

**An Examination of Methods for Increasing
On-Airport Revenue**

by

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TABLE OF CONTENTS

List of Figures	vii
List of Tables	viii
Introduction.....	1
Methodology	4
Summary of Literature Research	5
Results and Data Analysis	6
Discussion and Conclusion.....	13
Endnotes.....	15
Appendix A Annotated Bibliography	17
Appendix B Survey Instrument	23
Appendix C Complete List of Revenue Generation Methods and Ideas to Increase Airport Activity.....	27

LIST OF FIGURES

Figure 1. Purpose of Study.....	2
Figure 2. Study Rationale and Framework.	3
Figure 3. Methods for Increasing Airport Revenue and Activity.	12

LIST OF TABLES

Table 1. Revenue Sources and Percent Response..... 8
Table 2. Planned Revenue Generation Methods and Potential Revenue Range..... 10

INTRODUCTION

The Texas Airport System Plan (TASP) consists of 300 airports including 27 commercial service airports and 273 general aviation airports. While most of the 27 commercial service airports have significant general aviation operations, they also have economic support provided through revenues related to passenger travel. The remaining general aviation airports, which provide access to many parts of the state and serve a variety of industries and functions, rely on less predictable and periodic sources to operate, maintain, and grow their airports. These include tax revenues from the local, state, and federal levels, grants (Routine Airport Maintenance Program [RAMP], Airport Improvement Program [AIP], others) and some additional revenues generated on the airport.

General aviation airports are not typically known to be financially self-sufficient. While some reliever airports and large general aviation airports do indeed have substantial revenue sources, most general aviation airports do not and they often struggle for matching funds to maintain their pavement and other key operational areas. The 2002 TASP Update shows that five-year development costs for general aviation airports in Texas are approximately \$500 million. This includes approximately \$200 million for the 21 reliever airports and \$300 million for the remaining 251 general aviation airports.¹

The level of funding for the state airport system plan, including both state and federal dollars, in Fiscal Year 2003 totaled \$55 million.² This includes money from the Federal Aviation Administration (FAA), the state, and the local airport sponsors. Funding levels are not expected to increase significantly in the future while the needs of the system are expected to be greater than they are now. This has prompted many to review their airport revenues and seek ways to increase existing revenue sources and establish new revenue sources.

Federal law requires that revenue generated by the airport be used to support the airport. Specifically, it states that airport “sponsors must provide assurance that all revenue generated by their airport, if it is a public-owned airport, will be expended for the capital or operating costs of the airport, the local airport system, or other local facilities which are owned or operated by the sponsor and directly and substantially related to the

actual air transportation of passengers or property. This requirement appears as Assurance 25 in the Assurances for Airport and Planning Agency Sponsors though it does not apply to planning projects.”³ There are certain exceptions to this that generally apply to provisions enacted prior to September 2, 1982.

The AIP Handbook provides guidance on the use of airport revenues and should be consulted as well.⁴ Specifically, Section 731 of the handbook, entitled Uses of Airport Revenue, cites the federal law that governs such uses as well as the *Policy and Procedures Concerning the Use of Airport Revenues* published in the Federal Register.⁵ As noted in the AIP Handbook, the FAA Airports Office, Compliance Division (AAS-400) should be consulted for assistance in making determinations on exemptions applicability in particular cases as well as any other questions pertaining to the acceptable or appropriate use of airport revenues.

This analysis provides an examination of the methods and opportunities available for airports to increase the revenue generated on the airport. The focus is on revenues that would accrue to the airport operators. In times of budgetary constraints and growing demands on the transportation infrastructure, there is a need to exhaust and maximize any revenue generating capabilities and opportunities. Many airports offer fuel services, maintenance services, air shows, fly-ins, and other “draws” that bring in increased aviation activity that, in turn, generate additional revenues via increased sales at the fuel pump. Others have been successful in bringing industry or other business on to airport property and generating revenues from land and building leases and other related activity. With airport revenues being required to be returned to the airport for aviation purposes, this revenue can help facilitate airport development for both needed improvements and economic development purposes.

Figure 1. Purpose of Study.

