

CRESWELL AIRPORT MARKET FEASIBILITY STUDY & BUSINESS PLAN



Report Submitted to

The City of Creswell, Oregon

By

Elesco Limited

May 18, 2010

CRESWELL AIRPORT - HOBBY FIELD MARKET FEASIBILITY STUDY & BUSINESS PLAN

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CRESWELL AIRPORT – HOBBY FIELD MARKET FEASIBILITY STUDY & BUSINESS PLAN

INTRODUCTION

The goals of this project are to provide the City of Creswell with a market feasibility study for the Creswell Airport along with an Airport business plan. The feasibility study and business plan will be utilized to determine which of the three alternatives identified in the Airport Master Plan is most appropriate for creating a sustainable and prosperous Airport. The project includes the following objectives:

1. Define market area and existing conditions
2. Identify and prioritize airport markets
3. Define market trends
4. Conduct budget analysis
5. Define implementation steps with which to pursue prioritized markets

Development of this Airport Market Feasibility Study & Business Plan required consulting numerous sources of existing data to avoid duplication of effort. Those sources included the Airport Master Plan, Airport Layout Plan, Terminal Area Plan, Airspace Plan, and Airport Land Use Plan which were all produced by Century West Engineering Corporation in November, 2007. While the data in these documents was less than two years old when this study was initiated, economic conditions and the aviation market changed dramatically during the two years after those documents were written. All of the data in those documents that specifically affects this report was updated to show the changed conditions.

The Airport Master Plan identified three alternative scenarios for the future development of Hobby Field and described a preferred alternative which consisted of Alternative C with some modifications. This study provides a feasibility analysis of those alternatives in terms of current and projected economic conditions and aviation demand, then provides a business plan that the City of Creswell can follow to achieve the objective of a sustainable and prosperous Airport.

Alternative A showed current and future development of facilities as shown in the 2004 Airport Layout Plan (ALP) which was approved by the Federal Aviation Administration (FAA).

Alternative B retained the configuration of the south hangar layout as depicted in the 2004 ALP but showed significant reconfiguration of the terminal area and a different development pattern for the north sections of the west development area.

Alternative C showed a reduction of outside aircraft parking (tie-downs) on the north side of the Terminal apron and redevelopment of some of that area for enclosed T-hangars.

The Preferred Alternative incorporated most of the provisions of Alternative C but also showed a 500- foot extension at the north end of the runway, along with additional hangars, an east side access road, and land acquisition for future airport needs.

PART 1: MARKET FEASIBILITY STUDY

SECTION 1: OVERVIEW OF HOBBY FIELD AND INVENTORY OF EXISTING CONDITIONS

Rather than duplicating information found in the various documents described in the Introduction, the descriptions below are provided as an overview to facilitate discussion of key characteristics of the Airport without having to cross-reference those other documents.

Location: Creswell Airport (Hobby Field – 77S) is a municipally-owned, public use general aviation airport located adjacent to the Interstate 5 freeway 1-mile NE of the city of Creswell, Oregon, approximately 10 miles south of the cities of Eugene and Springfield in Lane County.

Aviation Facilities and Services:



Hobby Field has a single paved runway 15/33, which is 3101 feet long by 60 feet wide. The 2004 Airport Layout Plan was approved by the FAA in August 2004 with B-I (small) listed as the existing and future Airport Reference Code (ARC) based on a Beechcraft Baron, light twin-engine aircraft. However, it is capable of handling most single and multi-engine piston aircraft weighing less than 12,500 pounds along with many turbo-prop aircraft and some of the newer category of Very Light Jets (VLJs) unless precluded by weight or dimensional restrictions. The Airport is currently limited to VFR (visual flight rules) operations although a WAAS/GPS instrument approach procedure is in the planning stage.

Hobby Field is included in the National Plan of Integrated Airport Systems (NPIAS) and is included in the “Core System of Airports” in the Oregon Aviation Plan (OAP).

In addition to hangars and tie-down facilities for based and transient aircraft, the Airport has 100LL and Jet-A fuel on the field for both reciprocating and turbine powered aircraft. On-field businesses provide airframe and powerplant maintenance and repair, flight instruction, aircraft rentals and sales, and pilot supplies.

The 2007 Master Plan listed nine T-hangars with a combined capacity of storing 97 aircraft. It also listed 12 conventional hangars located on the airport including the FBO maintenance hangar, the Experimental Aircraft Association (EAA) hangar, and eleven other hangars used for commercial businesses and aircraft storage. In November 2009, the FAA was showing 129 aircraft based at Hobby Field.

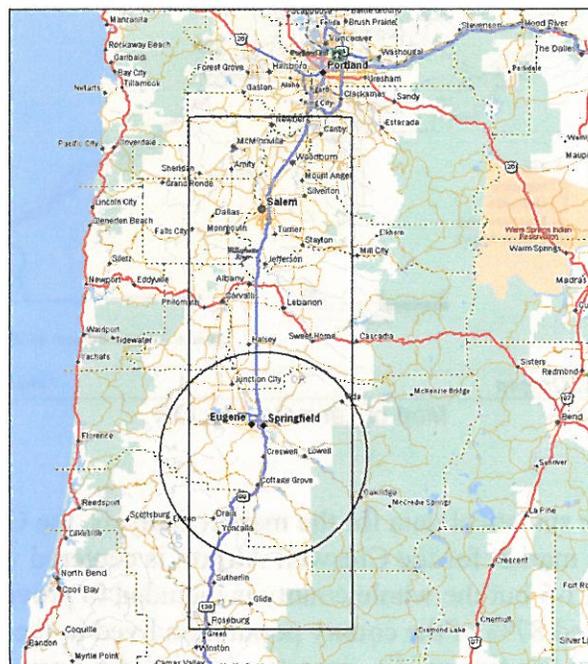
In addition to providing a home base for local aircraft, Hobby Field serves a large market of transient general aviation aircraft. The FAA indicated there was an average of 105 operations per day on a yearly basis in 2008, with 39% of those conducted by local aircraft and 58% by transient aircraft. Another 3% represented air taxi operations.

Hobby Field also provides a temporary base for emergency services such as medical evacuations, fire fighting, and public safety operations. It is also used as a base for skydiving operations with a designated off-airport landing area.

The aviation facilities and services offered at Hobby Field are further described and compared later in this report with other public use airports in Lane County to illustrate the Airport's competitive position in this market.

Geographic Study Area (GSA) and Area of Influence (AOI)

The Geographic Study Area and the Area of Influence necessarily overlap for some aviation measurement criteria. Aviation, by definition, is a highly mobile activity that is not confined to the local areas where the aircraft are based. Aircraft owners will fly their planes long distances, often out of state, to have services provided by repair shops that specialize in their types of aircraft or engines. That means a reputable repair or maintenance facility can attract business from places outside the local or regional geography.



Geographic Study Area (circle) and Area of Influence (Rectangle)

This study focuses on the geographic areas that are estimated to produce at least 90% of their respective markets for Hobby Field, for the reasons explained below. The circle on the map represents a 40-mile radius around Hobby Field that encompasses the Geographic Study Area;

the larger rectangle stretches along the I-5 Corridor between Roseburg and the Aurora Airport near Canby and represents the Area of Influence. That does not mean that Hobby Field can not draw from markets in Portland, Medford, or other parts of Oregon and the Northwest. However, greater competition in those areas will reduce potential market share to a relatively smaller size.

Geographic Study Area (GSA)

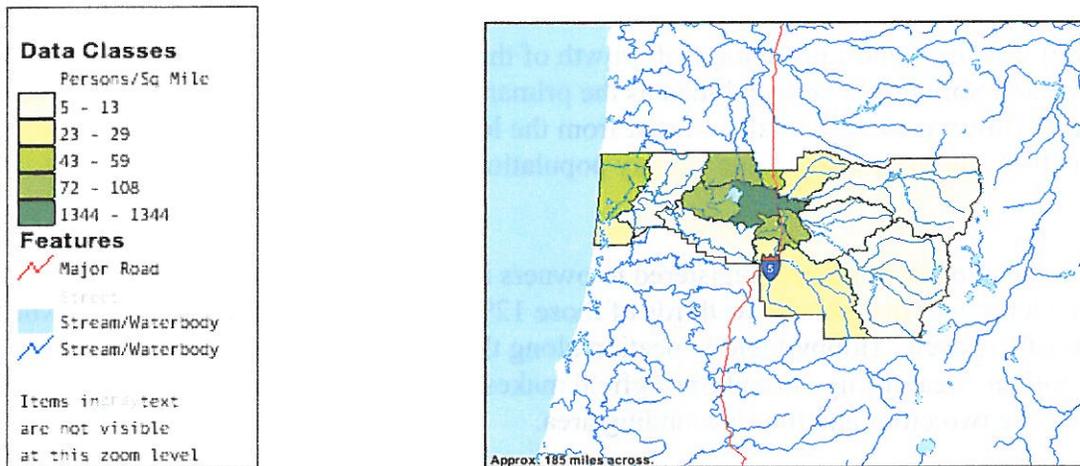
The Geographic Study Area for Hobby Field generally encompasses the area that has direct economic impacts from the Airport and/or benefits from services provided at the Airport. It is also the area from which Hobby Field draws most of its based aircraft and aviation operations. While the greatest impacts are linked to the City of Creswell, Hobby Field also has economic and service interactions within a broader market that stretches along the I-5 corridor from the Douglas County line on the south to Junction City on the north. South of the Douglas County line, Roseburg Municipal Airport is the center of its own geographic sphere of influence while north of Junction City aviation activities are more influenced by the Albany and Corvallis airports.



