

Oddly, general aviation airports are still being governed by 50 year old rules that discourage private enterprise and competition.

It is time to deregulate general aviation and allow it to prosper with current business practices that reward innovation and creativity.

THE PUBLIC BENEFITS OF PRIVATE DEVELOPMENT AT PUBLIC AIRPORTS

BY ARON FAEGRE

"Aviation today is not so much an industry in recovery, as an industry in transition." – Secretary Mineta

Since the early 1980's the economics of general aviation (GA) has been weak. By GA we mean all of the various aircraft operations for business, private, public, and recreation activities that are not under the category of scheduled airline or freight, or military.

During the early 1990's, the production of standard two and four seat aircraft almost came to a standstill. Following the passage of aircraft product liability reform, manufacturing of standard GA aircraft has increased, but is still far, far below the levels of production in the 1970's – 30 years ago! Why is this?

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There are many theories as to why the production and use of small aircraft has never returned to the levels of the 1970's. Product liability reform was thought to be the major issue, and the General Aviation Revitalization Act of 1996 has created a much improved situation – but not really a "recovery" by any stretch of the imagination. This paper suggests that the key other reason general aviation has remained weak is that the airport ownership and governance model has not changed to match changing cultural norms. The Reagan presidency fundamentally changed the American governance landscape, by accepting private enterprise and competition as being the most important force for determining industry outcomes. This philosophy has penetrated virtually every American industry – but surprisingly has remained absent from the thousands of small general aviation airports across the country.

Of course, there is no need to excessively bash the economics of the general aviation industry. There are many "good news" segments of the industry to acknowledge. For example, the "home-built" aircraft market has become a gigantic success story. Also, in the post 9-11 era, corporate GA has grown very strong, in response to the slowed down, less predictable scheduled airline transportation mode – given the increased security measures.

Acknowledging that once again, the times they are a changing, Transportation Secretary Mineta has recommended that all of aviation be viewed as an industry in "transition"¹, and that a "recovery" to prior conditions should not be expected. In the case of the international airports, the obvious major transitions of the past have been deregulation, and expanded development as major retail and hospitality facilities to serve the travelers. More recent transitions include complete privatization of airports – as will be discussed later in this paper.

For general aviation airports there has not been any significant change in governance, ownership, or use in the past 50 years. In spite of this, as a kind of grass roots movement at a few airports, the evidence is growing that GA airports are poised to become new, vital, centers for innovation and employment, in their rural or semi-urban settings. The fundamental ingredient to help in this transition of GA is the freeing up of the public-private ownership model, so that private enterprise can own at least some of the land-side services and facilities at the airport. The Oregon model shows that this spurs enormous investment and growth, that could be harnessed for virtually any GA airport in the country.

¹ Secretary of Transportation Mineta, speaking at the "FAA Commercial Aviation Forecast Conference" in Washington, D.C., March 25, 2004.

Private Airport Development Defined

In Oregon, 30% of the FAA funded public airports have adjacent private properties which are allowed to access the taxiways and runways. As such, they are developed just as any private industrial or commercial property is developed, with the caveat that to remain functional, it must maintain access to the public airport runway. In FAA lingo these are called "through-the-fence" properties, as their aviation access must cross the airport property line – figuratively referred to as the "fence".

At some of these airports – such as Aurora, Scappoose, and McMinnville – there has been conflict about this issue of private access to public lands for many years. Are the private properties getting preferential or extraordinary access to a public asset that should not be permitted? Or is the public asset intended to serve such private development, and is the public asset better off because of the resulting symbiotic partnership?

Disagreements on this issue have led to airport managers in some cases barricading off the taxiways leading to private properties, in an attempt to force through-the-fence users to pay special fees to the airport owner, or cease and desist in their aircraft operations. Likewise, private developments have threatened public airports with lawsuits to preserve their rights of access to the public property, and where fees are charged, to ensure that they are "fair and reasonable" as required by federal compliance standards. Today, the FAA acknowledges that through the fence developments exist at many airports, but promotes a policy of prohibiting any additional private access to, or ownership of, land on public airports, and even promotes the elimination of private ownership where it does exist.

Public-Private Development Partnerships

One might wonder why this is an issue of any significance. In the case of autos and trucks, the road system is public but there is no attempt to keep private properties from accessing them. It is clearly understood that federal, state, and local agencies create and maintain the roads – Interstate Freeways, State Highways, County Roads, and City Roads – for the use of the public. But it is up to individuals and business to create the gas stations, repair stations, driveways, and parking lots needed by the homes and businesses that use the highways.

In fact, the history of public-private partnerships for nationally important public facilities shows that there are many different approaches to this issue. A list of non-aviation examples of partnerships are shown below. In each case the partnership can be examined

from the standpoint of where lines are drawn between the two entities, and how costs are shared:

- The Interstate Highway system,
- Publicly funded industrial parks,
- Tax increment financed development districts,
- Economic development employment zones,
- Private concessions in National Parks, State Parks, County Parks, and City Parks,
- Public marinas,
- Marine ports,
- Maintenance of rivers and lakes as "navigable waterways" for interstate commerce,
- Support of the "Public Trust Doctrine" as it relates to use of navigable waterways by fish and commerce,
- American transcontinental railroad system, and
- Modern light rail urban development.

Each of these examples of public-private partnerships has approaches and techniques that might be useful for airports. The GA industry can become strong and vibrant again, but a partnership model must be found which promotes investment and innovation.

Airline Deregulation Act of 1978

America's system of airports is a relatively new development, because the airplane is itself such a recent invention. Use of scheduled airline service as a "normal" transportation mode for most citizens, has only occurred during the past 30 years. In the earlier years of that period, airlines were assigned routes, and very strictly controlled by the federal government as to the "who, when, where, and how much" of flight. However, in 1978 the Airline Deregulation Act became law, (following a test of concept on air freight²) and government control was largely removed, leaving the industry open to market forces for setting routes, fares, and schedules. One might say that the rest is history – America has developed an amazingly successful, useful airline system that is counted on every day as the least expensive method of long distance travel, and as the necessary method of delivery for time sensitive materials. And it has been copied by the rest of the world.

Now that the Airline Deregulation Act is 26 years old, have there been significant legislative changes since then? What "transitions" are next? The next big issue appears to be whether "privatization" of the entire airport should be considered. And as will be discussed at the end of this paper, other nations are far in advance

² Air cargo had been deregulated in 1977 under the Air Cargo Deregulation Act.

of the United States in exploring this issue. But first, let's get back to general aviation.

Deregulation of General Aviation Remains to be Accomplished

This study focuses its analysis on our general aviation airports and proposes a major deregulation in control by the government. It is proposed that private enterprise, with its ability to be innovative and creative, can take our largely underutilized general aviation airports, and breathe new life into them. This in turn, will provide feedback to invigorate the entire general aviation industry.

This study focuses on general aviation because the large airports are generally already running near maximum capacity and do not need more stimulation per se. In addition, there are generally very few existing through-the-fence or other private property opportunities at our major international and hub airports. But more importantly, the economics of general aviation airports are fundamentally different from the economics of international and hub airports. General aviation relies on a mix of diverse users – ranging from individual recreational pilots, to flight instruction schools, to corporate flight departments, to crop dusters – whereas major international and hub airports rely only on passengers and freight. In addition, this study focuses on airports in the western United States, where there is, in many cases, still much open space and land around an airport, and where most airports operate far, far below their aeronautical capacity³.

This paper will examine this issue of airport private development from the standpoint of four major factors:

1. local airport economics,
2. larger airport system⁴ needs,
3. general community needs, and
4. competitive advantage.

The first three issues are straightforward in their analysis, and are, simply put, about dollars and cents. The results of the analysis do not support the current "standard FAA view" of through-the-fence. The last issue dispels the fear that through-the-fence operations

³ A non-towered airport with a single runway and two parallel taxiways has a typical aeronautical capacity of approximately 200,000 annual operations. Most of Oregon's 100 public GA airports operate at a capacity that is less than one-tenth of this capacity. Thus from a purely aeronautical standpoint there is no logical reason to limit their use and development where it serves the local community needs and interests.

⁴ By system needs we mean both the goals for state and federal airport systems – meaning the Oregon State Airport System Plan (1997) and the federal National Plan of Integrated Airport Systems (NPIAS, 2001-2005).

have significant competitive advantages over on-airport operations. Rather, it is shown that through-the-fence operations, due to normal local, state, and federal taxation rules, coupled with the lack of availability of AIP funds for land and facilities development, carries a heavier financial burden than do on-airport businesses. In spite of this heavier burden, it is shown that private development results in a "win-win-win" – advantages for its own business, for the surrounding community, and for the larger national aviation system.

It is proposed that the real reason that through-the-fence operations continue to exist, and at some Oregon airports are thriving, is because they represent places where creativity and innovation can flourish. Private investment, as is common in our American free enterprise system, cannot resist trying to make a better mousetrap, or find a better way to provide a service.

A new model for general aviation airports is proposed, not unlike that of our public highways. Let the runway, taxiways, safety areas, navigation systems, and airspace remain public. But let private enterprise figure out how best to provide the services and make use of the resource. Private enterprise will promote new uses and ways of delivering services, that result in transition and growth that a "top down" government controlled system can never deliver.

Before addressing these issues in detail, we will consider why through-the-fence operations exist at all. In addition, we will list and discuss the common reasons given as to why through-the-fence should not be allowed to exist on public airports.

Why Does Through-the-Fence Private Development Exist?