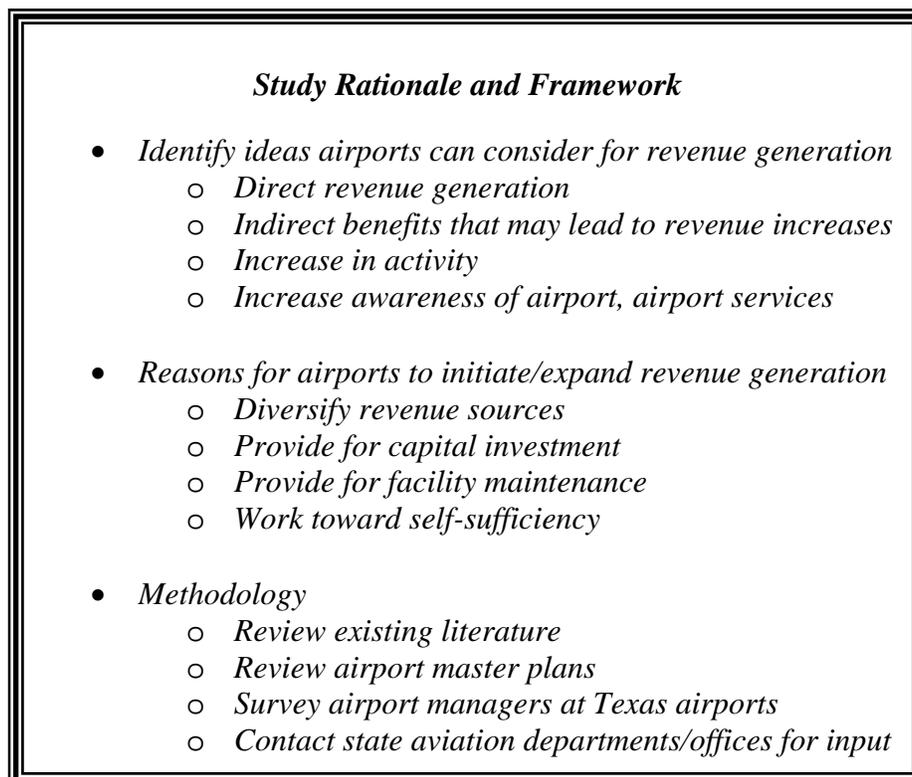
Purpose: To create a document to be used by airport sponsors that includes viable and plausible activities and ideas to be considered for implementation to increase activity and ultimately increase airport-related revenue.

This project examines how various general aviation airports in Texas generate revenue, attract activity, and position themselves for financial sustainability. Emphasis is placed on methods for generating significant new revenue sources or increasing existing revenues on both an occasional and continuing basis.

This effort has resulted in a report documenting the methods and opportunities for increasing airport revenue. Airport sponsors seeking revenue generating ideas and alternatives can review this document to see how other airports have increased their revenues, marketed their airports and their revenue generating opportunities, and worked to contribute to their own success.

This document is intended for airport sponsors to use to increase and/or maximize on-airport revenue. It includes viable and plausible activities and ideas for airport sponsors to consider for implementation. The increase in activity at and/or visibility of their facility will ultimately result in increased airport-related revenue and aviation activity. For many airports, these results will provide some level of assurance that they are doing what they can in terms of revenue generation potential.

Figure 2. Study Rationale and Framework.



METHODOLOGY

The methodology for examining the existing and planned revenue-generation activities included a variety of methods to gather or collect information from diverse sources. Included in the work is a literature search that encompasses a review of planning documents and a survey of airports and state aviation directors.

The literature search was performed to identify those revenue-generating methods mentioned in any academic or professional publications. An annotated bibliography of relevant literature is provided in Appendix A. Existing planning documents were reviewed to identify current and planned revenue-generating methods at airports in Texas. This review included over 60 airport master plans, action plans, and business plans. None of the studies were more than 10 years old and most were prepared within the past five years.

A survey instrument was developed for airport managers to provide information on current and planned revenue methods, their advantage/disadvantages, the existence of marketing plans, and those amenities/services that might help attract activity at the airport. The survey instrument is included in Appendix B. The survey was sent to 294 airport managers in Texas and 51 state aviation/aeronautics departments/offices in the U.S. as provided by the National Association of State Aviation Officials. This did not include Texas but did include aviation offices in Guam and Puerto Rico.

