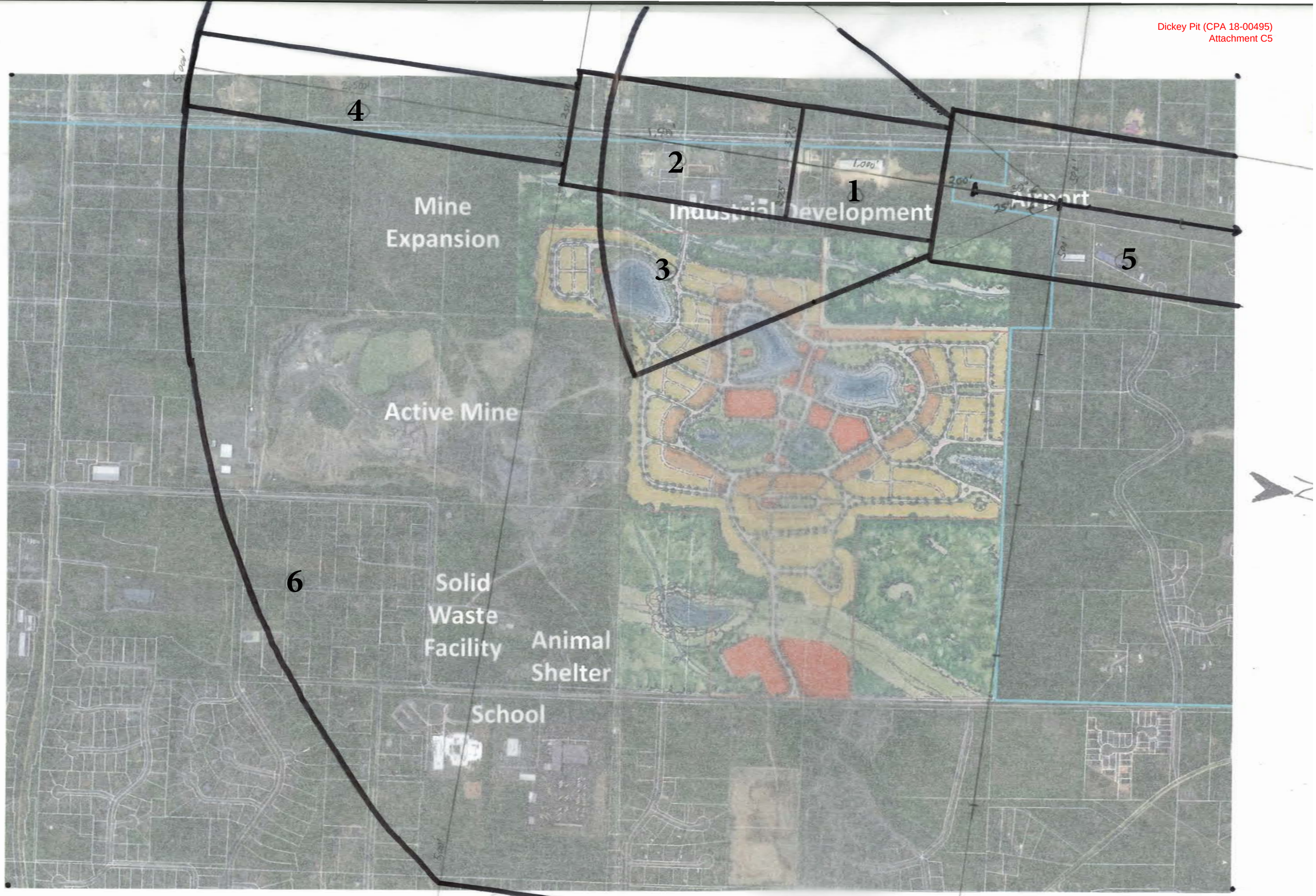
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1,000'
250'
500
750'

Washington State Department of Transportation

ADMINISTRATIVE MANUAL

Airports and Compatible Land Use Guidebook

M 3074.00

January 2011

Aviation Division

Airports and Surrounding Land Uses

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 communities 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.

Evergreen Field

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.

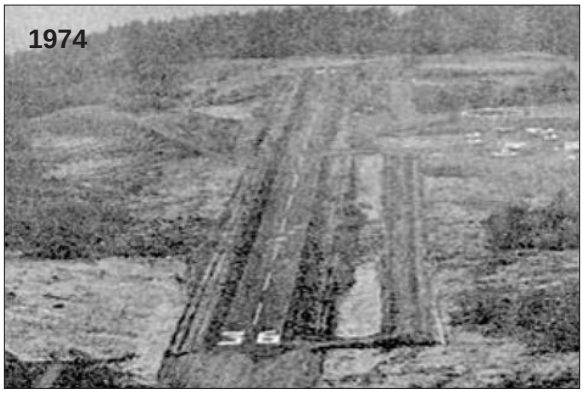
Encroachment of Incompatible Land Uses

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.

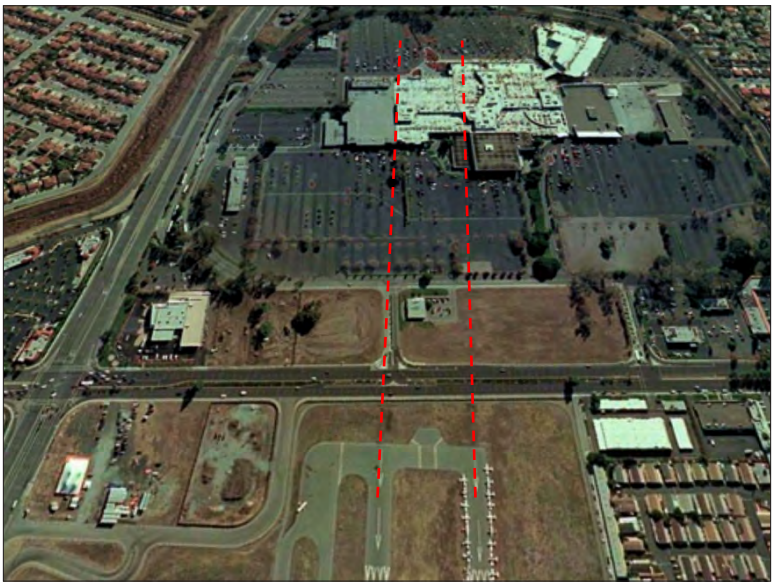
Consequences to people who live near airports:

- 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.

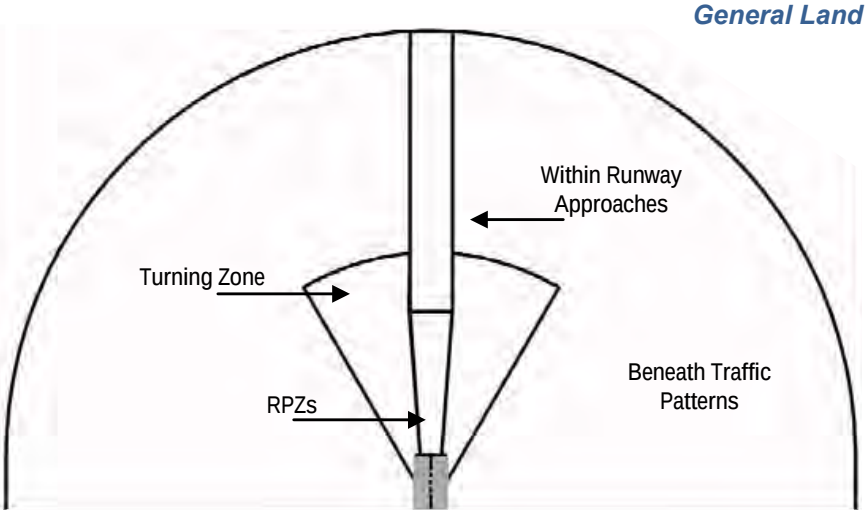
Because of noise and impacts within the airport influence area, single-family residential uses are best kept away from anywhere that aircraft are regularly flying to reach or leave the airport. Often, multi-family residential can be a better option than single-family in locations where aircraft accident 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
Single-Family Residential	• Noise can be disruptive in outdoor areas as well as indoors with open windows. • Aircraft overflight can be annoying, especially where ambient noise levels are low such as in suburban or rural areas.
Multi-Family Residential	• Noise can be disruptive in outdoor areas as well as indoors with open windows, although less sensitive than for single-family residential. • High density presents concern for safety of residents in areas exposed to significant risk of aircraft accidents.
Schools K-12	• Noise can disrupt the learning environment. • Special concerns for safety of children in areas exposed to significant risk of aircraft accidents.
Hospitals/Nursing Homes	• Special concerns for safety of patients and the elderly in areas exposed to significant risk of aircraft accidents.
Retail Centers	• 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.
Business Parks	• Safety concerns for places with high-intensity uses. • Tall buildings can be airspace obstructions.
Assembly Facilities	• Large numbers of people could be at risk from aircraft accidents; outdoor stadiums have greatest exposure.
Industrial Uses	• Smoke, steam, and thermal plumes can be hazards to flight. • Tall structures can be airspace obstructions. • Possible release of hazardous materials if damaged during an accident.
Agricultural Uses	• Potential wildlife attractants as well as a source of dust and smoke.
Water/Natural Areas	• Potential wildlife attractants.
Power Plants	• Smoke, steam, and thermal plumes can be hazards to flight. • Tall structures can be airspace obstructions. • Potential disruption of service if damaged during an accident.
Critical Community Infrastructure (emergency services and communications)	• Potential disruption of service if damaged during an accident.

Table 2-2
General Land Use Acceptability



	Airport Proximity:	RPZ	Within Runway Approaches	Turning zone	Beneath Traffic Patterns
Typical Land Use Types	In General…	Only low heights and few or no people.	Limited building height and number of people; no noise-sensitive uses.	Limited building height and number of people; no noise-sensitive uses.	No noise sensitive uses.
	Agricultural	Compatible if not wildlife attractant or produces airspace obstructions.	Compatible if not wildlife attractant.	Compatible if not wildlife attractant.	Compatible if not wildlife attractant.
	Power Plants/ Transmission Lines/Roads	Generally incompatible.	Compatible if does not produce airspace or visual obstructions.	Compatible if does not produce airspace or visual obstructions.	Compatible.
	Parks/Recreation	Incompatible.	Compatible if low intensity.	Compatible if low intensity.	Compatible.
	Stadiums	Incompatible.	Incompatible.	Incompatible.	Generally incompatible.
	Industrial	Compatible if low-activity, warehousing, mini-storage, etc., provided the use does not produce airspace obstructions.	Compatible if does not produce airspace obstructions or have bulk amounts of hazardous materials.	Compatible if does not produce airspace obstructions or have bulk amounts of hazardous materials.	Compatible if does not produce airspace obstructions.
	Retail/Service Uses/Mixed Use	Incompatible.	Compatible only if low intensity.	Compatible.	Compatible.
	Dining/ Entertainment	Incompatible.	High-intensity and outdoor areas incompatible.	Outdoor areas generally incompatible.	Outdoor areas generally incompatible.
	Offices/Industrial Parks	Incompatible.	Compatible if low intensity.	Compatible.	Compatible.
	Places of Worship	Incompatible.	Incompatible.	Generally Incompatible.	Compatible if low intensity.
	Residential	Incompatible.	Incompatible.	Incompatible.	Generally incompatible.
	Schools K-12/Day Care Centers	Incompatible.	Incompatible.	Incompatible.	Incompatible.
	Hospitals/Nursing Homes	Incompatible.	Incompatible.	Incompatible.	Incompatible.

Table 2-4
Compatibility Challenges and Strategies

Challenge Strategy	Strategy															
	Encourage Airport to Buy Property	Prohibit the Use	Limit Residential Density	Limit Usage Intensity (people per acre)	Avoid Highly-Risk Sensitive Uses	Avoid Noise-Sensitive Uses	Encourage Development Clustering	Encourage Transfer of Development Rights	Consider limited criteria exceptions	Require Preservation of Open Land	Restrict Heights of Structures	Prohibit Bird & Wildlife Attractants	Require Avigation Easement Dedication	Require Recorded Deed or Plat Notice	Recommend Disclosure During Real Estate Transactions	Establish Coordination Mechanism
Expansion of UGA to encompass all or part of the airport influence area is proposed							X	X		X	X			X	X	X
The airport influence area encompasses all of a town or city					X				X		X	X				X
The airport influence area encompasses multiple jurisdictions								X								X
The airport area is in a GMA and extensive new development is unavoidable			X	X	X	X	X	X						X	X	
Airport influence area is almost completely developed and there is a demand for infill			X	X	X	X	X	X					X	X	X	
Redevelopment is planned for part of airport influence area					X	X					X					
Land near the airport is needed for residential development		X	X				X	X		X			X	X	X	
There are existing residential areas near the airport and a new school is needed		X		X												
The community's commercial core area is within runway approach zone				X	X						X		X			
Some of runway protection zone is private property	X			X					X	X	X	X	X			
Planned new high-intensity development near runway approaches would put people at risk			X	X												
Little open land remains near the airport							X			X						
High terrain exceeding FAR Part 77 standards exists near the airport									X	X	X		X			
Property is so close to runway that FAR Part 77 height criteria doesn't allow buildings	X	X					X		X				X			
Tall buildings could be located near the airport		X						X			X		X			
Cell towers and antennas are not restricted in the airport environs		X									X		X			
Existing uses in the airport area attract birds or other wildlife												X				X
Airport compatibility conflicts with siting requirements for other essential public facilities located nearby					X											X

Table 2-5
Characteristics of Existing Influence Area Environs

Characteristics of Existing Influence Area Environs	**Rural** *Existing land use is agricultural or rural; few buildings; new development not anticipated.*	**Limited Development** *Existing development is scattered or low-intensity with little new development anticipated.*	**Developing** *Extensive vacant or underutilized land with urban development potential.*	**Developed** *Fully or mostly developed; potential redevelopment.*
Runway Protection Zone	• Airport should control land consistent with design standards. • Height restrictions. • Avoid new buildings. • Avoid new roads.	• Airport should control land consistent with design standards. • Height restrictions. • Avoid new buildings. • Avoid new roads.	• Airport should control land consistent with design standards. • Height restrictions. • Avoid new buildings. • Avoid new roads.	• Airport should control land consistent with design standards. • Height restrictions. • Infill uses if low intensity. • Avoid new roads.
Parallel to Runway	• Aviation-related development preferred. • No new residential tracts. • Non-residential uses acceptable, industry preffered. • No new schools, hospitals, nursing homes, etc. • Tall structures restricted to protect airspace. • Caution regarding land uses that attract birds or other wildlife. • Encourage keeping land agricultural, undeveloped, or in airport-related uses.	• Aviation-related development preferred. • No new residential tracts. • Low intensity non-residential uses acceptable. • No new schools, hospitals, nursing homes, etc. • Tall structures restricted to protect airspace. • Caution regarding land uses that attract birds or other wildlife. • Encourage keeping land agricultural, undeveloped, or in airport-related uses.	• Aviation-related development preferred. • Low/moderate intensity non-residential uses acceptable. • No new residential tracts. • No new schools, day care centers, nursing homes, etc. • No new shopping centers or places of public assembly*. • Tall structures restricted to protect airspace. • Caution regarding land uses that attract birds or wildlife. • Encourage light industrial and other low-intensity uses or airport-related uses.	• Aviation-related development preferred. • Low/moderate intensity non-residential uses acceptable. • No new residential tracts. • No new schools, day care centers, nursing homes, etc. • No new shopping centers or places of public assembly*. • Tall structures restricted to protect airspace. • Caution regarding land uses that attract birds or wildlife. • Encourage light industrial, commercial, and other low-intensity non-residential uses.
Approaches/ Extended Runway Centerline	• Aviation-related development preferred. • Low-intensity industry or other non-residential uses acceptable. • No new residential tracts. • No new schools, day care centers, nursing homes, hospitals, etc. • Tall structures restricted to protect airspace. • Caution regarding land uses that attract birds or wildlife. • Encourage continuation of agricultural and related uses.	• Low-intensity industrial or other non-residential uses acceptable. • No new residential tracts. • No new schools, day care centers, nursing homes, hospitals, etc. • Tall structures restricted to protect airspace. • Caution regarding land uses that attract birds or wildlife. • Encourage continuation of agricultural and related uses.	• Low/moderate-intensity industrial or other non-residential uses acceptable. • No new residential tracts; infill discouraged. • No new schools, day care centers, nursing homes, hospitals, etc. • No new shopping centers, industrial uses with high concentrations of people, places of public assembly*. • Tall structures restricted to protect airspace. • Caution regarding land uses that attract birds or wildlife. • Encourage light industrial, office, and other low-intensity uses.	• Low/moderate-intensity industrial or other non-residential uses acceptable. • Residential as infill acceptable. • No new schools, day care centers, nursing homes, hospitals, etc. • No new shopping centers, industrial uses with high concentrations of people, places of public assembly*. • Tall structures restricted to protect airspace. • Caution regarding land uses that attract birds or wildlife • Encourage light industrial, office, and other low-intensity uses.
Traffic Pattern	• Maintain existing minimal development conditions to maximum extent practical. • No new schools, day care centers, nursing homes, hospitals, etc. • Encourage continued agricultural uses, and industrial uses.	• No new residential subdivisions. • No new schools, day care centers, nursing homes, hospitals, etc. • Encourage continued agricultural and agriculture-related commercial or industrial or other low-intensity commercial uses.	• No new residential subdivisions. • Encourage nonresidential uses except for ones with very high intensities (such as sports arenas). • Favor moderate to high-density or mixed use development if residential is necessary. • Caution regarding land uses that attract birds or wildlife.	• No new residential subdivisions. • Encourage nonresidential uses except for ones with very high intensities (such as sports arenas). • Favor high-density residential or as infill or mixed use redevelopment. • Caution regarding land uses that attract birds or wildlife.