Map of Lane County, OR

In order to provide reliable statistical data for the market analysis, the GSA is measured for all of Lane County. Most of the market for the Creswell Airport is centered within a corridor about 15 miles wide on each side of I-5 but the whole county is included to provide comparable data for trend analysis. An estimated 87% of the county population lived in the 30-mile wide corridor in 2008. This geographic area has five public airports with paved runways but only three of them are located within the central corridor: Eugene Municipal Airport; Creswell’s Hobby Field; and the Cottage Grove State Airport. The other two airports are at Florence and Oakridge and have little influence on Hobby Field. Hobby Field’s competitive position within this market is examined later in this report.

Below is the population density map from the 2000 US Census that graphically shows the concentration of population along the I-5 Corridor with the highest densities in Eugene and Springfield.



Socioeconomic Data for the GSA

The socioeconomic data measured in this report are: (1) population trends and forecasts; (2) age composition of the population; (3) income levels and trends; and (4) employment and unemployment trends. By correlating current data to the pilot population and aircraft ownership, these measurements can be extrapolated to indicate future changes in the aviation market.

Population Trends and Forecasts

Table 1: Lane County Population Trends, 1980 to 2009

	1980	% of LC	1990	% of LC	2000	% of LC	2009	% of LC	Δ1980-2009
State of Oregon	2,366,156		2,842,321		3,421,399		3,823,465		61.6%
Lane County	275,226		282,912		322,959		347,690		26.3%
Creswell	1,770	0.6%	2,431	0.9%	3,579	1.1%	4,790	1.4%	170.7%
Cottage Grove	7,136	2.6%	7,403	2.6%	8,445	2.6%	9,485	2.7%	32.9%
Eugene	105,664	38.4%	112,733	39.7%	137,893	42.7%	157,100	44.7%	48.7%
Springfield	41,621	15.1%	44,683	15.8%	53,215	16.5%	58,085	16.8%	39.6%
Douglas County	93,748		94,649		100,399		105,395		12.4%
County Totals	368,974		377,561		423,279		453,085		22.8%

U.S. Census, 1980 – 2000. Estimate for 2009 from Center for Population Research and Census, Portland State University, as of July 1, 2009

1980 is used as the base year for the market analysis in order to show recent trends over the past 30 years rather than historical trends. Douglas County figures are shown to indicate that there is also a sizable market south of Lane County, although that market is not included in this analysis.

Population growth in Lane County from 1980 to 2009 was only 42.7% of growth in the state of Oregon as a whole. Oregon’s annual average growth rate was 1.7% while in Lane County it was 0.8%. If aircraft ownership as a percentage of overall population remains constant, that indicates a weaker market for airport services in Lane County than in the overall state of Oregon.

Creswell saw the highest percentage of growth of the three cities cited as the GSA market (Eugene and Springfield are combined as the primary market for Eugene’s Mahlon Sweet Airport). However, Creswell also started from the lowest base in 1980 and was still the smallest city in 2009. Its share of the Lane County population rose from only 0.6% in 1980 to 1.4% in 2009.

Data on the number of aircraft registered to owners in Creswell versus the number based at Hobby Field show that about two-thirds of those 129 based aircraft belong to owners who live outside of Creswell. Hobby Field’s location along the I-5 freeway only 10 miles south of the Metropolitan Area of Eugene and Springfield makes it a convenient base for aircraft owners who live in those two cities and the surrounding area.

The data show that this is a sizable market. In 2009, there were 215,185 people living in those two cities representing 62% of the total population of Lane County. The market analysis for Creswell recognizes that Hobby Field is an important GA airport serving the whole Eugene-Springfield Metropolitan Area. Identifying market opportunities for Hobby Field can be related to that much larger market.

Table 2: Lane County Coordinated Population Forecasts, 2010 to 2035

	2010	2015	2020	2025	2030	2035	Δ2010-2035
Lane County	349,518	366,924	385,297	403,892	421,522	437,207	25.1%
Creswell	5,647	6,802	8,263	9,758	11,060	12,172	115.6%
Cottage Grove	9,957	10,616	11,424	12,261	12,856	13,542	36.0%
Eugene	156,844	166,609	176,124	185,422	194,314	202,565	29.2%
Springfield	58,891	62,276	66,577	70,691	74,814	78,413	33.2%

Included in Update of Lane County Rural Comprehensive Plan, Adopted by Lane County Board of County Commissioners, June 17, 2009

The population forecast is provided only for Lane County and the four cities that comprise the primary Geographic Study Area. This was the most recent data available at the city level and is based on input from the four cities.

This 25-year forecast shows the City of Creswell leading all others in population growth rate from 2010 to 2035 but still remaining the smallest city in the GSA. While growth rates in Eugene-Springfield are predicted to be only one-quarter or less than those of Creswell, the numerical growth for those cities is expected to be over 65,000 people during the period versus 6,525 in Creswell. Again, the Metropolitan Area market must be considered in planning for new business services and aviation activities at Hobby Field.

Age Characteristics of the Population

The breakdown of age characteristics is provided only for the State of Oregon and Lane County in order to provide a comparison. Breaking them down further to the community level has little value because the GSA has been defined as the whole of Lane County. The data in the tables below were obtained from the U.S. Census Bureau's American Community Survey and represent an average over the three-year period of 2006 – 2008.

Table 3: Age Distribution of Population in Oregon and Lane County, 2006 - 2008

State of Oregon			Lane County		
Age Group	Number	% of Total	Age Group	Number	% of Total
0 – 14 Years	709,217	19.0%	0 – 14 Years	56,669	16.5%
15 – 24 Years	487,986	13.1%	15 – 24 Years	52,394	15.3%
25 – 54 Years	1,592,343	42.6%	25 – 54 Years	141,943	41.4%
55 – 64 Years	456,628	12.2%	55 – 64 Years	43,561	12.7%
65+ Years	489,395	13.1%	65+ Years	48,354	14.1%
Total Population	3,735,524	100.0%	Total Population	342,921	100.0%
Median Age	37.8		Median Age	38.0	

Source: US Census Bureau, American Community Survey averages for 2006 - 2008

There are no significant disparities in the age distribution between the State of Oregon and Lane County. Lane County had a slightly smaller percentage of its population in the 0-14 year old age group, and a slightly larger percentage in the 15-24 year old age group. That is apparently due to the large student population at the University of Oregon and Lane Community College and may indicate a larger market for pilot training which is normally aimed at this age group.

In the next two age groups, 25-54 years and 55-64 years, the combined percentages are almost the same. Those are the prime age groups for aircraft ownership.

Unless these age patterns change, the figures indicate that the age distribution of the population in Lane County will match that of the State of Oregon as the state's population grows. That means the percentage of pilots and aircraft owners should also follow existing patterns in Lane County as compared to the state as a whole.

Income Characteristics of the Population

Income comparisons show greater disparity between Lane County and the State of Oregon. Table 4 shows the figures published in the 2006 - 2008 American Community Survey.

Table 4: Household Income Characteristics of the Population in Oregon and Lane County, 2006 - 2008

State of Oregon			Lane County		
Household Income	# of Households	% of Total	Household Income	# of Households	% of Total
Total Households	1,464,672	100%	Total Households	139,615	100%
Less than \$10,000	102,356	7.0%	Less than \$10,000	13,206	9.5%
\$10,000 - \$14,999	82,405	5.6%	\$10,000 - \$14,999	8,117	5.8%
\$15,000 - \$24,999	162,398	11.1%	\$15,000 - \$24,999	17,598	12.6%
\$25,000 - \$34,999	167,278	11.4%	\$25,000 - \$34,999	16,905	12.1%
\$35,000 - \$49,999	219,653	15.0%	\$35,000 - \$49,999	21,002	15.0%
\$50,000 - \$74,999	291,959	19.9%	\$50,000 - \$74,999	29,012	20.8%
\$75,000 - \$99,000	181,846	12.4%	\$75,000 - \$99,000	15,914	11.4%
\$100,000 - \$149,999	163,100	11.1%	\$100,000 - \$149,999	11,667	8.4%
\$150,000 - \$199,999	49,213	3.4%	\$150,000 - \$199,999	3,435	2.5%
\$200,000 or more	44,464	3.0%	\$200,000 or more	2,759	2.0%
Median income	\$49,863		Median income	\$44,180	
Mean income	\$64,956		Mean income	\$56,885	

These figures do not look as favorable for Lane County. The median household income measured over the three-year period in Lane County was only 88% of the whole state, with the mean income closely matching that at 87.6%. That means the population residing in Lane County, on average, is less able to afford the relatively expensive costs of owning and operating aircraft than in the rest of the state.

Part of the disparity may be caused by the large student populations at the University of Oregon and Lane Community College. The greatest divergence is in the upper income groups earning \$75,000 and more, and in the lower income groups earning \$35,000 and less. However, the income figures for the state may also be skewed by the concentrations of higher income occupations centered in the major population centers of the Portland Metropolitan Area.

Employment Characteristics of the Population

Table 5: Average Annual Employment, 1990 - 2009

	1990		2000		2009	
State of Oregon						
Employment	1,319,960		1,627,769		1,746,532	
Unemployment	87,183	6.2%	112,529	6.5%	217,035	11.1%
Lane County						
Employment	129,698		155,460		160,607	
Unemployment	9,962	7.1%	10,593	6.4%	21,761	11.9%

Lane County had 9.8% of the statewide employment in 1990 which fell to 9.2% in 2009. Statewide employment gained by 32.3% over the 19-year period while in Lane County the gain was only 23.8%. This is a sign of weakness for all markets in Lane County compared to the State as a whole. Combined with the relative weakness in median household incomes, it is expected that the demand for personal and business aircraft in Lane County is weaker than in the overall state.