SUMMARY OF LITERATURE RESEARCH

The literature related to revenue generation for airports is, in large part, focused on commercial airports and larger general aviation airports. In many ways, that is precisely what motivated this effort. Emphasis is on retail businesses at the airports, which can bring in significant non-aeronautical revenues. While in most cases this is not an applicable or suitable revenue generator for the general utility airport or general aviation airports due to level of activity and resources, other revenue generators used at commercial airports may be, in a modified form, useful.

Typical revenue generators outside of fees related to passenger or aircraft landing fees that were discussed in the literature include:

- parking fee strategies;
- advertising;
- leasing of underutilized land;
- leasing of hangars (storage), tie-downs, or other facilities;
- fuel flowage fees; and
- agricultural spray activity.

Additional ideas for revenue generation also suggested that may not be traditional sources of funds for airports include:

- charging a deposit for those on waiting list for hangar rentals;
- laptop computer access amenities, sale and rental of network cards;
- public golf course development with adjacent or excess land use for detention facilities;
- fly-ins;
- BBQs, pancake breakfasts;
- community events;
- parties or catered events with underutilized hangar space;

- joint development of excess land for retail and/or office space;
- plane spotting; and
- educational activities for children at the airport.

These revenue methods were identified through the available literature. The annotated bibliography in Appendix A provides more detail on these revenue-generating methods.

RESULTS AND DATA ANALYSIS

Surveys were mailed to 294 airport managers in Texas along with a cover letter explaining the survey's purpose and including the internet address for completing the survey online. This included all of the airports in the Texas Airport System. Postcard reminders with the website address for the survey were mailed out two weeks after the initial mailing. A total of 93 responses were received and recorded. Over one-third (36 percent) of the responses were returned via the Internet. The response rate was 32 percent. Appendix B contains the survey instrument.

Most airports (73 percent) reported that they generate some revenue from a variety of methods. There were many commonly used revenue generation methods, with fuel sales/flowage and hangar rentals being the top two methods.

Surveys were also mailed to state aviation directors allowing them to provide any additional thoughts or ideas on revenue generators that they may be aware of in their respective states. There were three states that responded to the request in three different ways. Virginia responded by sending a letter that included revenue generation methods used in their state. It included the more common methods as well as some not so common ones such as:

- co-located phone antennae with airport beacon towers;
- terminal building conference room rental;
- business center services (fax machine, copiers, phones, office space); and
- leasing to law enforcement/emergency services, chambers of commerce; economic development agencies or other governmental agency.

Pennsylvania responded by making the survey's website address available to their airport managers. This resulted in 16 Internet survey responses from airports across Pennsylvania. In Iowa, the director was interested in sending the survey out to their system airports. The results of the Iowa survey will be made available to TxDOT – Aviation when they become available from the Iowa Department of Transportation, Office of Aviation.

The research staff also reviewed 60 recent airport planning documents housed in the Aviation Division's planning and programming library. These studies included master plans, action plans, and general business plans. The majority of the studies were conducted in the past five years. Many of the airports were found to have similar revenue streams. These included:

- fuel sales;
- hangar rentals;
- tiedowns;
- land leases;
- building leases;
- FBO leases;
- car rental.

Some of the more unique or less prevalent revenue generation methods noted in these plans included below. This is not an exhaustive list of every revenue generator at every general aviation airport in Texas. These are examples of particular methods that have been planned and/or used. They include:

- access/easement fees;
- non-profit organization use of facilities;
- concessions / retail sales / vending machines;
- maintenance for aircraft/engines;
- landing fees;

- recreation facilities (e.g., picnic areas, riding stable area, skeet range, par course, ball fields, tennis courts, swimming pools, and ponds);
- economic development sales tax;
- agricultural leases (farming, grazing);
- improvement plans – includes helipad;
- aircraft rescue and firefighting; and
- aircraft wash facility.

As previously mentioned, most airports (73 percent) generate some level of revenue. Typical sources of revenue reported in the survey are shown below in Table 1.

Table 1. Revenue Sources and Percent Response.

Revenue Source	Percent Response
Fuel sales and fuel flowage	74%
Hangar leases (public and private)	65%
Land leases	46%
Tie-downs	15%
T-hangars	10%
Building leases	9%
Special events (fly-ins, breakfasts, etc.)	6%
Office space lease	5%
FBO agreements	4%
Vehicle parking	3%
Concessions / retail	3%
Car rental	1%

Consistently, respondents indicated that availability of hangars was a key factor in increasing activity and revenue through fuel sales. Many airports (33 percent of respondents) either have not noticed any increase in the aircraft activity as a result of revenue generators currently in use or they do not track how previous improvements to the airport link with revenue streams. Those that have noticed increases in revenue or activity resulting from implemented revenue generation methods primarily note that fuel

sales increased as a result of increased activity. Such activity accounted for fuel sales increases that ranged from 15 to 50 percent.