Many of Oregon's publicly owned airports have existing through-the-fence operations⁵. A quick (but in no way definitive) count suggest that 17 of 56 Oregon's FAA funded NPIAS (National Plan of Integrated Airport Systems) airports – 30% of them – have through-the-fence operations. Why is this?

Most of Oregon's airports started as grass landing strips on private farm property. Once a local City, County, or Port government perceived the importance of the airport to the whole community, it would take ownership of the airport property, as a means of ensuring that the airport remains available for public use. From the national perspective, Congress could see the national importance of these airports, and authorized that federal funds be spent to create a system of these airports. The national goal was to create standardized airports, located at regular intervals around the country, to promote aviation as a

⁵ An appendix to this paper has a list of Oregon's airports, and identifies which have through-the-fence operations.

predictable interstate mode of transportation, first for mail, and later for passengers.

When an airport was made public, there were in some cases pre-existing adjacent private properties that were already using the airport. In this way, "through the fence" operations became "grandfathered" uses that came with the purchase of the airport.

Other airports gained through-the-fence operations because the amount of use was so low that no-one cared. A grass landing strip might be created adjacent to several farms, and the adjacent farmers might now take off on the designated runway, rather than on their own informal farm road or field.

For some through-the-fence operations, as long as there was no harm, the airport owner did not call foul. In fact, as long as friendly relations existed, the adjacent property owner might represent an advantage of additional fuel sales, or help mowing, or even help in accomplishing the business of the airport. One can guess that in the early days of aviation there was a certain camaraderie among users at an airport. There would be an advantage in having other aviators around the airport when tragedy struck, as it often did.

Thus, adjacent private properties were in most cases strong supporters of the airport, and were historically essential for the airport to become established and successful. The land around an airport was populated by those with more of an interest in aviation. And these people became the operators of the FBO and maintenance facilities. Even today, there are airports where the adjacent private property owner is the active party ensuring that the airport is open for business and successful.⁶

Some airports have granted through-the-fence rights to businesses as a means of attracting jobs to their community⁷. A company might agree to purchase land in a community, and provide jobs and other support for that community, as long as a permanent right to access the airport from their property were granted.

The formalization of through-the-fence operations often occurred, as small airports began to expand. Needing more space, or new road access, a public airport would attempt to purchase adjacent properties. The sale of property often included an access agreement for an adjacent property owner. Or in some cases, property was traded, in part, for airport access. Thus, a private need for airport access was balanced with public need for more airport land.

⁶ Transwestern Aviation, located on private property at Scappoose Airport, is a good example. The owners' volunteer work of promoting the airport continuously over a 15 year period is largely responsible for the growth and success of the airport today.

⁷ Evergreen Aviation, located at McMinnville Airport, and Boeing Aircraft at Renton and Everett Airports are examples of this type of through-the-fence operation.

In conclusion, through-the-fence private operations at an airport are in many cases a vestige of the earlier days of aviation, when airports were by necessity mostly private. Through-the-fence operations reflect the fundamental nature of airports, that they function as partnerships to meet both public and private needs, and thus involve both public and private facilities.

Why is Through-the-Fence Private Development so Bad?

At a recent FAA conference⁸ representatives from the Washington D.C. FAA Headquarters were queried as to why the FAA discourages "through the fence" operations at airports. The answers were:

- Through-the-fence operators are "freeloaders" taking advantage of the airport, and contributing nothing back;⁹
- Through-the-fence property has high value precisely because there is a runway next door, so the private property owner should be required to give the increase in land value back to the airport;¹⁰
- Privatization of the airline industry should not be viewed as having anything to do with through-the-fence airport operations;¹¹
- The airport needs to be preserved for the long term, and through-the-fence operations can change into uses that are opposed to preserving the airport.¹²

In eighteen years of studying this issue of through-the-fence operations, the author has never yet heard an FAA staff say anything positive about through-the-fence operations. The primary objections – as noted above – are financial. Private users are perceived as using a public facility but not paying their fair share for using it. Or, a private owner is perceived as getting an increased land value from the adjacent airport, but not giving any of that value back to the airport. In the following sections we will look at these in hard, cold, "dollar and cents" and try to evaluate the validity of these financial concerns.

The FAA regulations which govern airports that receive federal funds include specific discussion of through-the-fence operations. These are found in FAA Order 5190.6A, the "Airports Compliance Handbook."

⁸ FAA NW Mountain Region Conference, April 19 - 21, 2004, Seattle, Washington.

⁹ An FAA Deputy Associate Administrator for Airports.

¹⁰ An FAA Manager, Airports Compliance Division, Office of Airport Safety and Standards.

¹¹ An FAA Deputy Associate Administrator for Airports.

¹² An FAA Manager, Airports Compliance Division, Office of Airport Safety and Standards.

Section 6-6 is intended to provide guidance in the granting of airport access to adjacent property. A copy of the full text of this section is included at the end of this paper as an appendix.

The Order says that as a general principal, FAA recommends refraining from through-the-fence agreements, but that on a case-by-case basis they can be approved. Two specific examples of acceptable through-the-fence agreements are given: 1) where the access to the airport from private property goes through an on-airport lease area given to the owner of the private property, and 2) where an adjacent residence or business does not offer aeronautical services to the public. The Order notes that:

- at times an airport owner will enter into such through-the-fence agreements;
- although there is an obligation to allow the public to land aircraft at the airport, there is no obligation to allow the public to taxi across a property line;
- a through-the-fence agreement must require the off-site user to conform to all FAA grant requirements at the airport;
- an airport owner is entitled to seek recovery of costs of providing the public landing area being used; and
- if a competitive advantage for a through-the-fence operator exists, over on-airport operators, the airport owner should obtain from the through-the-fence operator a "fair return" for the use of the landing area.

It is fascinating that the FAA requires that airports are required to allow any aircraft¹³ access to a public airport when it is arriving by air, but discourages or prohibits the arrival of all aircraft that arrive by land! The major concern again appears to be financial – a fear or expectation that the through-the-fence operator will have some competitive advantage over on-airport operators in providing aeronautical services to the public. In fact, as long as the adjacent uses are not offering aeronautical services to the public – only aircraft used for a residence or as incidental to the business – the FAA appears to have no formal objection to through-the-fence, and would only expect that the through-the-fence operator participate in the costs of providing the public landing area.

Local Airport Economics

Currently, the funding of public general aviation airports is principally accomplished by federal, state,

¹³ Of course, there are access limits for aircraft based on the weight capacity of the runway pavement, and the runway length, and other safety standards.

and local fuel taxes. Every gallon of aviation gas is taxed at the rate of 15 cents to the federal aviation trust fund plus 4.3 cents to the federal general fund ("federal deficit reduction tax"¹⁴) and every gallon of jet fuel is taxed at the rate of 17.5 cents to the federal aviation trust fund plus 4.3 cents to the federal general fund. These aviation fuel taxes are very similar in amounts to those charged for vehicles and trucks on the highways, for which there is a dedicated highway trust fund¹⁵.

The funds collected for the aviation trust fund are placed in a dedicated airport fund, and are dispersed only for aviation purposes, including for airport construction and maintenance. Eligible projects are funded at 95% from the FAA airport fund with the remaining 5% coming from the airport owner. Examples of eligible projects include: land¹⁶, pavement, pavement maintenance, access roads, and in the most recent federal legislation, even revenue producing facilities such as fuel dispensing systems and hangars¹⁷.

In the State of Oregon, the Legislature, with pilot support, passed a state aviation fuel tax of 9 cents per gallon and a jet fuel tax of 1 cent per gallon to go to a dedicated state aviation fund. That fund is used principally for pavement maintenance at Oregon airports¹⁸. In addition, some airports have a "fuel flowage fee" for fuel put into aircraft at that specific airport which is intended to provide operational funds for that specific airport. For example, Aurora Airport has a 4 cent fee for each gallon of aviation and jet fuel.

Thus, using Aurora Airport as an example, the tax on a gallon of aviation fuel is 32.2 cents and on a gallon of jet fuel is 26.8 cents. There are some other fees charged by the State of Oregon, including a "load fee" of \$4.75 per fuel delivery and a "Leaky Underground Storage Tax" (LUST) of 0.1 cents per gallon, so aviation also pays its way in regard to the environmental cleanup issues surrounding fuel delivery and storage.

¹⁴ Thus, aviation facilities are not only self-supporting through their own aviation tax, but by additional special taxes, support our national programs of defense, education, welfare, and health.

¹⁵ Federal highway taxes are 14 cents per gallon for gas to the highway trust fund plus 4.3 cents to the federal general fund, and 20 cents for diesel to the federal highway trust fund plus 4.3 cents to the federal general fund.

¹⁶ Eligible land includes that needed for the basic landing area runway, taxiways, and safety areas, along with land for potential revenue producing activities such as tie-downs, hangars and commercial aeronautical services.

¹⁷ The list of eligible projects just this year added the fuel systems and hangars (as long as all other airport facility needs have been met).

¹⁸ At the time of passage of the Oregon aviation fuel tax, FAA funds could not be used for pavement maintenance, so part of the justification was that it would be for maintenance, and the pilot community supported this.

Aviation fuel taxes are convenient and practical ways to share the burden of building and maintaining the airport transportation system. Those users that use aircraft the most, burn the most fuel, and pay the most into the airport fund. The net result of the current airport funding system (95% funding of airports by the FAA, with an additional state aviation fund that can also assist with airport needs), is that the "cost of providing the public landing area" (as mandated by Order 5190.6A) is already largely covered by the aviation fuel tax system. However, airport owners say that it is hard to end up in the black. It is common knowledge that most general aviation airports have a very hard time "breaking even"¹⁹. With 95% funding of facilities, how can this be?

