

CHAPTER SIX IMPLEMENTATION

ED CARLSON MEMORIAL FIELD- SOUTH LEWIS COUNTY AIRPORT MASTER PLAN UPDATE

The purpose of this chapter is to outline airport improvement projects necessary over the 20-year planning period, and in order of priority. The priority of projects is driven by the aviation demand forecasts, compliance with Federal Aviation Administration (FAA) design standards, and other needs identified during the study process. Safety improvements, environmental evaluations, and property acquisitions are often high priority projects and a prerequisite to other development. The less critical projects are identified later in the planning period timeline. Cost estimates for each project as well as potential funding sources are presented to assist Lewis County with assessing the financial feasibility of implementing the proposed development within the timeframe each project should be accomplished. An attempt is made to balance the cost over the years so that budgets required to design and construct the projects are reasonable and feasible.

Improvements that are required to satisfy the forecast aviation demand at South Lewis County Airport are placed into three development timeframes—referred to as phases: near-term (0-5

years), intermediate-term (6-10 years), and long-term (11-20 years). The proposed list of improvements by phase, their associated costs, and narrative descriptions are provided in subsequent sections.

CAPITAL IMPROVEMENT PROGRAM

The following sections outline the Airport’s Capital Improvement Program (CIP), which includes the proposed development projects over the 20-year planning window. Following discussion of the 20-year CIP, proposed improvements beyond 20 years are also presented. Consideration of such distant future needs is prudent planning. Further, incorporating the 20-year and distant future proposed improvements allows the County to review and protect the airport environs for such development possibilities.

Exhibit 6A provides a general overview of the proposed development by phase; development details are covered in subsequent sections.

Cost estimates for individual projects, based on 2014 dollars, have been prepared for improvements that have been identified as necessary during the 20-year planning period. More importantly, estimated costs are presented by eligibility so the County may review what portions of these improvements could be funded by Federal (FAA 90% grants) and State (5% matching grants from the Washington State Department of Transportation Aviation grant program) governments with the remainder, designated “Local”, funded by the County grant matching funds or other entities as obtained by the County. These dollar figures allow the County to budget for upcoming improvements and make annual adjustments when funding constraints require shifting timeframes.

Additional discussion of costs and funding sources is provided in later sections.

NEAR-TERM (PHASE I) DEVELOPMENT

Table 6A lists the near-term airport improvement needs through the year 2017. Descriptions of the airport improvement projects follow Table 6A.

Subsequent sections present tables with anticipated CIP projects for the intermediate term (2018-2022) and long-term (2023-2032).

Table 6A. Capital Improvement Program Near-Term (through 2017)

#	FY	Description	Federal \$	State \$	Local \$	Total Cost
I-1	2015	Taxiway Widening and Strengthening - Design Phase	234,000	13,000	13,000	\$ 260,000
I-2	2015	Replace Runway 06 VASI with PAPI – Design Phase	27,000	1,500	1,500	\$ 30,000
I-3	2015	Aircraft Apron Fog Seal – Design Phase	9,000	500	500	\$ 10,000
I-4	2017	Taxiway Widening & Strengthening - Construction Phase	2,070,000	115,000	115,000	\$2,300,000
I-5	2017	Replace Runway 06 VASI with PAPI – Construction Phase	90,000	5,000	5,000	100,000
I-6	2017	Aircraft Apron Fog Seal (Pavement Maintenance)	90,000	5,000	5,000	100,000
Near-term Total			\$2,520,000	\$ 140,000	\$ 140,000	\$2,800,000

Note: Project costs are planning level estimates in 2014 dollars. Funding source assumptions: Federal/State/Local projects are 90%, 5%, and 5%, respectively. Local can be Lewis County, private, or other.

Project Descriptions for Phase I (Present to 2017)

I-1 Taxiway Widening and Strengthening - Design Phase (\$260,000): Design Phase for the widening of the portion of the parallel taxiway that is currently 22 feet (3,360 feet portion to the west) to the FAA standard of 35 feet. Along with widening the taxiway, its pavement strength will be increased to 12,500 lbs. Single Wheel Load (SWL) necessary to accommodate the aircraft using the airport on a regular basis.

I-2 Replace Runway 06 VASI with PAPI – Design Phase (\$30,000): Design for replacing the Visual Approach Slope Indicator (VASI) system on Runway 06 with a Precision Approach Path Indicator (PAPI) system.

I-3 Aircraft Apron Fog Seal – Design Phase (\$10,000): Design of a Fog seal project (pavement maintenance) for the aircraft apron. The apron was last reconstructed and expanded in 2007 and is in need of a fog seal and miscellaneous maintenance in order to retain its “good condition”.