**Places of worship, auditoriums, outdoor sports arenas, etc.*

Traditional Zoning Ordinance

Zoning ordinances are the most common regulatory tool used by local government throughout the country to manage land use and development. Traditional zoning ordinances typically involve two components: text and a map. The text defines the categories, uses, and standards of development permitted within a particular land use designation. The map demonstrates the spatial distribution of the zoning classifications.

Historically, zoning has been used as a land use control technique to segregate incompatible land uses and establish standards for the type and intensity of use. Zoning ordinances typically categorize land uses into several different classifications. Usually included are: residential, commercial, industrial, institutional/governmental, parks/open space, and agricultural. The exact classifications will vary from jurisdiction to jurisdiction. Zoning is also used to regulate the density and intensity of uses, and the manner in which structures can be placed on the site—setback distances, lot coverage, and allowable height. Parking and landscaping requirements for each land use classification are typically specified in the zoning ordinance as well.

📖 Click here to review your jurisdiction's development regulations: www.mrsc.org/codes.aspx

How can zoning be used to promote airport land use compatibility?

To discourage the encroachment of incompatible land uses within the airport influence area, jurisdictions can develop regulatory tools that limits or discourages uses such as residential development and promotes compatible commercial, agricultural, light industrial, and mixed-use development. Parcels within the airport influence area should, at a minimum, be maintained at their current level of compatibility or rezoned for a more compatible use. Parcels should not be rezoned to allow a more incompatible use. Remember, jurisdictions are required to discourage incompatible development, not encourage its proliferation through passive zoning regulations.

Overlay Zoning Ordinance

Overlay zoning is a regulatory tool that identifies special zoning standards that provides additional standards and/or modifies standards in the base zoning district map and text. The overlay district can share common boundaries with the base or underlying zone or cut across the underlying zone boundaries. Additionally, overlay zones are usually created to be applied within smaller geographic areas to protect a specific resource or guide development within a special area.

Overlay zoning is a highly useful and efficient tool for addressing land use compatibility within an airport influence area. Common requirements may include building heights, bulk and density standards, lot sizes, provide incentives to attract uses or prohibit uses or activities that may impact the airport. By creating an airport overlay zone, the underlying zoning criteria for property within the airport influence area can be modified to ensure compatibility with the airport. This method also allows communities to keep their existing base zoning in place adjacent to the airport rather than creating new base zoning districts. In this way, the need to create zoning district to specifically address industrial commercial, or other such classifications specific to the airport influence area can be avoided. Several types of overlay districts have been successfully used to address land use compatibility. The two most commonly used in Washington State have included an overlay district to address height hazards using FAR Part 77 *Imaginary Surfaces* and a separate overlay to implement the land use compatibility zones addressed in Appendix F.

Critical Concept
To be successful in implementing both an airport overlay and traditional zoning, the two strategies must have and maintain a give-and-take relationship. This means you cannot change the underlying zoning without due process or cause, such as a change in circumstance or operations. Jurisdictions should establish a clear record of their methodology and goals regarding efforts to achieve a more compatible environment though the use of both tools.

Land Use Protection/Airport Compatibility Overlay

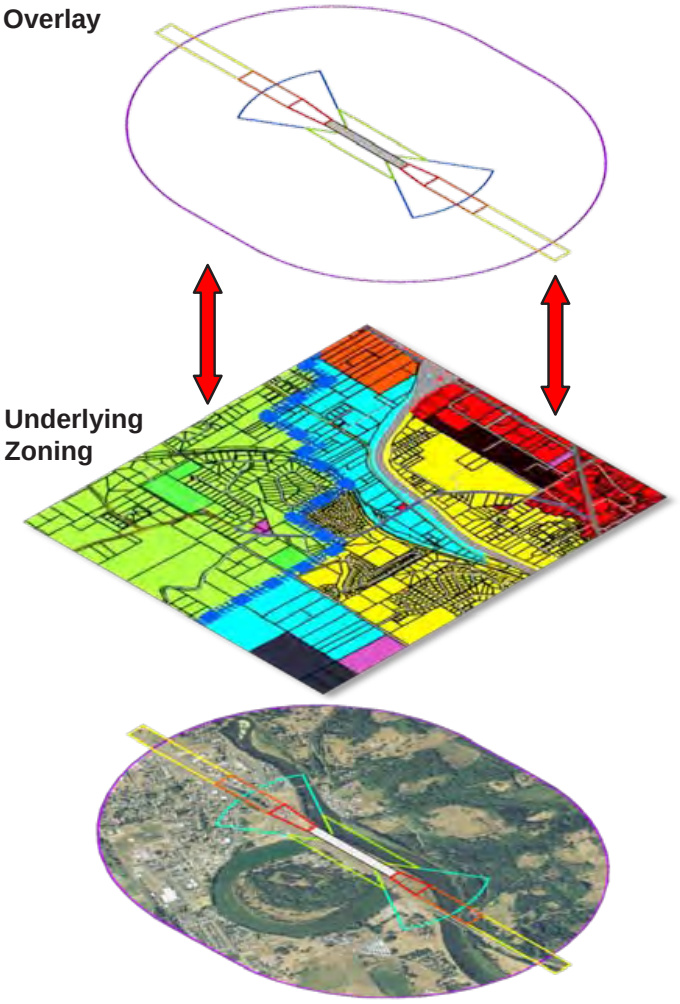
An airport overlay can be used to protect the viability of the airport as an essential public facility by discouraging incompatible development and encouraging compatible land uses. As the name implies, the overlay district is laid over the existing zoning districts and modifies the density and land use requirements of the underlying zoning districts. An overlay should also address:

- Wildlife attractants.
- Light, smoke, and glare.
- Electromagnetic interference.
- Storage of hazardous materials.
- High intensity and special function uses.

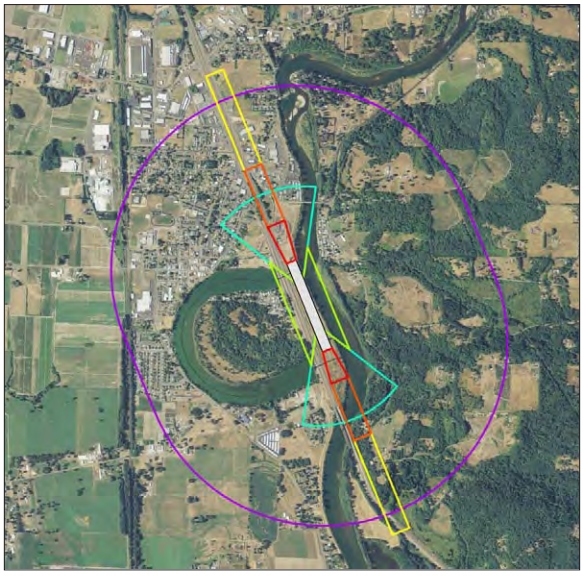
Typically, airport overlays address the issues of noise, light, vibration, safety, and low-flying aircraft through a series of compatibility zones. WSDOT recommends variations of the compatibility zones to take into account different runway lengths, types of approach procedures, traffic pattern location, and other factors.

As shown in Appendix F, the suggested zones are larger for longer runways that accommodate larger, faster aircraft than for short runways used only by light aircraft. The six zones can be characterized as follows:

Symbiotic Relationship

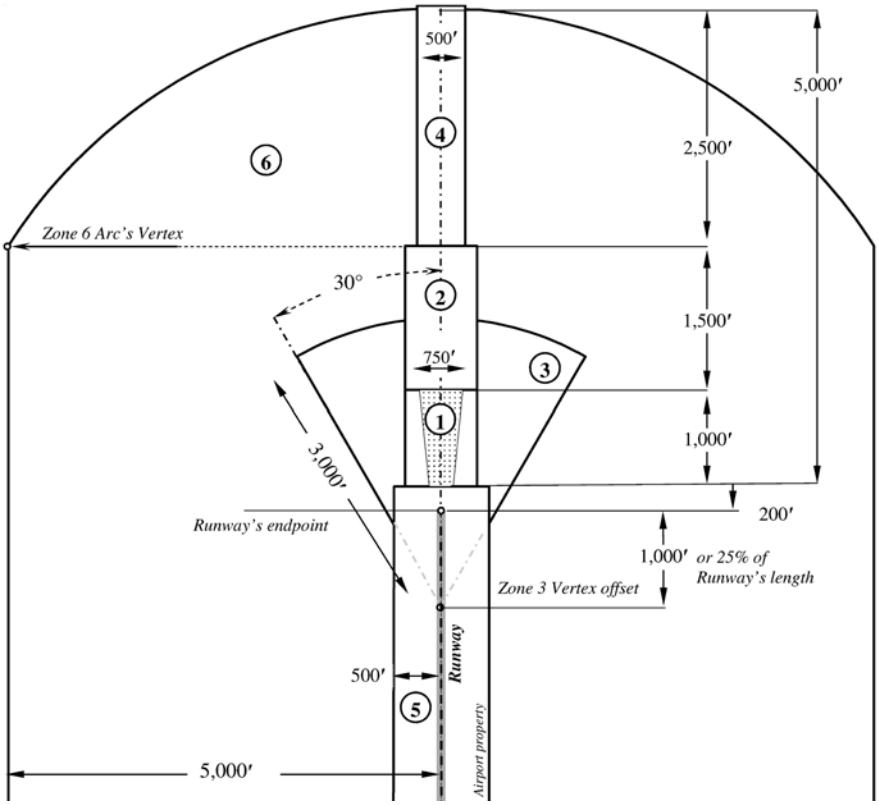


Airport Compatibility Overlay



- **Compatibility Zone 1** – This zone encompasses the runway protection zone (RPZ) at each end of the runway and should use the RPZ dimensions established in accordance with FAA standards. Also included in the zone are the strips of land immediately adjacent to the runway where FAA standards preclude structures.

WSDOT Compatibility Zones



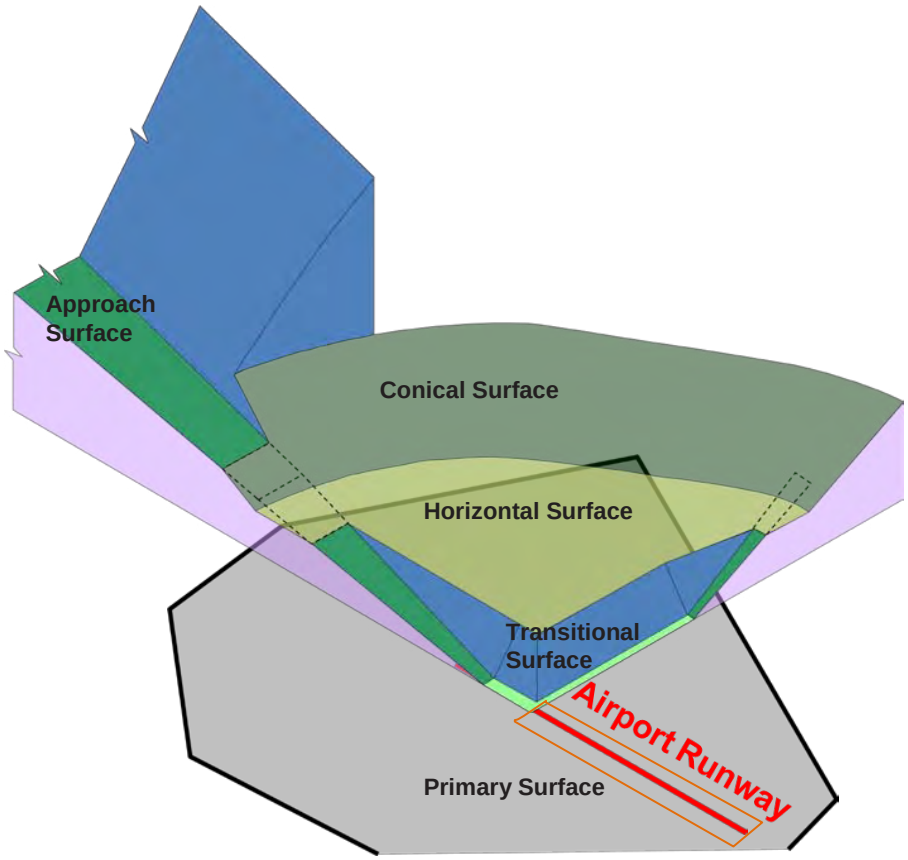
- **Compatibility Zone 2** – This zone wraps around and extends beyond Zone 1 along the runway centerline. Next to the RPZ, it represents the area where the risk of aircraft accidents is the greatest. On departure, aircraft are typically at full power in the initial phase of climb. On approach, they are at low altitude as they prepare for landing.
- **Compatibility Zone 3** – This zone is a wedge-shaped area lying along the sides of Zone 2. When operating visually, departing aircraft may begin turning over this area to fly toward their destination or to remain in the traffic pattern. Arriving aircraft often overfly this area as well, especially if they are flying a tight pattern.
- **Compatibility Zone 4** – This area lies beyond Zone 3 along the extended runway centerline. Aircraft flying straight out or in overfly this area at low altitude. The zone is particularly significant on runways where much of the operations are on instrument procedures and at busy airports where elongated traffic patterns are common.
- **Compatibility Zone 5** – Lying in narrow bands along each side of the runway, aircraft do not normally fly over the sideline zone. The principal risk is from aircraft that lose directional control while landing or just after takeoff.
- **Compatibility Zone 6** – The final zone contains the remainder of the airport environment where aircraft fly as they approach and depart the airport or are engaged in flight training. In area, Zone 6 is typically larger than the other zones combined.

Each airport is unique. Thus, it is essential to adjust compatibility zones to fit the airfield configuration, usage characteristics, fleet mix, topography, and other factors associated with a specific airport.

Airspace Protection/Height Limit Overlay

Development regulations put policy into action. It is important that the regulations implement the policy, not start a new direction. Make sure to provide adequate detail in the regulations to help the development community understand what is required.