Any private developer of commercial or industrial properties would love to have 95% funding for their projects. At the airport, through-the-fence developers cannot get any of these funds. They must pay the full cost of the land, taxiways, drainage system, roads, fuel systems, aprons, hangars, fences, and every other element needed for the development. Then, on top of that, the private developer must pay property tax on their development, a cost not charged to the airport property owned by a public agency.

Tie-down Rents do not Contribute to Airport Operational Costs

Assuming that there are additional costs that are needed to be recovered for providing the public landing area, one would expect the cost to be equitably shared



¹⁹ Some countries – for example Australia and Canada – are concluding that governments make poor airport operators, and are privatizing their facilities. Private contractors are being creative in their planning and use of airports. Reports from Australia indicate that the private companies are taking their excess land and finding ways to get it profitably developed and useful, with the income going to support the airport.

among all aircraft based at the airport. Thus, it should be found in the most basic of airport facilities for aircraft – the aircraft tie-down. Let's take an example of constructing just an aircraft tie-down, and determine the "recovery of costs of providing the public landing area being used" which is contributed by a rental of such a tie-down. We'll use Aurora Airport as the model for computational purposes. The results – that the tie-downs lose money for the airport – is surprising to most people.

A tiedown space per AC 150/5300-13 page 121 can reasonably be considered to be 6,480 sf of land area²⁰ with approximately 85% of that paved (some of the land area can be grass rather than pavement). Land costs²¹ are currently approximately \$150,000 per acre (\$3.44 per square foot) and pavement costs approximately \$4 per square foot. Multiply that total by 125% to cover the cost of storm drainage, engineering design, permits, and miscellaneous items.

Thus, the cost of creating a tie-down space on a federally funded airport in the Portland metropolitan area will be:

Total tie-down cost =

$$\begin{aligned} \text{Ctotal} &= 1.25 \times \{ \text{Cland}[\text{land area} \times \text{cost per sf}] + \\ &\quad \text{Cpavement}[\text{paved area} \times \text{cost per sf}] \} \\ &= 1.25 \times \{ 6480 \text{ sf} \times \$3.44/\text{sf} + 5508 \text{ sf} \times \$4.00/\text{sf} \} \\ &= \$55,404 \end{aligned}$$

Assuming a 20 year²² amortization, at 5%, this represents a cost of \$4,388 per year.

The revenue coming back to the airport to cover this construction cost, plus the cost of supporting the public landing area can be figured as follows, assuming a \$35 per month fee²³ and 30% of that going to the airport owner²⁴ as mandated for State of Oregon owned airports:

The total revenue from the tie-down for the public landing area can be figured as follows:

$$\begin{aligned} \text{Rtotal} &= \text{Rtie-down}[\text{annual charge}] \times \text{P} [\text{Percent going to} \\ &\quad \text{airport owner}] \\ &= (12 \times \$35) \times 30\% \end{aligned}$$

²⁰ Includes typical tie-down area of 70' x 41' plus half of a double loaded 79' wide taxilane, all times 1.15 to allow for a taxilane connection to the main taxiway system of the airport.

²¹ Land cost is for Aurora Airport, and a similar number would apply to any "shovel ready" industrial land around the state.

²² The FAA's grants require a 20-year use period, and from a maintenance standpoint after 20 years there will likely be required a major reconstruction of the pavement.

²³ Current tie-down market rate at Aurora Airport.

²⁴ OAR 738-010-0025 sets tie-down fees at State owned airports at from \$20 to \$15 per month, and that 30% of this goes to the airport owner, the remainder to the private management company to cover the administrative and operational costs.

= \$126 per year

Thus, the rate of return on the tie-down space is negative – it loses \$4,262 per year. The loss of \$4,262 per year generated by the tie-down is paid for by all of the users in the aviation system and the gas taxes on those users, not by the actual user.

Some might argue that the 95% financing is a gift from heaven, and that the only costs to be recovered are the remaining 5% put in by the airport owner. However, the 95% financing could have gone to some other part of the aviation system, and served the public, so it should not be thought of as free.

None-the-less, for sake of argument, let's do the math. The 5% first cost is only \$2,770, which at a 20 year, 5% rate, represents a \$219 annual cost. This would leave a net loss of \$93 per year. Again, it is all of the other users of the aviation system that are paying for the tie-down of that aircraft, through fuel taxes.

In this example, if the tie-down were constructed by a through-the-fence operator, the actual break-even cost that would need to be charged to the tie-down user, at 7% financing (since private rates are higher than public financing rates), but assuming a longer 100 year period, would be approximately \$3,882 per year and to this would need to be added the administrative and maintenance costs. The property could be depreciated, which would create an equivalent sinking fund for maintaining the property in perpetuity.

Based on the above analysis, it is clear that current fees for tie-downs are not covering even the cost of the tie-down, let alone the cost of keeping the public airport open. If the tie-down aircraft are not contributing to keeping the airport open (in fact they are a "black hole" cost being subsidized by all of the other users), then why should a private developer of a through-the-fence private operation be charged any fee at all? The through-the-fence aircraft will be burning fuel, which will be contributing tax, which will be the true supporter of the airport facilities.

The calculation shows that currently tie-down fees have no significance in actually maintaining a public landing area. A similar calculation can be done for aircraft hangars, which shows that at current market rates they also do not significantly contribute to the general cost of operating the public landing area. At most, they simply cover their bare hangar development costs, and in many cases when the administrative and maintenance costs are included, they also cost the airport more than they contribute.

Hangar Rents do not Contribute to the Airport Operational Costs

A T-Hangar space can reasonably be considered to be 4,000 sf of land area²⁵ with approximately 75% of the taxilane area paved (some of that land area can be grass rather than pavement). Land costs are currently approximately \$150,000 per acre (\$3.44 per square foot), hangar costs approximately \$40 per square foot, and pavement costs approximately \$4 per square foot. Multiply that total by 125% to cover the cost of



acquisition, storm drainage, engineering design, permits, and miscellaneous items.

Thus, the cost of creating a tie-down space on a federally funded airport in the Portland metropolitan area will be:

Total hangar cost =

$$\begin{aligned} C_{\text{total}} &= 1.25 \times \{ C_{\text{land}}[\text{land area} \times \text{cost per sf}] + \\ &\quad C_{\text{building}}[\text{building area} \times \text{cost per sf}] + \\ &\quad C_{\text{pavement}}[\text{paved area} \times \text{cost per sf}] \} \\ &= 1.25 \times \{ 4226 \text{ sf} \times \$3.44/\text{sf} + 1200 \text{ sf} \times \$40.00/\text{sf} \\ &\quad + .75 \times 2475 \text{ sf} \times \$4.00/\text{sf} \} \\ &= \$87,453 \end{aligned}$$

Assuming a 20 year²⁶ amortization, at 5%, this represents a cost of \$6,926 per year, or \$577 per month. Given that the current market rate for renting a T-hangar is a maximum of \$500 per month, this shows us that again, on-airport facilities do not contribute to supporting the airport. Thus, the rate of return on the hangar is negative – it loses approximately \$924 per year. The cost of the hangar is paid for by all of the

²⁵ Includes building area of 1200 square feet plus half of a double loaded 90' wide x 55' taxilane, all times 1.15 to allow for a taxilane connection to the main taxiway system of the airport.

²⁶ The FAA's grants require a 20-year use period, and from a maintenance standpoint after 20 years there will likely be required a major redo of the pavement.

users in the aviation system and the gas taxes on those users, not by the actual user.

Based on the above analysis, it is clear that current fees for tie-downs and hangars are not covering even the cost of the facilities, let alone the cost of keeping the public airport open. If the on-airport aircraft are not contributing (in fact they are again a "black hole" cost being subsidized by all of the other users), then why should a private developer of a through-the-fence operation be charged any fee at all? The through-the-fence aircraft will be burning fuel, which will be contributing tax, which will be the true supporter of the airport facilities.

Through-the-fence operations pay the full cost of their facility development, and as such leave more of the federal and state aviation funds available for the truly "basic costs" of the public landing area, such as the runways, taxiways, and lights.

Financial Conclusions Strongly Support Private Development Model

This analysis shows that it is very strongly in the public interest to promote private development of the aviation support facilities at public general aviation airports. Our national policy for general aviation airports should be to:

- leave the development of tie-downs, hangars, and other built structures to private development as much as possible;
- maximize any efforts which result in additional aircraft using the airport and thus purchasing fuel, the tax on which is the primary real source of airport funding for the entire aviation system; and
- in some cases, where an airport has excess unused land²⁷, allow some portion of the land to be sold for private aviation development.

That the private sector wants to invest capital in through-the-fence facilities at airports, even with the high costs discussed above, shows that there is a fundamental element missing from our equations. There is something that allows private development to be able to invest more than what the pure cost analysis would justify. What is it?

We will return to this subject at the end of this paper, in the discussion of "competitive advantage." The answer lies in the ability of private enterprise to find innovative and creative ways to use aviation to serve society, which creates an added value. Some

²⁷ In Oregon, the FAA has allowed removal of land from airports, for use as major non-aviation private development projects where the 50 year airport needs could be shown to be very conservatively satisfied by the retained portion.

businesses are finding they can use general aviation to their "competitive advantage" over other businesses that do not use general aviation, and thereby can create greater profits, which in turn justifies greater initial expenses. Once the use of aviation is tied this closely to the business itself, the development of the aviation facilities needs great overall flexibility (to be able to respond to changing market needs), needs the ability to have 100% self-determination and internal control, and needs long term availability and predictability. It should not be surprising that these qualities are all best provided by our normal American system of private ownership, development, and control.