I-4 Taxiway Widening and Strengthening - Construction Phase (\$2,300,000): Construction Phase for the widening of the portion of the parallel taxiway that is currently 22 feet (3,360 feet portion to the west) to the FAA standard of 35 feet. Along with widening the taxiway, its

pavement strength will be increased to 12,500 lbs. Single Wheel Load (SWL) necessary to accommodate the aircraft using the airport on a regular basis.

I-5 Replace Runway 06 VASI with PAPI – Construction Phase (\$100,000): Replacement of the Visual Approach Slope Indicator (VASI) system on Runway 06 with a Precision Approach Path Indicator (PAPI) system as previously designed in Project I-2.

I-6 Aircraft Apron Fog Seal – Pavement Maintenance (\$100,000): Completion of pavement maintenance project following design identified in project I-3.

INTERMEDIATE TERM (PHASE II) DEVELOPMENT

Projects included in Phase II of the planning period are proposed for 2018-2022. Of the 16 projects listed, half are associated with the new development on the south side. As shown in **Table 6B**, total project costs for Phase II are estimated at \$11.8 million with nearly \$9.0 million eligible for FAA funding, over \$466,000 State, and \$2.4 million identified for local funding. Of the \$2.4 million local requirement, \$1.1 million is for hangar development, which could be and likely will be planned for 3rd party/private developer financing.

Project Descriptions for Phase II (2018-2022)

II-1 Land Acquisition for Approach/Extension Protection (\$1,439,000): Acquisition of additional land to the east that is needed to protect the viability of a future extension of the runway. The land to be acquired will accommodate the future runway extension and its associated safety areas, the extension of the parallel taxiway and its associated safety areas, and the future Runway 24 RPZ. This land acquisition could be divided into various phases based on the availability of land and capital to acquire it.

II-2 Land Acquisition/Lease (AWOS Area): Fee simple acquisition or lease of the property expected to house the future AWOS site. An approximate minimum of **15 acres** are needed to ensure control over the AWOS and its critical area.

II-3 Complete Environmental Assessment (EA)/Environmental Impact Study (EIS) and Mitigation Design for South Development (\$250,000): Complete an EA or EIS for the development of the 14-acre property to the south of the runway. An EA for the said property was completed and may require updating. This project also include the design for any required wetland mitigation.

Table 6B. Capital Improvement Program Intermediate Term (2018-2022)

#	Description	Federal \$	State \$	Local \$	Total Cost
II-1	Land Acquisition for Approach/ Extension Protection	1,295,100	71,950	71,950	\$1,439,000
II-2	Land Acquisition/Lease for AWOS Area	361,800	20,100	20,100	\$ 402,000
II-3	Complete EA/EIS & Mitigation Design for South Development	225,000	12,500	12,500	\$250,000
II-4	AWOS Installation (Includes BCA)	242,100	13,450	13,450	\$269,000
II-5	South Side Site Preparation - Clearing & Grading	314,100	17,450	17,450	\$349,000
II-6	South Development - Access	301,500	16,750	16,750	\$335,000
II-7	South Taxiway Construction	1,119,420	62,190	62,190	\$1,243,800
II-8	Southside Utilities Extension	609,300	33,850	33,850	\$677,000
II-9	South Apron Development	2,064,600	114,700	114,700	\$2,294,000
II-10	South Auto Parking	225,000	12,500	12,500	\$250,000
II-11	South Hangar Development - Phase I	-	-	1,141,000	\$1,141,000
II-12	Install Fuel Tanks on South Side and Decommission Tank to the North	-	-	642,000	\$642,000
II-13	Replace Runway Lighting System	628,099	34,894	34,894	\$697,888
II-14	Taxiway Reconstruction Adjacent to Apron	825,300	45,850	45,850	\$917,000
II-15	Access Road Realignment, Fencing & Terminal Parking (Design and Construction)	432,000	-	48,000	\$480,000
II-16	Vehicular Parking Lot - North Side	144,000	-	16,000	\$160,000
II-17	Pavement Maintenance Program	180,000	10,000	110,000	\$300,000
Intermediate-term Total		\$8,967,319	\$466,184	\$2,413,184	\$11,846,688

Note: Project costs are planning level estimates in 2014 dollars. Funding source assumptions: Federal/State/Local projects are 90%, 5%, and 5%, respectively. Local can be Lewis County, private, or other.

II-4 AWOS Installation including Benefit-Cost Analysis (\$269,000): Design and construction for the installation of an Automated Weather Observing System (AWOS) III system at the airport. The installation of the weather equipment is needed and would increase the safety and efficiency of operations at the airport.

