publicly owned, either by municipalities, including port and airport districts, or by the state. Several airports are owned by a combination of public entities. The state-owned airports are mostly small facilities which provide essential services to recreational or remote areas. Most of the privately owned, public-use airports also are classified as rural essential or seaplane bases.

Policy decisions involving publicly-owned airports in the state are typically made by elected officials of the entity owning the airport. Day-to-day operations are generally administered by an airport manager. Larger airports usually have a full-time manager, frequently supported by other staff, while low-activity airports may have a volunteer manager, part-time contractor, or local official who serves as airport manager in addition to other roles in local government.

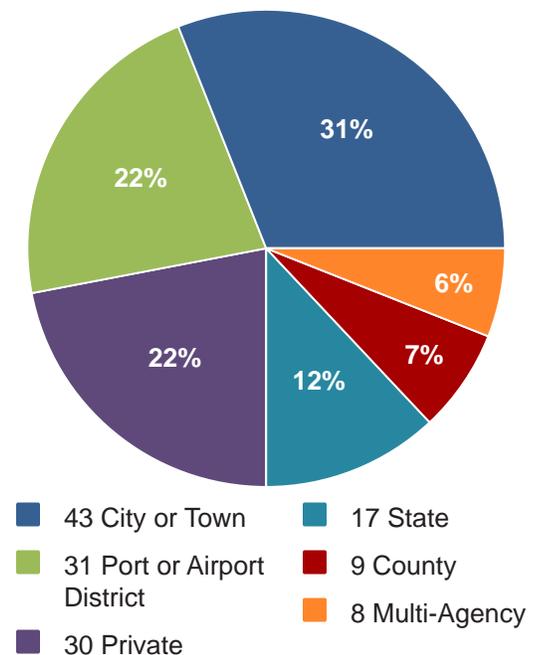
Funding to develop, maintain, and operate airports is derived from a variety of sources including user fees, revenues from land and facility leases and rents, local government funds, and federal and state grants. The proportion of funding coming from each of these sources varies from airport to airport. Larger airports are more likely to be self-supporting than the small ones with few aircraft or services. For those airports in NPIAS, a substantial proportion of development and major maintenance funding comes from the FAA grant program. State grants serve a similar function for the smaller NPIAS airports and others in the state airport system.

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Airports that do not receive federal funding are often referred to as non-NPIAS airports. These airports generally serve smaller towns and cities, provide access to remote locations, or serve recreation areas. These airports are typically funded by the state or through private funding.

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**Public-Use Airports by Ownership**




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State law authorizes formation of public port districts for the purpose of supporting economic development. Ports are quasi-governmental entities that may own land and often operate a variety of public infrastructure, including airports. There are 75 port districts in Washington State.

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### com•pat•ible

Capable of existing or working together in a harmonious or agreeable manner or in combination with another activity.

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## Airports and Surrounding Land Uses

*Evergreen Field*

### What is compatibility?

Most people are familiar with the negatives associated with being located near an airport, particularly such things as noise, vibration, odors, and accident risks. Fewer people understand the effect that adjacent land uses can have on airport activities. Development around an airport can have direct adverse consequences to airport safety, efficiency, operation, and economic viability. Tall buildings, towers, power lines, and even tall trees can be hazardous obstructions for landing and departing aircraft. In addition, development near an airport may reduce property available for aviation operations and safety areas. Indirectly, incompatible development can lead to demands for limitations on the airport activity. Ultimately, incompatible development around public use airports may result in loss of the facility. History shows us that incompatible development has the following consequences:

- Reduces the public's access to air transportation and the benefits it provides.
- Reduces the value of public investment in airport infrastructure.
- Reduces opportunity for economic development and diminishes a community's capacity to deal with natural and human caused disasters.
- Reduces quality of life for people living in developments located near airports.

Communities can address airport land use compatibility in a variety of ways based on the specific characteristics of an individual airport facility as well as numerous other factors that are unique to their area. Approaches that may work well in outlying communities may be impossible to achieve in urban locations. To determine the best approach for any particular airport and community, the types of land use interactions must first be understood.



These photos show the spread of urban development around Evergreen Field in Vancouver, Washington. The airport closed in summer 2006 to make way for a mixed-use development including retail, office, and residential units after the original owner passed away and his heirs sold the land to developers.

## Types of Land Use Interactions Between Airports and Communities

Airports and nearby communities interact in a variety of ways, both physical and economical. Economically, airports can be important attractors of business and income to a community. The physical interactions are the focus here, and particularly the interactions that occur between all types of airports and communities:

- The airport influence area is the area where an aircraft flies during the final phases of flight. This area is most impacted by noise, light, vibration, fumes, and low-flying aircraft.
- Noise addresses the areas of concentrated impacts that are most disruptive to land use activities.
- Airspace protection deals with aspects of land uses that can cause or contribute to aircraft accidents.
- Safety is concerned with the consequences of accidents when they occur.

### Encroachment of Incompatible Land Uses

Encroachment of incompatible land uses is a key factor contributing to constraints on expansion and restrictions on operations of airports in the U.S. In many cases, it can even lead to airport closures.

Why is encroachment occurring?

- Communities underestimate the adverse impacts of incompatible land use development on airport operations.
- Washington's population has doubled in the last 30 years.
- Urban areas are expanding and communities are pursuing denser development.
- Local land use authorities are either unaware of or not compliant with the requirements of Washington's Growth Management Act.
- Property adjacent to the airport may have services extended to it and be affordable due to its proximity to the aviation facility.
- Many airports are surrounded by flat, undeveloped land that is attractive for development because the land, in many cases, is served by utilities and other infrastructure.