Revenue generation is not typically the main priority for many of the general aviation airports. Basic operations and maintenance are the main focus for general aviation airports. However, reducing costs or generating enough revenue to cover costs, may be a key factor in operating a better airport and providing needed facilities and services for customers.

For the 58 percent of the respondents that have plans to increase revenue at their airports in the future, most focused on efforts to increase fuel sales such as installing credit card readers to allow for 24-hour access to fuel, constructing new hangars for leasing, or seeking additional opportunities for land leases. In several cases, airport managers indicated that to increase revenues they needed to expand their runways to accommodate larger planes, which they felt would subsequently increase fuel sales. A few airport managers were interested in having special events like pancake breakfasts and fly-ins to promote awareness of their airport. Table 2 includes the responses for the planned revenue generation methods as well as the reported range of revenue potential. For the most part, the planned revenue methods are nearly identical to the revenue generation methods currently in place at airports across the state.

Table 2. Planned Revenue Generation Methods and Potential Revenue Range.

Planned Revenue Generation Method	Reported Potential Revenue Range (\$/yr)
Fuel sales and fuel flowage	\$1,800 – \$60,000
Hangar (private – land lease)	\$2,000 – \$15,000
Hangar (public – owned)	\$600 – \$54,000
Tiedowns	None Given
Terminal building lease	None Given
Land leases	\$570 - \$20,000
FBO agreements	None Given
Concessions	None Given
Car rental	None Given
Vehicle parking	None Given
Office space lease	None Given
Special events	None Given

The key advantages anticipated or realized using various revenue-generation methods reported by airport managers included increasing activity at the airport, increasing fuel sales, paying for expenses from revenues, and increasing the lease or investment potential. Key disadvantages primarily centered on the inability to get access to capital improvement funds for expanding runways, constructing hangars, or other construction needs that would generate more activity and revenue for the airport.

Formal marketing of general aviation airports is not a typical tool used to increase activity at the airport and thus increase revenues through fuel sales, hangar rentals, concessions, etc. Only 24 percent of respondents indicated having some kind of marketing plan or method for their services or airport. Some airports coordinate with local economic development offices, chambers of commerce or other local government departments to include the airport in other marketing programs.

Ideas suggested by the airport manager regarding other methods to increase activity and ultimately revenue at general aviation airports can be categorized into five general areas:

1. Marketing strategies;
2. Funding mechanisms;
3. Improvements to airport facilities;
4. Community connections; and
5. Special events or activities.

Marketing strategies included targeting industries in the area for potential hangar rentals, advertising in local publications and relevant journals, mail-out advertising, brochures on services offered, and websites. Funding mechanisms included evaluating impact of airport on tax revenues to local government and/or providing tax abatements to promote capital investment in the airport. Improvements to the airport included a full-time staff person on site, volunteers to assist pilots, installing upgrades to navigational services, purchasing a weather monitor, and building additional hangars. Community connections and special events included charitable fund-raising events, club events (Lions Club, Kiwanis, Rotary, etc.), education events about the airport, connecting with agricultural activities (e.g., using extra land for grazing), hunting season activities (special parking spaces for hunters), flight schools, air shows/fly-ins, and, in one case, providing direct runway access to a private property owner nearby. Figure 3 summarizes these methods.

Figure 3. Methods for Increasing Airport Revenue and Activity.