Larger Airport System Needs

The United States unarguably has the best general aviation system of airports in the world. That it was two American bicycle mechanics that figured out the innovations necessary to make a successful flying machine, gave us a head start. Americans have dominated the aviation world ever since. Part of our success is based on this strong and robust system of airports that allow all kinds of aircraft to easily navigate all around the 50 states.

The history of the creation of America's great airport system will not be considered here in any detail. But suffice it to say that our general aviation airports include many created from farm grass strips, initial mail system airways and airports, former military airports, business and industry based airports, emergency landing fields, and occasionally even brand new airports. Today there are 3000 public airports in the United States that are supported under the FAA's National Plan of Integrated Airport Systems (NPIAS). Of these, 56 are in Oregon. A list of the Oregon NPIAS airports is provided in the appendix to this paper.

All aircraft fuel is taxed, however only NPIAS airports can receive the federal funds from the fuel tax. For most NPIAS general aviation airports, this fuel tax is the primary source of funds which keep the airport open and operational. Thus, the primary financial approach to keeping the system of airports healthy is to have aviation as a whole be healthy. The more pilots that own aircraft and fly them, the healthier the whole aviation system becomes. Thus, from a dollars and cents standpoint it is clear that the national goals for keeping the larger airport system in good financial condition should be to encourage:

- Aircraft ownership and use;
- Private investment in aircraft and aviation facilities, to promote long term stability;
- Training of youth to join the ranks of future aviators; and

- Creating innovative aircraft and flight systems that fit the interests of future aviators.

The airport system works best when there are many hours flown! Our first order of business should be to do whatever is needed to encourage the entry of new pilots to the system, and likewise do whatever is needed to allow those pilots to make more use of their aircraft. The rest will take care of itself, in the sense that all other issues are secondary in importance.

Private investment is identified as a key element, because it is clear that the American culture generally promotes ownership – in a home, a car, and a boat. Aircraft should be capable of becoming a more common addition to this list. The biggest hindrance is usually identified to be the "cost" of flying. Thus, one of the largest growth areas in general aviation is "home built" aircraft. The strength of the aircraft kit industry is evidence of this interest in, and demand for, private ownership in the entire aviation industry. Once a pilot builds his or her own plane, they will want their own hangar. And then next comes inventing their own business that uses the airplane!

In the Portland area today, there is much private investment in hangars. However, virtually all of it is on private property. Pilots are anxious to invest in aviation facilities, but only if they can have ownership in it – as long as they want – just like for their home, car, and boat.

General Community Needs

An airport is an important community asset, just as are the community's roads, schools, water and sewer systems, parks, and other infrastructure. The local City Council or County Commissioners typically tax private property as a means of supporting the basic services of police, fire, and schools. But when the property is owned by a public agency (or a non-profit, or church), the property is exempt from taxes. Thus, generally, a publicly owned airport is exempt from taxes.

However, the portions of an airport used for private revenue producing purposes, such as a private hangar, are not exempt from property taxes. However this is a "grey" area, in that it requires constant and extensive record keeping. For example, if a city owns a hangar and it is partially vacant, then only the part that is rented pays taxes. And in that case, only the value of the hangar and perhaps the footprint of land under the hangar are taxed.

The value of the taxiways, road access, parking lots, fuel tank areas, septic drainfields, drainage ditches, utility systems, and other infrastructure needed for the hangar are not taxed. And there are many uncertainties as to the taxable value, as well. If the hangar were privately owned, but under a 20 year land

lease, would the value of the property depreciate linearly to zero over the term of the lease, since at the end of the lease the hangar would revert to public ownership and have zero value to the private owner? Thus, it is clear that generally, public airport development is not taxed at the level it would be if it were under truly private ownership.

On the other hand, an airport development on private land would clearly be 100% taxable as private property, just as any business or residential property would be in a community. Thus, the value of the taxiways, road access, parking lots, fuel tank areas, septic drainfields, drainage ditches, utility systems, and other infrastructure needed for the hangar are taxed. Even undeveloped property is taxed at its full value, though it may be used for nothing. Since well located airport land is valued at levels similar to well located industrial land, this means that there is a built-in impetus for the private land to be developed. The owner is taxed whether it is developed or not, so it is in the owner's interest to be creative and innovative – to promote general aviation demand – to develop it for some revenue source to offset the ongoing taxes.

For these reasons, local government is often in strong support of private development at airports. At a recent meeting concerning through-the-fence possibilities at the Scappoose Airport, two City of Scappoose Commissioners specifically noted that they preferred private ownership over Port ownership of aviation facilities, for just this reason. They complained that the airport was generally getting a "free ride" in getting police, fire, water, and sewer services, without really paying for them. If private development were to create new facilities at the airport, then at least those airport facilities would be contributing their "fair share" to the community, for those basic services.

When the aviation development at an airport is through-the-fence it is clearly recognized as private, and 100% taxable. This kind of development results in a stronger connection to the community. Just as a local community often assists in the costs of creating an industrial park, or other employment center, the airport can be similarly considered. Private development at airports should in this way create a better partnership between the airport and its community. Expansion at the airport will be more directly equated to more jobs and more support for police, fire, and schools – especially key issues in today's economic hard times.

Aurora Airport and Hillsboro Airport: Models for Comparison

In the Portland Metropolitan area, Aurora Airport and Hillsboro Airport provide good examples for comparing the pros and cons of private development on

public airports. Both airports are considered as close to downtown Portland, and both have good access to major public roads.

Hillsboro Airport is located 15 miles west of downtown Portland off of State Highway 26 and is operated by the Port of Portland. Its prime site strength is that it is adjacent to Oregon's "Silicon Forest," a high tech corridor of development – with its subsequent two-fold advantage of strong business use of aviation²⁸ and well paid workers who can afford the costs associated with being a pilot²⁹. The airport is located within the city limits of Hillsboro, and thus has the advantage of many adjacent shopping centers, motels, restaurants, taxis, a light rail stop, supply stores, and other typical urban services that can be supportive to an airport. It has 870 acres all in public ownership, with two runways (6,600 feet and 4,049 feet in length), a control tower, multiple instrument approach procedures, including a precision instrument approach landing system (ILS) with 200 foot ceiling minimums.

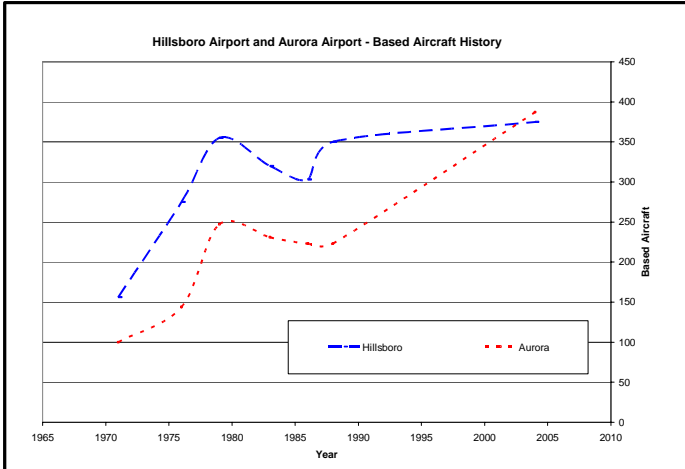
Aurora Airport is located 21 miles south of downtown Portland and is operated by the State of Oregon. Its prime site strength is that it is located close to the major freeway (I-5) which connects Portland with Salem. This is a corridor with strong business and population characteristics. It is located in rural agricultural lands, adjacent to a small city (Aurora, population 655) that does not have major urban type facilities as described for Hillsboro. It consists of 242 acres of land, of which 146 acres (60%) are in public ownership and 96 acres (40%) are in private ownership. It has only one 5,004 foot runway, no control tower, and only non-precision approaches with 560 foot ceiling minimums.

From this summary, it is clear that Hillsboro Airport has much better airfield facilities, instrument approaches, support services, and directly associated community business activity, than does Aurora Airport. Yet, in the discussion below it will be shown that during the past ten years, Aurora Airport has shown strong economic growth, while Hillsboro Airport has remained relatively flat in growth.

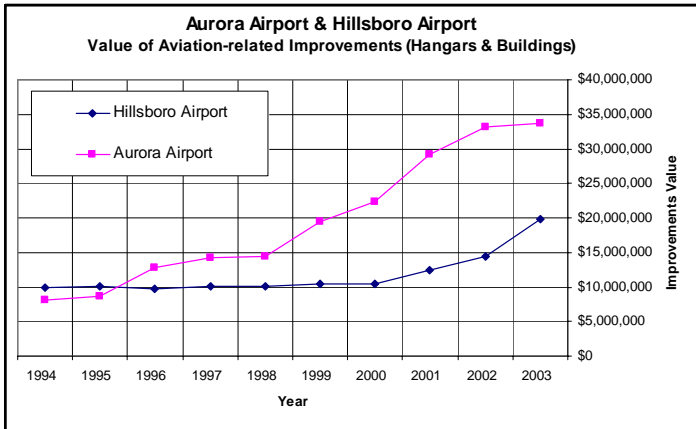
The graph below shows historic data for based aircraft at each airport. Both airports have shown growth and Hillsboro has historically been the larger airport, in terms of based aircraft. In fact, Hillsboro Airport has traditionally had more based aircraft than any other in Oregon. Due to the growth of the last 10 years, Aurora Airport now has that status.