Anacortes Airport



## Consequences of Incompatible Land Uses Near Airports

Consequences to the aviation system and its users:

- Delays and constraints to airport development, leading to limitations on system capacity.
- Restrictions on aircraft operations, leading to system delays and travel time penalties.
- Constraints to runway approach protection, leading to runway capacity constraints and safety risks.
- Litigation and related costs.
- Increased development costs.
- Lost value of public investment.
- Increased risk of aviation accidents caused by the presence of tall structures, visual obstructions, and wildlife attractants.

Consequences to people who live near airports:

- Exposure to noise.
- Exposure to emissions.
- Exposure to aviation accident risk.
- Decline in transportation access.
- Consequences to concerned local and regional jurisdictions.
- Local and regional economic impacts due to constraints on airport growth.
- Irresolvable political disputes.

### What land use types pose concerns?

Some types of compatibility conflicts between airports and land uses are obvious. Houses and schools, for example, are generally incompatible near airports for reasons of noise, safety, fumes, vibration, and low-flying aircraft. Others are not as readily recognized or understood—uses that concentrate people in locations where aircraft accident risks are greatest, tall structures that impinge upon airport airspace, or features that attract birds or animals to areas where aircraft operate. Some examples of the obvious and not-so-obvious compatibility conflicts are listed in [Table 1-2](#).

### Reid-Hillview Airport San Jose, California



High intensity uses along the extended runway centerline can pose a substantial risk. In this example, a mall was constructed along the extended centerline for two parallel runways.

In general, to avoid compatibility conflicts, land uses closest to the ends of runways should ideally consist of open areas, agricultural land, commercial or industrial uses. Professional offices and mixed use commercial development can also be compatible if located farther away from the runway ends.

Because of noise and impacts within the airport influence area, single-family residential uses are best kept away from anywhere that aircraft are regularly flying to reach or leave the airport. Often, multi-family residential can be a better option than single-family in locations where aircraft accident risks are low, but noise impacts are present.

For additional discussion of compatibility conflicts, see [Chapter 3](#).

**Table 1-2**  
**Compatibility Concerns Represented by Particular Land Uses**

| Land Use Type  | Compatibility Concerns  |
|--|---|
| <b>Single-Family Residential</b>   | <ul style="list-style-type: none"> <li>• Noise can be disruptive in outdoor areas as well as indoors with open windows.</li> <li>• Aircraft overflight can be annoying, especially where ambient noise levels are low such as in suburban or rural areas.</li> </ul>  |
| <b>Multi-Family Residential</b>  | <ul style="list-style-type: none"> <li>• Noise can be disruptive in outdoor areas as well as indoors with open windows, although less sensitive than for single-family residential.</li> <li>• High density presents concern for safety of residents in areas exposed to significant risk of aircraft accidents.</li> </ul> |
| <b>Schools K-12</b>  | <ul style="list-style-type: none"> <li>• Noise can disrupt the learning environment.</li> <li>• Special concerns for safety of children in areas exposed to significant risk of aircraft accidents.</li> </ul>  |
| <b>Hospitals/Nursing Homes</b>   | <ul style="list-style-type: none"> <li>• Special concerns for safety of patients and the elderly in areas exposed to significant risk of aircraft accidents.</li> </ul>   |
| <b>Retail Centers</b>  | <ul style="list-style-type: none"> <li>• Large numbers of people could be at risk from aircraft accidents if the use is located in areas exposed to high levels of aircraft accidents.</li> </ul>   |
| <b>Business Parks</b>  | <ul style="list-style-type: none"> <li>• Safety concerns for places with high-intensity uses.</li> <li>• Tall buildings can be airspace obstructions.</li> </ul>  |
| <b>Assembly Facilities</b>   | <ul style="list-style-type: none"> <li>• Large numbers of people could be at risk from aircraft accidents; outdoor stadiums have greatest exposure.</li> </ul>  |
| <b>Industrial Uses</b>   | <ul style="list-style-type: none"> <li>• Smoke, steam, and thermal plumes can be hazards to flight.</li> <li>• Tall structures can be airspace obstructions.</li> <li>• Possible release of hazardous materials if damaged during an accident.</li> </ul>   |
| <b>Agricultural Uses</b>   | <ul style="list-style-type: none"> <li>• Potential wildlife attractants as well as a source of dust and smoke.</li> </ul>   |
| <b>Water/Natural Areas</b>   | <ul style="list-style-type: none"> <li>• Potential wildlife attractants.</li> </ul>   |
| <b>Power Plants</b>  | <ul style="list-style-type: none"> <li>• Smoke, steam, and thermal plumes can be hazards to flight.</li> <li>• Tall structures can be airspace obstructions.</li> <li>• Potential disruption of service if damaged during an accident.</li> </ul>   |
| <b>Critical Community Infrastructure</b> (emergency services and communications) | <ul style="list-style-type: none"> <li>• Potential disruption of service if damaged during an accident.</li> </ul>  |

## Addressing the Land Use Compatibility Issue

First, it is important to recognize that the responsibility for airport land use compatibility does not rest just with WSDOT Aviation or any other single party. Many participants have a role to play in the process and a stake in its outcome.

The process can be thought of as puzzle with each participant as having a part of a puzzle—the planning effort is not complete without every piece. The responsibilities for preserving and enhancing airport land use compatibility rest at all levels of government as well as with the private sector. Each entity has its own distinct role to play.