Comparisons of the Five Paved Airports in the GSA

For reference in evaluating Hobby Field's competitive position in the aviation market of the GSA (Lane County), the following table shows comparisons in selected evaluation criteria for the five public airports with paved runways.

Table 5: Comparison of Five Public Airports in the GSA
Comparison of Paved Airports in Lane County

	Creswell (current)	Creswell (Master Plan)	Cottage Grove State	Eugene	Oakridge	Florence
Category	GA	GA	GA	AC/GA	GA	GA
Runways	1	1	1	2	1	1
Primary Runway Length	3,101 ft. x 60 ft.		3,188 ft. x 60 ft.	8,009 ft. x 150 ft.	3,610 ft. x 47 ft.	3,000 ft. x 60 ft.
Elevation	538 ft.	538 ft.	641 ft.	374 ft.	1,393 ft.	51 ft.
Lights	PCL	PCL	PCL	Yes	No	PCL
Beacon	Yes	Yes	Yes	Yes	No	Yes
Inst. Approach	No		No	ILS/LOC	No	No
Attended	Yes - PT	Yes - PT	No	Yes - FT	No	Yes - PT
Services						
Fuel	100LL/Jet-A	100LL/Jet-A	**100LL	100LL/Jet-A	None	100LL/Jet-A
Airframe	Major	Major	None	Major	None	None
Powerplant	Major	Major	None	Major	None	None
Flt. Training	Yes	Yes		Yes	None	Yes
Aircraft rental	Yes	Yes		Yes	None	Yes
Pilot supplies	Yes	Yes		Yes	None	Yes
Courtesy car	On request			Yes		Yes
Distance from City	1 Mile NE	1 Mile NE	1 Mile E	7 Miles NW	1 Mile W	1 Mile N
Based Aircraft	129	145	55	203	5	15
SE Aircraft	120		50	159	5	12
ME Aircraft	3		1	14	N/K	2
Helicopters	3		1	10	N/K	1
Glider/Ultralight	3		3	2	N/K	N/K
Jet				18		
Operations						
Avg. Daily	105/day	139/day	46/day	225/day	33/wk	134/wk
Transient GA	58%		58%	39%	71%	40%
Local GA	39%		39%	30%	12%	30%
Air Taxi	3%		3%	28%	18%	9%
Military	0%		0%	2%	0%	21%
Commercial	0%	0%	0%	8%	0%	0%

GA = General Aviation

AC/GA = Air Carrier / General Aviation

PCL = Pilot Controlled Lighting

PT = Part Time; FT = Full Time

N/K = Not Known

Master Plan based aircraft and operations in 2025

**It is reported that Cottage Grove State is discontinuing its aviation fueling service

Area of Influence (AOI)

The AOI is substantially larger than the GSA because it includes airports that offer competition to Hobby Field in the provision of aircraft support services. It is not unusual for aircraft owners to fly outside of their local areas in order to obtain specific services from suppliers who have a reputation for quality of service and/or more competitive prices. For that reason, the AOI selected for this report consists of the region containing all airports along the I-5 corridor running from Roseburg Municipal Airport on the south to Aurora State Airport on the north. These airports are profiled in this report along with descriptions of their facilities and operations.



Western Oregon Counties in AOI

The map of Western Oregon shows the seven counties selected to make up the AOI. These include Douglas County, Lane County, Benton County, Linn County, Polk County, Marion County, and Yamhill County. Some of these counties do not have their primary airports located along the I-5 corridor but their airports offer the types of aircraft services that compete with Hobby Field. Independence State Airport in Polk County does not offer services but has some parallels that may be used as comparisons for potential development plans at Hobby Fields. As noted earlier, the major airports in the three-county Portland Metropolitan Area are not included in this analysis.

The purpose for presenting information on the AOI is to show the expanded market potentials if Hobby Field could draw market share from airports in these counties, acknowledging they are also competitors. Aircraft service business locating at Hobby Field will recognize that they have a much larger potential market than just the smaller area described in the GSA. Only the most recent data are provided rather than showing trend lines and forecasts.

Table 6: Seven County Comparisons

County	2009 Population	2006-08 Median Age	2006-08 Total Income (Billions)	2006-08 Median Household Income
Lane	347,690	38.0	\$8.234	\$44,180
Douglas	105,395	43.8	\$2.194	\$40,212
Linn	110,865	38.3	\$2.464	\$44,977
Benton	86,725	33.4	\$2.231	\$50,350
Polk	68,785	36.5	\$1.758	\$48,825
Marion	318,170	34.7	\$6.787	\$46,340
Yamhill	95,250	35.0	\$2.375	\$51,638
Total of AOI	1,132,880	N/A	\$26.043	\$46,646
AOI as % of GSA	326%		316%	106%

Source: US Census Bureau, American Community Survey, Three Year Survey of 2006 - 2008

These data show that by expanding the market from the GSA to the AOI, the size of the population increases by 326%; total income increases by 316%; and median household income increases by 106%.

In the section of this report that evaluates Hobby Field’s competitive position within the AOI market, information on the following airports is used for comparisons.

- Douglas County: Roseburg Municipal Airport
- Lane County: Eugene Municipal Airport
- Benton County: Corvallis Municipal Airport
- Linn County: Albany Municipal Airport
Lebanon State Airport
- Polk County: Independence State Airport
- Marion County: Salem Municipal Airport
Aurora State Airport
- Yamhill County: McMinnville Municipal Airport

Aircraft Ownership in the Seven Counties of the AOI

Based aircraft and operations data for Eugene’s Mahlon Sweet Airport were provided in Table 5. Table 7 shows the same data for the other eight airports that are within the AOI but outside of the GSA.

Table 7: Based Aircraft and Operations in the AOI

Based	Total	Single Engine	Multi-Engine	Jet	Helicopters	Other
Aurora	324	258	30	12	24	
McMinnville	132	88	11	5	11	17
Salem McNary	216	153	21	11	11	20
Independence	189	172	11		1	5
Albany	58	49	7	2		
Lebanon	67	57	2			3
Corvallis	134	104	10	2	18	
Roseburg	94	79	10	2	3	
Operations	Total Daily	Transient	Local GA	Air Taxi	Military	Other
Aurora	202	53%	38%	8%		1%
McMinnville	174	63%	35%		2%	
Salem McNary	145	55%	33%	5%	7%	
Independence	87	71%	25%	4%		
Albany	62	55%	42%	3%		
Lebanon	27	54%	42%	4%		
Corvallis	143	96%	2%	<1%	2%	
Roseburg	87	55%	37%	8%	<1%	

Source: AirNav.com Most recent data as of March 30, 2010.

These figures total 1,214 based aircraft in the AOI in addition to the 407 based aircraft in the GSA, for a total of 1,621 based aircraft. Daily operations total 927 in the AOI plus 400 among the airports in the GSA, for a total of 1,327 operations daily. This is the general size of the market from which Hobby Field can compete for market share of aircraft business services.

SECTION 2: AVIATION DEMAND ANALYSIS

A. Trends in the National General Aviation Fleet

The aviation forecasts cited in this section are largely taken from the 35th Annual FAA Aviation Forecast Conference which was held in early March 2010. The forecasts were released to the public on March 10, 2010.

National aviation forecasts made during the period from 2004 to 2007 predicted strong growth for all sectors of the market over the next 15 years and beyond. In the general aviation market, those growth forecasts were based primarily on increased use of general aviation aircraft in business along with new types of aircraft entering the market, ranging from light sport aircraft (LSAs) to very light jets (VLJs). It was expected that there would be continuing demand for these and other new aircraft despite concerns about a shrinking pilot population.

Those forecasts proved to be unachievable when the U.S. entered the worst economic downturn in almost 80 years in early 2008. In its year-end 2009 report on aircraft shipments, the General Aviation Manufacturers Association (GAMA) reported that the number of aircraft shipped during 2009 had fallen 42.6% from the same period in 2008 while billings were down 21.4%. Their numbers showed a decline from 3,976 aircraft delivered in the full year 2008 versus only 2,276 during the year 2009. Billings fell from \$24.8 billion to \$19.5 billion during that same period.

The recent decline in shipments follows a pattern of overall decline in the numbers of active general aviation aircraft in the United States, especially among piston-engine aircraft. Data from the Aircraft Owners and Pilots Association (AOPA) show there were 145,036 active single-engine piston aircraft registered in the U.S. in 2007, down from 149,422 in the year 2000 and down from a peak of 168,435 in 1980. Multi-engine piston aircraft showed similar patterns of decline, falling from a peak of 25,356 in 1981 to 20,951 in 2000 and 18,708 in 2007.

Through 2007, other types of aircraft generally showed positive growth trends. Turboprop aircraft, turbojets, rotorcraft, experimental, and “other” types of aircraft all showed increases in their respective numbers of active registrations from 2000 to 2007.

The AOPA table showing trends in the numbers of active aircraft by type since 1980 is shown below.