²⁸ Intel, a major employer in Hillsboro, uses its own aircraft for scheduled service for workers traveling between its California, Oregon, and Washington offices.

²⁹ The cost of initial and recurrent pilot training is significant, as is the cost of aircraft rental or ownership. Thus general aviation functions best in communities with strong economies.



The next graph shown below identifies the "true" values of the airport improvements³⁰, as established by the Washington County and Marion County Tax Assessors. In 1995 tax limitation rules were put in place which required that an "assessed" value be established based on certain maximum percent annual increases. Since growth of "true" values have exceeded those percentages, the true values now are approximately 60% higher than the "assessed" values.



The graph shows that a rapid growth of investment at the Aurora Airport began in 1995, after which the value of the airport increase by a factor of four. During this period Hillsboro's growth was half of Aurora's, with much of that growth being a single hangar for Nike.

The strong growth of improvement value at Aurora Airport is believed to directly relate to the realization

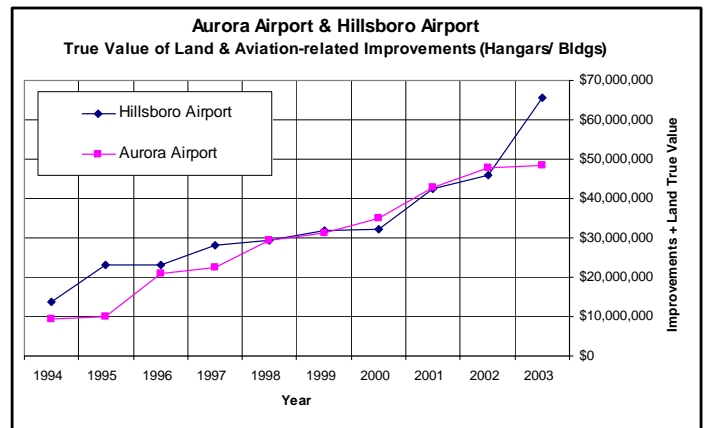
³⁰ The Port of Portland owns land adjacent to the airport that is used for shopping centers, motels, and other non-aviation related uses. Those non-aviation related use lands and improvements are not included in this analysis. Any airport could show enormous value by acquiring adjacent commercial properties, but this would not represent the true aviation values. In the case of Hillsboro Airport some of these commercial properties may have been purchased with FAA funds in order to get parcels needed to protect runway approaches.

of private property owners, that there is a market for privately owned GA facilities. It was also spurred by investment of private GA businesses that would make major investments in facilities if they could own them. Thus, the airport has seen \$25 million of improvements through new development of Aurora Airpark, Aurora Aviation, and Van's Aircraft, along with major improvements or expansions at Columbia Helicopters, Southend Airpark, the Janzen Condominium Hangars, and other facilities.

All of this development at Aurora Airport has been fueled by one simple investment feature – private ownership. This growth has pushed Aurora Airport past Hillsboro Airport, as having the most based aircraft of any airport in the State. Growth at Aurora is continuing, with approximately \$5 million of new private hangars being completed this year, and more improvements planned for next year.

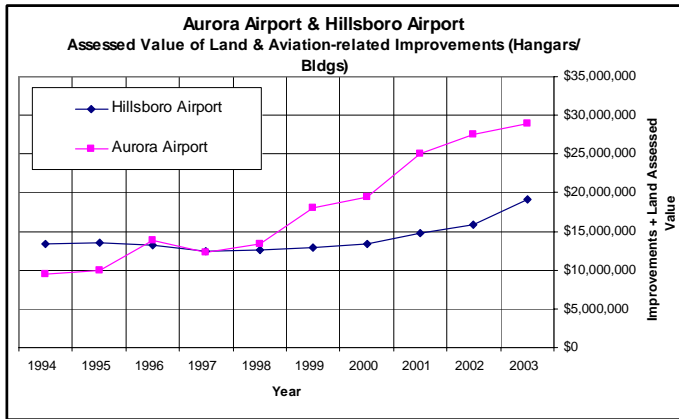
The "true" value of improvements plus the land is shown in the next graph. It is found that Aurora and Hillsboro Airports surprisingly have risen quickly but remained fairly close to each other in total value. This is largely because the value of the land has increased, and Hillsboro Airport has a lot of it. So Hillsboro Airport's total "true" value has risen mostly because of land, whereas Aurora Airport's total "true" value has kept pace with Hillsboro Airport because of the increased improvements.

By next year, Aurora Airport may have double the improvements (hangars and buildings) value of Hillsboro Airport – which is a very significant difference! The City of Aurora, which only a few years ago was trying to have Aurora Airport closed because of noise, is now looking into ways it might be able to annex the airport into their city. The value of the airport for community tax support and jobs is recognized as a big, big opportunity.

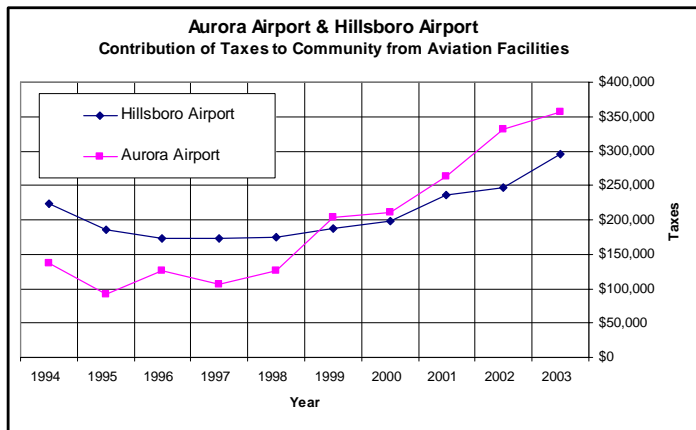


The next graph shows the "assessed" value of the combined airport land and improvements. Because much of the "true" value of Hillsboro Airport is in land that is in public ownership – and thus is not assessed a

tax – the overall "assessed" value of Hillsboro Airport is significantly reduced from that of the "true" values. Aurora Airport however keeps a much higher percentage of its "true" value, because a large amount of the land is not in public ownership, and thus is "assessed" a tax.



In terms of community support, Aurora Airport (and each other Oregon airport) should be thought of as one large business.³¹ Each aviation business and airport pilot should be able to say: "here is what my airport contributes to our community".



The above graph shows the actual taxes which have been assessed at Hillsboro Airport and at Aurora Airport based on the improvement values, the associated land values³², and fixed equipment³³ located

³¹ Economic development studies are beginning to acknowledge the importance of considering related groups of businesses as "clusters". A general aviation airport is an obvious example of such a "cluster", where businesses are forced to share a single runway and taxiway as their lifeline.

³² Publicly owned land is not taxed, except for the small portion that is directly under an improvement, i.e. its "footprint". Thus at Hillsboro Airport all taxiways, tie-down aprons, drainage ditches, and excess land are not taxed. At Aurora Airport where these areas are on privately owned land, they are taxed.

in the buildings or on the property. The data shows that Aurora Airport contributes 20% more taxes from aviation related uses than Hillsboro Airport, in spite of being only 28% of the land area and having an approximate 33% smaller tax rate³⁴ than Hillsboro Airport. Again, this shows the community value of allowing private development at public airports. Aurora Airport provides basic taxes to the community at the average rate of \$1,474 per acre of airport, whereas Hillsboro provides basic taxes to the community at the average rate of \$340 per acre of airport.

It is interesting that not only does the smaller airport with the public-private partnership model provide a better rate of return in support for the community, but from the standpoint of sustainability, the costs to maintain its runway and taxiways are much less. Hillsboro has probably three to four times as much pavement which would translate to much higher costs and use of the aviation trust fund to keep the airport in operation. In addition, at Aurora Airport, private owners pay for the cost of maintaining the private taxiways, thus requiring less federal trust fund support. Aurora Airport is in fact quite an efficient airport in this regard.

Another advantage of private development to a community is that the community does not automatically get reduced taxes when economic times have a turn-down. Governmentally owned hangars are only taxed if they are leased out. When vacant, a governmentally owned hangar is not taxed, unlike a privately owned equivalent. Private ownership provides a more stable tax base for a community.

The graph on the next page shows where the direct cash taxes paid by Aurora Airport properties went to support important community needs such as schools, libraries, fire, and police. No matter what tax rates or improvement values that exist for an airport, at public meetings and hearings, all airports can and should portray their positive financial contributions to the community.

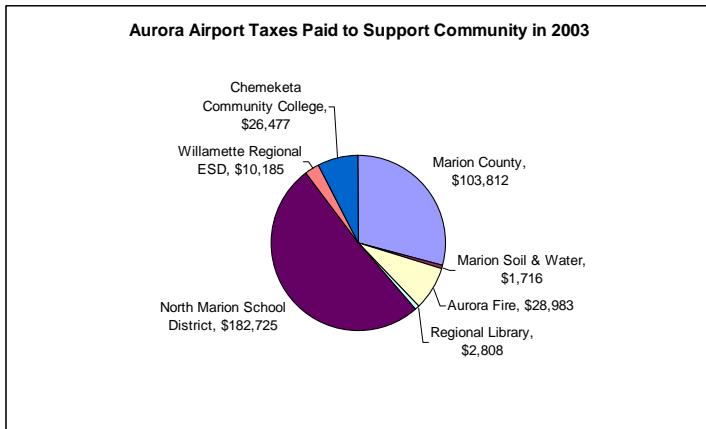
To this direct property tax, a standard economic analysis would also add the tax values of employment and the indirect values of influence. But direct cash paid is a particularly easy value for citizens to understand. One can ask: how many teachers for the North Marion School District did Aurora Airport's \$182,725 contribution provide?

