

# Birchwood Airport Master Plan Update: Financial Assessment and Maintenance Cost Generation

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# List of Abbreviations

DOT&PF..... Alaska Department of Transportation and Public Facilities  
FAA..... Federal Aviation Administration  
FY ..... fiscal year  
M&O.....Maintenance and Operations  
TAF .....Terminal Area Forecast

# 1 INTRODUCTION

This report analyzes operating costs and their driving factors at the Birchwood Airport. It then benchmarks the airport’s operating costs against two airports of similar size in the region: Wasilla Airport and Soldotna Airport. This provides an initial assessment of the Birchwood Airport’s financial condition. More detailed information will be included in the upcoming Financial Plan.

The information in this report comes from the Alaska Department of Transportation and Public Facilities (DOT&PF), other component reports of this Birchwood Airport Master Plan Update, and the financial statements and published aviation forecasts of comparable airports. Information from these sources is available on an annual basis and does not include shorter periods of time, which limits an analysis of maintenance costs to an annual basis.

The information about Birchwood Airport includes only a portion of the income and expense data related to rural airport operations for DOT&PF. It does not reflect federal funds received for capital or maintenance grants; federal funds received from the Air Carrier Compliance program; the state’s share of capital and maintenance project grants; managerial expenses by Commissioner, Deputy Commissioner, Statewide Aviation staff; nor administrative costs incurred by Division of Administrative Services (Budget, Finance, IT, appeals functions), Statewide Aviation Leasing, Right-of-Way, Planning, Design and Engineering Services, and Construction. Through FY 2017, it does not reflect expenses for the rural airport facilities component building costs such as repairs, electricity and heating fuel, or other utilities for buildings, but it does include maintenance and operating (M&O) costs such as personnel; utilities; and fuel for equipment, runway lights, and some buildings such as heated storage. For FY 2018–2020, it does include both M&O and facility costs such as personnel; utilities; and fuel for equipment, runway lights, building repairs, electricity, and heating (DOT&PF 2021).

# 2 AIRPORT REVENUES AND EXPENDITURES

The Birchwood Airport has had an operating profit over the last six years. Table 2.1 compares revenues and expenses associated with the airport for fiscal year (FY) 2015–2020.

**Table 2.1 Birchwood Airport Revenues, Expenses, and Operating Profits, \$, FY 2015–2020**

Fiscal Year	Revenue	Expenses	Operating Profit
2015	208,165.98	66,793.98	141,372.00
2016	201,024.25	57,423.97	143,600.28
2017	200,555.79	134,124.85	66,430.94
2018	243,716.10	99,907.24	143,808.86
2019	258,990.50	97,672.78	161,317.72
2020	273,832.14	147,209.04	126,623.10

Source: DOT&PF (2021)

The Birchwood Airport generates revenues from several sources. In order of greatest to least, revenues in FY 2020 came from land use (70% of total revenue), assigned aircraft tie-downs and transient parking (25%), application and process fees (3%), fuel dispensing permits (2%), and interest and late fees (<1%). Revenues have grown rapidly from FY 2017 to FY 2020, increasing

36.5% over that period. The increase has largely been driven by land use revenues. Table 2.2 provides total revenues for FY 2015-2016 and detailed revenues for FY 2017–2020.

**Table 2.2 Birchwood Airport Revenue Detail, \$, FY 2015–2020**

Fiscal Year	Assigned Aircraft Tie-down/Transient Parking	Fuel Dispensing Permit	Interest/Late Fees	Application/Process Fees	Land Use	Total Revenue
2015						208,165.98
2016						201,024.25
2017	50,937.19	2,895.35	260.73	1,050.00	145,412.52	200,555.79
2018	68,718.00	4,721.14	243.28	4,225.00	165,808.68	243,716.10
2019	68,756.16	10,982.53	396.59	3,775.00	175,080.22	258,990.50
2020	68,723.00	5,137.15	212.52	8,025.00	191,734.47	273,832.14

Source: DOT&PF (2021)

Birchwood Airport generates expenses from several sources. Historically, expenses have been categories such as personal services, services, and commodities, in that order of magnitude. While personal services have been the largest category of spending at the airport, they constitute a smaller share than other airports (see Section 4) due to Birchwood Airport being unmanned. In FY 2020, the new categories of facilities and capital outlay costs accounted for 70% of expenses. Personal services (19% of the total), services (7%), and commodities (4%) costs were all lower than has been typical for the airport in recent years.

Expenses at Birchwood Airport are shown in Table 2.3. Facilities costs are included for FY 2018–2020, causing an increase in the baseline expenses at the airport relative to prior years. In FY 2020, additional capital outlay and facilities expenses resulted in higher total expenses for a year in which expenses would have otherwise been lower due to less spending in other categories.