FAR Part 77, *Objects Affecting Navigable Airspace*, establishes standards for determining obstructions to the airspace necessary for safe aircraft operations. To do this, the regulations define a set of airspace protection surfaces referred to as "imaginary surfaces." The sizes and shapes of the surfaces are determined by the airport's runway configuration, the weight of the aircraft each runway can accommodate, and the type of approach procedure (visual, non-precision, or precision) at each runway end. There are five types of surfaces that should be considered:



- **Primary Surface** – It is longitudinally centered on a runway and, if the runway is paved, extends 200 feet beyond the runway ends.
- **Approach Surfaces** – These surfaces begin at the end of the primary surface and extend from 5,000 feet to as much as 50,000 feet if the runway has a precision approach. The surface slopes upward at a horizontal-to-vertical ratio of 20:1, 34:1, or 50:1.
- **Transitional Surfaces** – These surfaces are situated along the edges of the primary and approach surfaces. They have a slope of 7:1 running at right angles to the runway centerline.
- **Horizontal Surface** – As the name suggests, this surface is a horizontal plane. Its elevation is 150 feet above the highest point on the airport runway(s) and it extends either 5,000 or 10,000 feet from the runway.
- **Conical Surface** – Extending outward and upward from the periphery of the horizontal surface, the conical surface has a slope of 20:1 for a horizontal distance of 4,000 feet.

Objects that are too tall may constitute airspace hazards. By holding objects to heights that remain below the FAR Part 77, land use jurisdictions can ensure that constraints are not placed on the length of the runway usable for aircraft takeoffs and landings or on the runway's instrument approach procedures.

How can an airspace protection/height limit overlay be used to promote airport land use compatibility?

Use the airspace definitions provided in federal law to identify FAR Part 77 *Surfaces* for your airport, and include in the development regulations language that prohibits penetration of these surfaces. Provide a map and instructions to assist community members, airport managers, and planning staff with implementing the regulations.

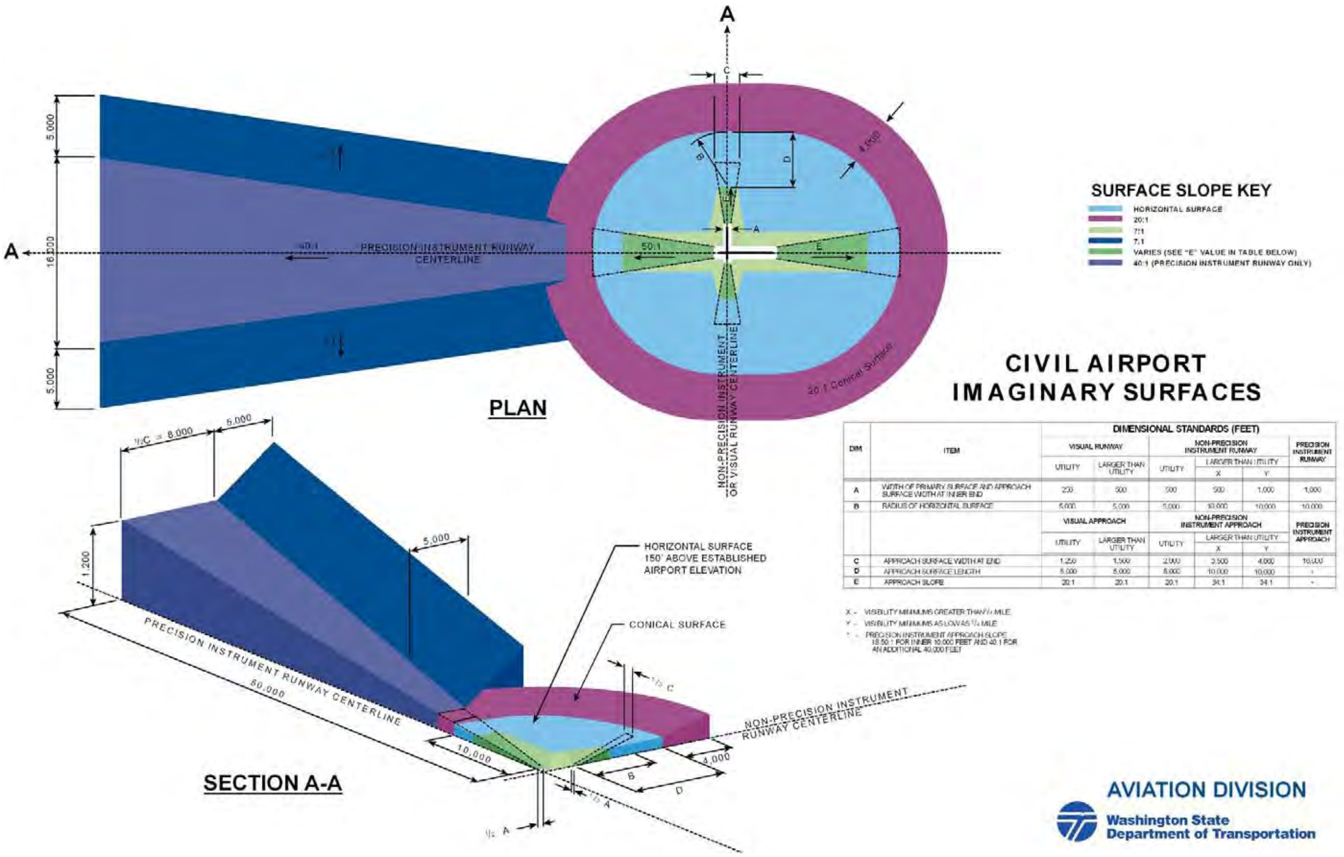
📖 The airspace assessment worksheet is located on page D-7.

The FAA relies on local jurisdictions with land use authority to keep critical airspace clear of obstructions. *RCW 14.12* Airport Zoning gives local jurisdictions the authority to develop and adopt airspace regulations.

Harvey Field, Snohomish County

Airspace obstructions, as seen above, can severely limit the utility of an airport by displacing the runway's threshold and limiting the ability of air-craft to develop supplicated instrument approach procedures necessary for most business aircraft.

FAR Part 77 Imaginary Surfaces



See *Appendix D* for a diagram of FAR Part 77 Imaginary Surfaces and a chart of the surfaces' dimensions.

How can the zoning ordinance be used to promote airport land use compatibility?

Tools to promote compatibility can include conventional zoning, overlay zoning, or a combination of both. Use of the airport overlay relies on the base zoning district or underlying zoning district and standards identified in the overlay zoning to prohibit or restrict land use features and activities within the airport influence area. Use the overlay to address issues such as:

- Tall structures and development that would penetrate critical airspace surfaces identified in FAR Part 77.
- Stormwater or other facilities (such as stormwater or agricultural operations) that may attract hazardous wildlife. The overlay may direct staff to use a specific standard such as the *Washington Aviation Stormwater Manual* to address stormwater issues on or off airport property.
- Interference with air navigation (i.e., smoke, electromagnetic interference).
- Special function uses such as K-12 schools, hospitals, nursing homes, and other similar uses.
- Large gathering of people or areas of public assembly such as sporting arenas, fair grounds, and stadiums.
- Above-ground bulk storage of fuel, explosive, or hazardous chemicals within the airport approach or other sensitive areas.
- Noise-sensitive uses.
- Reflective building materials. The overlay may suggest reducing light and glare by limiting the type of materials or requiring special conditions such as downward shaded lighting equipment.

The best approach to promoting compatibility is using a combination regulatory tools. For example, the use of zoning overlay's rely on and have a symbiotic relationship to the underlying zoning districts and regulations. Additionally, there are two types of zoning overlays that are designed to achieve different purposes. One that is designed and shaped to address critical air space surfaces depicted in federal regulations FAR Part 77 *Imaginary Surfaces* and the other that addresses compatibility zones or the general operating environment of the airport.

Consider establishing the following regulations to address land use compatibility in the airport influence area.

- Traditional or performance based zoning regulations.
- Compatible land use overlay.
- Height hazard overlay.

Other Types of Zoning Tools

Form-Based Codes

Form-based zoning codes differ from traditional zoning in that they focus on the size and shape of buildings rather than on the way the land is used. The codes often include drawings illustrating how buildings should relate to the public spaces around them. While not highly widespread in application, form-based codes are becoming more common particularly for the more highly developed, core areas of cities and where redevelopment to more intensive uses is desired.

How can form-based codes be used to promote airport land use compatibility?

Form-base codes have pluses and minuses in terms of their relationship to the objectives of airport land use compatibility planning. They might be beneficial in setting height limits, defining building types that offer better protection in the event of an aircraft accident, and in setting criteria for open land areas where an emergency landing could be made. On the other hand, they typically do not address occupancy types that are at the heart of conventional zoning and compatibility planning. Nevertheless, by incorporating provisions addressing usage intensities and noise sensitivity, form-based codes could be an ideal mechanism for promoting airport land use compatibility in urban communities.

Conditional Use Permit

Conditional use permits are typically used by local jurisdictions to allow a use or activity that may need additional scrutiny to ensure that the activity is compatible with neighboring land uses. Use may be tailored to meet the limitations of the site or mitigate impacts. Conditional uses are decided by the governing body, hearing examiner, board of adjustment, or similar body.

Conditional use permits and variances to the code should be reviewed and allowed only if they will not pose a safety hazard or are found to be compatible with the airport.

Variances

Variances are also decided by the a hearing examiner, board of adjustment, or similar body. A variance authorizes the landowner to vary a condition or standard in the development code. There are often used to vary a setback, height limitation, or dimensional standard. The local governing body determines whether to grant a variance request based on criteria outline in state statues and local regulations. The Planning Enabling Act details several prerequisites that must be met before a variance may be granted. These include:

- Special circumstance of the subject property (including size and shape or surroundings). Strict application of the zoning ordinance would deprive the property owner of rights or privileges enjoyed by other owners of properties in the vicinity and under identical zone classifications.
- The granting of the variance will not be materially detrimental to the public welfare or injurious to the property or improvements in the vicinity and zone in which the subject property is located.

Nonconforming Uses

A nonconforming use is a use that existed lawfully prior to the adoption or amendment of a zoning ordinance, but does not comply with present zoning provisions. Many local jurisdictions generally protect existing legal nonconforming uses of buildings, structures, premises, or fixtures if they continue unchanged. However, communities may use a variety of methods to prohibit or limit the expansion of nonconforming uses.

Docketing Process

How to recommend changes to your jurisdiction's comprehensive plan and development regulations.

Docketing is a process by which parties recommend changes to comprehensive plans and development regulations. Jurisdictions compile and maintain a list of suggested changes and consider them on an annual basis. The docket process allows parties to note deficiencies and recommend changes. These suggested changes are reviewed by the jurisdictions and made available for review by the public. There is no fee for submitting the docket form in some jurisdictions. This process allows for public input on policy affecting land use compatibility.

What actions are necessary to ensure continued implementation of the policies?

To conclude this six-step process, a final point to remember is that your work does not end with adoption of a comprehensive plan and implementing regulations that incorporate airport land use compatibility planning measures. The criteria must continue to be applied on an ongoing basis.

Among the continuing actions are:

- Make sure that compatibility criteria are not buried in the planning policies and implementing regulations so that planners do not overlook them. Flagging parcels affected by airport compatibility criteria with an airport overlay zoning designation is a way of helping to ensure that the criteria are noticed. Consider incorporating the compatibility criteria into a geographic information system (GIS) to make the criteria quickly evident.

Local jurisdictions are strongly encouraged to conduct a preliminary analysis to determine if the project meets local height regulations and FAR Part 77 *Standards*. This preliminary analysis should be done prior to when the project applicant submits Form 7460 to the FAA. If the project would penetrate a FAR Part 77 *Surfaces* and thus be an airspace obstruction, jurisdictions should require the applicant to propose alterations to the proposal.

- Pay attention not just to the finished height of structures, but also to any add-on features such as antennas that would increase the overall height. Also consider construction cranes or other temporary objects that could be airspace obstruction if near the airport. The height of trees could be another concern. Be certain that project proponents submit proper notification (Form 7460) to the FAA for an aeronautical study in accordance with FAR Part 77 requirements.
- Do not overlook proposed changes of use of existing buildings. A proposal to change a low-intensity or vacant building to one with many occupants, or to a use that is noise sensitive, or would allow the occupancy of adult or child care facility could encourage incompatible uses or activities and conflict with the comprehensive plan.

Step 6: Products

- Draft and adopt implementing regulations such as an airport overlay zoning ordinance that contain the specific compatibility criteria to be met.
- Identify continuing actions and specific points in the development review process where airport land use compatibility concerns will be addressed.

Agricultural Uses

Most agricultural uses are compatible with airports. However, some activities can attract wildlife which may pose a significant safety hazard.

- Slaughter yards, rendering plants, feed lots, and other similar activities are a significant wildlife attractant and should be strongly discouraged
- Caution should be taken with some fruit and vegetable bearing crops. They may be incompatible near runway approaches because of the height of trees and food source for wildlife. Seed crops may attract waterfowl or flocks of birds.
- Agricultural septic lagoons and similar by-products used to enhance crop yields should be reviewed.

Aviation Compatible Agricultural Use

Arlington Municipal Airport leases its RPZ for landscaping business, production of sod.

Residential Uses

Residential land uses are generally considered incompatible when located within the airport influence area. However, some high-density residential development can co-exist and compliment the airport depending on their location, density, and intensity of other uses around them.

- No new residential development should be allowed inside any runway protection zone or runway approach.
- Outside the urban growth boundary, scattered, large-lot, agricultural-related residences are acceptable. Generally they are lot sizes of five acres or greater. However, dwelling units should be strongly discouraged within the runway protection zone or runway approach.
- Inside the urban growth boundary:
  - New low to medium residential development should be discouraged within the airport influence area, especially under the airport traffic pattern(s).
  - New high-density multifamily development may compliment the airport if located in areas that do not have a high safety risk such as at the end of the runway or within the runway approach/departure area.
  - Mixed-use development or redevelopment of an area to accommodate a mix of land uses can be compatible when located in areas that that do not have a high safety risk such as at the end of the runway or within the runway approach/departure area.

Substantial Residential Encroachment

Substantial residential encroachment around Hoskins Field, Olympia, Washington.

Special Function Uses

Special function uses generally include children, elderly, the infirmed, or others regarded as having comparatively little control over their own lives. Land uses may include K-12 schools, hospitals, nursing homes, convalescent centers, and other similar uses.

- Proposed new uses should be located outside of the airport influence area and more specifically should not be permitted at the end of the airport runway, approach/ departure areas, or within the airport traffic pattern (Compatibility Zones 1-6).
- Care should be taken to preclude uses such as hospitals where patients remain overnight. Should not be situated in approach compatibility zones.

Special Function Use

K-12 schools represent a highly vulnerable use and should be prohibited near airports.

- Substantial expansions or remodels of existing special function uses should include the addition of zoned sprinkler systems, additional exist doors, and enhance safety coordination plans with emergency providers.

Parks and Recreational Facilities

Most passive and active parks and recreation facilities are compatible when located within the airport influence area. Care should be taken not to locate facilities within the runway approach or sideline areas of the airport. Additionally, it is strongly recommended that active recreation facilities such as ball parks, football or soccer fields, and other similar uses that attract large groups of people should be discouraged from locating in the runway protection zone, runway approach to the airport, and sideline areas of the airport (Compatibility Zones 1, 2, and 5).

Commercial, Retail, and Business Office Uses

Most commercial, retail, and business office uses are compatible with airport operations. Compatibility is dependent on the concentration of people per square foot and the intensity of the use. For more information on the types of activities and restriction, see Appendix F, Table F-2.

- Business office-type uses, particularly those having only one or two floors, are generally acceptable throughout the airport influence area except in and near the runway protection zone (Compatibility Zones 1 and 2) Taller buildings may present airspace obstruction issues as well as be too intense (too many people) for good safety.
- Retail commercial spaces are generally acceptable in most areas adjacent to the airport depending on the intensity of uses and concentration of people.
- Major retail shopping centers and big-box stores should not be located in Compatibility Zones 1, 2, and 5.
- Lodging facilities are generally compatible with airports and often located near airports providing accommodations for the traveling public. These uses should be prohibited in Compatibility Zone 1 and depending on the airport Compatibility Zone 2.

Industrial Uses

Most industrial uses are compatible with airport operations. Compatibility is dependent on the concentration of people per square foot and the intensity of the use. For more information on the types of activities and restriction, see Appendix F, Table F-2.

The compatibility of heavy industry depends on the facility. Tall smokestacks or structures, steam, smoke, thermal plumes, glare, electromagnetic interference, and storage or use of large amounts of hazardous materials are incompatible when located in areas that may disrupt flight operations to and from the airport. Warehouse and storage facilities are excellent uses within Compatibility Zones 1 and 2 due to their low concentration of people.