### **Who is responsible for airport land use compatibility?**

The responsibilities for preserving and enhancing airport land use compatibility rest at all levels of government as well as with the private sector. Each entity has its own distinct role to play. While the respective responsibilities—and the limitations on authority—are largely defined by law local planning depends on participation from a diverse range of interests and stakeholders to define community needs and identify solutions. Participation is critically important for influencing outcomes. It is the nature of the planning process that interests that are not represented are often not addressed. Airport advocates wishing to preserve aviation facilities should ensure their place at the table so they can work cooperatively with other citizens and local leaders to educate them about the importance of air transportation for their community.

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This section outlines the primary roles of each of the players. A further look at the legal framework behind the different roles is contained in the final section of this chapter.

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WSDOT Aviation's responsibilities under the Growth Management Act include addressing land use and airport compatibility concerns. The state agency having overall responsibility for overseeing implementation of the act is Growth Management Services (GMS), a unit of the Department of Commerce Local Government Division. GMS provides technical and financial resources to help local governments to undertake planning and other work essential to their compliance with provisions of the act.

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### **Washington State Department of Transportation**

The State of Washington has a lead role in promoting land use compatibility around the airports in the state. This role derives from the state's broad interest in all modes of transportation in recognition of the benefits that transportation brings the state and its citizens. The specific responsibility as the primary steward and advocate of the state's aviation interests is assigned to WSDOT Aviation. WSDOT Aviation's role extends to advocating for promotion of safe air transportation, preservation of aviation facilities, provision of airport capacity to meet demand, and technical assistance.



**Washington State  
Department of Transportation**

State law addressing airport hazards dates back to the mid 1940s. [Chapter 14.12 RCW](#) focuses on obstructions to airport airspace and gives counties and cities the power to adopt and enforce airport hazard zoning.

“It is hereby found that an airport hazard endangers the lives and property of users of the airport and of occupants of land in its vicinity, and also, if of the obstruction type, in effect reduces the size of the area available for the landing, taking-off and maneuvering of aircraft thus tending to destroy or impair the utility of the airport and the public investment therein.”

While not exclusively directed at airports or airport land use compatibility, broader legislative attention to land use planning matters took place with the enactment of the Growth Management Act (GMA) ([RCW 36.70A](#)) in 1990. The basic purposes of the act are identified through 13 GMA goals. These goals were identified with the purpose of addressing uncoordinated and unplanned growth, that may otherwise pose a threat to the environment, sustainable economic development, and to the health, safety, and public welfare of residents of the state.

Legislation adopted in 1996 was aimed more specifically at airport land use compatibility. [RCW 36.70.547](#) and other sections that refer to it (including [RCW 35.63.250](#), [35A.63.270](#), and [36.70A.510](#)) requires towns, cities, and counties to “discourage the siting of incompatible uses” adjacent to general aviation airports through adoption of comprehensive plan policies and development regulations. *Note: In the context of this statute, all airports that serve general aviation, meaning all public-use airports in the state, are considered to be general aviation airports.* Formal consultation with WSDOT Aviation is required before such plans and regulations may be adopted or amended. Additionally, WSDOT Aviation is tasked with providing technical assistance to the communities and aviation stakeholders to help them meet the requirements of the law. (See Appendix \_\_\_ for more details on the consultation process.)

The technical assistance includes establishing airport land use compatibility guidelines. WSDOT Aviation does not have regulatory authority over land use decisions, however, cases decided by the state’s Growth Management Hearing Boards direct local government to “give substantial weight to WSDOT Aviation’s comments and concerns related to matters affecting safety at general aviation airports.” (See Stephen Pruitt and Steven Van Cleve vs. Town of Eatonville, heard by the Central Puget Sound Growth Management Hearings Board [CPSGMHB; Case No. 06-3-0016].)

In conclusion to the *Long-Term Air Transportation Study* (LATS) in July 2009, the Washington State Aviation Planning Council recommended policies that clarify Washington’s position and responsibility in relation to its local, regional, and federal aviation partners as the primary steward and advocate for protecting Washington State’s aviation system interests.

“The challenge of meeting Washington’s aviation capacity is shared between many entities including the FAA, local and regional agencies, airlines, and publicly and privately owned airports. The Council believes that the State needs to exercise a leadership role as the primary steward for a healthy and viability aviation system. In this role, it will provide the FAA with support to help it better manage the national aviation system and clarity about its funding priorities. The state will also provide policy direction and support local and regional agencies in fulfilling their distinct aviation roles.”

 More information about WSDOT Aviation is available at: [www.wsdot.wa.gov/aviation](http://www.wsdot.wa.gov/aviation)

 Growth Management Hearings Board Decisions are available at: [www.gmhb.wa.gov](http://www.gmhb.wa.gov)

## Federal Aviation Administration

The FAA plays a very focused role in airport land use compatibility. Its involvement stems from its primary areas of responsibility—the safe and efficient operation of airports and the national aviation system. In these matters, the FAA role is preeminent. Federal law preempts local regulations in the area of aircraft safety, navigable airspace, flight operations, and noise control.



Even in these fields though, the FAA's authority is directed primarily at the operators of airports and aircraft. The FAA has little ability to prevent the development of incompatible land uses near airports. However, the FAA strongly encourages local jurisdictions to protect airports through their local land use authority. The U.S. Constitution reserves to the states the authority over local land use matters. Thus, the FAA cannot dictate the decisions made by airports and local land use entities, it can only influence them—albeit sometimes very strongly. The two mechanisms by which the FAA most strongly influences local land use decisions are through regulations designed to protect airport and en route airspace; and via its grant program.