II-5 South Side Site Preparation – Clearing & Grading (\$349,000): Design and construction of the site preparation for the development of the 14 acres property to the south. The project includes the clearing and grading of the entire property in preparation for its development.

II-6 South Development Access (\$335,000): Design and construction of an access road to the 14 acres property off of Buckley Road. The access road is approximately 1,500 feet long and 30 feet wide.

II-7 South Taxiway Construction (\$1,243,800): Design and Construction of a partial parallel taxiway to the south of the runway. The taxiway is approximately 970 feet long and 35 feet wide. The project includes the design and construction of two taxiway connectors as well as four taxilanes, as shown on the preferred alternative and ALP, to serve the future hangar development to the south.

II-8 Southside Utilities Extension (\$677,000): Design and construction of the extension of utilities to the south side of the airport. Utilities to be extended include power, phone lines, drainage, fire, and water.

II-9 South Apron Development (\$2,294,000): Design and construction of the aircraft parking apron on the south side. The apron, 24775 square yards in size, will serve the development of the south side of the airport.

II-10 South Auto Parking (\$250,000): Construction and design of the vehicular parking lot to the south to serve the needs of the new B-II development in the area.

II-11 South Hangar Development – Phase I (\$1,141,000): Design and construction of one row of T-hangars on the south side of the airport. The exact timing of this project as well as other phases of the south hangar development will depend on actual demand.

II-12 Install Fuel Tanks on South Side & Decommission Tank to the North (\$642,000): Design and construction of two 12,000-gallon fuel tanks on the south side (Avgas and Jet A). The project includes the decommissioning of the existing tank on the north side and the purchase of a fuel truck.

II-13 Replace Runway Lighting System (\$697,888): Design and construction for replacing the runway lighting system with a MIRL system.

II-14 Taxiway Reconstruction Adjacent to Apron (\$917,000): This project includes the reconstruction of a portion of the parallel taxiway adjacent to the aircraft apron on the north side.

II-15 Access Road Realignment, Fencing & Terminal Parking (\$480,000): Design and construction of the realignment of the existing airport entrance road as shown on the preferred alternative and the ALP. The realigned road would also provide access to the area adjacent to and to the north of the terminal building where a vehicular parking lot (20 parking spaces) will be built. Additionally, fencing will be installed along the realigned road along with a vehicular gate and three pedestrian gates in order to protect the Airport Operations Area (AOA).

II-16 Vehicular Parking Lot North Side - Design & Construction (\$160,000): Design and construction of a vehicular parking lot to the north of the access road in order to serve the parking needs of the existing hangar development. This project includes filling the ditch and construction of a vehicular parking lot (14 parking spaces).

II-17 Pavement Maintenance Program (\$300,000): This project is a placeholder for pavement maintenance and rehabilitation items needed to extend the useful life of airport pavements and to maintain their structural integrity.

LONG TERM (PHASE III) DEVELOPMENT

Table 6C includes the proposed airport improvements in Phase III, or 2023-2032—the end of the master planning window. Consequently, a master plan update is the first project identified as this master plan will be a decade old at that time. In addition, there are five projects listed for the north side development assuming that the south side aviation development is in place, the land on the north side is available for acquisition, and aviation demand supports the initiation of additional development. Further, the hangar development identified is slated for private development/financing so the County would just provide a ground lease. A pavement maintenance program project is also listed in Phase III as a placeholder for recurring maintenance on an as-needed basis. Total county costs for this ten year phase is estimated at \$237,950 or an average of \$24,000 annually.

Table 6C. Capital Improvement Program Long-Term (2023-2032)

#	Description	Federal \$	State \$	Local \$	Total Cost
III-1	Airport Master Plan Update	180,000	10,000	10,000	\$200,000
III-2	Land Acquisition - North East Side	116,100	6,450	6,450	\$129,000
III-3	North Development Area - Clearing & Grading	132,300	7,350	7,350	\$147,000
III-4	B-I Taxilanes Development North	340,200	18,900	18,900	\$378,000
III-5	B-I Apron Development North	1,354,500	75,250	75,250	\$1,505,000
III-6	B-I Hangar Development	-		Private \$	Private \$
III-7	Pavement Maintenance Program	360,000	20,000	120,000	\$500,000
Long-term Total		\$2,483,100	\$ 137,950	\$ 237,950	\$2,859,000

Note: Project costs are planning level estimates in 2014 dollars. Funding source assumptions: Federal/State/Local projects are 90%, 5%, and 5%, respectively. Local can be Lewis County, private, or other.

Project Descriptions for Phase III (2023-2032)

III-1 Airport Master Plan Update (\$200,000): A Master Plan Update (MPU) is recommended every seven to 10 years unless significant changes take place and warrant an earlier update.