Sport Stadiums and Other Large Assembly Facilities

Uses that allow high concentrations of people should be avoided within the airport influence area. These uses generally include sports stadiums, multiplex theaters, large places of worship, shopping centers, town centers, and other areas that promote the assembly of large concentrations or groups of people.

- Uses should be avoided in Compatibility Zones 1-5 and allowed with caution in Compatibility Zone 6.
- Outdoor arenas and amphitheaters can be particularly incompatible because no structure provides protection from a light aircraft accident; noise intrusion can also be an issue.

Utilities, Communications, and Emergency Response Facilities

Critical facilities that could be made inoperable if struck by an aircraft should not be situated in the approach (Compatibility Zones 1 and 2).

Other Hazards to Flight

Wildlife Attractants

Among other physical hazards to flight, wildlife strikes represent the most widespread concern. Measures based upon Federal Aviation Administration FAA guidance should be established to prevent creation of known types of conflicts and to enable mitigation of unanticipated problems. Particular attention should be paid to any proposed use that could create an increased attraction for birds and other wildlife. These uses include landfills, stormwater detention facilities, refuge containers, and certain agricultural uses that may attract birds or other wildlife that may pose hazards to aircraft in flight and people on the ground.

Tacoma Narrows Airport

Waterfowl, gulls, and raptors represent 77 percent of reported bird strikes causing damage to aircraft in the US. Over 70 percent of all strikes occur within 500 vertical feet within the airport traffic pattern. (Photo courtesy of the Tacoma News Tribune)

The FAA recommends that uses known to attract birds—sanitary landfills and certain types of crops being primary examples—be kept at least 5,000 feet from runways used only by piston-powered aircraft. For runways used by turbine-powered aircraft, the distance increases to 10,000 feet.

📖 FAA rules and regulations concerning these hazards are found in FAA Order 5200.5A, Waste Disposal Sites On or Near Airports, and Advisory Circular 150/5200-33, Hazardous Wildlife Attractants On or Near Airports.

- **FAR Part 139** – FAA regulations associated with wildlife hazards are addressed in FAR Part 139 (14 CFR 139) *Certification of Airports*. Section 139.337 requires holders of Airport Operating Certificates (or air carrier airports) to "take immediate action" to address potential wildlife hazards once they are identified.

  📖 Available at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/title14/14tab_02.tpl

- **Grant Assurances** – While none of the standard grant assurances explicitly addresses mitigation of bird and wildlife hazards, three establish requirements that can broadly be applied to the issue. These assurances require airports to:

  1. Operate and maintain the facilities in a safe and serviceable condition (no. 19).
  2. Remove, lower, relocate, mark, light, or otherwise mitigate existing airport hazards and prevent the establishment or creation of future airport hazards (no. 20).
  3. Take appropriate action 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 (no. 21).

Beyond these two sources, federal guidance is advisory. Several FAA advisory circulars address particular aspects of the issue.

- ***Wildlife Hazard Management at Airports: A Manual for Airport Personnel*** **(July 2005)** – FAA's most thorough reference document. The manual includes background information, agencies and organizations involved in wildlife hazard management at airports, and applicable legislation, regulations, and policies as well as direct and indirect controls for addressing potential hazards.

  📖 Available at: http://wildlife.pr.erau.edu/englishmanual/2005_faa_manual_complete.pdf

- **AC 150/5200-32A,** ***Reporting Wildlife Aircraft Strikes*** **(December 2004)** – Explains the importance of reporting collisions between aircraft and wildlife and describes FAA's Bird/Other Wildlife Strike Reporting system. Provides instructions on how to report a wildlife strike in paper or electronic format, and provides links to wildlife strike reporting mechanism.

  📖 Available at: www.faa.gov/documentLibrary/media/advisory_circular/150-5200-32A/150_5200_32A.pdf

Additional guidance regarding mitigation of wildlife hazards is available from WSDOT Aviation. In 2009, the Aviation Division, in coordination with WSDOT Environmental Services and the FAA, developed a stormwater design manual to assist in the design, construction, and maintenance of stormwater facilities on and near airports. The manual focuses on design modifications to decrease the attractiveness of stormwater facilities to wildlife rather than active wildlife removal measures.

📖 Available at: www.wsdot.wa.gov/aviation/airportstormwaterguidancemanual.htm

Thermal Plumes

An additional, little recognized, physical hazard to aircraft flight are thermal plumes generated by power plants. Invisible unless the heated air turns to steam, the plumes from large facilities can create unstable air at the altitude that airplanes or helicopters fly when near airports. Power plants and other facilities that generate large thermal plumes should be avoided within airport traffic pattern areas.

Visual Hazard

Visual and Electronic Interference

Criteria defining land use characteristics that can cause visual or electronic hazards to flight are more qualitative in nature—the FAA has not set any precise standards. In general, visual hazards to flight include sources of dust, steam, smoke, or glare that can impair pilot visibility, as well as distracting lights that can be confused for airport lights. Electronic hazards are ones that can cause interference with aircraft communications or navigation. While it is not always possible to prevent these types of hazards to flight from occurring, awareness of the potential can often enable reduction or mitigation of the most serious problems.

Tools That Address Specific Airport Land Use Compatibility Factors

Compatibility Strategies

Density and Intensity Limits

Establishment of criteria limiting the maximum density (number of dwellings) or people per acre is the most direct method of reducing the potential severity of an aircraft accident. In setting these criteria, consideration must be given to the two different forms of aircraft accidents—those in which the aircraft is descending, but is flying and under directional control of the pilot and those in which the aircraft is out of control as it falls (also see later discussion of clustering).

Limits on usage intensity—the number of people per acre—must take into account both types of potential aircraft accidents. To the extent that accidents and incidents are of the controlled variety, then allowing high concentrations of people in a small area would be sensible, as long as intervening areas are less populated. However, concentrated populations present a greater risk for severe consequences in the event of an uncontrolled accident at that location. Limiting the average usage intensity over a site reduces the risks associated with either type of accident. In most types of land use development though, people are not spread equally throughout the site. To minimize the risks from an uncontrolled accident, the criteria should also limit the extent to which people can be concentrated and development can be clustered in any small area.

Open Land Requirements

Creation of requirements for open land near an airport addresses the objective of enhancing safety for the occupants of small aircraft forced to make an emergency landing away from a runway. If areas are sufficiently large and clear of obstacles, open land can be valuable for light aircraft anywhere near an airport.

For large and high-performance aircraft, however, open land has little value for emergency landing purposes and is useful primarily where it is an extension of the clear areas immediately adjoining a runway.

Tools for Enhancing Compatibility

Tools for Addressing Specific Airport Land Use Compatibility Issues

The land use compatibility tools described in the first part of this chapter are ones that apply broadly throughout a community and typically are employed during the comprehensive plan amendment process. The group of tools outlined here may be enabled through the comprehensive plan or zoning ordinance, but are more narrowly focused in their application. Typically, they will come into play with regard to a specific land use development proposal.

Airport Development Review Committee

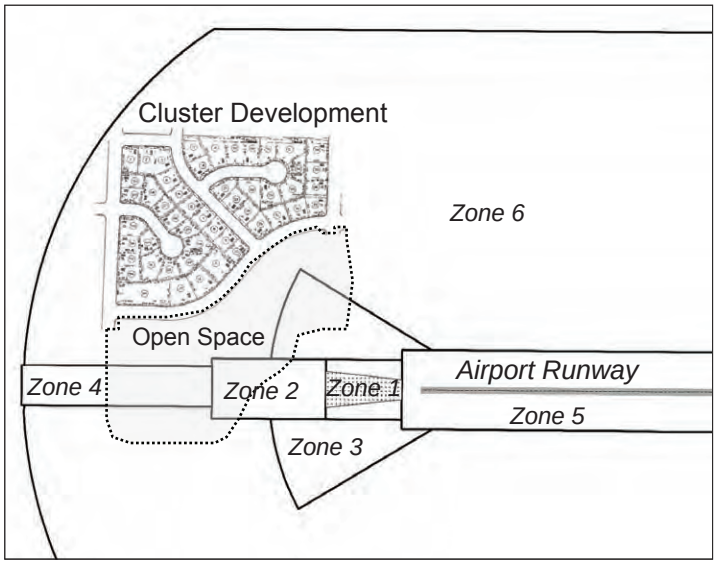
An Airport Development Review (ADR) committee is a volunteer board appointed by the airport or local jurisdiction that ensures compliance with the jurisdiction's goals, policies, and implementation regulations. Committee members volunteer their time and expertise to ensure that development within the airport influence area is compatible with the current and future airport environment.

How can an ADR committee be used to promote airport land use compatibility?
Use the ADR committee to review proposed development within the airport influence area. Draw upon local skills and expertise in regards to airport operations and planning. Be sure to include a variety of stakeholders. The goal of the committee is to assess the compatibility of proposed uses in relation to the jurisdiction's goals, policies and development regulations. Have the committee meet once a month to review applications and make recommendations to the jurisdiction's planning staff. The committee may be used to review planned unit developments, variances, and conditional-use permits.

Clustering of Development

Clustering is the grouping of a particular development's structures on a portion of available land. This reserves a significant amount of the site as protected open space. Cluster developments are appropriate for all types of development activity. They may be used in conjunction with commercial, industrial, mixed-use, and residential development. The advantage of this land use technique to the community is that it preserves open space and critical areas. The advantage to the developer is the opportunity to construct at a higher intensity or height and a lower cost of infrastructure and the ability to develop open space for passive uses.

Cluster Development



Cluster developments may be used to move development away from areas that experience greater aviation impacts: noise, light, vibration, risk, fumes and low-flying aircraft.

How can cluster development be used to promote airport land use compatibility?
Clustering has several advantages for airport land use compatibility planning. It can be especially valuable with respect to safety if portions of the remaining undeveloped land are not just free of buildings, but also relatively flat and clear of other large objects such as trees and poles. If large enough—about a football field in size—these "open land" areas can potentially serve as emergency landing spots for small aircraft. For residential uses, clustering the dwellings into multifamily buildings can make them less susceptible to noise intrusion.

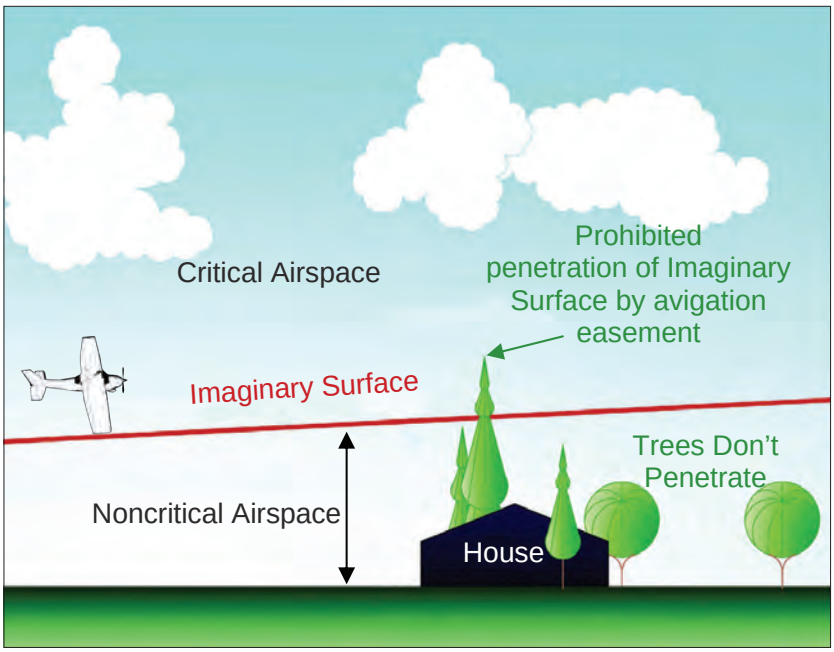
One caution to recognize with clustering is that its use should be limited to areas that have frequent airport operations and in areas where the potential for aircraft accidents is elevated, such as the runway approach. Providing open land areas can enhance the prospects for successful near-airport emergency landings when the aircraft is under control while descending. However, many accidents involve aircraft that are out of control and will strike whatever is in their path. Allowing a high concentration of people in the high-risk compatibility zones is not wise.

Additionally, any object taller than 200 feet requires FAA notification, regardless of the object's proximity to any airport. Also important to understand is that federal law places the burden for FAA notification of development near airports on the proponents of such development, not on the local land use jurisdiction. The role of local jurisdictions is to alert project proponents of the notification requirements.

Avigation Easements

As with any type of easement, an avigation easement is a conveyance of specified property rights from the owner of the property to another party. Avigation easements are recorded with the title to the underlying properties and run with the land—that is, they remain in effect even with sale of the property.

Avigation Easements May Be Used To Protect Critical Airspace



Source: California Airport Land Use Planning Handbook, 2002 / Mead & Hunt

In most cases, avigation easements are owned by the entity owning the airport. The airport may obtain the easements either through purchase or via dedication. An avigation easement typically gives the easement owner the right to fly aircraft over the property at a low altitude and to cause noise, vibrations, exhaust particle emissions, and other impacts associated with normal flight. Limits on the heights of structures, trees, and other objects are also usually established by avigation easements. To enforce these limits, an avigation easement may give the easement owner the right to enter the property to remove or reduce the height of objects that exceed the height limits.

In addition to the specific rights that avigation easements convey, another function they serve is as a form of buyer awareness that carries with it a degree of legal protection for the airport. By having an avigation easement on their property, property owners cannot easily argue politically or through litigation that the airport generates unacceptable noise levels or creates other impacts. While useful in this way, avigation easements do nothing to change the fundamental incompatibility of residential and other inappropriate land uses—they do not address the quality of life people experience.

Another important limitation of avigation easements is that they normally do not restrict the underlying use of the property. Thus, the property could still be used for other type of land use that may or may not be incompatible with airport activity in ways other than height. Where airports wish to prohibit specific land uses—or, conversely, only allow specified uses—they sometimes acquire a type of easement sometimes called an approach protection easement. In practice though, approach protection easements are only occasionally used because their cost is usually not much less than for fee title acquisition.

How can avigation easements be used to promote airport land use compatibility?
Short of fee title property acquisition, airport ownership of an avigation easement is the most certain means of ensuring protection of the runway approaches from too tall objects. For property located close to runway approaches where common structures, trees, and other objects could penetrate the airport airspace, a common practice is to require that the property owner dedicate an avigation easement to the airport as a condition for local approval of property development.

An additional benefit to avigation easements is that they serve as a form of buyer awareness tool as described in the next section. Caution should be exercised, however, in attempting to require avigation easement dedication in locations where buyer awareness is their only purpose. Their most appropriate use is for locations where height limits are substantial or where significant constraints on the development or use of the property are necessary for noise or safety reasons.

Other Tools for Enhancing Compatibility

In addition to the tools identified elsewhere in the guidelines, fly friendly procedures, noise insulation, and property disclosure may be appropriate when used in conjunction with traditional zoning, overlays districts, TDRs or a combination of regulations and incentives. These tools are often used by jurisdictions to .....

Fly Friendly Procedure

A fly friendly procedure is a voluntary noise abatement program that helps airports reduce their noise footprint within the community. They are educational programs that promote recommended piloting practices and navigation techniques to help minimize impacts on surrounding land uses. Fly friendly procedures are advisory in nature and serve to help pilots be better neighbors.

They are not:

- A tool to discriminate against aircraft propulsion systems (i.e., jets).
- A way of giving preferential treatment to specific aircraft types (i.e., fixed wing, rotorcraft).
- A way to limit commercial service or interstate commerce.
- A way to supersede Federal Aviation Regulations that govern flight or the pilot in command's responsibility for safety air navigation.

Harvey Field's voluntary noise abatement procedure.

How can fly friendly procedures be used to promote airport land use compatibility?
Working toward a more aviation compatible environment is everyone's responsibility and by implementing voluntary fly friendly procedures airport sponsors and pilots can help minimize aviation impacts on surrounding land uses. Airport sponsors can work with the pilot community on ways to minimize aircraft impacts near noise sensitive uses and residential development.