### FAA Grant Program

As authorized under the Airport and Airway Improvement Act of 1982, the FAA's grant program—the Airport Improvement Program (AIP)—provides the majority of funding for facility improvements and land acquisition for airports within the NPIAS. In exchange for receipt of grant funding, however, airports must promise to take steps, to the extent possible, to prevent creation of airspace hazards and incompatible land uses. The FAA can withhold funds from a grantee or require repayment of funds if the grant assurances are not met. The grant assurance language is quite general, but two particular assurances address the actions that the FAA expects the airport sponsor to take. The grant assurances say that the airport sponsor must agree that:

20. **Hazard Removal and Mitigation.** It will take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting, or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.
21. **Compatible Land Use.** It will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the airport, of the noise compatibility program measures upon which Federal funds have been expended.

 The full set of FAA grant assurances is available at: [www.faa.gov/airports/aip/grant\\_assurances](http://www.faa.gov/airports/aip/grant_assurances)

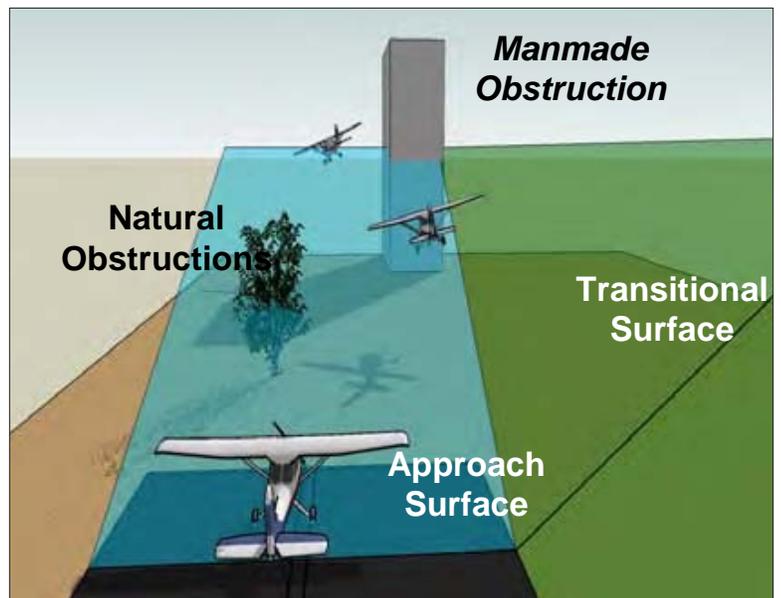
## Airspace Protection

The other way in which the FAA gets involved in local land use actions is with regard to protection of airport and en route airspace. However, beyond the obligation that the FAA puts on airports when they accept grant funds, the agency does not have the authority to prevent airspace hazards from being created. This is a local responsibility and is not mandatory. The FAA's function is to set the standards used to determine whether tall structures would adversely affect the airspace and, additionally, to evaluate individual proposals relative to these standards. Other airspace hazards include smoke, glare, wildlife, and electronic signals. The standards and the review process are both defined in Part 77 of the Federal Aviation Regulations (14 CFR Part 77).

The one facet of the federal regulations that does create a mandatory local responsibility is the notification process. Part 77 requires that notification be submitted to the FAA before any tall structure is constructed or erected that could penetrate the airspace surfaces defined in the regulations. Certain other land use features or activities are also subject to the notification process (for example, uses involving electromagnetic radiation or laser lights). The notification responsibility rests with the project proponent, not the local government agency that has approval authority. Substantial fines can be levied for failure to comply with the notification requirements.

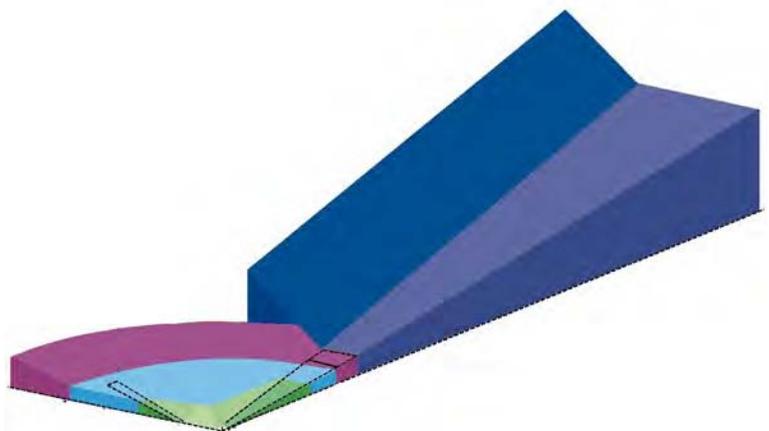
📖 See U.S. Code Title 49, Sections 44718, Structures Interfering with Air Commerce and 46301(a), Civil Penalties.

### Airspace Protection



It is important to note that the FAA relies on local jurisdictions with land use authority to protect critical airspace. The FAA has no direct land use authority and must rely on local decision makers to protect airspace from both naturally occurring and man-made airspace obstructions.