III-2 Land Acquisition – Northeast Side (\$129,000): Acquisition of the 4.5 acres property located to the north east of the existing development on the north side of the airport. This land will serve to expand the existing B-I development.

III-3 North Development Area – Clearing & Grading (\$147,000): Design and construction of the site preparation for the development of the 4.5 acres property to the northeast of the existing B-I development. The project includes the clearing and grading of the entire property in preparation for its development.

III-4 B-I Taxilanes Development North (\$378,000): Design and Construction of two taxilanes to serve the planned B-I hangar development on the north side.

III-5 Apron Development North (\$1,505,000): Design and Construction of the proposed aircraft apron area to support the south side aviation facility and service development.

III-6 B-I Hangar Development (Private- Funding \$ by others): Design and construction of two rows of T-hangars on the north side of the airport. The exact timing of this project will depend on actual demand.

III-7 Pavement Maintenance Program (\$500,000): This project is a placeholder for pavement maintenance and rehabilitation items needed to extend the useful life of airport pavements and to maintain their structural integrity.

BEYOND 20 YEARS (PHASE IV)

While this airport master plan update covers a planning period that reaches out to 2032, it's important to identify other possible development in the more distant future to protect the County's ultimate vision for the airport by ensuring that no development around the airport would preclude or make cost prohibitive the airport's development potential. The following projects are anticipated beyond the 20-year master planning window.

Future FBO: Construction of a future FBO to the north side of the airfield in the area identified on the preferred alternative and ALP. This project includes the demolition of the existing building.

Runway Extension Justification Report: Once the demand levels necessary to justify the extension of the runway are reached, a report documenting activity levels and the need for a runway extension must be prepared and submitted to the FAA.

Threshold Displacement: Based on the current interim land use in the RPZ guidance, a runway extension would trigger a review of the existing incompatible land use (Buckley Road and Jackson Hwy. pass through Runway 06 RPZ). The displacement of Runway 06 threshold by 379 feet would address the incompatible land use issue although it would not solve it completely (a 379 feet displacement would clear the roads from the inner two thirds of the RPZ. A larger displacement, or a roadway realignment that would completely clear the roads out of the RPZ were found unfeasible. Please refer to Chapter 4, Alternatives for additional details). It must be noted that since the current FAA guidance is interim, the timing and/or need for this project may change once the final guidance is released.

Runway Extension Environmental Assessment: Environmental Assessment related to the extension of the runway to the east.

Runway Extension: Extension of the runway to 6,200 feet. The project also includes the extension of the parallel taxiway.

Fire Station Access Road: This project includes the construction of a secondary access road to serve the new fire station. Although the presence of a fire station on the Airport is not required, the overwhelming community support for the construction of the facility on airport property and

the added safety benefits it presents to airport operations make this project an integral part of the Airport development plan.

SOURCES OF CAPITAL FUNDING

This section describes the various funding sources that are potentially available to Lewis County for their proposed airport development plans. Since South Lewis County Airport revenues represent a relatively small source of funding relative to the large CIP investment needs, the vast majority of CIP funding will be derived from other sources. The dominant source of grant funding for eligible capital projects typically comes from the FAA. However, if such projects are deemed a relatively low priority by the FAA, they may be delayed or never funded. The following is a summary of the County's financing options:

- Federal (FAA)
- Washington State Department of Transportation (WSDOT) Aviation Division grants
- Lewis County transfers in funding
- County bonds
- Airport operating revenues
- Private financing/third party development of specific airport projects

FEDERAL FUNDING

Federal funding available to South Lewis County Airport is derived from the Airport Improvement Program through entitlement grants and discretionary grants. The Airport Improvement Program (AIP) was established by the Airport and Airway Improvement Act of 1982, with several subsequent amendments to include the most recent titled the FAA Modernization and Reform Act of 2012. Funds for the AIP are derived from the Airport and Airway Trust fund, which is supported by user fees, fuel taxes, and other similar revenue sources. Currently, AIP grants cover 90 percent of eligible project costs for general aviation airports like South Lewis County Airport.

AIP funding for eligible projects is described in FAA Order 5100.38, *Airport Improvement Program Handbook*.

The Wendell H. Ford Aviation Investment and Reform Act for the 21st Century—often referred to as AIR-21, established the Non-primary Airports Entitlement Program, of which South Lewis County and similar airports in the National Plan of Integrated Airport Systems (NPIAS) benefit. AIR-21, enacted in 2000, sets aside grant funding for these airports. Currently, each airport can

receive up to \$150,000 per year based on the FAA's assessment of maintenance needs over a five-year period.