Fly friendly procedures may:

- Designate a preferred runway for all traffic.
- Identify the preferred pattern for fixed wing aircraft.
- Identify the preferred pattern for rotor aircraft.
- Identify overflight areas to avoid.
- Recommend a pattern altitude.
- Recommend a reduced power setting on takeoff, as soon as safe and practical.
- Encourage use of the full runway to gain maximum altitude before overflying adjacent neighborhoods.
- Recommend a climb-out distance and turn to avoid sensitive areas, if at a safe and appropriate altitude.

Noise Insulation

Noise insulation is a mitigation measure that may be utilized in existing structures. For airports that qualify under the FAA's Part 150 program, noise insulation may be an appropriate course of action. However, it should not be used as a mitigation measure in new residential development. It is important to note that it does not provide for compatibility outside the structure and therefore does not meet the intent of RCW 36.70.547. As discussed before, outside activity is a substantial aspect of single-family residential development.

Buyer Awareness Tools

As indicated in previous chapters, the guidebook describes different types of impacts found in the airport influence area. The guidebook also provides a range of actions or tools that can be used to promote compatible land uses. However, rarely do communities have the opportunity to wipe the slate clean and start over with new development or redevelopment patterns. More than likely communities are planning around existing development patterns that may have pockets of land uses that may or may not be compatible when located adjacent to airports. In these cases, options are available to enhance the public's knowledge and understanding of airport impacts through buyer awareness measures.

Jurisdictions across the state have developed different notice requirements and although variations are sometime created, measures designed specifically for the purpose of promoting buyer awareness fit mostly into two categories:

- Aviation Disclosure Notice
- Aviation Easements
- Real Estate Disclosure Statement.

Avigation easements can also serve as a means to disclosed the airport location and aviation impacts. However, this devise primarily used by the airport sponsor to protect critical flight paths. More information on avigation easement is discussed above.

Aviation Disclosure Notices

The aviation disclosure notice is a tool that is used by local land use jurisdictions to disclose the proximity of the airport and airport operations to property that may impact or be impacted by the airport and airport operations. The notice is generally recorded with the County Auditor for noise sensitive uses or uses that may be affected by low-flying aircraft, odor, vibration, and other aviation related impacts. Aviation notice requirements are generally set forth within the local jurisdictions development code, such as the subdivision regulations and or zoning regulations. The following criteria is generally used to apply the disclosure requirements.

Proposed Notice Procedures for New or Existing Lots of Record

Proposed New Lots of Record – As a condition of approval for major and short subdivisions, binding site plans, or similar documents, a note should be required on the face of the final plat map as a condition of approval of the subdivision if the proposed subdivision is located within the airport influence. Plat maps are then recorded with the County Auditor during the normal subdivision process.

Existing Lots of Record – As a condition of new development on existing lots of record, an aviation disclosure notice should be recorded with the County Auditor. The notice would be recorded for all new development/building permit activity, substantial remodels (as defined by the local jurisdiction), conditional use permits, and special use permit within the airport influence area.

Many jurisdictions require a disclosure notice for areas within the airport influence area (5,000 feet from the airport runway) that have noise sensitive uses such as residential uses. Others require notice within horizontal and approach surfaces identified within FAR Part 77 *Imaginary Surfaces*, while other may require notice within the entire airport influence area.

Disclosure During Real Estate Transactions

Some states have established statutory guidance with regard to disclosure of external impacts on a property such as noise, odors, natural hazards, and proximity to undesirable land uses. Airport proximity and the presence of frequent aircraft overflights may be one of the conditions to be disclosed during the sale or lease of residential property.

Disclosure is an obligation between private parties and normally not something that state or local governments can dictate. Nevertheless, WSDOT Aviation encourages counties, cities, and towns that have airports in their jurisdictions to identify the area within which airport proximity disclosure would be appropriate and to make this information known to real estate agents and others who are regularly involved in facilitating real estate transactions.

Appendix F Compatibility Criteria

Table F-1

Maximum Residential Density						
Compatibility Zones	**Zone 1**	**Zone 2**	**Zone 3**	**Zone 4**	**Zone 5**	**Zone 6**
Maximum Residential Density						
	Average Number of Dwelling Units Per Gross Acre					
Agricultural (farmland/forest)	0	Maintain current comprehensive plan designation and zoning designation				
Rural (outside an urban growth boundary)	0	1 d.u. per 10 acres	1 d.u. per 10 acres[A]	1 d.u. per 5 acres[A]	1 d.u. per 10 acres[A]	1 d.u. per 5 acres
Urban (within the urban growth boundary)	0	0	B	C	B	C
Maximum Intensities for Nonresidential Uses (Commercial, Industrial, Offices, and Activities)						
	Average Number of People Units Per Gross Acre					
Agricultural (farmland/forest)	1-5[E]	D, E	D, E	D, E	D, F	D
Rural (outside an urban growth boundary)	1-5[E]	10-25[E]	10-25[E]	40-60[E]	100-150[E]	100-150[G]
Urban (within the urban growth boundary)	1-5[E]	50-75[E]	80-120[E]	100-150[E]	100-150[E]	No Limit[G]

Notes:

A Cluster to preserve open space to maintain open approach corridor at and near runway ends.

B Infill development up to average of surrounding residential area is allowed, but is appropriate only if nonresidential uses are not feasible

C Promote high density and intensity mixed use development (15 or more d.u. per acre)

D Maintain current comprehensive plan designation and zoning designation.

E Special Function Land uses should be prohibited.

F 50-100 people per acre allowed if on airport and aviation-related.

G Special Function Land uses should be avoided.

Table F-2
Airport Land Use Matrix

	Compatibilty Zones					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
A. Resource Operations						
1. Agricultural (Commercial)						
Agriculture, horticulture, general farming (crops only, not feedlots and stockyards)	P	P	P	P	P	P
Agricultural building	L	L	P	P	P	P
Agricultural chemical sales/storage	X	L	P	P	P	P
Agricultural Housing/Farm labor	X	X	L	P	L	P
Agricultural housing/farm labor	X	X	L	P	L	P
Agricultural market	X	X	P	P	X	P
Agricultural related industries	X	L	P	P	P	P
Animal husbandry	X	L	L	L	X	P
Agricultural feeding operation or stockyards	X	X	X	X	X	X
Agriculture or food processing facility	X	L	P	P	L	P
Livestock auction	X	X	X	L	X	P
Fairgrounds	X	X	X	X	X	P
Floriculture, aquaculture	X	L	P	P	P	P
Fruit bin sales/storage	X	L	P	P	P	P
2. Forest (Commercial)						
General forest silver culture	L	L	P	P	P	P
Forest product processing	X	L	P	P	P	P
3. Mining/Refining/Offsite Hazardous Waste Treatment						
Asphalt paving and roofing materials, rock crushing	X	X	L	L	L	P
Mining including sand and gravel pits	X	L	L	L	X	P
Stockpiling of earthen materials	X	L	L	L	X	P
B. Rural Development						
1. Rural Residential						
Single-family dwelling (large lot, 5 acres or greater*)	X	L	L	P	X	P
Single-family dwelling, rural centers	X	X	L	L	X	L
Residential Cluster Development, 40% open	X	X	LSC	X	X	P
Multi-family dwelling	X	X	X	X	X	P
Temporary farm housing	X	X	P	P	L	P

Chart Symbols

- **"L" Limited** – Uses or activities that may be compatible with airport operations depending on their location, size, bulk, height, density and intensity of use.
- **"LSC" Limited Special Conditions** – Development should be moved away from the extended runway centerline. Open space should be devoted to areas that experience elevated risk.
- **"P" permitted** – Uses or activities that should be permitted, however, these activities should be reviewed to ensure that they will not create height hazard obstructions, smoke, glare, electronic, wildlife attractants, or other airspace hazards.
- **"X" Prohibited** – uses or activities that should not be constructed near the airport.

All uses or activities identified herein are subject to intensity and density limitations set forth in Table F-1. Particular attention should be given to developments that when located in combination with other permitted or limited activities may create cumulative impacts on airport operations. All uses should be reviewed to ensure that they will not create airspace hazards.

	Compatibilty Zones					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
2. Rural Centers						
Single-family dwelling; up to 12 dwelling units/acre	X	X	L	L	X	L
Two - Four family dwelling (duplex) (*)	X	X	X	X	X	L
Multi-family dwelling; 12-20 units/acre	X	X	L	X	X	P
21+ units/acre	X	X	P	P	X	P
Agriculture/forest/mineral resources or industry (see item A)						
Community services (see item D2)						
Retail and commercial service (see items D4 & D5)						
Industrial/manufacturing (see item D4s & D5)						
C. Education Facilities						
1. Education Facilities						
Junior or community college	X	X	L	L	L	P
Schools, K-12 elementary, middle, senior high	X	X	X	X	X	X
Business school	X	L	L	L	L	P
Vocational schools	X	L	L	L	L	P
D. Urban Development						
1. Residential						
Single-family dwelling; up to 12 dwelling units/acre	X	X	X	X	X	L
Two - four-family dwelling (duplex)(*)	X	X	X	X	X	L
Multi-family dwelling(*): 15 or more	X	X	LSC	X	X	P
Mixed-use office/commercial/residential use	X	X	P	P	X	P
Residential development cluster 40% > open space	X	X	L	L	X	L
Residential infill	X	X	L	L	L	P
Mobile home parks	X	X	L	L	X	L
Boarding house	X	X	L	L	L	L
Retirement homes	X	X	X	X	X	L

Chart Symbols

- **"L" Limited** – Uses or activities that may be compatible with airport operations depending on their location, size, bulk, height, density and intensity of use.
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	Compatibilty Zones					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
2. Community Services						
Cemetery	P	P	P	P	L	P
Churches, synagogues, temples	X	X	L	L	X	L
Community center meeting halls, fraternal organizations	X	X	L	L	X	P
Convalescent, nursing home and group homes	X	X	X	X	X	L
Day care facilities, family in-home	X	X	L	L	X	L
Day care center	X	X	L	L	X	L
Funeral home	X	X	P	P	X	P
Police, fire stations, ambulance service	X	L	P	P	P	P
Hospital	X	X	X	X	X	X
Medical clinic	X	X	L	L	X	P
Correction facilities	X	L	L	L	L	L
Libraries	X	X	P	P	X	P
Museums and art galleries	X	X	L	P	P	P
Zoo	X	X	P	P	X	P
3. Amusement and Recreation						
Amusement park (permanent)	X	X	L	L	X	L
Bowling alleys	X	X	P	P	X	P
Campground	X	L	L	P	L	P
Recreational vehicle parks; short term	X	L	L	P	L	P
Drive-in theatres	X	X	L	L	X	P
Fairgrounds	X	X	P	L	L	P
Golf courses	X	L	P	P	X	P
Gymnasiums, exercise facilities	X	L	L	L	L	P
Horse racing tracks, speedways	X	X	X	X	X	X
Miniature golf courses	X	X	P	P	X	P
Movie theatres, auditoriums exhibition halls	X	X	L	L	X	P
Parks	L	L	P	P	L	P
Roller skating rink	X	X	L	L	X	P

Chart Symbols

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	Compatibilty Zones					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
4. Retail Trade and Service						
Addressing, mailing, and stenographic services	X	L	P	P	L	P
Advertising agencies	X	L	P	P	L	P
Airport uses and activities commercial/industrial	L	P	P	P	P	P
Animal clinic/hospital	L	P	P	P	P	P
Antique stores	X	L	P	P	X	P
Automobile, truck, manufactured home, and travel trailer sales	L	P	P	P	P	P
Automobile and recreational vehicle (RV) sales; weekend	L	P	P	P	L	P
Automotive: car wash	L	P	P	P	L	P
Sales lot/auto center	L	P	P	P	P	P
Parking lots and garages	L	P	P	P	P	P
Maintenance and repair shops	X	P	P	P	P	P
Paint and body repair shops	L	P	P	P	P	P
Parts and accessories (tires, batteries, etc.)	X	P	P	P	P	P
Specialized repair shops (radiator, etc.)	L	P	P	P	P	P
Towing services	L	P	P	P	P	P
Wrecking and dismantling yard	L	P	P	P	L	P
Bakery	X	P	P	P	L	P
Beauty and barber shops	X	L	P	P	X	P
Bed and breakfast inn	X	X	L	L	X	P
Boats and marine accessories	X Except storage L	P	P	P	P	P
Books, stationery, office supplies	Storage only	P	P	P	L	P
Building and trade (plumbing, heating, electrical, painting, etc.)	Storage only	P	P	P	L	P
Clothing and accessories	X	L	P	P	L	P
Communication towers	X	X	L	L	L	L
Computer and electronic stores	X	L	P	P	L	P
Department, discount, variety stores	X	X	P	P	X	P
Drug stores (optical goods, orthopedic supplies)	X	L	P	P	L	P
Employment agencies (private)	X	P	P	P	L	P

Chart Symbols

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	Compatibilty Zones					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
Farm and implements, tools and heavy construction equipment	X	L	P	P	P	P
Farm supplies	L	P	P	P	P	P
Financial institutions	X	P	P	P	L	P
Food store	X	P	P	P	L	P
Furniture, home furnishings, appliances	X	P	P	P	L	P
General hardware, garden equipment and supplies	X	P	P	P	L	P
Grocery and convenience stores	X	L	P	P	L	P
Heavy equipment storage, maintenance and repair	X	L	P	P	L	P
Insurance agents, brokers, and service agencies	X	P	P	P	L	P
Kennels	L	P	P	P	L	P
Laundries, laundromats, and dry cleaning plants	X	P	P	P	L	P
Liquor stores	X	P	P	P	L	P
Lumber yards	L	P	P	P	L	P
Medical and dental laboratory, offices and clinic	X	X	L	P	x	P
Mini Storage	L	P	P	P	P	P
Motels and Hotels	X	X	P	P	P	P
Motorcycles sales/repair (including maintenance)	X	P	P	P	L	P
Paint, glass, and wallpaper stores	X	P	P	P	L	P
Pet stores, pet supplies, and dog grooming	X	L	P	P	L	
Professional office buildings for architects, attorneys, government, etc.	X	L	P	P	P	P
Rental: auto, truck, trailer, fleet leasing services	L	P	P	P	L	P
Repairs: small appliances, tv, business machines, watches, etc.	L	P	P	P	L	P
Restaurant, cafe and drive-in eating facilities	X	L	P	P	P	P
Service station	X	L	P	P	L	P
Sporting goods, bicycle shops	X	P	P	P	P	P
Taverns, bars, dance establishments	X	L	P	P	L	P

Chart Symbols

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	Compatibilty Zones					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
5. Industry/Manufacturing						
Aircraft parts	Storage only	L	P	P	P	P
Aircraft industrial	Storage only	L	P	P	P	P
Apparel and accessories	X	L	P	P	X	P
Bakery products (wholesale)	Storage only	L	P	P	X	P
Beverage industry	Storage only	L	P	P	X	P
Canning, preserving, and packaging fruits, vegetables, and other foods	X	L	L	L	X	P
Cement and concrete plants	X	L	L	L	X	P
Chemicals (industrial, agricultural, wood, etc.)	X	X	L	L	X	L
Concrete, gypsum, and plaster products	Storage only	L	P	L	L	P
Confectionery and related products (wholesale)	Storage only	P	P	P	L	P
Mini storage	P	P	P	P	P	P
Product assembly	Storage only	L	P	P	L	P
Prefabricated structural wood products and containers	Storage only	P	P	P	L	P
Printing, publishing, and binding	Storage only	P	P	P	L	P
Rendering plants, slaughter houses	X	X	X	X	X	L
Rubber products	X	L	P	P	L	P
Sawmills and planing mills	Storage only	L	P	P	L	P
Sheet metal and welding shops	Storage only	P	P	P	L	P
Stone products (includes finishing of monuments for retail sale)	Storage only	P	P	P	L	P