### FAR Part 77 Imaginary Airspace Surfaces



[www.wsdot.wa.gov/aviation/planning/civapimagsurf.htm](http://www.wsdot.wa.gov/aviation/planning/civapimagsurf.htm)

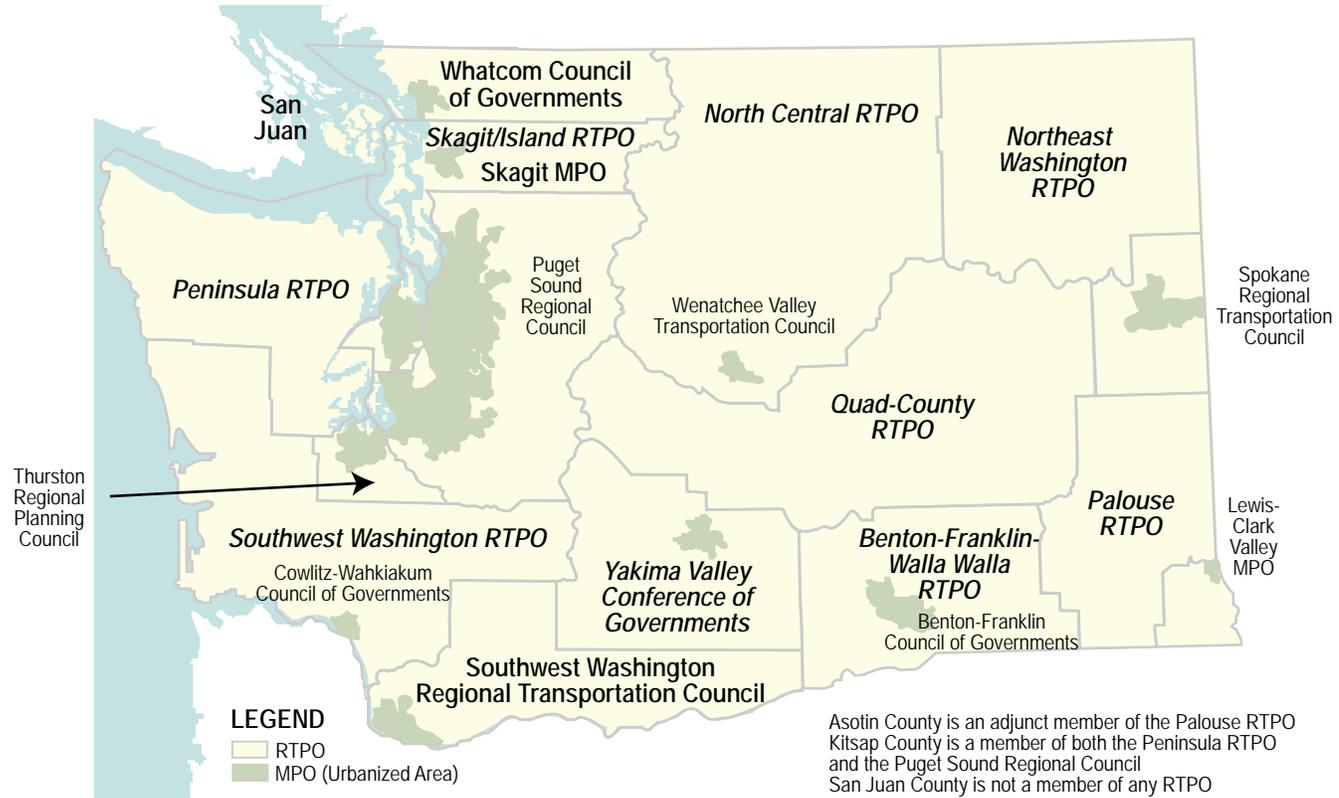
## Regional Transportation Planning Organizations

Regional Transportation Planning Organizations (RTPOs) occupy a special niche in the overall spectrum of agencies having responsibilities for airport land use compatibility planning in Washington. As enabled by state law, RTPOs are voluntary associations of local governments within a county or contiguous counties. They were authorized as part of the 1990 GMA to ensure local and regional coordination of transportation plans. RTPO members include cities, counties, WSDOT, tribes, ports, transportation service providers, private employers, and others. Among the duties taken on by these organizations is review of local countywide planning policies and the transportation-related provisions in local comprehensive plans.

The level of involvement of RTPOs in airport land use compatibility planning varies from one organization to another. As the RTPO for the state’s most populated area, the Puget Sound Regional Council (PSRC) specifically reviews airport compatible land use policies as part of its comprehensive plan review and certification process. The process requires cities and counties to report on actions taken to discourage the siting of incompatible land uses near airports. PSRC also offers technical assistance to local planners to assist them in identifying key airport land use compatibility issues and to help in developing policies and planning provisions to address those issues.

 More information about Washington’s Metropolitan Planning Organizations (MPOs) and RTPOs, including information about the review and certification process, is available at: [www.wsdot.wa.gov/planning/regional/](http://www.wsdot.wa.gov/planning/regional/)

**Regional and Metropolitan Transportation Planning Organizations**



## Local Government

To a great extent, the ultimate responsibility for airport land use compatibility rests with local government bodies—towns, cities, and counties. Although local comprehensive plans, plan policies, and regulations must be consistent with state law and countywide planning policies, local government has discretion to determine how development occurs within the community. Also, the federal preemption doctrine does not affect the local government’s ability to use its police powers, particularly land use controls, to anticipate, abate, mitigate, and otherwise respond to other land use concerns provided they are reasonable and do not restrict airport operations.

The local government level is where day-to-day decisions are made on whether development proposals are compatible with airport activity. Airport compatibility issues may be addressed in a variety of local planning documents.

**Countywide Planning Policies** – Counties develop these policies in cooperation with their cities. The policies provide a common framework for local planning efforts within each county. Countywide planning policies address numerous issues, including siting major public capital facilities, defining transportation strategies and facility needs, and facilitating joint planning. Basic airport land use compatibility goals and intergovernmental coordination mechanisms should be addressed.