**Table 2.3 Birchwood Airport Expense Detail, \$, FY 2015–2020**

Fiscal Year	Personal Services	Services	Commodities	Capital Outlay	Facilities	Total Expenses
2015	24,630.88	6,289.18	35,873.92			66,793.98
2016	26,887.86	5,296.41	25,239.70			57,423.97
2017	74,387.00	51,310.18	8,427.67			134,124.85
2018	45,629.06	42,344.99	11,933.19			99,907.24
2019	42,399.96	46,883.01	8,389.81			97,672.78
2020	27,708.92	10,715.40	5,429.71	25,207.05	78,147.96	147,209.04

Source: DOT&PF (2021)

Other than seasonal variations in the type and amount of operating expenses required for airport operations (e.g., heating and snow removal costs during the winter), insufficient information is available to determine daily or quarterly variations in the operating costs at the airport at this time.

### 3 OTHER FACTORS AFFECTING OPERATIONS AND OPERATING COSTS

Stakeholder interviews provided feedback on the airport’s operations, limitations, and future improvements. This section summarizes the findings of those interviews with a focus on the financial implications.

Stakeholders noted that the state keeps surfaces clear of snow, with minimal impact to pilots' operating days. From a financial perspective, this level of service results in higher snow removal costs but has supported the number of operations and therefore the revenues received from users.

The uncontrolled airspace and easy access to the airport were considered by many stakeholders to be strong positives. Financially, this drives the airport's operations and user revenues.

The lack of onsite DOT&PF presence was mentioned as a negative when there are operations or management issues at the airport. The personnel cost savings from not maintaining a presence at the airport could have minor negative impacts on revenues to the extent that aircraft operations are affected.

Many pilots indicated interest in more tie-downs, electric outlets near the tie-downs, and hangar space. Others would like to see more designated parking spaces. These improvements would require capital investments and increase operating expenses, offset by an increase in user revenues.

Pilots asked for a new taxiway between E and G. This improvement would require a capital investment and would increase maintenance costs. It could potentially improve congestion and result in increased revenues from users.

Stakeholders and the study team also noted several needed maintenance and capital improvements, including repainting of pavement markings, replacement and upgrades of lighting, repaving of existing surfaces, additional connecting taxiways, and adjustment of perimeter fencing. These improvements would require a combination of capital investment and maintenance spending.

The Financial Plan will provide a more detailed analysis of the costs associated with improvements considered in the Birchwood Airport Master Plan.

#### **4 BENCHMARKING WITH COMPARABLE FACILITIES**

This section presents a high-level benchmarking exercise used to compare Birchwood Airport's operating costs with the city-owned airports in Wasilla and Soldotna.

The Federal Aviation Administration's (FAA) Terminal Area Forecast (TAF) was used as the basis for a screening-level comparison of airports in the region for benchmarking. Using the latest TAF (FAA 2020), the Wasilla and Soldotna airports appeared to be suitable comparisons.

After that initial screening, the benchmarking analysis uses operations and based aircraft counts for each airport. Birchwood data is based on actual counts conducted in 2020, while published forecasts were used for Soldotna and Wasilla. Table 4.2 presents these counts of operations and based aircraft at these airports.

**Table 4.2 Estimated Operations and Based Aircraft at Birchwood, Soldotna, and Wasilla Airports, 2020**

Airport	Total Operations	Based Aircraft
Birchwood	10,259	308
Soldotna	21,100	169
Wasilla	42,660	168

Source: HDL Engineering Consultants, LLC (2017), HDL Engineering Consultants, LLC (2021), Wince-Corthell-Bryson and Aries Consultants Ltd. (2017), and Northern Economics Inc. analysis

Note: Wasilla estimates are a straight-line interpolation of actual 2016 counts and 2021 projections.

Wasilla has more than 4.0 times the number of operations as Birchwood, but only 55% of the based aircraft. Soldotna has 2.0 times the number of operations as Birchwood, though its based aircraft count is likewise 55% of Birchwood's. Compared to Soldotna and Wasilla, the operating cost per aircraft operation at Birchwood (\$14.35) is approximately 2 times the cost of Soldotna and 4 times the cost of Wasilla. The operating cost per based aircraft at Birchwood (\$477.95) is 54% that of Soldotna and 37% that of Wasilla. Table 4.3 summarizes the operating expenses at each of the airports.

**Table 4.3 Comparison of Operating Costs at Selected Airports, 2020 Estimates**

	Birchwood	Soldotna Municipal Airport	Wasilla Municipal Airport
<b>Operating Expenses</b>			
Wages and benefits	27,709	105,712	80,605
Services/charges	10,715	42,297	
Supplies	5,430	1,839	
Other	103,355		133,787
<b>Total Operating Expenses</b>	<b>147,209</b>	<b>149,848</b>	<b>214,392</b>
<b>Comparison Metrics</b>			
Aircraft Operations	10,259	21,100	42,660
Based Aircraft	308	169	168
<b>Total Operating Expenses per Metric (\$)</b>			
Aircraft Operations	14.35	7.10	5.03
Based Aircraft	477.95	886.67	1,276.14

Source: City of Soldotna (2021), City of Wasilla (2021), HDL Engineering Consultants, LLC (2017), HDL Engineering Consultants, LLC (2021), Wince-Corthell-Bryson and Aries Consultants Ltd. (2017), and Northern Economics Inc. analysis



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