Chart Symbols

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	Compatibilty Zones					
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
6. Wholesale Trade-Storage						
Warehouses	Storage only	P	P	P	P	P
Wholesale trade	Storage only	P	P	P	P	P
Storage facilities; bulk	L	P	P	P	P	P
commercial	L	P	P	P	P	P
mini-storage	L	P	P	P	P	P
E. Transportation and Utilities						
1. Transportation						
Bus terminals	X	L	P	P	L	P
Transportation storage and maintenance facilities	Storage only	P	P	P	P	P
Transportation brokerage offices; without truck parking	X	P	P	P	P	P
with truck parking	L	P	P	P	P	P
Contract truck hauling, rental of trucks with drivers	L	P	P	P	P	P
Rail, truck terminals (for short-term storage, office)	L	P	P	P	P	P
Air storage and office use	Storage only	P	P	P	P	P
Railroad switch yards, maintenance, and repair facilities, etc.	X	P	P	P	P	P
Taxicab terminals, maintenance, and dispatching centers, etc.	X	P	P	P	P	P
2. Utilities						
Power generating facilities	L	L	L	L	L	L
Utility services (substations, etc.)	L	L	L	L	L	P
Wholesale trade	L	P	P	P	L	P
Storage facilities; bulk	L	P	P	P	P	P
Commercial	L	P	P	P	P	P

Chart Symbols

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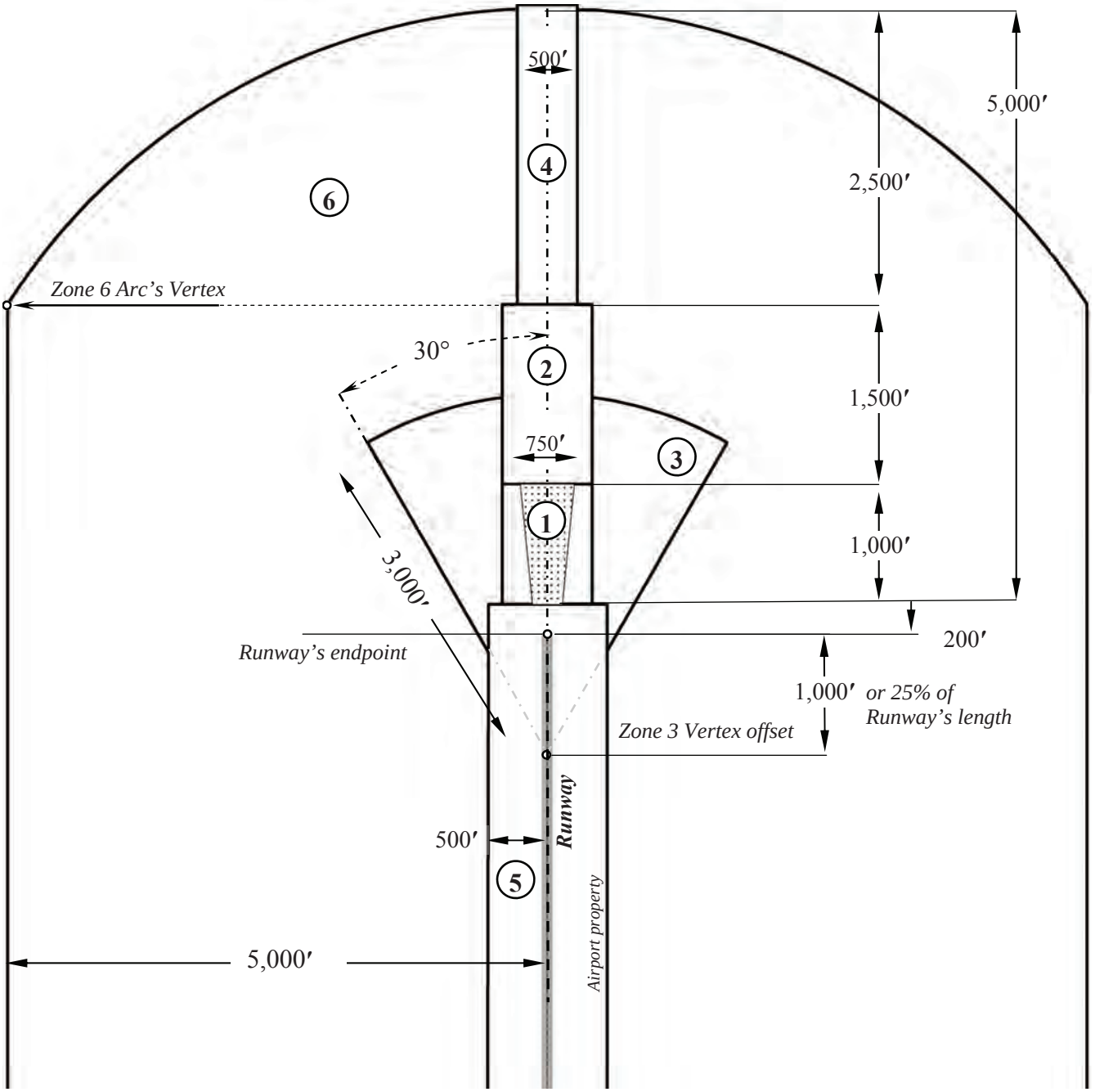
Airport Runways Under 3000 Feet



Airport Compatibility Zones			
Dimensions	**Length**	**Width**	**Notes**
Zone 1	1,000′	750′	Zone 1 includes the runway's RPZ. The RPZ is depicted with ordered stipple within Zone 1
Zone 2	1,500′	750′	NA
Zone 3	3,000′	*	*Plot Zone 3's vertex 1,000′ from the runway's endpoint or 25% of runway's length
Zone 4	2,500′	500′	NA
Zone 5	*	500′	Zone 5 ends 200′ past the runway's endpoint
Zone 6	5,000′	5,000’	Set the vertex for Zone 6's arc parallel to the end of Zone 2

RPZ – Runway Protection Zone

Sources of noise in the vicinity are shown in the attached map. They include the following:

- Existing surface mine (and anticipated expansion area)
  - Asphalt batch plant
  - Rock crusher
  - Vehicle operations (trucks, loaders, etc)
  - Occasional blasting
- Adjacent industrial development (and future industrial uses in undeveloped industrial areas)
- Bus barn and elementary school
- Animal shelter
- Solid waste transfer center

Noise monitoring was not required as part of this application.

Attached are typical noise profiles for two types of equipment typically used in surface mining compared to current Kitsap County noise regulation thresholds for receiving areas (Class A are residential areas, Class B are commercial areas, and Class C are industrial areas). Similar information could not be readily found for asphalt batch plants, blasting, or other types of equipment.

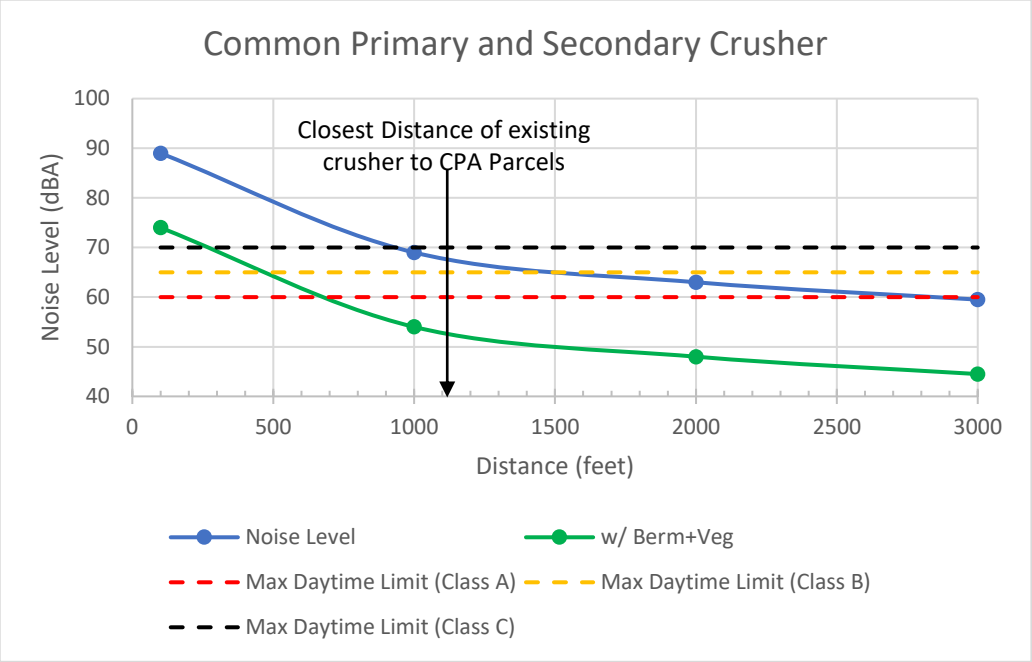
Vicinity Map of Primary Noise Sources

Dickey Pit (CPA 18-00495)
Attachment C7

Printed October 31, 2019

** This map is not a substitue for field survey ** **Map Scale:** 1 inch = 833 feet

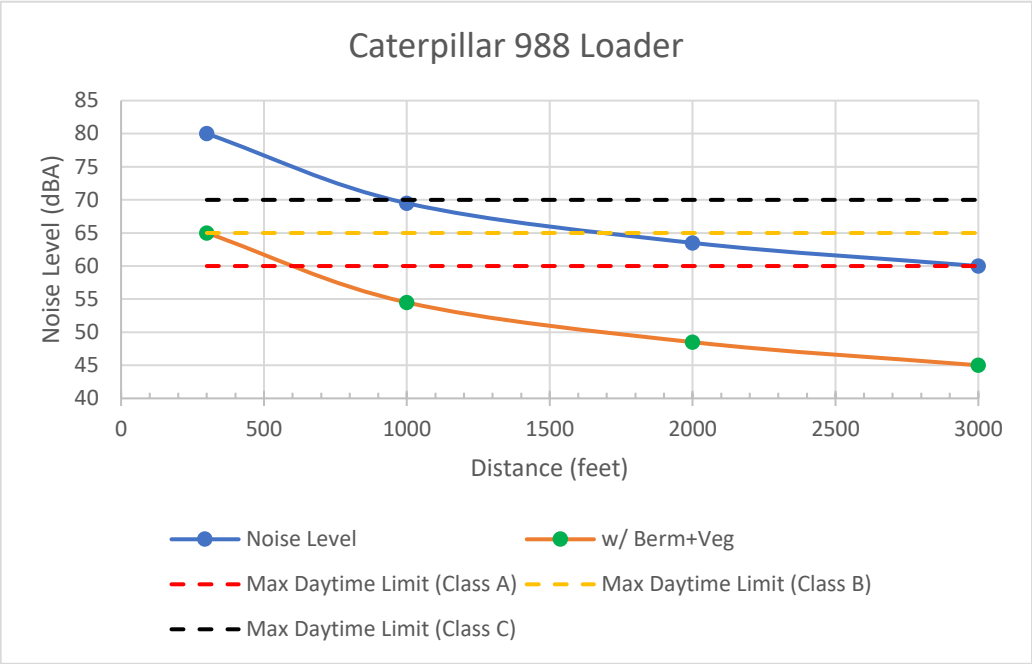
Kitsap Co. Parcel Search Application



Note: It is not clear if the existing crusher has berms or other sound barriers.

Distance (ft)	Noise Level	w/ Berm+Veg	Max Daytime Limit (Class A)	Max Daytime Limit (Class B)	Max Daytime Limit (Class C)
100	89	74	60	65	70
1000	69	54	60	65	70
2000	63	48	60	65	70
3000	59.5	44.5	60	65	70

Source: Washington Department of Natural Resources. 1997. Best Management Practices for Reclaiming Surface Mines in Washington and Oregon. Open File Report 96-2.
Source: KCC 10.28.040



Distance (ft)	Noise Level	w/ Berm+Veg	Max Daytime Limit (Class A)	Max Daytime Limit (Class B)	Max Daytime Limit (Class C)
300	80	65	60	65	70
1000	69.5	54.5	60	65	70
2000	63.5	48.5	60	65	70
3000	60	45	60	65	70

Source: Washington Department of Natural Resources. 1997. Best Management Practices for Reclaiming Surface Mines in Washington and Oregon. Open File Report 96-2.
Source: KCC 10.28.040

Chapter 10.28
NOISE*

* **Editor's Note:** Prior ordinance history: Ord. 3 (1969) and part of an unnumbered ordinance dated August 28, 1972.

Sections:

10.28.010 Definitions.

(a) "Background sound level" means the level of all sounds in a given environment, independent

of the specific source being measured.

(b) "dBa" means the sound pressure level in decibels measured using the "A" weighting network on a sound level meter. The sound pressure level, in decibels, of a sound is twenty times the logarithm to the base ten of the pressure of twenty micropascals.

(c) "EDNA" means the environmental designation for noise abatement, being an area or zone (environment) within which maximum permissible noise levels are established.

(d) "Noise" means the intensity, duration and character of sounds, from any and all sources.

(e) "Person" means any individual, corporation, partnership, association, governmental body, state agency or other entity whatsoever.

(f) "Property boundary" means an imaginary line exterior to any enclosed structure, at ground surface, which separates the real property owned by one person from that owned by another person, and its vertical extension.

(g) "Racing event" means any motor vehicle competition conducted under a permit issued by a governmental authority having jurisdiction or, if such permit is not required, then under the auspices of a recognized sanctioning body.

(h) "Receiving property" means real property within which the maximum permissible noise levels specified herein shall not be exceeded from sources outside such property.

(i) "Sound level meter" means a device which measures sound pressure levels and conforms to Type 1 or Type 2 as specified in the American National Standards Institute Specification S1.4-1971.

(j) "Watercraft" means any contrivance, excluding aircraft, used or capable of being used as a means of transportation or recreation on water.

(Ord. 3-A (1975) § 2, 1975)

10.28.030 Environmental designations.

For purposes of establishing noise limitations, the unincorporated areas of Kitsap County shall be classified in accordance with Kitsap County zoning ordinance codified in Title 17, and any amendments thereto, as follows:

(a) Residential Zones. Class A EDNA residential zones shall include the following:

(1) All single-family residential zones;

(2) All multiple-family residential zones;

(3) Residential mobile home zone;

(4) Agricultural zone;

(5) Forestry zone;

(6) Undeveloped land zone.

(b) Commercial Zones. Class B EDNA commercial zones shall include the following:

(1) Business neighborhood zone;

(2) Business general zone;

(3) Commercial zone;

(4) Light manufacturing zone.

(c) Industrial Zones. Class C EDNA industrial zones shall include the following: Manufacturing zone.

Nonconforming uses, as defined by Chapter 17.570, and any amendments thereto, shall be classified according to the actual use of the property under the above EDNA classifications. The maximum permissible noise level for a nonconforming use shall be that level which is applicable to the EDNA classification of the nonconforming use limited by the EDNA of the receiving property.

(Ord. 3-A (1975) § 3, 1975)

10.28.040 Maximum permissible environmental noise levels.

(a) The noise limitations established are as set forth in the following table after any applicable adjustments provided for herein are applied:

EDNA OF NOISE SOURCE	EDNA OF RECEIVING PROPERTY		
	Class A	Class B	Class C
Class A	55 dBA	57 dBA	60 dBA
Class B	57	60	65
Class C	60	65	70

(b) Between the hours of 10:00 p.m. and 7:00 a.m., the noise limitations of the foregoing table shall be reduced by 10 dBA for receiving property within Class A EDNAs.

(c) At any hour of the day or night, the applicable noise limitations in subsections (a) and (b) of this section may be exceeded for any receiving property by no more than:

(1) 5 dBA for a total of fifteen minutes in any one-hour period; or

(2) 10 dBA for a total of five minutes in any one-hour period; or

(3) 15 dBA for a total of 1.5 minutes in any one-hour period.

(Ord. 3-A (1975) § 4, 1975)

10.28.050 Exemptions from Sections 10.28.040 and 10.28.145 between 7:00 a.m. and 10:00 p.m.

The following shall be exempt from the provisions of Sections 10.28.040 and 10.28.145 between the hours of 7:00 a.m. and 10:00 p.m.:

(1) Sounds originating from residential property relating to temporary projects for the maintenance or repair of homes, grounds and appurtenances;

(2) Sounds created by the discharge of firearms on authorized shooting ranges;

(3) Sounds created by blasting;

(4) Sounds created by aircraft engine testing and maintenance not related to flight operations, provided that aircraft testing and maintenance shall be conducted at remote sites whenever possible;

(5) Sounds created by the installation or repair of essential utility services.