This funding set-aside is available for each federal fiscal year when Congress appropriates at least \$3.2 billion for the FAA's AIP grant program. For the convenience of the Airport Sponsor, if a project is anticipated to cost in excess of \$150,000, participating airports can rollover the Non-Primary Entitlement funds for up to three years, at which time the accumulated total of rolled-over funds can be used for larger projects. Any unused funds at the end of the entitlement program revert to the FAA. CIP funding for the South Lewis County Airport CIP assumes the \$150,000 entitlement grant funding will continue through the planning period.

Over and above entitlement grants, the FAA also provides discretionary grants to South Lewis County Airport on a 90/10%. However, this funding is for projects that have a high federal priority for enhancing airport safety, security, and capacity, and would be difficult to fund otherwise. While dollar amounts for these grants vary can vary substantially, they may also be significantly higher than the entitlement funding, which is beneficial when high priority million-dollar-plus airport improvement projects are needed. Discretionary grant applications are evaluated based on need, the FAA's project priority ranking system, and the FAA's assessment of a project's significance within the national airport and airway system.

STATE FUNDING

WSDOT Aviation will provide sponsors of public-use airports identified in the Washington Aviation System Plan with funds in order to preserve the state system of airports and the attendant public benefits (see RCW 47.68.090). All requested project work must be for public use, be shown on the approved ALP and be included in WSDOT Aviation's five-year Statewide Capital Improvement Plan (SCIP). The sponsor applicant's information must be updated annually for the state Airport Information System database. WSDOT airport aid grant funds may be used for planning, acquisition, construction, improvement and maintenance of airports. Historically, the majority of WSDOT aviation funding has been spent on pavement maintenance. For airport improvement projects receiving federal funds, it has been a long-standing practice for WSDOT Aviation to support airports in matching their AIP grants, and typically up to half of the sponsor's obligation. Since AIP grants currently require the airport sponsor to fund 10% of the total project cost, WSDOT has been providing 5% with Lewis County funding the other 5%. Funding for the South Lewis County Airport CIP assumes that WSDOT Aviation will continue funding half of the sponsor's 10% obligation on FAA-eligible projects through the planning period. For other projects that seek state-only funds, WSDOT Aviation requires the airport sponsor to contribute a

minimum 5% grant match. Such state-only projects may be ineligible for FAA funds or will likely not be FAA-funded due to their lower priority. However, the maximum amount WSDOT Aviation can grant to any one individual airport sponsor in any single grant is \$250,000. This grant limit amounts to an estimated 23% of WSDOT Aviation’s total grant distribution for the year, which has averaged a total of \$1.1 million annually. Also notable is that a recent study by WSDOT Aviation reveals that while the grant program is forecast to increase to an average of \$1.4 million in the future, this is \$12 million short of the annual funding needs in the state.

LOCAL FUNDING

AIRPORT CASH FLOW

This section presents an overview of the historical and projected revenues and expenses for the South Lewis County Airport. A review of the Airport’s cash flow helps the County determine the financial feasibility of the CIP, namely when local dollars needed to fund airport improvement projects are substantially higher than the County typically budgets for the Airport. This often occurs when projects are either ineligible for state or federal funding participation, or do not compete well for eligible funding, resulting in the airport sponsor being responsible for a larger share or 100% of the project.

CURRENT REVENUE SOURCES

The following recaps the Airport’s limited operating revenue sources outlined in the Inventory Chapter. As discussed in subsequent sections—and typical of similar general aviation airports, these revenues typically fall short of covering the Airport’s operating expenses.

- Land leases
- Hangar leases
- Tiedown fees
- Tenant annual use fees
- Through the fence annual fees
- Profit of fuel flowage fees

The Airport's current rates and charges structure is as follows:

- Ground leases rates for privately owned Airport buildings--\$0.16 per square foot/year for private use and \$0.19 per square foot/year for commercial use
- Airport-owned T-hangar bay lease rates--\$660/year (or \$55/month plus tax)
- Airport tiedown fees--\$180/year (\$15/month)
- Airport tenant user fees--\$100/ year
- Airport Avgas price--\$6.00/gallon

HISTORICAL REVENUES AND EXPENSES

The relationship between operating revenues and operating expenses is one representation of the overall financial condition of the Airport. From a net cash flow perspective, comparison of operating revenues and expenses shows whether revenues are sufficient to cover operating expenses.