Table 6: US Active General Aviation Trends by Type of Aircraft, 1980 - 2007

AOPA GENERAL AVIATION TRENDS										
Active General Aviation Aircraft										
Year	Piston SE	Piston ME	Piston Other	Total Piston	Turbo-prop	Turbo-jet	Rotor-craft	Exper-imental	Other	Total
1980	168,435	24,366	212	193,013	4,090	2,992	6,001	-	4,945	211,045
1981	167,898	25,356	114	193,368	4,660	3,171	6,974	-	5,049	213,226
1982	164,173	24,882	140	189,195	5,186	3,996	6,169	-	5,233	209,779
1983	166,427	24,909	143	191,479	5,453	3,898	6,539	-	5,923	213,293
1984	171,922	25,258	262	197,442	5,809	4,320	7,098	-	6,275	220,943
1985	153,400	22,100	100	175,600	5,000	4,100	6,000	-	5,800	196,500
1986	160,300	22,100	100	182,500	5,600	4,200	6,500	-	6,500	205,300
1987	159,700	21,700	100	181,500	4,900	4,000	5,900	-	6,300	202,700
1988	153,700	21,200	100	175,000	4,900	3,900	6,000	-	6,400	196,200
1989	158,900	21,800	100	180,800	5,900	4,100	7,000	-	7,200	205,000
1990	154,000	21,100	100	175,200	5,300	4,100	6,900	-	6,600	198,000
1991	152,836	20,551	131	173,518	4,941	4,126	6,238	-	8,051	196,874
1992	144,837	17,966	77	162,881	4,786	4,004	5,979	-	8,000	185,650
1993	133,516	15,626	14	149,156	4,116	3,663	4,721	10,426	5,037	177,120
1994	127,351	14,801	-	142,152	4,092	3,914	4,728	12,144	5,906	172,936
1995	137,049	15,739	-	152,788	4,995	4,559	5,830	15,176	4,741	188,089
1996	137,401	16,150	-	153,551	5,716	4,424	6,570	16,625	4,244	191,129
1997	140,038	16,017	-	156,055	5,619	5,178	6,785	14,680	4,092	192,414
1998	144,234	18,729	-	162,963	6,174	6,066	7,426	16,502	5,580	204,710
1999	150,886	20,930	108	171,923	5,679	7,120	7,448	20,528	6,765	219,464
2000	149,422	20,951	140	170,513	5,762	7,001	7,150	20,407	6,700	217,533
2001	145,034	18,192	89	163,314	6,596	7,787	6,783	20,421	6,545	211,446
2002	143,503	17,584	101	161,087	6,841	8,355	6,648	21,936	6,377	211,244
2003	142,265	17,491	182	160,938	7,689	7,997	6,525	20,550	6,008	209,708
2004	146,613	18,469	107	165,189	8,379	9,298	7,821	20,800	5,939	219,426
2005	148,101	19,412	170	167,608	7,942	9,823	8,728	23,627	6,454	224,352
2006	148,236	19,364	400	167,600	8,026	10,032	9,232	24,541	6,592	226,422
2007	145,036	18,708	0	163,743	8,063	10,379	9,159	23,047	7,551	221,943
% Δ 1980-2007	-13.9%	-23.2%	n/a	-15.2%	97.1%	246.9%	52.6%	121.1% 1993-07	52.7%	5.2%
% of 2007 Fleet	65.3%	8.4%	n/a	73.8%	3.6%	4.7%	4.1%	10.4%	3.4%	100%

Source: FAA Aerospace Forecasts Last updated December 2007

The table includes the following notes:

- Sub-totals might not add to totals due to rounding, estimates, and/or survey procedures
- 1985 – 1990 totals revised to correct for non-response bias on FAA GA Activity Survey
- 1991 – 1995 totals revised do to change in estimating procedures for the 1996 GA Activity Survey
- 2006 = Numbers are Estimates

While the piston segment of the GA fleet showed significant declines in percentages of total active aircraft between 1980 and 2007, it still represented almost 74% of the total fleet in 2007.

There is no breakdown between piston and turbine power for the rotorcraft or experimental categories but it can be assumed that piston engines represent the majority of the rotorcraft and nearly all of the experimental aircraft. Adding those to the piston categories would add about 32,000 aircraft to their total and make the total piston category more than 88% of the total fleet. The category shown as “other” represents gliders, balloons, and other non-motorized aircraft.

It is important to note that the table includes estimated “active” aircraft only. This is a more realistic category for assessing demand for aircraft services rather than “registered” aircraft that includes those in storage or non-flying condition.

Forecasting future trends in market segments is complicated by these national trends and the currently unpredictable economic conditions in the aviation industry. However, the FAA is confident that recovery will occur although its timing and magnitude are uncertain. As the FAA stated in the introduction to its 2010-2030 Aerospace Forecast:

Developing forecasts of aviation demand and activity levels continues to be challenging as the aviation industry evolves and prior relationships change. In times of amplified volatility, the process is filled with uncertainty, particularly in the short-term. Even though the highly cyclical U.S. aviation industry went into a downward spiral during 2009, history has shown the demand for air travel is resilient and growth will return. With the start of 2010, the lingering questions are 1) how much economic recovery will be required to jumpstart the industry back to a period of growth, and 2) when will the recovery occur?

Given the current instability in the global economy, there is much uncertainty as to the timing and strength of a recovery in aviation demand. Nevertheless, the FAA has developed a set of assumptions and forecasts consistent with the emerging trends and structural changes currently taking place within the aviation industry. The FAA is confident that these forecasts accurately predict future aviation demand, however due to the large uncertainty of the operating environment the variance around the forecasts is wider than in prior years.

The general aviation forecasts rely heavily on discussions with industry experts and the results of the 2008 General Aviation and Part 135 Activity Survey. The assumptions have been updated by FAA analysts to reflect more recent data and developing trends, as well as further information from industry experts. The FAA also presents the forecasts and assumptions to industry staff and aviation associations, who are asked to comment on the reasonableness of the assumptions and forecasts. Their comments and/or suggestions have been incorporated into the forecasts as appropriate.

National Aviation Forecasts

Two current reports are used to assess where the aviation markets are heading in the near future: (1) the FAA National Aviation Forecast of 2010 cited above; and (2) the General Aviation Manufacturers’ Association Year-End 2009 Shipment Analysis.

FAA Forecasts

Most of the FAA's 2010-2030 forecasts focus on the air carrier and air cargo markets with only a short section devoted to the general aviation sector of the industry. As noted above, it only includes "active" aircraft, not the total. The FAA uses estimates for 2009 as its baseline so the total period of the forecast is 21 years. The following is excerpted from selected parts of the general aviation market forecast.

General Aviation

The FAA forecasts the fleet and hours flown for single-engine piston aircraft, multi-engine piston, turboprops, turbojets, piston and turbine powered rotorcraft, light sport, experimental and other (which consists of gliders and lighter than air vehicles). The FAA forecasts "active aircraft," not total aircraft. The FAA uses estimates of fleet size, hours flown, and utilization from the General Aviation and Part 135 Activity Survey (GA Survey) as baseline figures upon which assumed growth rates can be applied.

The demand for business jet aircraft has grown over the past several years. New product offerings, the introduction of very light jets, and increasing foreign demand have helped to drive this growth. In addition, corporate safety/security concerns for corporate staff, combined with increasing flight delays at some U.S. airports have made fractional, corporate, and on-demand charter flights practical alternatives to travel on commercial flights. Despite the hard impact of the recession felt in the business jet market, the forecast calls for robust growth in the long term outlook and predicts business usage of general aviation aircraft will expand at a faster pace than that for personal/recreational use.

The active general aviation fleet is projected to increase at an average annual rate of 0.9 percent over the 21-year forecast period, growing from an estimated 229,149 in 2009 to 278,723 aircraft by 2030. The more expensive and sophisticated turbine-powered fleet (including rotorcraft) is projected to grow at an average of 3.0 percent a year over the forecast period, with the turbine jet portion increasing at 4.2 percent a year.

With the advent of a relatively inexpensive twin-engine very light jet (VLJ), many questions have arisen as to the future impact they may have. The lower acquisition and operating costs of VLJs were believed to have the potential to revolutionize the business jet market, particularly by being able to sustain a true on-demand air-taxi service. While initial forecasts called for over 400 aircraft to be delivered a year, events such as the recession along with the bankruptcy of Eclipse and DayJet have led us to temper more recent forecasts. The worldwide delivery of VLJs this year has held up relatively well compared to the turbine jet market as a whole.

Despite that, the impacts of the recession have led to dampened expectations. The current forecast calls for 440 VLJs to enter the US fleet over the next three years, with an average of 216 aircraft a year for the balance of the forecast period.

The number of active piston-powered aircraft (including rotorcraft) is projected to decrease from the 2008 total of 166,514 through 2017, with declines in both single and multi-engine fixed wing aircraft, but with the smaller category of piston-powered rotorcraft growing.

Beyond 2017 active piston-powered aircraft are forecast to increase to 172,613 by 2030. Over the forecast period, the average annual increase in piston powered aircraft is 0.2 percent. Although piston rotorcraft are projected to increase rapidly at 3.4 percent a year, they are a relatively small part of this segment of general aviation aircraft. Single-engine fixed-wing piston aircraft, which are much more numerous, are projected to grow at a much slower rate (0.2 percent respectively) while multi-engine fixed wing piston aircraft are projected to decline 0.8 percent a year. In addition, it is assumed that VLJs and new light sport aircraft could erode the replacement market for traditional piston aircraft at the high and low ends of the market respectively.

Starting in 2005, a new category of aircraft (previously not included in the FAA's aircraft registry counts) was created: "light sport" aircraft. At the end of 2008 a total of 6,811 active aircraft were estimated to be in this category while the forecast assumes the fleet will increase approximately 825 aircraft per year until 2013.

Thereafter the rate of increase in the fleet tapers considerably to about 335 per year. By 2030 a total of 16,311 light sport aircraft are projected to be in the fleet.

The number of general aviation hours flown is projected to increase by 2.5 percent yearly over the forecast period. A large portion of this growth will occur in the short term post recession period, where record low utilization rates experienced in 2009 will return to normal trends, particularly in the turbine jet category.