This is the kind of analysis needed for every Oregon airport, so that the community can see how its

³³ Fixed equipment could include machinery in the building, or items such as approach lights, navigational equipment, or cell towers on the airport. Again, publicly owned equipment is not taxed.

³⁴ Marion County's tax rate for Aurora Airport is approximately \$10.39 per \$1,000 while the City of Hillsboro's tax rate for Hillsboro Airport is approximately \$15.51 per \$1,000.

airport currently supports local needs, and then if it can grow and be more successful, how it will increase its support of the community. And there are creative ways to expand on this idea.



For example since Aurora Airport last year contributed \$182,725 to the North Marion School District, the airport could expand on this and say to the district that as a major contributor it would like to also be involved with sponsoring several students and teachers to promote learning about aviation as part of their studies - and potentially helping several become pilots! Similarly, airport businesses and pilots might get involved with the library, to recommend current books on aviation that would be of interest to the community.

And to this direct tax on airport land and improvements, is added the public value of the airport jobs (Aurora Airport currently employs approximately 750 persons), the public value of taxes on that income (which also provides for community services), and the "induced" and "indirect" employment and taxes which those direct jobs provide, along with the taxes on business revenue, and the revenues and taxes from visitors who come to the community because the airport is available.

When these employment values (direct, induced, and indirect) and visitor values are added in for Aurora Airport, the total state and local tax contribution from the airport is likely ten to twenty times the annual property tax values shown above - i.e. in the \$3.5 to \$7.0 million range³⁵. The income taxes and visitor impacts are harder to verify, and are for the public a bit more ethereal, and hard to grasp. In explaining the airport value to a community, we recommend starting with the direct taxes from the airport land and improvements, as they are pure cash and undeniable, and their increase is directly related to growth and health of the airport.

³⁵ Economic Impact analysis of Oregon's airports is intended to be prepared by the Oregon Department of Aviation during the next year.

The Old meaning of "Competitive Advantage"

The FAA's Order 5190.6A brings up the issue of "competitive advantage" and identifies it as a major concern. It suggests that a through-the-fence operation may have some kind of "competitive advantage" over an on-airport similar business. Section 6-6(b) states:

"The development of aeronautical enterprises on land uncontrolled by the owner of the public airport can result in a competitive advantage for the "through the fence" operator to the detriment of on airport operators. To equalize this imbalance the airport owner should obtain from any off-base enterprise a fair return for its use of the landing area."

What are the competitive advantages that the FAA feels may exist? It is clear that the business costs of land and facilities will always be much higher for off-airport property, since no FAA funds would be permitted to be used for their acquisition or development. The only other significant financial factor might be a fear that through-the-fence operations might attempt to avoid fuel taxes. In practice, there are many airports³⁶ that have agreements with through-the-fence operators that provide for fuel taxes to be paid, just as they are on-airport.

So there is no real financial "competitive advantage" to through-the-fence operations. It is a myth! Rather, there is a basic financial disadvantage to develop facilities off-airport. The FAA's language in this Order must have come from an era when there were no fuel taxes, so that significant financial support could come from direct fees charged to the aircraft users, such as landing fees, tie-down fees, and leases.

Or perhaps, it was just a matter of good socialistic governance that created this concern. In the early years of aviation, the nation had the problem of creating a national system of airports that could provide fuel and services at regular spacing around the country. As a quasi-military organization, the Civil Aviation Authority (CAA) needed to fully control the creation of airports. Today, the system of airports is well established, and does not need such socialistic oversight. The global economy of today creates a new world for aviation. Just as scheduled service has been freed from the old version of control of routes and prices, general aviation has its own revolution to undergo.

The New Meaning of "Competitive Advantage"

In today's world, the phrase "competitive advantage" has a very different meaning. By the use of aviation, the internet, and wireless technologies the world is

³⁶ Aurora Airport and Scappoose Airport are examples.

today beginning to operate more as a "global economy" than a group of "local economies". NAFTA and World Trade Congresses have changed the way products are produced, marketed, delivered, and used.

In this regard, the State of Oregon has recently launched a vigorous effort at creation of jobs and economic development. The effort is being headed up by the Oregon Economic and Community Development Department (OECDD) and a central focus of the effort is to help businesses find and exploit their "competitive advantages" in the global economy of today. The phrase "competitive advantage" is a very positive term that businesses are encouraged to find and enhance, rather than expect to be compensated for. For example, several ranches in Central Oregon have banded together and now market an Oregon brand of organic beef that is desired all over the world.

A whole new way of considering and using "competitive advantage" has been developed and extensively written about by Michael E. Porter of the Harvard Business School. Just the titles of his books indicate the uniqueness and vigor of the concept:

- "Competition in the Open Economy" (1980)
- "Competitive Strategy: Techniques for Analyzing Industries and Competitors" (1980)
- "Cases in Competitive Strategy" (1982)
- "Competitive Advantage: Creating and Sustaining Superior Performance" (1985)
- "The Competitive Advantage of Nations" (1990)
- "Clusters and the New Economics of Competition" (1998)

This last publication is Porter's most recent, and most important, as concerns airports and aviation. The concepts of "competitive advantage" and "clusters" are being used as fundamental methodologies by the OECDD in working toward making Oregon's economy strong and healthy for the future. Many other cities, states, and countries are also using these approaches in their support and planning for future healthy business and industry. In this article Porter shows that competition is essential for businesses to be successful. Rather than being a negative, it is competition that creates the setting for innovation and improvement to be able to occur in products and services.

Porter says that "Today's economic map of the world is dominated by what I call clusters: critical masses - in one place - of unusual competitive success in particular fields." These clusters are geographic concentrations of interconnected companies and institutions in a particular field. They encompass an array of linked industries and other entities important to competition. Clusters therefore represent a new way of thinking about location. They reveal that the

immediate business environment outside companies also plays a vital role. Porter introduces the California wine cluster as an example to explain the anatomy of clusters.

So why are clusters so important? Porter claims that modern competition depends on productivity. Porter also claims that productivity rests on how companies compete, not on the particular fields they compete in. He explains the positive impacts of clusters on productivity, innovation, and new business formation. So how are clusters formed? The cluster's roots can often be traced back to historical circumstances. The author discusses the birth, evolution, and decline of clusters. So what are the implications?

According to Porter, understanding clusters adds four issues to the company's strategic agenda: (1) Choosing location; (2) Engaging locally; (3) Upgrading the cluster; and (4) Working collectively. He then turns towards governments. He claims that governments, both national and local, have new roles to play, they should strive to create an environment that supports rising productivity. Finally, Porter concludes that "leaders of businesses, government, and institutions all have a stake - and a role to play - in the new economics of competition." Each party is dependent on and responsible for creating the conditions for productive competition.³⁷

In the case of the scheduled airline industry, it is obvious that competition has led to great innovation, and great advantages for the public. In the case of general aviation the FAA is still attempting to control the industry with a kind of "top-down" approach which makes innovation very difficult. The future health and strength of general aviation will be in the innovations and improvements that are made, and that only private enterprise working in competition can create. We see the beginning of innovation occurring in places like:

- Aurora Airport as a whole – where the model of allowing private enterprise to flourish has resulted in it becoming Oregon's fastest growing airport (now having the most based aircraft of any in the state);
- Residential airparks like at Independence Airport which is a thriving and rapidly expanding airport;
- The enormous growth of the experimental and kit plane industry (Van's Aircraft and others);
- The very strong condition of the business jet market, and the potential addition of a new parallel "small jet" market; and
- New navigation technologies such as GPS moving maps and "heads up display" which are bringing real-time aviation more in line with current

³⁷ This summary of Porter's concepts is largely borrowed from a review by Gerard Kroese.

computer and game technologies that the younger generations are very comfortable in using.

The "competitive advantage" and "cluster" concepts have brought the analysis of commerce and industry into a framework that is not unlike that of biology in its use of ecology for studying species. Businesses do not exist independent of their surroundings and other businesses. In this global economy, businesses must remain competitive, smart, flexible, and innovative. They must continually upgrade their products and services.

For general aviation to participate in this new world economy, private enterprise must be given the tools and support to respond to the market forces. For a business on an airport to be able to be competitive nationally and internationally, it must be able to "constantly control the quality of its product"³⁸. To do this a company must be able to:

- Have complete control over the design and construction of their buildings (many airports will only build "spec" buildings for their tenants since the buildings typically revert back to the airport after 20 years). The need for control can relate to issues such as: kinds of windows, amount of insulation, whether "green building" technologies are used, and wanting to create a healthy indoor work environment.
- Own their facilities as a long term investment – more like 50 to 100 years than 20. Most businesses want to create a permanence and value that does not have a pre-determined date of mortality (end of lease).
- Expand or contract their business, or remodel and revamp their facilities as needed to meet changing market conditions. This "scaling" of the business is difficult when its facility is owned by the airport, and is mandated to meet airport "specs".
- Make decisions rapidly when necessary. The process of complying with a typical airport management often results in years of effort, which may or may not reach a successful conclusion. Governmental bureaucracies by their nature are conservative and have difficulty responding to the market and private sector needs of business.

For all of these reasons, the facility costs for a business in today's world are less important, than the need to be flexibility, innovative, and above all maintain a "competitive advantage" – maintain a distinctive "quality" for their product or service. As the

³⁸ For one of Oregon's fastest growing aviation businesses, this is their most important issue, and why they want to build on through-the-fence airport property to create their own building.