(Ord. 3-B (1995) § 2, 1995: Ord. 3-A (1975)q § 5(a), 1975)

10.28.060 Exemptions from Sections 10.28.040(b) and 10.28.145.

The following shall be exempt from the provisions of Sections 10.28.040(b) and 10.28.145:

(1) Noise from electrical substations and existing stationary equipment used in the conveyance of water by a utility;

(2) Noise from existing industrial installations which exceed the standards contained in these regulations and which, over the previous three years, have consistently operated in excess of fifteen hours per day as a consequence of process necessity and/or demonstrated routine normal operation. Changes in working hours, which would affect exemptions under this regulation, require approval of the Kitsap County commissioners, or their duly authorized representatives.

(Ord. 3-B (1995) § 3, 1995: Ord. 3-A (1975) § 5(b), 1975)

10.28.070 Exemptions from Section 10.28.040 relating to noise reception in Class A EDNAs and from Section 10.28.145.

The following shall be exempt from the provisions of Section 10.28.040, and from the provisions of Section 10.28.145, except insofar as such provisions relate to the reception of noise within Class A EDNAs between the hours of 10:00 p.m. and 7:00 a.m.:

(1) Sounds originating from temporary construction sites as a result of construction activity;

(2) Sounds originating from forest harvesting and silvicultural activity.

(Ord. 3-B (1995) § 4, 1995: Ord. 3-A (1975) § 5(c), 1975)

10.28.080 Exemptions from all provisions of Sections 10.28.040 and 10.28.145.

The following shall be exempt from all provisions of Sections 10.28.040 and 10.28.145:

(1) Sounds created by motor vehicles when regulated by WAC Chapter 173-62 and motor vehicles, licensed or unlicensed when operated off public highways except when such sounds are received in Class A EDNAs;

(2) Sounds originating from aircraft in flight and sounds that originate at airports which are directly related to flight operations;

(3) Sounds created by surface carriers engaged in interstate commerce by railroad;

(4) Sounds created by warning devices not operating continuously for more than five minutes, or bells, chimes and carillons;

(5) Sounds created by safety and protective devices where noise suppression would defeat the intent of the device or is not economically feasible;

(6) Sounds created by emergency equipment and work necessary in the interests of law enforcement or for health, safety or welfare of the community;

(7) Sounds originating from motor vehicle racing events at existing, authorized facilities;

(8) Sounds originating from officially sanctioned parades and other public events;

(9) Sounds from existing refrigeration equipment for preservation of retail food goods;

(10) Sounds emitted from petroleum refinery boilers during the startup of the boilers; provided that the startup operation is performed during daytime hours whenever possible;

(11) (Repealed);

(12) Sounds caused by a natural phenomena and unamplified human voices;

(13) Sounds created by the discharge of legal fireworks only during the specific days, times and locations where discharge is allowable pursuant to existing state and local law.

(Ord. 3-B (1995) § 5, 1995: Ord. 133-A (1992) § 45, 1992: Ord. 133 (1989) § 45, 1989: Ord. 3-A (1975) § 5(d), 1975)

10.28.085 Exemptions from all provisions of Section 10.28.145.

The following shall be exempt from all provisions of Section 10.28.145 but not thereby made exempt from other applicable ordinances:

(1) Sounds commonly associated with an existing commercial operation which has been approved through a public hearing process and is operating in compliance with all permit conditions relating to noise;

(2) Sounds commonly associated with an existing commercial operation which was established prior to the effective date of any land use regulation(s) and is thereby nonconforming.

(Ord. 3-B (1995) § 6, 1995)

10.28.090 Variances – Granting when.

Variances may be granted by the Kitsap County commissioners, or their duly authorized representatives, to any person from any particular requirement of this chapter, if findings are made that immediate compliance with such requirement cannot be achieved because of special circumstances rendering immediate compliance unreasonable in light of economic or physical factors, encroachment upon an existing noise source, or because of nonavailability of feasible technology or control methods. Any such variance or renewal thereof shall be granted only for the minimum time period found to be necessary under the facts and circumstances.

(Ord. 3-A (1975) § 6(a), 1975)

10.28.100 Variances – Implementation schedule.

An implementation schedule for achieving compliance with this chapter shall be incorporated into any variance issued.

(Ord. 3-A (1975) § 6(b), 1975)

10.28.110 Variances – Issuance – Hearings when.

Variances shall be issued only upon application in writing and after providing such information as may be requested. No variance shall be issued for a period of more than thirty days except upon due notice to the public with opportunity to comment. Public hearings may be held, when substantial public interest is shown, at the discretion of the issuing agency.

(Ord. 3-A (1975) § 6(c), 1975)

10.28.120 Variances – Noise sources with overriding considerations for.

Sources of noise, subject to this chapter, upon which construction begins after the effective date of this chapter, shall immediately comply with the requirements of this chapter except in extraordinary circumstances where overriding considerations of public interest dictate the issuance of a variance.

(Ord. 3-A (1975) § 6(d), 1975)

10.28.130 Measurement.

Noise measurement for the purposes of enforcing the provisions of Section 10.28.040 shall be measured in dBA with a sound level meter with the point of measurement being at any point within the receiving property; provided, however, a violation of this chapter may occur without the above noise measurements being made.

(Ord. 3-A (1975) § 7, 1975)

10.28.140 Enforcement policy.

(a) Compliance with this chapter may be enforced by mandatory injunction brought by the owner or owners of land lying within the area affected by any violation of this chapter, or the prosecuting attorney may commence an action or proceeding for abatement and enjoinment thereof, in the manner provided by law, and shall apply to such court as may have jurisdiction to grant such relief as will abate, restrain and enjoin the violation.

(b) Any person, violating the provisions of this chapter, in addition to the penalties provided for in Section 10.28.150, shall, by order of the court in such action, be ordered to forthwith abate and remove such nuisance; and if the same is not done by such offender within twenty-four hours, the same shall be abated and removed under the direction of the officer authorized by order of the court, which order of abatement shall be entered upon the docket of the court and made a part of the judgment in the action. Any such offender shall be liable for all costs and expenses of the abatement when such nuisance has been abated by any officer or authorized agent of Kitsap County; the costs and expenses shall be taxed as part of the costs of the prosecution against the offender, liable to be recovered as other costs are recovered, and in all cases where the officer is authorized by the court to abate any such nuisance, he shall keep an account of all expenses attending such abatement; and in addition to other powers given to collect such costs and expenses, Kitsap County may bring suit for the same in any court of competent jurisdiction against the offender carrying on the nuisance so abated.

(c) In addition to or as an alternative to any other penalty provided in this chapter or by law, any violation of any provision of this chapter shall constitute a Class I civil infraction. Each violation shall constitute a separate infraction for each and every day or portion thereof during which the violation is committed, continued, or permitted. Infractions shall be processed in accordance with the provisions of the Civil Enforcement Ordinance (Chapter 2.116 of this code).

(Ord. 3-D (1997) § 1, 1997: Ord. 3-A (1975) § 9, 1975)

10.28.145 Public disturbance noises.

It is unlawful for any person to cause, or for any person in possession of real or personal property to allow to originate from such property, a public disturbance noise. Provided, that owners or possessors of real property shall not be responsible for public disturbance noises created by trespassers. The following sounds are public disturbance noises:

(1) Frequent, repetitive or continuous sound of any horn or siren attached to a motor vehicle, except as a warning of danger or as specifically permitted or required by law;

(2) Frequent, repetitive, or continuous sounds from starting, operating, repairing, rebuilding, or testing of any motor vehicle, motorcycle, dirt bike, or other off-highway vehicle, or any internal combustion engine, within a rural or residential district, and which unreasonably disturb or interfere with the peace, comfort and repose of owners or possessors of real property in the area affected by such noise;

(3) Use of a sound amplifier or other device capable of producing or reproducing amplified sound upon public streets for the purpose of commercial advertising or sales or for attracting the attention of the public to any vehicle, structure, or property or the contents therein except as permitted by law, except that vendors whose sole method of selling is from a moving vehicle shall be exempt from this subsection;

(4) Any loud and raucous sound made by use of a musical instrument, whistle, sound amplifier, or other device capable of producing or reproducing sound which emanates frequently, repetitively or continuously from any building, structure or property, such as sound originating from a band session, tavern operation, or social gathering, and which unreasonably disturb, or interfere with the peace, comfort and repose of possessors of real property in the area affected by such noise;

(5) Noise from portable or motor vehicle audio equipment, such as a tape player, radio or compact disc player, while in park areas, residential and commercial zones, or any area where residences, schools, human service facilities, or commercial establishments are in obvious proximity to the source of the sound, and where the volume of such audio equipment is such that it can be clearly heard by a person of normal hearing at a distance of fifty feet or more from the source of the sound; provided, however, that this section shall not apply to persons operating portable audio equipment within a public park pursuant to an event sanctioned by a responsible authority under valid permit or license.

(Ord. 3-B (1995) § 7, 1995)

10.28.146 Enforcement of public disturbance noises.

(a) The county sheriff's office shall enforce the provisions of Section 10.28.145. Evidence of sound level through the use of a sound level meter reading shall not be necessary to establish the

commission of the offense. Provisions of Section 10.28.145 shall not affect any other claim, cause of action or remedy including any prosecution for violation of sections regulating environmental noise.

(b) For public disturbance noise that is not related to motor vehicles and noise emanating from vehicles, enforcement may be undertaken only upon receipt of a complaint made by a person residing or who is employed in an area affected by a public disturbance noise, except as provided in Section 10.28.145(5) in which event enforcement shall be undertaken upon complaint made by any person affected by the public disturbance noise.

(c) The subsections of Section 10.28.145 relating to motor vehicles and noise emanating from vehicles may be subject to enforcement with or without a citizen's complaint.

(Ord. 3-B (1995) § 8, 1995)

10.28.150 Violation – Penalty.

Inasmuch as this chapter is for the benefit of the life, health, welfare and safety of the inhabitants of the unincorporated areas of Kitsap County, and is passed under the power given to the county commissioners by the state, it is a misdemeanor to violate any of the provisions of this chapter or any amendments thereto, and such violation shall be punishable by imprisonment in the county jail for not more than ninety days, or by a fine of not more than two hundred fifty dollars. Each day charged shall constitute a separate offense. The prosecuting attorney shall have discretion in each violation of this chapter to proceed with prosecution, either criminally in accordance with this section or civilly in accordance with Section 10.28.140, or both.

(Ord. 3-A (1975) § 8, 1975)

CPA 18-00495 – Preliminary Capital Facility Review Summary

This document reflects the preliminary review of the proposal by service providers and how it is expected to affect their long-range capital facilities plans (i.e. 20-year Capital Facilities Plan) and identifies if added deficits from the proposal could be addressed at the project level in the future.

Service	Provider	Existing Capacity Deficits	Current 20-year Plan Capacity Deficits	Added Deficits from Proposal
Roads	Kitsap County Public Works	**Yes** – The following intersection has PM peak traffic that exceed the LOS D threshold: • Newberry Hill Rd & Dickey Rd/Eldorado Rd The following intersections are on the County's Traffic Safety List: • Dickey Rd & Apex Airport Rd • Apex Airport Rd & Anderson Hill Rd • Anderson Hill Rd & Bucklin Hill Rd • Silverdale Way & Byron St • Newberry Hill & Provost • Anderson Hill & Provost/Old Frontier Rd • Old Frontier Rd & Greaves Way • Bucklin Hill and Silverdale Dickey Rd has significant geometric concerns, specifically two 90-degree turns. Roads in the area generally lack paved shoulders and/or sidewalks. A county-wide non-motorized North-South spine route is planned through the site.	**Yes** – The following road segments have long-term capacity deficiencies: • Anderson Hill Rd (Railroad trestle to Bucklin Hill Rd) • Bucklin Hill Rd (Anderson Hill Rd to Silverdale Way) • Newberry Hill Rd (Provost Rd to Silverdale Way) • Silverdale Way (Newberry Hill Rd to Byron St) Potential constraints to increasing roadway capacity include the following: • Railroad trestle on Anderson Hill Rd • SR-3 underpass at Anderson Hill Rd • Roundabout at Anderson Hill Rd & Frontier Pl • SR-3 interchange at Newberry Hill Rd • Approach grades on Silverdale Way from Newberry Hill Rd to Byron St Dickey Rd and Apex Airport Rd (currently classified as "Urban Local Roads") as well as Willamette-Meridian Rd (currently classified as "Rural Local Road") will need to be analyzed for reclassification and design.	**Expected** – A model will need to be run to quantify the increased deficit. Other Notes: East-West and North-South connectivity through the site will be needed; Some measure to prevent through traffic on Cascade St (currently classified as "Urban Local Road") will be needed since it has geometric limitations and is not suitable to support through traffic.

Can the impacts to **ROADS** for this site specific rezone be addressed at the project level at the time a project application is submitted for development in the future?	**Yes**	**NO**
	☒	☐

Service	Provider	Existing Capacity Deficits	Current 20-year Plan Capacity Deficits	Added Deficits from Proposal
Transit	Kitsap Transit	**None**	**None** – Improvements are not planned for this area in the 2018-2023 Transit Development Plan. Kitsap Transit owns land on Newberry Hill Rd for a future (currently unscheduled) park and ride facility.	**Yes** – The anticipated level of development would likely contribute to future demand for a bus route along Dickey Rd. Other Notes: Bus stops and a pedestrian crossing on Dickey Rd would be important. A grid roadway network (vs typical subdivision streets & cul-de-sacs) in this urban area would better facilitate resident access to transit.

Can the impacts to **TRANSIT** for this site specific rezone be addressed at the project level at the time a project application is submitted for development in the future?	**Yes**	**NO**
	☒	☐

Sewer	Kitsap County Public Works	**Yes** – A gravity sewer main flows north along Dickey Rd in front of the proposal area. The 20-year Capital Facilities Plan (2016-2036) includes a near-term capacity project to replace the lower Anderson Hill gravity main and provide improvements including added capacity based on current zoning to Pump Station 3 at the Silverdale waterfront park.	**Yes** – The 20-year Capital Facilities Plan (2016-2036) identifies Central Kitsap Wastewater Treatment Plant capacity projects as well as several pump station and collection system capacity projects in the area, including: • Replacing upper Anderson Hill gravity main • Replacing lower Newberry Hill Rd (and some Provost Rd) gravity main and Pump Station 12 • Building new mains (gravity and force) and a pump station in the Dickey Rd and Newberry Hill Rd area to support planned growth.	**None** – Based on modelling the increased flow from the revised proposal of an additional 337 residents and 446 new jobs downstream impacts are not expected within the 20-year planning window.