As with previous forecasts, much of the long term increase in hours flown reflects strong growth in the rotorcraft and turbine jet category. Hours flown by turbine aircraft (including rotorcraft) are forecast to increase 4.1 percent yearly over the forecast period, compared with 1.1 percent for piston-powered aircraft.

Jet aircraft are forecast to account for most of the increase, with hours flown increasing at an average annual rate of 6.1 percent over the forecast period. The large increases in jet hours result mainly from the increasing size of the business jet fleet, along with measured recovery in utilization rates from recession induced record lows. Rotorcraft hours, relatively immune to the economic downturn when compared to other categories, are projected to grow by 3.0 percent yearly. The light sport aircraft category is expected to see increases in hours flown on average of 5.9 percent a year, which is primarily driven by growth in the fleet.

The number of active general aviation pilots (excluding air transport pilots) is projected to be 501,875 in 2030, an increase of over 52,000 (up 0.5 percent yearly) over the forecast period. Commercial pilots are projected to increase from 125,738 in 2009 to 139,100 in 2030, an average annual increase of 0.5 percent.

The number of student pilots is forecast to increase at an average annual rate of 0.8 percent over the forecast period, growing from 72,280 in 2009 to 86,050 in 2030. In addition, FAA is projecting that by the end of the forecast period a total of 14,100 sport pilots will be certified. As of December 31, 2009, the number of sport pilot certificates issued was 3,248 reflecting a steady increase in this new “entry level” pilot certificate that was only created in 2005. The number of private pilots is projected to grow at an average yearly rate of 0.2% over the forecast period to total 219,050 in 2030.

These FAA forecasts are based on the belief that the recession ended in June 2009 with 2010 being the first year of real growth.

GAMA Forecasts

The General Aviation Manufacturers Association (GAMA) had not yet issued a shipment forecast for 2010 at the time this report was written but did provide a year-end 2009 summary with indications of where they expected the market to go in 2010.

GAMA Year-End 2009 Report

Total Number of Aircraft Shipments	2008	2009	CHANGE
Pistons	2,119	965	-54.5%
Turboprops	535	441	-17.6%
Business Jets	1,313	870	-33.7%
Total Shipments	3,967	2,276	-42.6%
Total Billings	\$24.8B	\$19.5B	-21.4%

Following is a narrative review of the state of the industry at the end of 2009 that describes the significant declines in shipments from 2008 to 2009. Only piston-engine aircraft are cited as this is the primary market for Hobby Field.

Now that the year is finally over, and the numbers have been painfully tallied up, we can finally assess just what shape the market is really in. The news from the General Aviation Manufacturer’s Association is pretty grim: Worldwide shipments and billings of general aviation airplanes fell sharply in all categories for 2009. Industry billings for the year were \$19.5 billion, down 21.4 percent from the record high of \$24.8 billion set in 2008. That’s \$5.3 billion in lost revenue for companies that had been projecting another record year.

Deliveries were also down big-time – a whopping 42.6 percent – finishing the year at 2,276 units, compared with 3,967 a year ago. GAMA Chairman Rob Wilson called it one of the toughest years ever for business aviation manufacturers as he reported the year-end numbers. As often happens, though, a closer look at the numbers reveals some reasons for optimism.

Wilson said in GAMA's annual state-of-the-industry presentation that **there are signs the worst of the economic crisis may be over. "The inventory of used aircraft has peaked and is now declining," he observed. "Flight hours are on the rise and inquiries for new orders are starting to grow again."**

He added "while these positive factors give us reason for optimism, we know that a full recovery will take time." The question for everyone right now is, how much time? Business jets were not the only segment to finish somewhat ahead of expectations. Turboprops also topped most forecasts, with 441 units. Even the piston products - which had a dismal result of 965 units - were ahead of their predicted pace. The reason all three groups exceeded expectations was that a sales surge occurred in the fourth quarter, just as we had suggested it might.

Piston Engine Aircraft

With a total of 965 deliveries, it was the worst year for piston-powered aircraft sales since 1996, when the market totaled 801. Ten piston manufacturers reported sales to GAMA in 2009. Every one of them had lower numbers than a year ago.

The piston market did experience a surge, so that 29.95 percent of all piston sales came in the fourth quarter. It will be very revealing to see what the piston sales numbers look like in the first quarter of 2010.

Singles

Cessna continued to dominate the piston singles market with 355 deliveries, down from 733 the previous year. Cirrus was next at 268, down from 549, followed by Diamond at 112, down from 223.

Piper made just 49 deliveries, off 70 percent from the 165 it reported a year ago. Hawker Beechcraft had 36, compared to 63 in 2008. Mooney, with production shut down and delivering from previously unsold inventory, reported 19 sales. Liberty had 13, Gippsland 11 and Maule 7.

Twins

The piston twin market, which a couple of years ago seemed to be having a significant revival, was also battered. Total piston twin deliveries totaled just 70 units, down 60 percent from 2008. This puts the piston twin market back to where it was in 2005, when 71 units were reported.

Diamond continued to be the leader in piston twins, but recorded just 38 deliveries compared with 85 in 2008. The good news is that Diamond seems to have resolved the engine problems that crippled deliveries of its DA42 Twin Star, and may now be in a position to lead another revival in piston twins. Hawker Beech, meanwhile, delivered 20

twins, exactly half the number it had in 2008, while Piper had just 12, down 76 percent from the 51 it delivered the previous year.

Final Reflections on 2009

Considering all these numbers, and the huge reductions that took place between 2008 and 2009, it's not hard to see why companies had to lay off thousands of workers last year. With long lead times for components like engines and avionics, as well as the need to stock raw materials such as aluminum and hardware to support anticipated production, all the companies must have built up huge quantities of work-in-process that will have to be worked down before production and employment can increase again.

Some of the delivery totals have sunk so low, particularly among certain of the piston manufacturers, that we can only hope most of the companies will be able to survive until the market recovers. With a little luck, recovery may be starting to develop. The next quarter's numbers should tell us a lot...

Oregon Aviation Forecasts

The latest forecast of aviation activity issued by the Oregon Department of Aviation was dated 2007 and released in early 2008. Upon review, the forecast was not meaningful because it predated the severe recession that hit the aviation market in 2008 and 2009. As indicated for the national market, there is still enough uncertainty about the timing and scope of recovery to make it not feasible to develop a separate forecast for Oregon at this time. Following are some data to indicate the current state of the aviation market in Oregon.

Aircraft Ownership in Oregon

Information on aircraft registrations in Oregon is provided by AircraftOne.com. No database was found that compiles this information at the Oregon Department of Aviation. The FAA provides information for each county in the state, which also requires aggregating the data to obtain state or regional counts. Other sources such as AirNav require aggregating the data for all individual airports in the state.

The FAA data is summarized by a commercial provider named AircraftOne.com. Their database shows the following registration figures for the state of Oregon for 2010:

State	Oregon	% by Type
Total Registered Aircraft Count	9,437	100.0%
• Individual Registered Count	4,878	51.7%
• Partnership Registered Count	216	2.3%
• Corporation Registered Count	2,737	29.0%
• Co-Owned Registered Count	1,546	16.4%
• Government Registered Count	46	0.5%
• Non-Citizen Corporation Registered Count	14	0.1%

Unfortunately, the information is not broken out by type of aircraft. The best source for that information is AirNav but they provide the data only for each individual airport for the aircraft that are based there.

Also, it should be noted that *registered* aircraft are not the same as *active* aircraft. Some critics of using registered aircraft as the database estimate that only about one-half of those are actually in flying status.

It is not known how closely the aircraft types in Oregon follow the pattern of aircraft types across the U.S. but applying the U.S. pattern to the state would produce the following breakdown, based on a total of 9,437 registered aircraft:

Type	U.S. Percentage	Oregon Equivalent
Single-engine piston	65.3%	6,162
Multi-engine piston	8.4%	793
Total piston	73.8%	6,965
Turboprop	3.6%	340
Turbojet	4.7%	444
Rotorcraft	4.1%	387
Experimental	10.4%	981
Other	3.4%	321

In summary, the current volatility of aircraft markets makes it unrealistic to forecast quantitative demand for hangar space at Hobby Field. As the trends appear to be turning up slowly, it can be assumed that there will eventually be additional demand due to growth. However, the primary driver of demand at Hobby Field will continue to be the ability of Creswell Airport to increase its share of the regional market rather than relying on local growth. The discussion of the Business Plan will explore ways to do that.

SECTION 3: ECONOMIC VALUE EVALUATION

Summary of Qualitative and Quantitative Benefits of General Aviation Airports.

General aviation is defined as all civilian flying except scheduled passenger airlines. According to the Aircraft Owners and Pilots Association, an estimated 65% of general aviation flights are conducted for business and public services that need transportation more flexible than the airlines can offer. Their description of the major benefits of general aviation airports is provided below:

- **General Aviation Offers Speed and Flexibility for Business:** Business owners and sales people can visit multiple customers and vendors in the time it would take to visit only one by car or even by an airline. This includes flying to places not served by commercial airlines.