U.S. Green Building Council points out, over the lifetime of a business, the facility costs are small compared to the employee costs. So to create better productivity by the employees, or more creative and innovative work by the employees, or even increased health (reduced sick days) of the employees, the basic facility needs can be viewed as all important.

Finally, private enterprise supports the creation of new aircraft (Van's, Lancair, etc), new aviation technologies, all with innovations and creativity, based on new clusters and partnerships. This is the kind of fresh approach needed in general aviation, and that can allow the industry to transition into a "new general aviation." To stay useful in our modern, rapidly changing world, we must allow for change. By letting the market forces direct that change, we will find that general aviation matures, becomes more integrated with business and employment, and gains enormous health and vigor.

Answering the "Freeloader" Allegations

Let's return to the criticisms of private, through-the-fence operations made by FAA staff from headquarters, and now give answers to their statements.

- *Through-the-fence operators are "freeloaders" taking advantage of the airport, and contributing nothing back;*

Aircraft coming from private property to the airport all pay the same fuel taxes, which are the real source of aviation funding for public airports. By using private property for tiedowns and hangars, less federal funds will be needed at most general aviation airports, since the on-airport tiedowns and hangars are the "freeloaders" that do not pay their way and require a constant input of funds from the dedicated aviation fund to cover their costs. The aviation trust fund dollars being used to create and maintain the tiedowns and hangars should instead be redirected for the basic airport needs of runways, taxiways, and lights.

- *Through-the-fence property has high value precisely because there is a runway next door, so the private property owner should be required to give the increase in land value back to the airport;*

The value of land is generally set by the land use zoning a community places on it. Zoning is determined by a local community, not the FAA. Any industrial land adjacent to an airport would have increased value given that the airport is next door due to improved access to shipping and transportation. Yet the FAA is not suggesting that other increases in land value due to the airport, be returned to the airport.

Land values for many uses go up if there is good access to transportation – an Interstate Freeway next door, or a light rail line next door, or a bus line next door. In fact, the FAA should be proud that for any given community, the value of all of the land in that community goes up if there is a good airport available.

Yet, the FAA is not suggesting that all properties benefiting from an airport be asked to give land value back to the airport. The airport should be considered a public facility that is available for use by the community, just like the other transportation modes. When adjacent land can make good use of an airport, this adds value back to the airport and our national aviation system generally, because there will be a growth in aircraft use. And this will result in an increased success of aviation, and an increase in the aviation taxes available for the system.

- *Privatization of the airline industry should not be viewed as having anything to do with through-the-fence airport operations;*

The privatization of the general aviation service facilities will clearly be very different from the privatization of scheduled service, in that general aviation is not governed as to routes, fares, and schedules. However, it will be the same in that it will revert to the "market" in establishing how services are provided. This will result in innovation, pride of ownership, and other factors that the private sector can accomplish better than the public sector.

- *The airport needs to be preserved for the long term, and through-the-fence operations can change into uses that are opposed to preserving the airport.*

There is a saying among park planners: "never sell park land." The fear is that once sold, the land will be developed and can never be "green" again. And the same probably is a good general rule for airport runways, taxiways, runway protection zones, and safety areas. However, there is no comparable reason to prohibit adjacent private land from accessing the airport. This would be equivalent to park lands prohibiting adjacent properties from turning their property into green spaces that are part of the park!

In fact, as adjacent private lands join in using the airport, the airport property functionality is increased. And in becoming aviation related uses, the surrounding land is ensured to remain compatible with the basic airport property. Once an investment is made for aviation facilities, it is much less likely to be developed for other incompatible uses. The current problem around airports is that they are being developed for

incompatible uses such as non-aviation housing or other noise sensitive uses.

It should be noted that some of our western airports have many more acres than they can ever use, and the FAA has been allowing airport land in these cases to be removed for non-aviation uses. In similar fashion, there are many western airports that have sufficient land that portions could be sold for aviation-related private developments. The result would be private investment in aviation facilities, increased aviation uses on an airport, land sale dollars back into the aviation fund, and additional taxes on the private property to support the local community services of police, fire, and schools.

Some New Aviation Public-Private Partnership Experiments

It is reasonable to ask, what is the state of aviation public-private partnerships today? Did the experiment with using market forces for innovation and creativity in aviation just stop in 1979 – the year after the Airline Deregulation Act of 1978 was passed? In fact the Executive Branch and Congress have encouraged the FAA to continue the experiment and try other models. Thus, the first President Bush issued Executive Order 12803 in 1992. That order removed a requirement that state and local governments that sell or lease federally aided infrastructure assets must repay all previous federal grants invested in that asset. It also instructed all grant-making federal agencies to cooperate with state and local governments that wish to privatize such assets.³⁹ Congress in 1996 mandated the creation of the "FAA Airport Privatization Pilot Program", which is only recently gaining some momentum, after a cessation of activity following the events of 9-11. Today, there is a very strong "privatization" movement internationally, with many airports going into private ownership or 99 year leases. These airports include⁴⁰:

- London's Heathrow International (sold in 1987, this was the first major airport to be privatized, and its success spawned an international movement);
- Sydney's Kingsford Smith Airport (sold in 2002 to Southern Cross Airports Corp. for \$3 Billion (US) with a 99 year lease);
- Melbourne Tullamarine Airport (sold in 1997 to Australian Pacific Airports Corp. for \$900 Million (US);

³⁹ See "Airport Privatization After the Bush Executive Order" by Tazewill Ellett, October 1992, which can be found at www.rppi.org/ of the Reason Public Policy Institute. Ellett was a former Chief Counsel of the FAA.

⁴⁰ See "Global Airport Privatization Gains Altitude" by Robert W. Poole, Jr. at www.rppi.org/ of the Reason Public Policy Institute.

- India is preparing privatization plans for its five largest airports (New Delhi, Mumbai, Chennai, Bangalore, and Calcutta);
- China announced that it will allow foreign investors to hold a majority stake in civil airport joint ventures;
- Japan announced plans to privatize three major airports (Narita, Kansai, and Chubu/Nagoya);
- In Europe privatization is under way for Malta International Airport and Vienna International Airport,
- In Italy Rome and Naples are privatized airports, with Milan expected to privatize soon;
- Ecuador is building a new privatized airport at its capital city; and
- In Canada, Vancouver is the country's only privatized airport.

It should be noted that these international cases of airport privatization in many cases just represent one giant private organization taking over the operation of what was previously one giant government organization. The international privatization model may still assume a master control of most operations by the parent company, with most employees being under their control – but with the non-profit public motive changed to profit motive.

Thus, some analysts, such as Dr. Neufville⁴¹ of MIT argue that the current form of American privatization is more meaningful since it spreads the sense of privatization down to all levels of private enterprise, into the concessionaires, car rentals, and parking lots entrepreneurs.

Currently the following US airports are privatized:

- Burbank Airport (California);
- Albany Airport (New York); and
- Stewart Airport (New York).

US Airports with planning under way to privatize under the federal Airport Privatization Pilot Program include:

- Atlanta Hartsfield International (America's busiest airport);
- New Orleans Louis Armstrong International;
- New Orleans Lakefront Airport (which would be the first GA airport in the US); and

⁴¹ See "Airport Privatization Issues for the United States" by Dr. Richard de Neufville, Professor and Chairman, Technology and Policy Program, MIT, 1999, as found http://ardent.mit.edu/airports/de_Neufville_airport_papers.html.

- Pictone International (Chicago's possible 3rd airport being promoted by the suburban communities, but being opposed by Mayor Daley).

Another airport planning model being considered, is to use an airport as the basis for creation of new towns. Dr. John Kasard, Director of the Kenan Institute of Private Enterprise at the University of North Carolina suggests that: "Airports will shape business location and urban development in the 21st century as much as highways did in the 20th century, railroads in the 19th, and seaports in the 18th." Dr. Kasard's Center for Air Commerce⁴² helps:

- Communities plan how they will leverage their airports and surrounding commercial areas to attract industry and promote economically and environmentally sustainable growth.
- Airport authorities to plan and develop airports as retail, entertainment and business meeting destinations and vital networks for air commerce.

Dr. Kasard's concept of using an airport as the primary element of the central business district has been called "The Aerotropolis", and has been used as a planning concept for airports in the following cities:

- Ontario, California
- Wayne County, Michigan
- Las Colinas in Dallas-Fort Worth, Texas
- Paris, France
- Campinas, Brazil
- Lantau Island, Hong Kong
- Seoul, Korea, and
- Zhuhai, China

Finally, in fairness to history, and with local pride, we must recall that the concept of using an airport as a major retail, entertainment, and business meeting environment was invented here in Oregon, at Portland International Airport, in 1989. Under the direction of Sheldon Klapper, Port Director of Aviation Planning and Property Development, this concept of making airports into fun places to be – and profit centers for the airport owner – was tested, fleshed out, and made to work as the "Oregon Marketplace". After this success Mr. Klapper formed his own company, The Center for Airport Management, based in Portland, Oregon and has assisted many of the other major airports in the United States with creating their own successful airport retail and entertainment centers.

If there is one lesson from all of this, it is that airport governance and organization should not be considered a fixed target. Most of the experimentation

⁴² www.kenan-flagler.unc.edu/KI/airCommerce/index.cfm

and creative ventures have occurred in the large, international airports. Sadly, general aviation airports in the U.S. continue to hold to a 50 year old model that in today almost seems like a remnant of a much earlier, cold war world.