Service	Provider	Existing Capacity Deficits	Current 20-year Plan Capacity Deficits	Added Deficits from Proposal	
Water	Silverdale Water District	**None**	**Yes** – Increased storage needed (currently studying possible regional storage and production in area)	**None** Other Notes: Various site improvements needed, including new mains (East-West & North-South) and pressure reduction valve; Interested in infiltrating recycled water in this area	
Schools	Central Kitsap School District	**No** – The current CKSD capital facilities plan (2016-2021) does not increase capacity but does replace and renovate many facilities and converts some temporary facilities to permanent facilities (Silverdale Elementary was recently refurbished; Klahowya Secondary School had an addition to replace temporary facilities; CK Middle School and CK High School replacements are underway). CKSD is currently looking at shifting some programming around to address near-term capacity constraints.	**Yes** – While CKSD's most recent forecast (2012-2021) projected enrollment to decline slightly from 2012 to 2014 and then remain steady through 2021, Kitsap County's 20-year Capital Facilities Plan enrollment forecast (2016-2036) indicates a long-term capacity deficit. The district will also need to continue to convert temporary facilities to permanent facilities over time.	**Expected** – Existing west side schools are pretty much at capacity and will need new capacity.	
Can the effects to SCHOOLS of this site specific rezone be addressed at the project level at the time of project application?				**Yes**	**NO**
				☒	☐
Fire/ Medic	Central Kitsap Fire & Rescue	**Yes** – At least some of these properties are not in the fire district and are not served; A new fire station is needed in this area	**Yes** – However the deficits should be addressed through the annexation of properties into the fire district which is currently underway, and the new residential fire station planned (~2023) at Anderson Rd & Olympic View Rd	**None**	
Police	Kitsap County - Sheriff	**Yes** – The area is currently served by the Silverdale Precinct. A 2017 needs assessment states a larger facility is needed to serve the area whether a future City of Silverdale has an independent police force or contracts for service with Kitsap County.	**Yes** – The 20-year Capital Facilities Plan (2016-2036) identifies a long-term deficit.	**Not Likely**	

Service	Provider	Existing Capacity Deficits	Current 20-year Plan Capacity Deficits	Added Deficits from Proposal
Parks	Kitsap County - Parks & Rec	**Yes** - The 20-year Capital Facilities Plan (2016-2036) identifies current deficits for the following park categories: • Natural Resource Areas • Regional Parks • Heritage Parks • Community Parks The Capital Facilities Plan does not analyze deficiencies for specific facilities, such as sports fields or playgrounds.	**Yes** – However some of the park category deficits may be more localized to certain portions of the County or may have been addressed through recent property acquisitions.	**Not Likely**
Storm-water	Kitsap County - Public Works	**None** – Provided current Stormwater Design Manual is followed	**None** – Provided current Stormwater Design Manual is followed	**None** – Provided current Stormwater Design Manual is followed
Solid Waste	Kitsap County - Public Works	**Yes** - This area is currently served with curbside garbage and recycling pickup that is voluntary. It is close to the Silverdale Recycling and Garbage Facility, where current use has exceeding design-capacity and is currently being upgraded and expanded. All garbage in the County goes to the Olympic View Transfer Station, where current use exceeds operational capacity and needed capacity improvements are scheduled (~2022).	**None** – The 20-year Capital Facilities Plan (2016-2036) identifies no further long-term deficits for this portion of the County.	**None** – The anticipated level of development will increase demand but will not create additional capacity deficits.
Natural Gas	Cascade Natural Gas	**Unknown** – 4" mains run along Dickey Rd, Newberry Hill Rd, Apex Airport Rd (to airport), and Anderson Hill Rd. Adequacy of capacity would depend on specific demand.	**Unknown -** Adequacy of capacity would depend on specific demand.	**Unknown -** Adequacy of capacity would depend on specific demand.
Power	Puget Sound Energy	**No response from provider**	**No response from provider**	**No response from provider**

Summary of Recent Market Activity

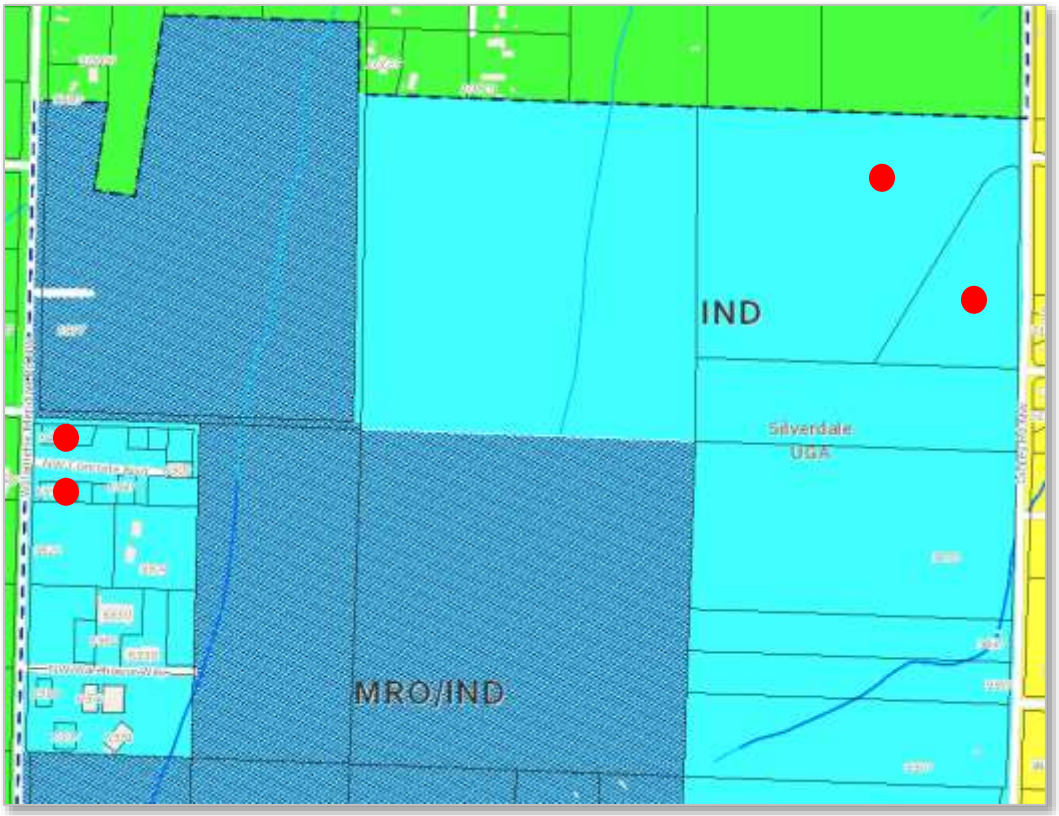
Permitting and Development

A quick review of recent and planned development activity on parcels (listed below) in the Dickey/Willamette-Meridian/Newberry Hill industrial area indicates there is recent demand for industrial land in this area.

- Parcel 192501-2-006-2005 (future anticipated mine expansion)
- Parcel 192501-1-021-2008 (2020 Planned Solid Waste Facility expansion)
- Parcel 192501-2-030-2005 (2019)
- Parcel 192501-1-022-2007 (2018-2019)
- Parcel 4449-001-005-0608 (2017-2019)
- Parcel 182501-3-010-2008 (2016-2019)
- Parcel 192501-2-034-2001 (2018)
- Parcel 192501-2-033-2002 (2015)
- Parcel 5601-000-002-0109 (2015)
- Parcel 192501-3-001-2008 (~2015 Logging for anticipated mine expansion)
- Parcel 8185-000-001-0009 (2014)
- Parcel 192501-2-028-2009 (2012-2014)

For Sale or Lease

On 1/9/2020, there were for sale or lease signs posted on four industrial (IND) zoned parcels in the area (red dots on map).



Photos

Industrial Park Site for Sale (1/9/2020)

Industrial Park Site Under construction (1/9/2020)

Industrial Park

Contractor

Contractor

Metal Fabrication

KEDA Consultation Notes

Date: July 16, 2019
Attendance: KEDA (John Powers, Kathy Cocus), Kitsap County DCD (Peter Best)

KEDA has not done any industrial demand/market analysis but offered the following anecdotal information based on a long history of economic development work in Kitsap County.

- Most typically, industrial business looking to locate or relocate in Kitsap County are looking for available space to lease in an existing facility.
- The typical industrial business is looking for an existing 40k SF facility on 100k SF site.
- A recent, but rare, example of a manufacturer looking for a location to develop a large new facility was looking for approximately 50 acres to build an approximately one million square feet (~29 acre) building with access to natural gas and sewer.
- Kitsap County has been slow to grow industrial sectors. Attracting/retaining larger scale operations has been limited.

While recognizing the residential development is valuable economic activity and affordable workforce housing is a growing need in Kitsap County, KEDA offered the following comments regarding the industrial area near Dickey Road, Willamette-Meridian Road, and Newberry Hill Road.

- This is the largest contiguous industrial area in unincorporated Kitsap County and the largest industrial area north of Bremerton. Limited and much smaller areas for new industrial development existing north of Silverdale.
- This area may have strategic value to the US Navy and Department of Defense given its size and central location to Navy Base Kitsap facilities at Bangor, Keyport, and Bremerton. Consultation with the US Navy was recommended. (In our conversation I noted the Dickey Pit was historically an important resource of sand and gravel for the expansion of the Bangor submarine base.)
- Light industrial development has been recently occurring along Willamette-Meridian Rd (adjacent to the proposed re-designation area) as well as near the intersection of Dickey Rd and Newberry Hill Rd. Remaining acreage in these developing portions of the larger industrial area is becoming somewhat limited/fragmented and not very suitable for larger operations.
- The Dickey Pit site has not previously been marketed for industrial development (at least to their recollection).
- Active adjacent mining would be more compatible with industrial development than with a new residential neighborhood. Consultation with the mine operator was recommended.
- Some adjacent industrial zoned land, particularly to the NE, may need to also be rezoned to ensure land use compatibility.
- The site has strong positive attributes for future industrial development, including:
    - Large area with large parcels and a small number of landowners
    - Easy access to a major highway (SR-3)
    - Proximity to defense industry customers
    - Ability to redevelop much of the area due to it being a former sand/gravel pit
    - Not many incompatible/conflicting uses nearby
    - Existing access to utilities, including:
        - Water supply
        - Sewer available along Dickey Rd
        - High voltage power, which runs through the site
        - Natural gas supply (needs to be confirmed)

- Potential goehazards (liquefaction) would be a negative site attribute for industrial development (or urban development of any kind) and needs further investigation/verification.

In conclusion, KEDA offered the following:

- While industrial sector growth may be slow in Kitsap County, this industrial area has significant and unique attributes for industrial development that do not exist north of Bremerton and it should be retained for industrial development.
- If the County were to move forward with rezoning the area, the County should consider zoning for business park uses as an alternative (or in addition) to Neighborhood Commercial where assembly, food processing, and a mix of retail/services could be provided. One example referenced was the Coppertop business park on Bainbridge Island.

On follow-up (9/3/2019), KEDA offered the following additional comment:

- "While we, as economic developers, have a proclivity to protect limited industrial sites as future homes to living wage manufacturing type jobs – we certainly recognize that now is an **historic** situation relative to lack of inventory of affordable – workforce housing units in Kitsap – indeed the entire region – which may provide a solid reason to convert this industrial land at this time - with an awareness that this should not set a precedent relative to rezoning – down-zoning other industrial properties."

Data: 10/25/2019

All Parcels in the IND Zone

Unincorporated Area	Tax Parcels	Gross Acres	% Total Acres	Avg Parcel Size	BoCC District	
Kingston UGA	6	20.36	2.2%	3.39	20.36	2%
Silverdale UGA	167	630.31	68.7%	3.77	647.18	71%
Central Kitsap UGA	4	16.87	1.8%	4.22		
Bremerton West UGA	120	46.88	5.1%	0.39	249.58	27%
Gorst UGA	15	99.89	10.9%	6.66		
Puget Sound Industrial Center - Bremerton	17	69.22	7.5%	4.07		
Port Orchard UGA	17	33.59	3.7%	1.98		
Total	**346**	**917.12**	**100%**	**2.65**		

CPA 18-00495 (+/- Total) -15.1%
CPA 18-00495 (+/- Silverdale UGA) -22.0%

All VACANT Parcels in the IND Zone

Unincorporated Area	Tax Parcels	Gross Acres	% Total Acres	Avg Parcel Size	BoCC District	
Kingston UGA	6	20.36	5.4%	3.39	20.36	5%
Silverdale UGA	54	276.63	73.0%	5.12	281.22	74%
Central Kitsap UGA	1	4.59	1.2%	4.59		
Bremerton West UGA	15	6.28	1.7%	0.42	77.46	20%
Gorst UGA	12	25.99	6.9%	2.17		
Puget Sound Industrial Center - Bremerton	10	41.82	11.0%	4.18		
Port Orchard UGA	5	3.37	0.9%	0.67		
Total	**103**	**379.04**	**100%**	**3.68**		

CPA 18-00495 (+/- Total) -36.5%
CPA 18-00495 (+/- Silverdale UGA) -50.0%

All Parcels in Silverdale UGA in the IND Zone

Type of Land Use	Tax Parcels	Gross Acres	% Total Acres	Avg Parcel Size
Church	1	5.00	0.8%	5.00
Commercial	24	8.92	1.4%	0.37
Common Area	11	13.52	2.1%	1.23
Forest	1	5.72	0.9%	5.72
Government	1	13.95	2.2%	13.95
Industrial	10	72.21	11.5%	7.22
Mining	5	117.62	18.7%	23.52
Recreation	2	1.95	0.3%	0.98
Residential	51	78.05	12.4%	1.53
School	1	1.07	0.2%	1.07
Utilities	6	35.67	5.7%	5.95
Vacant	54	276.63	43.9%	5.12
Total	**167**	**630.31**	**100%**	**3.77**

CPA 18-00495 (+/- Total) -22.0%
CPA 18-00495 (+/- Vacant) -50.0%

All Parcels in Industrial Zones (IND, BC, BP, RI, REC, TTEC)

Unincorporated Area	Tax Parcels	Gross Acres	% Total Acres	Avg Parcel Size	BoCC District	
Kingston UGA	6	20.36	1.2%	3.39		
Bond/Gunderson LAMIRD - Type III	7	56.52	3.3%	8.07		
Streibels Corner LAMIRD - Type III	75	148.44	8.7%	1.98	393.05	23%
Twelve Trees LAMIRD - Type III	51	106.81	6.3%	2.09		
Ecology Rd LAMIRD - Type III	18	60.92	3.6%	3.38		
Silverdale UGA	182	672.34	39.4%	3.69	689.21	40%
Central Kitsap UGA	4	16.87	1.0%	4.22		
Bremerton West UGA	120	46.88	2.7%	0.39		
Gorst UGA	15	99.89	5.9%	6.66		
Puget Sound Industrial Center - Bremerton	43	213.33	12.5%	4.96	622.74	37%
Port Orchard UGA	17	33.59	2.0%	1.98		
Port Orchard Airport LAMIRD - Type III	36	103.95	6.1%	2.89		
Unincorporated Rural	59	125.10	7.3%	2.12		
Total	**633**	**1,705.00**	**100.0%**	**2.69**		

CPA 18-00495 (+/- Total) -8.1%
CPA 18-00495 (+/- Silverdale UGA) -20.6%

All VACANT Parcels in Industrial Zones (IND, BC, BP, RI, REC, TTEC)

Unincorporated Area	Tax Parcels	Gross Acres	% Total Acres	Avg Parcel Size	BoCC District	
Kingston UGA	6	20.36	3.7%	3.39		
Bond/Gunderson LAMIRD - Type III	3	3.83	0.7%	1.28		
Streibels Corner LAMIRD - Type III	16	21.46	3.9%	1.34	90.40	17%
Twelve Trees LAMIRD - Type III	17	31.37	5.8%	1.85		
Ecology Rd LAMIRD - Type III	4	13.38	2.5%	3.35		
Silverdale UGA	55	286.43	52.7%	5.21	291.02	54%
Central Kitsap UGA	1	4.59	0.8%	4.59		
Bremerton West UGA	15	6.28	1.2%	0.42		
Gorst UGA	12	25.99	4.8%	2.17		
Puget Sound Industrial Center - Bremerton	20	87.46	16.1%	4.37	162.06	30%
Port Orchard UGA	5	3.37	0.6%	0.67		
Port Orchard Airport LAMIRD - Type III	18	25.15	4.6%	1.40		
Unincorporated Rural	9	13.81	2.5%	1.53		
Total	**181**	**543.48**	**100.0%**	**3.00**		

CPA 18-00495 (+/- Total) -25.5%
CPA 18-00495 (+/- Silverdale UGA) -48.3%

All Parcels in the Silverdale UGA in Industrial Zones (IND, BC, BP, RI, REC, TTEC)

Type of Land Use	Tax Parcels	Gross Acres	% Total Acres	Avg Parcel Size
Church	1	5.00	0.7%	5.00
Commercial	24	8.92	1.3%	0.37
Common Area	12	16.47	2.4%	1.37
Forest	1	5.72	0.9%	5.72
Government	1	13.95	2.1%	13.95
Industrial	12	76.97	11.4%	6.41
Mining	5	117.62	17.5%	23.52
Recreation	4	10.54	1.6%	2.64
Residential	60	93.98	14.0%	1.57
School	1	1.07	0.2%	1.07
Utilities	6	35.67	5.3%	5.95
Vacant	55	286.43	42.6%	5.21
Total	**182**	**672.34**	**100.0%**	**3.69**

CPA 18-00495 (+/- Total) -20.6%
CPA 18-00495 (+/- Vacant) -48.3%