- Increase Marketing of Airports
 - Advertising in industry publications
 - Advertising to potential hangar renters
 - Mailouts
 - Brochures
 - Websites
 - Conferences
- Cooperation with local Economic Development Agency, Chambers of Commerce
- Addressing/understanding taxes generated from airport
 - Taxes as a revenue source
 - Tax abatement to address construction improvements
- Fuel
 - 24-hour self-service
 - Both fuel types (JetA and Avgas)
- Staff on site at airport
 - Volunteers providing assistance to pilots
 - Full-time employment (improved level of service)
- General Service Improvements
 - Runway extensions
 - Additional navigational services (instrument approaches, etc.)
 - AWOS
 - Additional hangars
- Special Activities
 - Hunting season activities
 - Direct access to runways from private property
 - Flight schools
 - Air shows/fly-ins
 - Agricultural activities (leasing land for cattle crops; aerial applicator operations)
- Community Connections
 - U.S. National Aerobatic Championships
 - Charitable fund-raising events
 - Lions Club, Kiwanis, Rotary, etc.
 - Education to local community about services and activity at airport
 - Experimental Aircraft Association, Civil Air Patrol, etc., chapter meetings
- Amenities
 - Restaurants / “\$100 Hamburger”

Services or improvements that airport managers indicated were desired or requested by customers included:

- maintenance facilities – mechanic on duty, avionic repair facilities, paint shop;
- FBO services / facilities – increased space for FBO, charter services;
- fuel services – add fueling service where not available, add additional type of fuel, jet refueling truck, 24-hour service access;
- hangar facilities – building more spaces, providing water service to hangars, corporate hangars, overnight hangars;
- food services – concessions, restaurants, hamburger/pancake fly-ins;
- general facilities – lounge area, relaxation area, restrooms, furniture for terminal building, entertainment items such as a television computer/internet access, navigational services, weather monitor, runway expansion, pavement and lighting improvements, grass/turf runway; and
- ground amenities – courtesy or rental car, nearby motel, camping facilities, flight exhibit/museum.

DISCUSSION AND CONCLUSION

General aviation airports tightly focus their business on providing basic services, keeping costs down, and providing a safe airport for users. The survey showed that some general aviation managers and operators find creative solutions to bring awareness to the community about the airport and bring in new revenue and activity.

Other examples of innovative ideas were suggested by Andy Rivera of the Pearland Regional Airport. Rivera spoke at the 2004 Annual Conference of the American Association of Airport Executives, South Central Chapter, where he talked about non-traditional methods of raising revenue and keeping costs down. He confirmed what many in the survey have indicated that including concessions, restaurants, utilities for tenants, telephone access, security, and other amenities all can potentially draw prospective pilots to an airport location. Managing expenses by using part-time students to staff the airport for maintenance and general assistance issues as well as having excess land managed by

an agricultural operator, who will maintain the grassy areas of the airport in exchange for farm land, provide a valuable means of keeping available funds for other airport-related needs. In some cases, even closing a runway for additional land uses, such as hangar spaces may be more financially beneficial.

While some of the suggestions that various airports have used or are interested in trying may not apply to all airports due to costs, site logistics, or other factors such as local politics, the purpose of this report is to assist general aviation airports in thinking critically about their business and possibly identifying small or large projects that could provide them additional funding for capital investment needs or to become more self-sufficient. Promoting the airport in the local community and having events that “put the airport on the map” for aviation buffs is an inexpensive method of bringing activity to the airport. Having a visible and community-conscious airport with club meetings, exhibits about aviation, etc. can be effective in gaining community support and leveraging other economic development needs for a locale. Additionally, an informed and active airport advisory board can go a long way in helping an airport promote itself.

Based on the findings in this report, further study on marketing techniques is recommended. Given that most revenue is achieved from fuel sales, increasing activity at the airports is essential. In many cases, small efforts by the airports can reap larger, longer-term gains, which will continue to strengthen general aviation in Texas.

ENDNOTES

¹ *Texas Airport System Plan Update 2002*. Texas Department of Transportation, Aviation Division, Austin Texas, 2002.

² *Capital Improvement Program Introduction and Summary (2001-2003)*. Texas Department of Transportation, Aviation Division, Austin, Texas.

³ Title 49 U.S.C., Section 47133 Requirement.

⁴ The AIP Handbook, Change 1- January 8, 2004 (FAA Order 5100.38B).

⁵ *Policy and Procedures Concerning the Use of Airport Revenues*. Federal Register Notice, Volume 64, Number 30, Tuesday, February 16, 1999.