Table 6D shows net cash flows from recent actual and budgeted South Lewis County Airport operations. Revenues and expenses for years 2012 and 2013 are actual numbers. Similarly, estimated revenues and expenses are also shown for year-end 2014 and preliminary budget amounts for 2015. Revenues include fuel sales, space and facility leases, and miscellaneous revenues. Since the County is responsible for fueling, a line item identified as "fuel purchases for resale" is listed in expenses. In 2012, net income from fuel sales reached nearly \$7,000, but margins appear to be smaller in more recent years—the result of budgetary figures provided by the County when actual figures were not yet available; the County recently noted that fuel revenues are above that estimated for year end of 2014. Space and facility lease revenues—primarily derived from ground and hangar leases—show a gradual increase in recent years with an estimated \$23,000 anticipated in 2014. The far right column presents an average of airport operating revenues and expenses over the entire 2012-2015 period. As indicated, the average cash flow for this four-year time span is a deficit of approximately \$100,000. Consequently, Lewis County provides a subsidy to cover the Airport's operating expenses. This subsidy is often referred to as "Transfers In" from Lewis County.

Table 6D. Historical Revenues and Expenses

	Actuals		Estimated	Preliminary
	2012	2013	Year End 2014	Budget 2015
<u>Operating Revenues</u>				
Fuel Sales	\$ 54,194	\$ 70,396	\$ 50,000	\$ 50,000
Space & Facility Leases	\$ 17,568	\$ 21,814	\$ 23,000	\$ 23,000
Misc. Revenue--Other	\$ 108	\$ 44	\$ 100	\$ 100
Total Operating Revenues	\$ 71,870	\$ 92,254	\$ 73,100	\$ 73,100
<u>Operating Expenses</u>				
Salaries & Wages	\$ 51,077	\$ 50,843	\$ 51,777	\$ 51,831
Industrial Insurance	\$ 146	\$ 145	\$ 146	\$ 142
Social Security	\$ 3,916	\$ 3,888	\$ 3,961	\$ 3,965
Retirement	\$ 3,574	\$ 4,194	\$ 4,769	\$ 4,997
Med/Dental/Vision/H&A	\$ 1,519	\$ 1,519	\$ 1,519	\$ 1,519
Life Insurance	\$ 10	\$ 14	\$ 26	\$ 26
Sic/Vac Payout	\$ -	\$ -	\$ -	\$ 6,500
Interfund Self Insurc	\$ 262	\$ 157	\$ 157	\$ 189
Interfund County Ins	\$ 151	\$ 331	\$ 331	\$ 275
Interfund Unemployment	\$ 1,108	\$ 148	\$ -	\$ -
Labor Subtotal	\$ 61,763	\$ 61,239	\$ 62,686	\$ 69,444
Office & Oper Supplies	\$ 440	\$ 535	\$ 1,000	\$ 1,500
Fuel For Resale	\$ 47,199	\$ 64,252	\$ 48,000	\$ 48,000
Small Tools & Minor Equip	\$ 224	\$ 39	\$ 100	\$ 100
Professional Services/Advertising	\$ -	\$ 32	\$ 168	\$ 50
Telephone	\$ 947	\$ 1,049	\$ 1,000	\$ 1,000
Travel	\$ 565	\$ 609	\$ 200	\$ 500
Taxes/Op Assessment	\$ 765	\$ 103	\$ 18	\$ -
Oper Rental & Lease	\$ 441	\$ -	\$ 30	\$ -
Insurance	\$ 5,637	\$ 5,645	\$ 5,000	\$ 5,000
Repairs & Maintenance	\$ 141,365	\$ 1,581	\$ 2,500	\$ 2,000
Miscellaneous	\$ 1,305	\$ 1,737	\$ 1,000	\$ 1,000
Training & Registration	\$ 290	\$ 275	\$ 100	\$ 250
Dues & Subscriptions	\$ 175	\$ 175	\$ 75	\$ 250
Administration Subtotal	\$ 199,353	\$ 76,032	\$ 59,191	\$ 59,650
Intergovt--Prof Svcs	\$ 127	\$ 217	\$ 219	\$ 250
Intergovt--External Tax	\$ 18	\$ -	\$ -	\$ -
Interfund--Prof Services	\$ 579	\$ 1,183	\$ 586	\$ 625
Interfund--Info Services	\$ 2,208	\$ 2,130	\$ 2,328	\$ 2,280
Interfund--Postage	\$ 777	\$ 903	\$ 999	\$ 1,113
Interfund--Supplies	\$ -	\$ 980	\$ -	\$ -
Interfund--Op Rentals	\$ -	\$ 300	\$ -	\$ -
Interfund--ER&R Info SV	\$ 276	\$ 276	\$ 276	\$ 300
Interfund--Facilities M	\$ 8,602	\$ 6,976	\$ 18,696	\$ 7,609
Interfund--Debt	\$ -	\$ 41	\$ -	\$ -
Intergovernment Expense Subtot:	\$ 12,587	\$ 13,006	\$ 23,104	\$ 12,177
Total Airport Expenditures	\$ 273,703	\$ 150,277	\$ 144,981	\$ 141,271
Net Cash Flow (Loss)	\$ (201,833)	\$ (58,023)	\$ (71,881)	\$ (68,171)