**Comprehensive Plans** – Comprehensive plans guide land use development within towns, cities, and counties. They determine where development is or is not desirable and set the tone for the development size and intensity. The plans are the centerpiece of local planning and the starting point for the planning of individual projects. Development regulations—zoning, subdivision, and other controls—must be consistent with comprehensive plans. State agencies are required to comply with comprehensive plans and development regulations of jurisdictions planning under the GMA. Establishment of land use patterns to avoid compatibility conflicts with airports must be a consideration in preparation of these plans.

### ***What is a Comprehensive Plan?***

The comprehensive plan expresses a community’s vision about itself and what it would like to become. The plan forms the policy framework from which all future community planning actions will be judged, and it is the starting point for any discussion regarding local land use. It enables the community to compare how it looks now with what it wants to look like in 20 years.

The comprehensive plan<sup>1</sup> is developed cooperatively by elected officials, the planning commission, planning staff, and the public. Consultants are often engaged for all or part of the work effort. Elected public officials adopt the plan following a series of public hearings. The time range for the comprehensive plan is generally 20 years. Periodic amendments every five to seven years are usually required. Comprehensive plans generally cover the following topic areas or elements:

- Capital Facilities
- Land Use
- Utilities
- Transportation
- Economic Development
- Natural Resources
- Rural (county comprehensive plans only)
- Housing
- Parks and Recreation

<sup>1</sup>Adapted from *What is a Comprehensive Plan?* by David Martineau, Planning Director, City of Colville. Presented at the Spring 2006 meeting of the Washington State Community Airports Association (CAA), Wenatchee, Washington.

**Sub-Area Plans** – These planning documents address a portion of a municipality. They address a smaller geographic area than the comprehensive plan, but often influence airports depending on their scope and approach. Limits on development in areas subject to airport impacts should be described.

**Development Regulations/Zoning** – These regulations are set by local jurisdictions to implement the comprehensive plan. They specify the types, intensity, and density of activities that may take place in a given location and establish limits on the physical size and shape of the development. Specific limitations on the number of occupants, the heights and overall sizes of structures, and requirements for sound attenuation are appropriate elements of local zoning.

**Environmental Review** – This is a formal process for soliciting public comment on the effects of a particular development proposal or planning effort. The procedural and analysis requirements are set forth in the State Environmental Policy Act (SEPA). The SEPA process provides a way to identify possible environmental impacts that may result from governmental decisions. These decisions may be related to issuing permits for private projects, constructing public facilities, or adopting regulations, policies or plans. Information provided during the SEPA review process helps agency decision makers, applicants, and the public understand how a proposal will affect the environment. This information can be used to change a proposal to reduce likely impacts, or to condition or deny a proposal when adverse environmental impacts are identified. As part of a SEPA document regarding development near airports, the compatibility of the proposed development with airport activities should be addressed.

Under the National Environmental Policy Act (NEPA), similar environmental review requirements are established at the federal level. NEPA comes into play with regard to actions by federal agencies including the provision of grants for airport improvements. Local land use actions are not subject to NEPA.

 For additional information regarding SEPA and its process visit: [www.ecy.wa.gov/programs/sea/sepa/e-review.html](http://www.ecy.wa.gov/programs/sea/sepa/e-review.html)

 Information about the NEPA process can be found at: [www.epa.gov/compliance/basics/nepa.html](http://www.epa.gov/compliance/basics/nepa.html)

 For more information about the planning process in Washington State, see the Department of Commerce Short Course on Local Land Use Planning at: [www.commerce.wa.gov/site/395/default.aspx](http://www.commerce.wa.gov/site/395/default.aspx)

## Airports

Airports are the only participants in the airport land use compatibility process that have the ability, although limited in many ways, to address the issue from two perspectives—through their long-range planning of future airport development and with actions affecting day-to-day operation of the airport.

Chief among actions in the first category are decisions regarding the configuration of the airport. Airports can decide whether to build or extend a runway, for example. They also can purchase property either to eliminate highly incompatible land uses or to prevent future incompatible development. Funding is typically the major limitation, however, acquisition of property within runway protection zones is eligible for FAA grants.

An airport master plan is the primary mechanism by which airports determine the future direction of airport development. These development actions can have direct implications on the airport's impacts on nearby land uses. The master planning process also can affect airport impacts more indirectly by not seeking to attract types of aircraft that generate the greatest impacts. Airports, though, cannot exclude aircraft based on noise or safety and ultimately it is the pilot's decision as to whether the aircraft can safely operate at the airport.

In terms of day-to-day operations, airports can seek the cooperation of local pilots to identify noise sensitive areas and to help spread the word to avoid overflying these locations to the extent practical and safe. Airports also can work with the FAA to modify manner in which aircraft are flown at the airport. There are significant limitations as to what types of modifications are acceptable to the FAA, but changes to such things as traffic pattern locations, instrument approach procedures, and preferential runway designation may be open to consideration.

## Airport Users

Airport users, especially aircraft owners, operators, and pilots, have an informal but important role in airport land use compatibility matters. Foremost, when operating their aircraft, they should do so safely and in a manner that minimizes noise impacts on the land uses below. Individual pilots should encourage other pilots to do the same. Beyond these actions, airport users need to be engaged in planning for their airport and the surrounding community. Participating in public meetings and speaking out regarding compatibility concerns is essential.

## Airport Master Plan and Airport Layout Plans

Two distinct, yet interrelated, types of plans used to guide airport development are the Airport Master Plan (AMP) and Airport Layout Plan (ALP).