- **General Aviation Saves Lives:** Air ambulances carry out medevac rescues and provide urgent transportation to trauma and other emergency centers. Helicopter emergency medical evacuation nearly doubles survival rates by getting accident victims to hospitals within the first critical hour.
- **General Aviation Protects Our Environment:** The most efficient and cost-effective way to conduct wildlife surveys, map wetland losses and soil erosion, follow bird migrations, patrol parklands and detect pipeline spills is with general aviation aircraft. Specially equipped government and private aircraft gather information vital to the work of wildlife specialists, park rangers, prospectors, environmentalists and others.
- **General Aviation Facilitates Law Enforcement:** General aviation aircraft have revolutionized law enforcement in federal, state and local jurisdictions. Police use light airplanes and helicopters to patrol highways, apprehend suspects, back up ground units, monitor national borders and locate lost children. In a single year, for example, airborne Los Angeles law enforcement officers responded to more than 32,995 incidents, an average of 3.8 per hour. The result: 3,500 arrests, 1,354 suspects spotted, 747 stolen cars recovered and 205 residential and other urban fires discovered.
- **General Aviation Aids Agriculture:** “Ag pilots” treat more than 300 million acres of cropland each year, boosting production of the nation’s agricultural lands. Sixty-five percent of all commercially employed crop protection is applied by air. Ninety-five percent of the U.S. rice crop is planted by aircraft. Ranchers use general aviation aircraft to manage herds and grazing land.
- **General Aviation Facilitates Commerce:** General aviation expedites financial transactions by transporting canceled checks and other documents throughout the Federal Reserve System. By cutting down the cost of “float” until checks clear, general aviation plays a vital role in banking and commerce. General aviation also flies important documents and overnight packages on their way to offices, factories and individuals under next-day time pressures. Express freight like vital machine parts and mail to small towns also go by fast and flexible general aviation to thousands of locations where the major air carriers don’t fly.

About 75% of major airline flights operate out of just 46 big city airports. Seventy percent of all airline passengers are shuttled among only 30 hub airports. In all, only about 650 U.S. airports are certified for scheduled airline service with aircraft seating more than 30 passengers. But general aviation serves all 19,200 landing facilities in the United States.

The fleet of general aviation aircraft is the mainspring of a \$20 billion a year industry which generates more than \$150 billion in economic activity. Thousands of communities benefit as their airports create a positive ripple effect in the local economy. Their business people take advantage of rapid, on-demand air transportation, and the airports help attract corporations that would never locate a plant, headquarters or distribution center in a town without an airport.

So general aviation airports are not like marinas at all; they are transportation hubs that work around the clock to serve America's vital interests.

Economic Impacts of Hobby Field on Local and Regional Economy

The economic impacts of Hobby Field on the local and regional economy were profiled by the Oregon Aviation Department in the Oregon Aviation Plan 2007. That report showed that airports in Oregon were directly or indirectly responsible for 35,172 jobs; \$927,631,000 in wages; and \$2,998,930,000 in business sales. Those figures did not include the impacts of the Port of Portland airports which were significantly higher.

Creswell's Hobby Field represented a relatively small part of those figures but still showed important local impacts. Its economic contribution to the State's economy was given as 105 jobs, \$1,506,000 in wages, and \$5,159,000 in business sales. Most of those impacts were attributed to the economic region comprised of the Willamette Valley and Coast.

Contributing to these impacts, the report cited the numbers of visitors arriving at general aviation airports and estimated their spending impacts. For Hobby Field, it estimated 4,000 visitor arrivals per year, spending an average of \$151 per visitor for a total of \$606,000 per year.

Sources of Revenue at Hobby Field

The City of Creswell's adopted Airport Fund Budget for FY 2009-2010 shows gross operating revenue from eight sources, not including grants and the transfer from the General Fund:

Hangar Rental	\$ 17,350
Tie-down Rental	1,000
Land Lease Income	29,250
Office & Shop Rental Income	9,400
Fuel Sales	300,000
In Lieu of Taxes	18,650
Pilot Supplies	3,500
Miscellaneous	<u>3,000</u>
Total	\$382,150

Fuel sales represent 78.5% of the total gross revenue of the Airport. However, the *cost* of aviation fuel in the budget is shown as \$275,000 leaving a net margin of only \$25,000. That still compares favorably with other sources of revenue and may offer opportunities to increase net revenues by increasing total fuel sales.

The price of fuel is an important factor in drawing pilots to airports where they can refuel. Prices at each airport can be easily found at several sites on the Internet and compared prior to determining where to make a fuel stop. A comparison from the AirNav site shows the following:

Airport	100LL	Jet-A
Creswell Hobby Field	\$4.49/gallon	\$3.70/gallon
Eugene Mahlon Sweet	\$4.35/gallon	\$4.69/gallon
Albany	\$4.16/gallon	N/A
Lebanon State	\$3.99/gallon	N/A
Corvallis	\$4.20/gallon	\$3.95/gallon
Salem McNary	\$4.19/gallon	\$3.99/gallon

Fuel prices vary but these are the prices shown as of May 12, 2010. All 100LL prices are for self service fueling with higher prices charged for full service.

Lebanon State reportedly offers the lowest prices for aviation fuel in the Willamette Valley. In addition, they provide a self-service pump for 91-octane MOGAS at \$3.35 per gallon. This fuel is becoming increasingly popular among experimental and light sport aircraft owners using Rotax engines and other types approved for high-octane automobile fuel. With the forecasted growth of the light sport aircraft category, the City of Creswell might consider adding this capability at Hobby Field in the future.

Landing and tie-down fees are a relatively small part of the Airport's revenue. There is no landing fee per se at Hobby Field but there is a \$2.00 overnight parking fee. Most airports waive these fees if the pilot buys fuel. These are difficult fees to raise because they have a negative effect on demand by encouraging pilots to use other airports. The Master Plan called for a total of 15 local tie-down spaces at Hobby Field and 22 itinerant tie-down spaces by the year 2025.

Aircraft storage facilities produce two kinds of revenues at Hobby Field: (1) rental fees for City-owned hangars; and (2) ground lease fees for land underlying privately-owned hangars. The Master Plan showed there were 107 existing hangar spaces in 2005 and forecast that another 37 hangar spaces would be required in 2025. That increase of 35% offers opportunities to increase revenues to the Airport.

However, long-standing contracts that originated during the period when the City was acquiring the Airport from private interests appear to limit the amount of revenue the City can generate. Many of the hangars are owned by individuals or by groups that have constructed hangars for lease/sale on Airport ground leases. The construction of new hangars will give the Airport better opportunities to control revenues from new ground leases or from construction and leasing of the hangars themselves.

The key factor in estimating future revenues from ground leases or hangar rents is the lease rates charged by the Airport. Surveys show that there is a wide range of lease rates at the various airports in the Willamette Valley, tending to be highest at the north end that draws from the Portland market.

For example, an Airport Ground Lease Survey by the firm of Duncan & Brown in 2007, performed for the Aurora State Airport, showed the following range of rates:

Airport	Ground Lease Rates	Comments
Portland Troutdale	\$0.25 psf/year	Business or high activity/Reliever airport serving the Portland Metro Area. Control tower, nav aids. Reasonable Indicator.
Portland Hillsboro	\$0.38 psf/year	Business or high activity/Reliever airport serving the Portland Metro Area. Control tower. Nav aids. Superior location and facilities. High indicator.
Scappoose Industrial	\$0.36 psf/year	Business or high activity/General aviation airport serving the Portland metro area. No control tower. Nav aids. Rate appears high as compared to market. High indicator.
Salem Municipal	\$0.20 / \$0.26 / \$0.33 psf/year	Business or high activity/General aviation airport. Control tower. Nav aids. High end of rent range is for the best locations on the field with full utilities. The mid-range is the best indicator for the subject.
McMinnville Municipal	\$0.23 psf/year	Business or high activity/General aviation airport. No control tower. Nav aids. Low indicator.

At the time of the survey, the Aurora State Airport was using a rate of \$0.16 per square foot per year for their leases of ground with taxiway access. The Duncan & Brown report recommended they establish a new rate of \$0.25 psf.

Based on the typical hangar footprint of 1,500 square feet cited in the Hobby Field Master Plan, a rate of \$0.25 per square foot would yield \$375 per year for the hangar ground lease. For the 37 new hangars projected in the Master Plan by 2025, the total of 55,000 square feet of ground space would produce an additional \$13,750 in revenue annually. That could be increased by ground leasing additional land for aprons or other adjacent uses.

The other option would be for the City of Creswell to construct the hangars and lease them along with the ground. Again, lease rates vary but 18 hangars in a new complex at Eugene Municipal Airport are being quoted at a lease rate of \$249 per month. A 3,500 sq. ft. hangar for sale at EUB is quoted at a price of \$255,000 which represents \$72.86 cents per square foot. These prices reflect the current depressed market and a detailed financial analysis would need to be performed to determine whether this is a viable option for the City.

Aircraft maintenance and other services are provided at Hobby Field by local FBO's offering major airframe and powerplant repair, flight training, aircraft rentals, pilot supplies, and other typical services for light general aviation aircraft. All of the airports listed in the seven-county AOI offer similar services at various levels. The services available at Hobby Field appear to be adequate to keep the Airport competitive within its market.

Higher levels of service are offered at Flightcraft at the Eugene Municipal Airport and the Jet Center at Aurora State Airport. Those facilities service turbine-engine aircraft, both turbojets and turboprops in addition to piston aircraft. It is not expected that Hobby Field will compete for those levels of services.

Hobby Field could benefit from the addition of an avionics facility that can retrofit glass panels into older aircraft with "steam gauges". In fact, the whole area of retrofitting and modification of older aircraft is growing as the prices of new aircraft escalate.

Future Revenue Opportunities

There are opportunities to increase revenues from operations at Hobby Field but it appears these will have to be incremental and in progressive small steps. If the Master Plan is correct and only 37 additional hangars will be required by 2025, representing an increase of 35%, then revenues from ground leases and/or hangar rentals will increase by about \$20,000 annually from current levels depending on the formulas used.