Source: Lewis County

The operating expenses detailed in Table 6D are clustered to distinguish various labor costs, airport operating costs and imputed outside government and County interfund imputed costs charged to the Airport. On average, labor costs comprise approximately 36 percent of the 2012-2015 average of total airport expenditures; costs within the airport administration category account for about 55 percent with the nine percent balance associated with inter-government or Lewis County imputed inter-fund expenses. It's important to note that the repairs and maintenance cost line item in the County's 2012 records also included airport improvements, which were properly separated from this line item in subsequent years. For 2012, repairs and maintenance actually totaled \$2,358.

As an offset to Airport negative cash flows, Lewis County Transfers-In funds are intended to cover three airport cost areas:

- labor and benefits (operating costs)
- inter-fund and inter-government imputed expenses (operating costs)
- outside grant matching requirements (capital costs)

PROJECTED REVENUES AND EXPENSES

This section projects future operating revenues and expenses to provide the County with an overview of the Airport's future operating cash flows, which is summarized in **Table 6E**. These projections were prepared in a financial sensitivity analysis model to build in flexibility that allows financial results to change when Airport operating parameters change. In other words, annual changes in individual Airport revenue or expense line items inside the model can be modified to reflect operational dynamics. These projections consider normal growth factors adapted to the unique characteristics of South Lewis County Airport, particularly with revenues associated with space and facility leases, which have shown growth and are projected to increase with forecast demand and the County's development plans.

Table 6E. Projected Revenues and Expenses

Revenues	Baseline	2017	2022	2032
Fuel Sales	56,148	\$ 57,197	\$ 59,906	\$ 65,717
Space and Facility Leases	23,000	\$ 23,793	\$ 25,898	\$ 30,684
Misc. Revenue-Other	100	\$ 102	\$ 107	\$ 117
Total Revenues	\$ 79,248	\$ 81,092	\$ 85,911	\$ 96,517
Expenses	Baseline	2017	2022	2032
Salaries and Benefits	63,783	\$ 64,808	\$ 67,442	\$ 73,035
Fuel for resale	51,863	\$ 52,696	\$ 54,838	\$ 59,386
Minor Equipment, Supplies, Equipment Rental and Services	1,600	\$ 1,626	\$ 1,692	\$ 1,832
Communication, Travel, Advertising	1,550	\$ 1,575	\$ 1,639	\$ 1,775
Insurance, Taxes	5,000	\$ 5,080	\$ 5,287	\$ 5,725
Repairs & Maintenance	2,000	\$ 2,032	\$ 2,115	\$ 2,290
Miscellaneous- other	1,500	\$ 1,524	\$ 1,586	\$ 1,718
Intergovernment	12,177	\$ 12,373	\$ 12,875	\$ 13,943
Total Expenses	139,473	\$ 141,713	\$ 147,473	\$ 159,705
Cash Flow	\$ (60,225)	\$ (60,621)	\$ (61,562)	\$ (63,187)

Similar to any forecasting effort, results are predictions of future activities and should serve only as a guide for planning purposes. These predictions are based on the best available information and knowledge about existing conditions and anticipated future events and trends. Consequently, as the forecast extends further out from the present time, the predicted results become increasingly uncertain—all the more reason to update projections as they become outdated. Sudden changes within the Lewis County community or in the aviation industry can cause significant deviations from the projected activity.

CASH FLOW VERSUS CAPITAL COSTS

Table 6F provides a brief review of the South Lewis County Airport’s cash flow versus the anticipated local funding requirements for the proposed airport improvements identified in the CIP by phase. Since airport revenues cannot cover capital improvement needs, there are funding shortfalls in each phase. This provides the County with an overview of the total funding needs by phase, which will require one or a combination of the following actions throughout the CIP implementation process:

- County provides funding to cover capital costs not covered by FAA and State grants
- County postpones select airport projects, on an as-needed basis, until funding is budgeted or otherwise secured
- County pursues other funding options such as private development/financing (discussed further in the next section)

Another option is to increase rates and fees at the Airport to generate an increase in airport operating revenues. However, rates and fees should still be market-based. With the low activity and number of tenants presently at the Airport, incremental increases will provide limited assistance with large capital funding needs. Nevertheless, the County should review their rate-and-fee structure in the future as the economy, aviation industry, and area/regional aviation market continue to rebound—though gradually—from the recession.