An AMP is a comprehensive document intended to guide development on an airport. The planning period is normally 20 years. A typical AMP will contain most of the aviation-related information needed to prepare a land use compatibility plan. Almost all AMPs will contain:

- An inventory of airport facilities.
- Data on current and forecast activity levels.
- Assessment of future development needs and alternatives for meeting the needs.
- Text and drawings describing proposed improvements.

The AMP itself or an accompanying environmental document also will usually contain depictions of current and projected noise contours.

An ALP is a conceptual map depicting current and proposed airport features including runways, taxiways, navigational aids, buildings, aircraft parking areas, and other infrastructure. Airport property boundaries and the limits of required clear areas such as runway protection zones and runway object free areas are shown as well. Data tables (sometimes on a separate sheet) provide additional information about the airport runways, approaches, and other features, as well as the critical aircraft that the airport is designed to accommodate.

Additional drawing sheets typically will illustrate the airport airspace (FAR Part 77 surfaces), the runway approach surfaces and any obstructions to them, and details of the airport terminal or building area.

Even airports that do not have a current AMP may have a current ALP. ALPs are typically updated more regularly than AMPs. In addition to being listed in the NPIAS, to be eligible for FAA grant funds, an airport must have a current ALP approved by the FAA. Completion of an ALP is also an eligibility requirement for WSDOT Aviation's grant program.

See FAA Advisory Circular 150/5070-6B, *Airport Master Plans*, to learn how the master plan process works, including how your airport can apply for federal funds when/if eligible.

## Legal Framework for Compatibility Planning

The legal tools needed to address airport land use compatibility issues are provided by a variety of state and federal laws, regulations, and legal decisions. Some of this framework sets mandatory requirements for airports or local land use entities. Other pieces merely enable airport or local action, but are not mandatory. Ultimately, the responsibility for ensuring compatibility between an airport and surrounding land uses rests with the airport operator and its neighboring land use jurisdictions.

Summarized in this section are the major state laws, regulations, and state Growth Management Hearings Board decisions that have an important bearing on airport land use compatibility and the issues discussed earlier in this chapter.

### Aeronautics Laws

Laws pertaining to aeronautics are mostly gathered under [Title 14 RCW](#).

- **RCW 14.07 and 14.08 *Municipal airports act*** – Adopted in 1941 and amended in 1945, the act provides for the acquisition and sponsorship of airports by Washington cities, towns, counties, port districts, and airport districts.
- **RCW 14.12 *Airport zoning*** – This act establishes definitions and criteria, and allows local jurisdictions to adopt zoning controls to protect critical airspace from buildings, structures, or other airspace obstructions. The law provides direction and guidance to cities and counties on how to manage airport hazards.

### Planning Enabling Act

Washington’s Planning Enabling Act ([Chapter 36.70 RCW](#)) is a set of state laws that describe planning authorities and responsibilities for towns, cities, and counties. Sections particularly applicable to airport land use compatibility planning include the following:

- **RCW 36.70.320 *Comprehensive plan*** – Under this section, counties are required to prepare a “comprehensive plan for the orderly physical development of the county, or any portion thereof...” [RCW 35A.63.060](#) establishes similar comprehensive planning requirements for cities and towns. The two required elements of comprehensive plans are a land use element and a circulation element ([RCW 36.70.330](#)). Other elements are optional ([RCW 36.70.350](#)).
- **RCW 36.70.547 *General aviation airports*** – This section mandates that:  
“Every county, city, and town in which there is located a general aviation airport that is operated for the benefit of the general public, whether publicly owned or privately owned public use, shall, through its comprehensive plan and development regulations, discourage the siting of incompatible uses adjacent to such general aviation airport.”

Plans may only be adopted following formal consultation with airport owners and managers, private airport operators, general aviation pilots, ports, and the aviation division of the department of transportation. WSDOT Aviation is also tasked with providing technical assistance to local agencies preparing plans and regulations consistent with this section.

This section applies to every county, city, and town, whether operating under [Chapter 35.63, 35A.63, 36.70, or 36.70A RCW](#), or under a charter.

## Growth Management Act

Adopted in 1990, the GMA ([Chapter 36.70A RCW](#)) was enacted in response to rapid population growth and concerns with suburban sprawl, environmental protection, quality of life, and related issues. The act expands the Planning Enabling Act requirements for comprehensive planning in the state's most populous and rapidly growing counties. Twenty-nine counties are either required to fully plan under the GMA or have chosen to do so. These counties make up about 95 percent of the state's population. The remaining ten counties have limited planning requirements under the act.

Several sections are important to airports.