APPENDIX A
ANNOTATED BIBLIOGRAPHY

1. **Abeyratne, RIR. “Revenue and Investment Management of Privatized Airports and Air Navigation Services – A Regulatory Perspective.” *Journal of Air Transport Management*. V. 7, n.4. (July 2001), pp 217-230.** This article discusses the investment management strategies utilized in the industry – between single and dual till (separation of aeronautical and non-aeronautical revenues).
2. **Airport News. “Vote No on Measure A.” <http://savehhr.org>. Accessed 11/21/2013.** This article discusses a proposition to close Hawthorne Airport. It highlights reasons, including economic development for the city, that the airport should not be closed.
3. **Airports Council International. “Airport charges in Europe.” (May 8, 2000).** This article discusses the changes in the airport industry to more commercial/business-minded pursuits rather than solely public utility goals. It also discusses the International Civil Aviation Organization charging system for airports.
4. **Airports International. “Oiling the Wheels: Airport Finance Today Calls for More Than Mere Investment.” V. 34, n. 1. (2000), pp 16-19.** This article primarily is discussing airport ownership issues including the “Build-Operate-Transfer” option. This article also noted that automobile parking, advertising, retail outlets, and other concessions are critical to airport income.
5. **Bean, Randy, and Erik Solmundson. Prepared for San Antonio Aviation, Inc. “Texas General Aviation Airport Survey: A comparison of physical, economic and demographic characteristics of selected Texas airports.” (September 2003).** This study was performed to compare Stinson Municipal Airport to 11 other Texas airports to determine market rent for runway access and non-runway access land. The survey information included fuel flowage fee per gallon, and annual rental rate per square foot (buildings, tie-downs, unimproved areas).
6. **Bremer, Karl, and Arthur Holly. “The Revenue Diversion Quagmire.” *Airport Magazine*. V. 11, n. 3., (May/June 1999), pp. 11-13.** This article deals with the issues related to managing public land and resources, increasing revenues while remaining within Federal guidelines for the use of airport lands.
7. **Broderick, Sean. “Airport Revenue Generation - The Search Continues.” *Airport Magazine*. Vol. 11, no. 6, (Nov/Dec 1999), pp. 12-15.** This article discusses creative ideas that various airports have implemented to generate more revenue and manage existing revenue sources. Some of the ideas included: requiring people on the waiting list for hangar rentals to put down deposits in Mesa, AZ, at the Williams-Gateway Airport; a Seattle-based firm that developed technology to improve laptop access for business people waiting at airports; and a plan at the Spirit of St. Louis Airport in Chesterfield, MO, where they needed to build a large detention area and combined the project with construction of a new

- public golf course. Other examples included the Morristown Municipal Airport in New Jersey receiving reimbursements from U.S. Customs who located some of their operations at the site, and the auto recommending reviewing existing sources such as ground transportation (taxis, etc.) fees to ensure that proper fees are being collected (AVI equipment was recommended).
8. **Downen, Troy D. and R. John Hansman, Jr. “User Survey of Barriers to the Utility of General Aviation” and “Identification and Analysis of Key Barriers to the Utility of General Aviation.” Submitted to the American Institute of Aeronautics and Astronautics’ Journal of Aircraft, (Massachusetts Institute of Technology: February 2002) 2002-01-1509.** This report analyzed survey results from users of general aviation airports about important elements that could increase the utility of the airports. Weather information, access to better ground transportation, cost, and general convenience were the major issues noted by pilots.
 9. **“Duty-Free Concessions.” Airport Magazine. V. 12, n. 5. (September 2000), pp. 8-9.** This is a brief opinion article discussing the importance of using duty-free retail sales at airports as a key source of revenues.
 10. **Dresner, Martin, Robert Windle and Ming Zhou. “Regional jet services: supply and demand.” Journal of Air Transport Management. V. 8. (2002). Pp. 267-273.** This article discusses the impact on airports of regional jet services compared to turboprops.
 11. **Eagle Staff Report. “Cessna club to fly in for party.” December 12, 2003.** <http://www.theeagle.com/region/localregional/121203cessna.php> Accessed 12/12/2003. This is a news article highlighting a fly-in event held at Coulter Field in Bryan, Texas. This is an example of an event small airports could utilize to increase activity at their airports.
 12. **Florida Department of Transportation Aviation Office. Florida Airport Financial Resource Guide. June 1999.** This guide covers financial strategies that the Florida Department of Transportation has suggested as effective or possible strategies for airports. It includes traditional assistance programs, innovative financing approaches, and case studies. The innovative financing approaches included community planning, Community Development Block Grants (CDBG), among other non-traditional grant programs for airports. The focus included development of areas near the airports in a compatible manner.
 13. **Hamzaee, Reza G., and Bijan Vasigh. “ A simple revenue-cost perspective on US airport operations.” Journal of Airport Transport Management. V. 6. (2000), pp 61-64.** This report discusses the economics and economic models behind operating revenues for airports.