Increasing fuel sales by 35% over that period while keeping present margins will add about \$8,750 annually to net revenues.

The other revenue opportunity will be to attract one or more specialty FBOs that will pay ground leases, and hangar rents if the City constructs their facilities, as well as percentage rates on their volume of business. However, getting and keeping strong FBOs will eventually pay off for the Airport more than maximizing revenues from them. The Airport may even need to consider incentive rates to get the full range of aircraft services that the market demands.

These ideas are explored in the next part of this report – the Business Plan.

PART 2: THE BUSINESS PLAN

BUSINESS PLAN PROCESS

In drafting this Business Plan, careful consideration was given to the Vision Statement and Operational Plan for Creswell Municipal Airport – Hobby Field in addition to the 2007 Airport Master Plan and Airport Layout Plan. However, it was not always possible to reconcile certain elements of the Vision Statement with changing realities in aviation markets. For example, the high value on maintaining a local aviation-connected community oriented primarily to recreational flying is balanced against the declining market in recreational use of aircraft and the growing market of higher-performance aircraft used for business travel. These are not mutually exclusive but there are potential conflicts between those who want to retain the status quo for Hobby Field versus those who want to accommodate new uses at the Airport.

As much as possible in this report, these kinds of issues are left to the City, Airport management, and the aviation community itself to resolve. Impacts on financial cash flows are also given a high priority in the analysis. Alternative considerations are evaluated but specific recommendations are not included in the Business Plan.

What follows is a special purpose Business Plan aimed at achieving specific objectives over a 20-year planning period. That is different from general purpose models developed by private businesses and submitted to investors and banks to obtain equity or debt capital. Most of the standard elements of a Business Plan are already in place for Hobby Field, such as the management organization, physical layout of facilities, and financing structures. Instead of addressing those as if they did not already exist, this document examines changes that would enhance the Airport operations as it achieves its 20-year vision.

BUSINESS PLAN SCENARIO

20 – year objective: Increase net revenues from Airport operations to achieve break-even or positive cash flows for the City of Creswell; make the Airport self-supporting.

- Expand lease revenues from public hangar rents; ground leases for private hangars; ground leases from FBOs; ground leases from other aviation-related businesses at the Airport.
 - City leases ground only
 - City provides build-to-suite facilities and leases both ground and buildings
 - Upgrade hangars for business/executive users with facilities and offices to generate higher rents
- Expand revenues from tie-downs, overnight parking, other aircraft services
- Increase property tax revenues from private capital investments on the Airport
- Increase utility fee revenue from providing municipal utility services

Progressive scenario for achieving the long-term objective:

- Initial focus: Expand the market for all these activities by increasing the number of aircraft based at Hobby Field
- Corollary focus: Expand the market by attracting more utilization of Hobby Field by transient or visiting aircraft
- Intermediate-term focus: Upgrade infrastructure and runway expansions for higher – value users
- Longer-term focus: As these markets expand, recruit new businesses to provide FBO and other aircraft services at Hobby Field

Based aircraft ↗-----Transient aircraft ↗-----Airport services ↗----- Airport revenues ↗
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The Business Plan scenario provides a snapshot of the major elements of the Plan.

- Its purpose is to make Hobby Field self supporting or, even better, to generate positive cash flows from capital investments and operations. The main sources of revenues to the Airport are ground leases and building rents along with fees for services such as fueling aircraft. Revenues can be increased by expanding the numbers of aircraft based at Hobby Field as well as transient aircraft, and by expanding current FBOs leasing ground and/or space as well as attracting new FBOs that offer services not presently being provided. Property tax revenues from privately-owned property at the Airport should also be included in the cash flow calculations.
- For attracting new businesses, this Business Plan does not expose the City to the risk of “If you build it, they will come” but instead recognizes the reality that “If you provide a market, they will come”. This is a classic paradox of aviation-oriented businesses that need a high-volume market before they will locate at Hobby Field, but that market in turn will only be attracted to Hobby Field in response to the expansion of services including more hangars and tie-downs.
- To resolve this paradox, the Business Plan consists of four five-year segments, each providing a focus that will, when implemented sequentially, achieve the long-term objective of making Hobby Field self-supporting by 2030. That time frame could be accelerated by more aggressive actions initiated by the City but some of the specific recommendations will still take time to develop.

Initial Focus

The main requirements to attract more aircraft owners to home-base at Hobby Field are:

1. Increase the numbers and types of hangars for sale or lease at the Airport to accommodate not only more aircraft but also a wider range of newer types such as light turbine singles and twins.
2. Offer opportunities to enable tenants who utilize business aircraft to operate those businesses from their hangars.
3. Manage prices/rents to be competitive with Eugene Municipal Airport
4. Develop the instrument approach and landing systems to make Hobby Field an all-weather airport

This report has shown that the primary market for basing aircraft at Hobby Field consists of aircraft owners who prefer to operate from lower-cost, less-controlled environments. However, the trend toward higher-performance aircraft means they still require airports that can match the full capabilities of their aircraft. Developing the WAAS/GPS instrument approach procedure that is currently being planned will significantly improve Hobby Field’s marketability to operators of those kinds of aircraft.

The types of hangars available will also be important. Most of the aircraft currently based at Hobby Field are designed for light single-engine or multi-engine airplanes and have minimal amenities other than electricity for lights and plug-ins. However, the owner of a TBM 850 or a Pilatus PC12 is likely to want an insulated hangar with heat and a restroom. These are considered to be tenant improvements and can be added to a standard hangar by charging costs to the tenant or amortizing those costs through a short period of the longer-term lease, usually three to five years. The basic hangar may need to be a larger size to accommodate those improvements as well as the larger aircraft.

If these aircraft are used to support a business operation, the owners may also want room to construct one or more offices inside the hangar and may even need a parts storage room or other specialized areas. A standard practice is to utilize the cubic volume of the hangar and not just the floor space by constructing a mezzanine over the open areas.

The City has several options for providing these kinds of larger, more flexible hangars that will be discussed later in this report. It is only suggested here that the City plan for four-to-six of these kinds of hangars somewhere on the Airport. An actual ground lease and construction should only occur when the City has a qualified tenant and/or owner who is willing to commit to the financing.

One of the concepts being developed at several general aviation airports is a small business park that combines hangars with commercial offices. Those facilities are separated from the general traffic patterns for both cars and aircraft but still have taxiway access to the runways. One such concept from a Southwestern airport is shown below.



This picture shows the streetside view with entrances to the offices, while the hangar entrances are to the rear facing the runways.

In addition to generating revenues from leases and building rents, additional aircraft will buy more fuel at the Airport and more services from the existing FBOs. This will increase the size of the market for attracting additional business to the Airport.

The 2007 Airport Master Plan used the forecast figure of 104 aircraft based at Hobby Field in 2005 and projected this to increase to 120 aircraft in 2010; 128 in 2015; 136 in 2020; and 145 in 2025. The actual number of aircraft based on the field rose slightly higher than the forecast with the FAA estimating a total of 129 aircraft based at Hobby Field in 2009. As noted earlier in this report, that number was comprised of 120 single engine aircraft and three (3) each of multi-engine, helicopters, and gliders/ultralight aircraft.

A constant growth trend calculated from 2005 to 2025 and extended to 2030 produces an estimate of 158 based aircraft at the end of the 20-year planning period used in this report. That would be an increase of 29 aircraft from the FAA estimate in 2009.

The Master Plan estimated that 37 additional hangars would be needed at Hobby Field between 2005 and 2025. Extrapolating the trend line to 2030 produces an additional seven (7) hangars for a total of 152.

An initial starting point could be the 3.5 acres identified on the Master Plan as a potential south hangar site. The Master Plan cited a capability of constructing one 14-unit double-sided hangar building on that site along with 12 conventional one-sided hangars for a total of 26 aircraft hangar units. If the Airport were to ground lease that property to a private developer for the construction and leasing/sales of the hangar units, the ground leases would return approximately \$9,750 in annual revenue to the City.

The Master plan estimated the costs of constructing the taxiway, fencing, gate and vehicle parking to service this site at \$237,750 total with \$225,863 paid by an FAA grant, leaving a cost of \$11,888 for the City. The return on that investment would be approximately 82% annually.

The Master Plan also showed the estimated costs for the Airport to build a 12-unit T-hangar on that site of \$280,000 with \$266,000 paid by an FAA grant, leaving a cost of \$14,000 for the City. If these produced a lease rate of only \$150 per month each the total revenue would be \$21,600 annually. The City would recover its investment in the first year.

The strategy described above is not simply a response to outside demand but is instead a method to *stimulate* that demand by developing more and better hangar products. A way to do that while minimizing financial risks is to develop the plan and use it to market Hobby Field to the broader market. The plan can be implemented once signed contracts are in hand. That will require setting aside suitable tracts of Airport property for the expanded development and avoiding having those sites developed for T-hangars or other non-conforming uses. If the anticipated demand does not materialize, then the development plan can be revisited and changed to suit current circumstances.

Corollary Focus

After maximizing the number of hangars on Hobby Field, the Airport's capacity for basing aircraft will be reached. In addition to the cash flows from ground leases and hangar rents to the City, secondary benefits will be increased business for the present FBOs, increased fuel sales, completion of an instrument approach procedure, and new employment-generating businesses located on the field.

During this period, efforts can begin to develop the second focus which is generating more activity by attracting transient aircraft to Hobby Field. While the efforts will overlap, priority should be given to increasing the number of based aircraft during the initial phase.