Table 6F. Cash Flow versus Capital Costs

Development Phase	Revenues	Expenses	Net Income	CIP Local/Other	
				Share	Net Difference
Near-term, Phase I (through 2017)	240,503	421,775	(181,271)	140,000	(321,271)
Intermediate-term, Phase II (2018-2022)	419,796	725,754	(305,958)	2,413,184	(2,719,142)
Long-term, Phase III (2023-2032)	916,334	1,541,203	(624,869)	237,950	(862,819)
Total	\$ 1,576,634	\$ 2,688,731	\$ (1,112,098)	\$ 2,791,134	\$ (3,903,232)

OTHER POSSIBLE FUNDING SOURCES

This section further discusses other sources for funding capital improvements at the Airport. One possibility is general obligation bonds backed by the creditworthiness and taxing power of Lewis County. They usually bear low interest rates because of their high degree of scarcity. However, state laws limit the County’s overall debt, and competition from other County financing requirements may preclude their use for Airport capital improvement projects. Their potential use at the Airport is uncertain.

Third party financing may be appropriate for the Airport in a case where the Airport sponsor uses a third party developer or a tenant to finance an on-site construction project. The obvious advantage to the County of such an arrangement is relief of all responsibility for raising the capital funds for improvements. Key advantages to the developer are that there are no up-front property acquisition costs and that public entitlement uncertainties are typically mitigated. Projects of this kind typically include hangars, fixed base operator (FBO) facilities, fuel storage, exclusive aircraft parking aprons, industrial aviation-use facilities, and other various projects. This

type of funding is particularly suitable because these types of projects are not typically eligible for FAA or WSDOT funding. However, only projects with a strong positive cash flow can support this type of financing. From a developer's perspective, the biggest concern is that development would occur on leased Airport land with building improvement reversionary clauses at the end of the ground lease. Prospective building developers and owners strongly prefer developing on fee land.

Further, financing a new project or building on leased public land is challenging for a developer, from a collateral standpoint, for example. The Airport is precluded from allowing claims such as developer liens to be placed against airport land. Thus, the developer is unable to offer the potential real estate to be developed as security. In contrast, on private property, developers typically can encumber the title of the property for purposes of lender security. The lender, in turn, has the ability to place a lien on the real estate in order to secure its position.

Another potential problem for a developer is the probable existence of low market rents at the Airport. Given the private developer's cost to construct a new airport building, rents must be adequate to achieve amortization of that investment plus an adequate investment return for the effort and risk.

From the lender's point-of-view, private development financing on airport ground lease land may be problematic. The financial institution lending on an airport development project must look at the downside of the project and the implications of curing a potential default by the developer. Fundamental to the financing of a real estate project is mortgage underwriting—the analysis of a loan from the lender's perspective to determine the risk of making the loan using the real estate as collateral. However, from the lender's perspective, the real estate collateral is not viewed as a good defense against lender loss.

Specifically, the foundation of the market value of income producing real estate is the future stream of income. The key to the lender forecasting the present value of this future stream of income is accuracy in the size, timing, duration and stability of future income flows. The process of converting these future income flows to a present value is a simple matter of capitalization at an appropriate rate. From a lender's perspective, determining the appropriate rate is problematic and must take into account multiple marketplace variables including:

- The building is mostly absorbed with signed leases (not Letters of Intent)
- Signed tenants are mostly good credits
- In the case of construction loans, permanent (take-out) financing is already secured
- A minimum of 10 years is remaining on the lease in order to achieve any refinancing approvals
- Typically, a 20- to 30-year lease term is acceptable

Nevertheless, many of the metrics of the Airport, the developer, and the lender reflect similar perspectives. All three parties must be comfortable with the real estate development and business arrangement.

The following are suggested possibilities to generate additional revenue at South Lewis County Airport in the future.

1. The County could seek a third party developer to construct the following:
 - South side aircraft Group II hangars (on 14 acres owned by the airport)
 - North side aircraft Group I T-Hangars (three banks)

2. Lewis County could generate some additional recurring annual revenue at the Airport by developing the following as recommended in the Preferred Alternative:
 - Additional aircraft apron/tiedowns on the south side
 - Additional aircraft apron/tiedowns on the north side
 - Fueling facility on the south side to serve future hangar development tenants and transient aircraft operations

SUMMARY

Lewis County, airport tenants and visitors, and area communities recognize the importance of the South Lewis County Airport. Protecting the investment in this asset is essential to the Airport fulfilling its role in the air transportation system and in contributing to the future economic growth of the region. This Master Plan Update should be used as a tool to guide the County's development efforts to this end. Planning is a continuous process and changes in the aviation industry, economic environment, and numerous other factors may require adjustments in timing of planned improvements. The fundamental elements addressed in the Master Plan will assist the County in responding to such adjustments in the coming years.