14. **Kaps, R.W., NewMyer, DA, et al. “The Need for Airport Funding.”** *Collegiate Aviation Review*. V. 19, n. 1. (October 2001), pp. 71-91. This article is a review of funding mechanisms for airports. The article included methods commercial airports used to raise activity such as expanding runways, leasing facilities, fuel sales, and rental cars. The article noted that general aviation airports often have limited options for funding. The article outlines taxes received by airports and fund (grants, etc.) eligibility by type of airport as well as discretionary funds. This article is a good source for demonstrating how airports allocate various public funds.

15. **Palhares, Guilherme L., and Respacion A. Espirito Santo, Jr. “A Comparison Study of Medium Airport Mangement in Different Countries.”** *Canadian Transportation Research Forum*. (May 2001) , pp/ 448-464. This article discusses the effect of privatization of airports in the international arena. The focus is on Brazilian airports and comparisons with Australian airport privatization.

16. **Ricchiuto, Jack. “Protecting Airport Revenues in an Economic Downturn: Tampa and Hillsborough College Pool Parking Resources.”** *Parking Today*. V. 8, no. 4. (April 2003), pp 26-27. This article discusses parking issues and issues related to pre- and post-9/11 security issues. Technology options for payment of parking fees is primarily discussed as a method to reduce operating costs.

17. **Rossi, Jim. “New Technology – New Revenue?”** *Airport World*. V. 5, n.6, (Dec./Jan. 2001), p. 25-26. This article briefly discusses the various technology options at airports to reduce operating costs including biometric testing for checking in procedures, passenger entertainment services (view movies on demand), business amenities such as wireless network cards to rent or buy, and interactive kiosks with information on news, airport delays, etc.

18. **Texas Aviation. Calendar of Events 2003. Produced by Texas Department of Transportation.** This publication provides a list of events such as fly-ins, BBQ cook-offs, air shows, museums, pancake breakfasts, and exhibits.

19. **Tretheway, Mike. “Revenue Strategies for Airports with Low Cost Carriers.”** *Intervistas Consulting, Inc.* <http://www.hamburg-aviation-conference.de/pdf/session3/Tretheway.pdf>. Accessed November 21, 2003. This is a PowerPoint presentation on profiles of travelers on Low Cost Carriers (LCC) and what type of revenue generators might be supportive of LCC activity.

20. **Tyler, Charles. “From Dirt to Dollars.”** *Airports Council International*, v.4, no. 5, (Oct/Nov. 1999). This article discusses various development options for excess land owned by airports. It suggests industrial parks for adjacent land as an ideal compatible land use. Business parks, joint development, and hiring real

estate developers to manage excess land are also options discussed. Essendon Airport in Melbourne was cited for developing a golf course and receiving 45 percent of their revenues from building and land leases. Kuala Lumpur, Malaysia was cited for developing a motorsport amusement park and other entertainment-related activities. Additionally, advertising was listed as a revenue source that all airports could utilize.

21. **Tyler, Charles. "The Airport as a Destination." Airport World. V. 4, n.4. (Oct./Sept. 1999). Pp. 48-51.** This article was written prior to 9/11 and therefore some of the suggested ideas may not be possible with increased security issues. However, revenue and activity increasing programs such as plane spotting, educational trips for children, and other leisure activities are discussed as revenue generators for airports. Other elements such as nearby retail development, local flavor restaurants, and parties in underutilized hangars are also discussed as sources of revenue and activity for airports.
22. **Wisconsin Department of Transportation. Travel Information: Airport rates and charges.** <http://www.dot.wisconsin.gov/travel/air/rates-charges.htm>. Accessed 12/9/2003. This is information from the Wisconsin Department of Transportation related to summary rates and fee information for Wisconsin airports.
23. **WSA Team. Prepared for Louisiana Department of Transportation and Development. Louisiana Airport System Plan update. (2000).** This is an update to the system or master plan for the airports in Louisiana. Revenue sources included agricultural spray activity, fuel, retail sales, storage as well as traditional fees.