There are four primary reasons why pilots will fly to Creswell:

- To participate in fly-in activities such as airshows and other special events such as EAA meetings
- For recreational activities such as golf, fishing, or using Creswell as a base for events at the University of Oregon, the Hult Center, or other venues
- As an enroute stop to buy fuel and food
- To have their aircraft serviced by the on-field FBOs

The Vision Statement recommended forming a Special Events Subcommittee to plan and carry out events at the field that will attract fly-in visitors as well as engage the local community. It would rely primarily on volunteers and might enlist Chapter 31 of the EAA to manage the events. Fly-in events would give significant visibility to Creswell Airport among the pilot community in the southern Willamette Valley along with exposure for on-field businesses.

Many smaller airports in Oregon hold fly-in airshows that are combined with classic car shows, airplane and glider rides, helicopter rides, demonstrations of fire fighting helicopters and medivac aircraft, and even military demonstrations. They do not try to compete with the major airshows at places such as Hillsboro or Arlington, but instead provide a variety of events that attract not only pilots but local families as well. However, the main purpose for Creswell should be to attract pilots and aircraft owners to Hobby Field so they can see what it has to offer.

Attracting out-of-area pilots for recreational activities is primarily a matter of organizing and marketing the amenities that the region has to offer. For example, it has been suggested that the Airport management form a strategy with Emerald Valley Golf Club and the Comfort Inn to offer two-day packages that include an overnight stay and one or two rounds of golf. Emerald Valley Golf Club is well known in the Pacific Northwest by virtue of having hosted more USGA, PPGA and OGA Championships in the last 25 years than any other golf course in Oregon. That would be an attractive incentive to draw pilots and their passengers to fly into Hobby Field to access this facility.

In addition to organizing the packages, the issue of transportation to the facilities needs to be addressed. The three facilities are in close proximity but the only connections are by surface transportation. Shuttles could be provided but that involves issues of insurance risk. By pooling resources, it may be possible to provide four-person golf carts and cover the costs in the package rates.

For the wider range of recreational activities in the region, working with licensed guide services appears to be the best approach. At recreational airports such as Sunriver, a wide range of guide services is offered for fishing, rafting, skiing and snowmobiling, and bicycle tours. While these events bring new money into the local economy and create jobs, the primary benefit to Creswell is the added fueling and other aircraft services they generate.

Hobby Field is already a favorite airport for transient aircraft to stop and buy food and fuel. Pilots say they like the lack of congestion and FAA control along with the friendly service and small airport environment. It has been suggested that a local café or restaurant would increase this fly-in business but, again, the market needs to be built first. It is not likely that a café at the Airport would attract enough business from local customers to be profitable for some time. Even large airports such as Klamath Falls and Salem have had difficulty keeping their restaurants open. Other airport cafes have reduced hours or are open only on weekends.

A better strategy, at least initially, would be to offer the café at the Emerald Valley Golf Club as the place to buy the “\$100 hamburger”. It is a short trip across the Airport if either courtesy cars or golf cart shuttles are made available.

Again, marketing is the key to increasing the fly-in business for pilots enroute to somewhere else. Lower fuel costs, less hassle with airspace regulations, and a friendly reception are powerful incentives to land at Hobby Field instead of Eugene Municipal or other airports along the I-5 corridor.

Lastly, there are opportunities to attract larger numbers of aircraft owners who fly into Hobby Field to have their aircraft serviced. The reputation of individual FBOs is the key to attracting this business. Aircraft owners will often fly long distances to use specific shops because of their reputations for high quality and for specializing in their types of aircraft. Except for adding new services, which will be discussed later in this report, word-of-mouth marketing is the best way to expand this type of business. This market will also be expanded as pilots fly into Hobby Field for special events, recreational activities, and enroute food and fuel.

Intermediate-Term Focus

After maximizing the capacity of the Airport to accommodate home-based aircraft, as well as increasing the transient fly-in business, the next step will be to expand the levels of services provided at Hobby Field to generate additional revenues for the City. At this point, relatively small capital investments will have been made to generate these new revenues. However, attracting new businesses may be the trigger for upgrading and expanding the infrastructure necessary to serve them, especially the water and sewer systems.

It is not within the scope of this report to assess the details of extending water and sewer systems to Hobby Field. The main point is that this will eventually have to be done as more development takes place east of Interstate 5 and the Airport runs out of land to accommodate it. However, it does not have to be done at the beginning of the process and can be deferred until the aviation markets and the businesses responding to them create a justifiable need. At that time, costs can be spread over a larger number of users and can largely be paid by developers instead of the City. It would be desirable to have the engineering and financing plans in place so that the City can move quickly to serve new business tenants that need these services.

Once the market is expanded by strategies initiated during the first two 5-year plans, then the City can take advantage of that to recruit new businesses. The Airport tenants, working with the Airport Commission, will be able to identify and prioritize those targets. Several have already been mentioned including an avionics shop and an aircraft interior and upholstery shop. Because of the long life of airframes and the replacement and overhaul of engines, aircraft can be kept in good flying condition for many years. However, that also requires work on all of the aircraft systems and components.

Once the types of businesses are identified, the City will need to develop a strategy to market the airport to those companies. Companies providing these services are easily identified and can be found in western Oregon and Washington. Pilots and aircraft owners can suggest specific companies they would like to see locate at Hobby Field. Personal contacts will be more effective than advertising or direct mail solicitations.

The City will also want to develop an incentives package to attract specific types of firms. Incentives (as opposed to subsidies) involve such programs as providing work force training in specialized occupations, lower-cost financing through municipal bonds, or remediation of special requirement such as wetlands mitigation.

Longer-Term Focus

The last step in the process is to determine what additional sources of revenue can be developed on and adjacent to the Airport and see if they are feasible. A residential airpark has been suggested but it is not certain whether this would be approved by the FAA. The same question applies to an off-airport business park as a through-the-fence operation. This will also be the time when it may be appropriate to construct the runway extension and consider widening the runway to 75 feet to accommodate the air fleet of 2030.

This progressive approach to achieving the future vision for Hobby Field covers a long time period but it minimizes financial risks to the City of Creswell, builds on expanded revenues to generate funds for the next steps in the process, and keeps the pilots and aircraft owners actively involved in advancing their airport community.

BUSINESS PLAN OPERATING BUDGET

This Business Plan Budget assumes full build-out of hangars at Hobby Field, adding 37 hangars by 2025 as per the Master Plan, plus another seven hangars by 2030 to continue the trend line for another five years. This will result in 44 additional hangars over the 20-year period used in this report, for a total of 159 hangars. The Master Plan cites the potential for 26 of those to be built at the south hangar area with the remaining 18 to be built at the north hangar area and around the central core. That will max out the Westside development areas for hangars and some redevelopment may be necessary to accommodate all 44 hangars.

The additional hangars represent a 42% increase from the 2005 number. It is assumed that those hangars will be privately constructed on ground leases from the City. If the City chooses instead to construct and lease those hangars itself, a cash flow analysis will need to be developed based on construction cost estimates along with provisions for maintenance and other leasehold management costs.

The second assumption is that transient traffic can be increased by approximately 35% over this period, with a corollary increase of 35% in fuel sales. The increase in transient aircraft will come from marketing the Airport as a gateway to recreational opportunities in the region as well as to the Eugene-Springfield Metropolitan Area, plus developing special fly-in events and activity packages such as golf tournaments.

The third source of increased revenues will be from attracting new FBO facilities to add services such as aircraft modification and retrofitting, installing new avionics suites, and installing new interiors.

There should also be opportunities to develop revenues from ground leases and facility rents as old agreements mature and properties revert to City ownership. Those are not factored into the cash flows because there is no way to measure the potential revenues until new agreements are written.

The budget shown below captures these assumptions for the year 2030 when all properties are producing revenues according to the assumptions made above, along with an annual 2% CPI escalation:

Hangar Rental	\$ 25,780	Assumes no new city-owned hangars
Tie-down Rental	1,500	Assumes 2% annual increases
Land Lease Income	60,000	2% increase on existing; 66,000 sq. ft. new
Office & Shop Rental	14,000	2% increase on existing
Fuel Sales (margin only)	71,000	35% increase + 2% annual escalations
In Lieu of Taxes	27,700	2% annual escalations
Pilot Supplies	9,925	35% increase + 2% annual escalations
Miscellaneous	<u>4,500</u>	2% annual escalations
Total	<u>\$214,405</u>	

This represents an increase of \$107,255 over the 2009-10 budget in nominal dollars.

It is important to note that the fuel sales shown above only include the net revenues after fuel costs. In the 2009-2010 budget the gross sales were shown as \$300,000 with net revenues of \$25,000. For a strict comparison with the budget numbers shown on page 23, the difference of \$275,000 would need to be added but then subtracted again to show the net revenues. Since the expense is essentially a pass-through, it is more meaningful to show only the net revenues to the Airport from fuel sales.

The figures shown above represent a break-even budget for Hobby Field, replacing the current general fund contribution with the added operating revenues. In part, the inability to identify significant revenue-producing opportunities from the Airport is tied to the current agreements that remove much of the Airport hangar areas from City control. That restricts the City's ability to raise revenues by increasing rents and ground leases. That is a situation that will resolve itself over time, but that timeframe extends well into the future.

There is no doubt that Hobby Field is an economic asset to the City of Creswell and the surrounding region according to the figures produced by the Oregon Aviation Department. As the market transitions to higher performance business aircraft, demand for services at Hobby Field will increase and create new opportunities to increase revenues from ground leases, hangar rents, fuel sales, and FBO services. Marketing the Airport to capture those opportunities will eventually turn the operating budgets around and enable Hobby Field to be self supporting or even a producer of net revenues for the City.