A Bold Next Step: Make Oregon a demonstration State for GA Airport Private Development:

The time has come to try new economic and governance models for our American general aviation airports. There is no reason that general aviation cannot also benefit from a more market driven economic model. It should be expected to require an approach that is different than that being used for privatization of large airports, since the users and basic structure of the airport operations are so different.

This paper has attempted to show that the current model is out of sync with current views of how to sustain a business in a global economy. The existing GA airport model at most FAA funded airports:

- Promotes protection of one or two on-airport FBO's (fuel and maintenance stations), out of fear that if they are not protected, there would be none;
- Provides almost free land and facilities to the airport (95% funding), yet finds GA activity still largely stalled (no real growth);
- Penalizes private through-the-fence airport developments that are in a growth mode, by charging additional fees to curtail a perceived "competitive advantage" over on-airport businesses;
- Doesn't support the local community, in that on-airport development is only minimally taxed, resulting in aviation not providing its fair share of police, fire, school, water, sewer, and other basic local government services;
- Not consistent with the current business approaches to finding "competitive advantage" in our global economy, which are based primarily on the use of innovation and creativity to find strong markets and niches; and
- Not consistent with the current business approaches of working as "clusters" of businesses that cross traditional boundaries, and as a group create new markets.

To remedy this need for finding new and more vibrant models for GA airports, it is proposed that the State of Oregon petition the FAA to begin a five year period of in-depth case studies, and trials, at allowing and promoting private development of aviation facilities at Oregon airports. The program would be initiated as an nine step process:

1. Contact all Oregon airports with a notice about the new program;
2. Request return contact if the airport wishes to participate;
3. For those airports interested, work with the airport owner and the FAA to determine appropriate private enterprise sites (on airport or adjacent land);
4. Send written notice to all adjoining properties and place public notices about the availability of the program;
5. Work with the State land use agency and land use watchdog groups to set acceptable ground rules for allowable land uses at airports, and establishment of airport boundaries;
6. Work with local and state economic development groups, pilots, and citizens, to establish specific airport development goals that support the unique strengths of that community;
7. Assist airports and adjacent property owners with implementing airport development projects;
8. Create program evaluation criteria that include airport economic analysis from airport, local community, state, and federal standpoints; and
9. At the end of five years fully evaluate the program and report back to the FAA as to its successes and failures, and determine whether it should continue or not.

Based on the successes occurring at Aurora and other Oregon airports, it is believed that this pilot study can validate a new model for general aviation airports. The new model will encourage each airport to use market forces to allow at least parts of its airport to develop in ways that make it an important center for innovation and enterprise, based on the unique strengths of the local community. With local GA growth and investment, these airports will bolster and revitalize the larger U.S. general aviation system. Finally, it will a model for other States to examine and adopt – or even better – to improve upon.

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Appendix 1:

FAA Order 5190.6A 10/1/89

6-6. AGREEMENTS GRANTING ACCESS TO LANDING AREA FROM ADJACENT PROPERTY (THROUGH-THE-FENCE OPERATOR).

There are times when the owner of an airport will enter into an agreement which permits access to the public landing area by aircraft based on land adjacent to, but not a part of, the airport property. In some cases, special taxiways have been built for this purpose. This type of an arrangement has frequently been referred to as a “through-the-fence” operation even though the perimeter fence may be imaginary. In reviewing a lease or contract which proposes this type of arrangement, the following guidance should be followed:

a. Rights and Duties of Airport Owner. The obligation to make an airport available for the use and benefit of the public does not impose any requirement to permit access by aircraft from adjacent property. The existence of such an arrangement could place an encumbrance upon the airport property unless the airport owner retains the legal right to, and in fact does, require the off-site property owner or occupant to conform in all respects to the requirements of any existing or proposed grant agreement.

b. Practical Considerations. The owner of an airport is entitled to seek recovery of initial and continuing costs of providing a public use landing area. The development of aeronautical enterprises on land uncontrolled by the owner of the public airport can result in a competitive advantage for the “through the fence” operator to the detriment of on airport operators. To equalize this imbalance the airport owner should obtain from any off-base enterprise a fair return for its use of the landing area.

c. Safety Considerations. Arrangements that permit aircraft to gain access to a public landing area from off-site properties complicate the control of vehicular and aircraft traffic. Special safety operational requirements may need to be incorporated in the “through-the-fence” agreement.

d. Agency Position. As a general principle, FAA will recommend that airport owners refrain from entering into any agreement which grants access to the public landing area by aircraft normally stored and serviced on adjacent property. Exceptions can be granted on a case-by-case basis where operating restrictions ensure safety and equitable compensation for use of the airport. Examples include:

(1) Where a bonafide airport tenant has already leased a site from the airport owner and has negotiated airfield use privileges, but also desires to move aircraft to and from a hangar or manufacturing plant on adjacent, off-airport property. In this case actual access will be gained through the area provided by the airport owner.

(2) Where an individual or corporation, actually residing or doing business on an adjacent tract of land, proposes to gain access to the landing area solely for aircraft use incidental to such residence or business without offering any aeronautical services to the public. This situation is commonly encountered where an industrial airpark is developed in conjunction with the airport.

e. Determinations. The existence of arrangements granting access to a public landing area from off-site locations contrary to FAA recommendations shall be reported to regional Airports divisions with a full statement of the circumstances. If the regional Airports division determines that the existence of such an agreement circumvents the attainment of the public benefit for which the airport was developed, the owner of the airport will be notified that the airport may be in violation of his agreement with the Government.

Appendix 2:
Oregon NPIAS Airports (Eligible for Federal Aviation Funds)
 Data as of Year 2000 (Most Recent NPIAS Available)

Airport Serves City	Airport Name	ID	Based Aircraft	TTF at Airport	Comment
Scheduled Service Airports					
Eugene	Mahlon Sweet Field	EUG	183 ^a		
Klamath Falls	Klamath Falls International	LMT	119		
Medford	Rogue Valley International - Medford	MFR	158		
Newport	Newport Municipal	ONP	27		
North Bend	North Bend Municipal	OTH	68		
Pendleton	Eastern Oregon Regional at Pendleton	PDT	95		
Portland	Portland International	PDX	98		
Redmond	Roberts Field	RDM	105	Yes	Business
Non-Scheduled Service Airports					
Albany	Albany Municipal	S12	76	Yes	Fairground
Ashland	Ashland Municipal - Sumner Parker Field	S03	88		
Astoria	Astoria Regional	AST	47		
Aurora	Aurora State	UAO	387 ^a	Yes	Many properties
Baker City	Baker City Municipal	BKE	35		
Bandon	Bandon State	S05	31		
Bend	Bend Municipal	S07	132		
Boardman	Boardman	OR33	2		
Brookings	Brookings	BOK	29		
Burns	Burns Municipal	BNO	29		
Chiloquin	Chiloquin State	2S7	5		
Christmas Valley	Christmas Valley	62S	6	Yes	Many houses; <i>hangars</i>
Condon	Condon State - Pauling Field	3S9	8	Yes	2 hangars
Corvallis	Corvallis Municipal	CVO	161		
Cottage Grove	Cottage Grove State	61S	42		
Creswell	Hobby Field	77S	93	Yes	<i>House/Hangar</i>
Florence	Florence Municipal	6S2	31		
Gold Beach	Gold Beach Municipal	4S1	12		
Grants Pass	Grants Pass	3S8	128	Yes	<i>AC Maint. Shop/Hngr.</i>
Hermiston	Hermiston Municipal	HRI	38		
Hillsboro (Portland)	Portland – Hillsboro	HIO	375 ^a		
Hood River	Hood River	4S2	80	Yes	Several houses, museum
Illinois Valley (Cave Junction)	Illinois Valley	3S4	16	Yes	<i>2-3 Hangars</i>
Independence	Independence State	7S5	95	Yes	Many houses (<i>residential airpark</i>)
John Day	John Day State	5J0	29		
Joseph	Joseph State	4S3	6		
La Grande	La Grande / Union County	LGD	45		
Lakeview	Lake County	LKV	23		

The Public Benefits of Private Development at Public Airports

Lebanon	Lebanon State	S30	40	?	
Lexington	Lexington	9S9	9	Yes	Ag operator & residence
Madras	City - County	S33	34		
McDermitt	McDermitt State	26U	3		
McMinnville	McMinnville Municipal	MMV	147	Yes	Evergreen Airline, Museum
Mulino (Portland)	Portland - Mulino	4S9	58		
Myrtle Creek	Myrtle Creek Municipal	16S	10		
Newberg	Sportsman Airpark	2S6	31	Yes	
Ontario	Ontario Municipal	ONO	58		
Portland	Portland Downtown Heliport	61J	0		
Portland	Portland - Troutdale	TTD	191	Yes	US Forest Service
Prineville	Prineville	S39	44		
Roseburg	Roseburg Regional	RBG	101		
Salem	McNary Field	SLE	211	Yes	National Guard
Scappoose	Scappoose Industrial Airpark	SPB	93	Yes	Transwestern
Seaside	Seaside Municipal	56S	6		
Siletz Bay (Gleneden Beach)	Siletz Bay State	S45	15	?	<i>Adjacent houses may have airport access, hangars</i>
Sunriver	Sunriver	S21	47	Yes	<i>Residential Airpark (8-9 house/hangar units)</i>
The Dalles	Columbia Gorge Regional / The Dalles Municipal	DLS	48		
Tillamook	Tillamook	S47	49		
Wasco	Wasco State	35S	6	Yes	<i>Ag operator hangar</i>

Notes:

^a This footnote indicates that the number was updated to 2004 FAA data.