APPENDIX B
SURVEY INSTRUMENT



Airport Revenue Generation Survey

Please return this survey by **March 5, 2004**

This survey is available on-line at:

<http://tti.tamu.edu/aviation>

1. Airport Name _____

2. Airport Manager: _____ Phone: _____

3. Does your airport generate any revenue?

Yes _____ No _____ If no, please skip to question #5.

4. If yes, please indicate the methods of revenue generation that are currently being used at your airport. Be sure to include both continuous revenue generators (i.e., fuel flowage, hangar rentals, land leases, etc.) as well as any periodic revenue generators (i.e., fly-ins, air shows, etc.).

Revenue Generation Method	Revenue Potential Per Year/Event (\$/yr)
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	

5. Have you noticed any increased activity at your airport after implementing a particular method listed above?

Yes _____ or No _____

If yes, approximately what level of increase and for what method?

6. Do you plan to try to increase on-airport revenue at your airport in the next three years?

Yes _____ No _____

If yes, please identify how you are planning or considering to do so.

Revenue Generation Method	Revenue Potential Per Year/Event (\$/yr)
1.	
2.	
3.	
4.	
5.	

7. What are the advantages of the revenue generation methods you are using/planning to use?

8. What are the disadvantages of the revenue generation methods you currently use?

9. Does your airport have a marketing plan that promotes the airport, its facilities, services, and businesses to potential users?

Yes _____ No _____

10. Please identify any methods/strategies/events that are not noted above but that may increase activity at your airport that could ultimately lead to increased revenues. Include ideas you have heard or read about that we should look into.

11. What types of user/patron amenities might attract more users to your airport?

12. Have your airport customers asked for any new services that might increase your airport's activity? If so, which ones?

**Please return survey to: Jeff Borowiec, Texas Transportation Institute, The Texas A&M University System
3135 TAMU, College Station, TX 77843-3135 Fax: (979) 845-7548 Online: <http://tti.tamu.edu/aviation>**

**APPENDIX C COMPLETE LIST OF REVENUE GENERATION
METHODS AND IDEAS TO INCREASE AIRPORT ACTIVITY**

Methods to Increase Revenue Generation and Airport Activity

The following is a compilation of ideas that emerged from this study currently in use, planned, or suggested as potential methods to increase airport revenues and activity. Ideas listed may be focused on direct revenue generation or to encourage additional activity at the airport and thus increase revenue through fuel sales, hangar rentals, and/or other means.

- Fuel services – add fueling service where not available, add additional type of fuel, jet refueler truck, 24-hour service access, credit card machine
- Hangar facilities – building more spaces, providing water service to hangars, corporate hangars, overnight hangars
- T-Hangars
- Tiedowns
- Land leases
- Building leases
- Office space lease (public and private sector)
- FBO leases / FBO agreements – increased space for FBO, charter services
- Agricultural leases (farming, grazing, crop spraying)
- Oil and gas royalties
- Airport website
- Airport marketing plan
- Hunting season activities
- Rental house on airport property
- Landing fees
- Runway access fee
- Late rent fees
- Courtesy car
- Car rental
- Vehicle parking
- Access easement fees

- Non-profit organization use of facilities
- Food services – concessions, restaurants, hamburger fly-in
- Concessions / retail sales / vending machines
- Lodging – motel, camping facilities
- Flight exhibit/museum
- Aviation map sales
- Pilot supplies
- Flight school
- Advertising
- Maintenance facilities – mechanic on duty, avionics repair facilities, paint shop
- Economic development sales tax
- RAMP, AIP other federal and state grants
- Aircraft rescue and firefighting
- Aircraft wash facility
- Fire protection contract
- Governmental agency offices (U.S. Customs, U.S. Postal Service, Transportation Security, etc.)
- LaserGrade Testing Center
- Special events (fly-in, breakfasts, antique auto swap meet)
- Conversion of unneeded runway/taxiway/ramp area to hangar space and other revenue producing uses
- Recreation facilities (i.e., 200 acres includes: picnic areas, riding stable area, skeet range, par course, ball fields, tennis courts, swimming pools, and three ponds)
- General facility improvements:
 - pilot/passenger lounge area;
 - relaxation area;
 - restrooms;

- furniture for terminal building;
- entertainment items such as a television;
- computer/internet access;
- navigational services;
- weather monitor;
- runway expansion;
- navigational systems;
- pavement and lighting improvements;
- grass/turf runway; and
- helipad.