- **RCW 36.70A.070 *Comprehensive plans – mandatory elements*** – This section lists eight elements that must be included in comprehensive plans. Most of the elements potentially affect airports in that they guide the development that may occur in nearby areas. The land use element is particularly significant to land use compatibility matters and the rural element also may be consequential to some airports. The transportation element requires an inventory of facilities and services needs, including general aviation airports “to define existing capital facilities and travel levels as a basis for future planning.”
- For airports located near the edge of urban areas, airport land use compatibility should be considered in determining the location of the urban growth boundary.
- **RCW 36.70A.110 *Comprehensive plans – Urban growth areas*** – Each county that is required or chooses to plan under the GMA must designate an urban growth area or areas within which urban growth is to be encouraged and outside of which growth can occur only if it is not urban in nature. Urban growth area boundaries must be reviewed at least every ten years and adjusted as necessary to accommodate the urban growth projected to occur in the county for the succeeding 20-year period ([RCW 36.70A.130](#)).
  - **RCW 36.70A.200 *Siting of essential public facilities – Limitation on liability*** – This section deals with essential public facilities that are typically difficult to site. Airports are explicitly identified as an example of this type of facility. Others include state education facilities, state or regional transportation facilities, state and local correctional facilities, solid waste handling facilities, and in-patient facilities including substance abuse facilities, mental health facilities, group homes, and secure community transition facilities. Counties and cities planning under GMA must have a process for identifying and siting essential public facilities. No local comprehensive plan or development regulation may preclude the siting of essential public facilities.
  - **RCW 36.70A.210 *Countywide planning policies*** – Recognizing that counties are regional governments within their boundaries and that cities are primary providers of urban governmental services within urban growth areas, this section establishes requirements for adoption of countywide planning policies. Such policies are to serve as a countywide framework from which county and city comprehensive plans are developed and adopted and made consistent with each other. Specific topics to be covered by the policies are listed.
- Although airport land use compatibility is not explicitly listed as a topic for countywide planning policies, the statutes allow topics other than those listed to be addressed.
- **RCW 36.70A.510 *General aviation airports*** – This section requires cities and counties planning under [RCW 36.70A.040](#) to adopt and amend comprehensive plans and development regulations to address land use compatibility adjacent to airports consistent with [RCW 36.70.547](#).

## Findings of the Washington State Growth Management Hearings Boards

The following four decisions are ones most directly relevant to airport land use compatibility matters. The implications are noted here along with a brief indication of the topic addressed by the decision.

- Stephen Pruitt and Steven Van Cleve vs. Town of Eatonville – Central Puget Sound Growth Management Hearings Board (CPSGMHB; Case No. 06-3-0016)** – Legitimized WSDOT’s role in defining the compatibility policies that need to be incorporated into a community’s comprehensive plan. Guidelines developed by WSDOT could include minimum standards that would be given great weight by growth management hearing boards. However, these guidelines would be recommendations and not regulatory in nature.
- State of Washington Department of Corrections and Department of Social and Health Services vs. City of Tacoma – Central Puget Sound Growth Management Hearings Board (CPSGMHB; Case No. 00-3-0007)** – Expansion of essential public facilities must also be accommodated by local agencies. A community’s comprehensive plan therefore must support planned expansion of any airport that lies within the area covered by the plan. Guidance for expansion of airport facilities, volume of traffic, and changes in aircraft fleet mix can be taken from an airport’s master plan. Where a current airport master plan does not exist, the required facility planning can be done as a component of development of the comprehensive plan.
- Port of Seattle vs. City of Des Moines – Central Puget Sound Growth Management Hearings Board (CPSGMHB; Case No. 97-3-0014)** – The requirement to accommodate expansion of essential public services includes necessary supporting facilities and services. While this is likely to be most important at larger commercial service airports, it clearly establishes that comprehensive plans must facilitate all elements necessary for an airport to function. At commercial airports this could include such off-airport facilities as rental car facilities, airport shuttle businesses, air freight consolidators, and airline catering companies.

### Jurisdictional Regions for the Growth Management Hearings Boards

#### Eastern Panel



The eastern region includes all counties and cities east of the crest of the Cascade Mountains which are required to plan or choose to plan under the Act.

#### Western Panel



The western region includes all counties and cities west of the crest of the Cascade Mountains which are required to plan or choose to plan under the Act, but are not within the Central Puget Sound Board’s jurisdictional boundaries

#### Central Puget Sound Panel



The Central Puget Sound region includes King, Snohomish, Pierce, and Kitsap Counties and the cities within those counties.

Maps only depict counties fully planning under the GMA.

- ***Hapsmith et al vs. City of Auburn – Central Puget Sound Growth Management Hearings Board (CPSGMHB; Case No. 95-3-0075c)*** – Although this decision specifically addresses mitigations for a new essential public facility, it suggests that the external impacts of these uses need to be addressed. Compatibility policies contained in comprehensive plans can be viewed as a form of mitigation in that they are intended to minimize the noise and safety effects of airports. This case does not provide any guidance on the substance of mitigation. However, it does legitimize including mitigation of impacts as one more reason to include compatibility policies in comprehensive plans.

Additional decisions of interest include these:

- Local jurisdiction required to consult with airport prior to adoption of comprehensive plan amendments having an effect on the airport.
  - *Son Vida II v. Kittitas County*, EWGMHB 01-1-0017 (FDO March 14, 2002)
  - *NFRD v. City of Yakima*, EWGMHB 02-1-0009 (FDO December 5, 2002)
  - *McHugh v. Spokane County*, EWGMHB 05-1-0004 (FDO December 16, 2005)
- High-density residential zones adjacent to airports are inappropriate/incompatible uses; jurisdictions must preclude uses non-compatible with an airport to comply with GMA.
  - *CCARE v. Anacortes*, 01-2-0019 WWGMHB (FDO December 12, 2001)
  - *Klein v. San Juan County*, 02-2-0008 WWGMHB (FDO October 18, 2002)
  - *Futurewise v. Whatcom County*, 05-2-0013 WWGMHB (FDO September 20, 2005)

 For more information about state laws and Growth Management Hearings Board decisions affecting airport land use compatibility, see Mead & Hunt's briefing paper, *Implications of the Designation of Airports as Essential Public Facilities*. That report, along with numerous other resources on this topic, is available in the appendices resources section. Also, more information about decisions of Washington's Growth Management Hearings Boards are available on their website at: [www.gmhb.wa.gov](http://www.gmhb.wa.gov)

