

*Airport Closure Evaluation Report*  
*Prepared by MnDOT Aeronautics*

**Impacts of Closing**  
**The Silver Bay Municipal Airport (BFW)**

**Summary**

Closing a publicly owned airport is a long term decision which needs careful consideration and thorough evaluation. Establishing a replacement airport is extremely difficult, time consuming, and costly. It is not likely that funds will be available to construct a new airport in the future if the current airport is not rejuvenated.

Conditions leading to Closure:

The runway pavement condition has been in decline for a number of years. MnDOT Aeronautics staff met with representatives of the City of Silver Bay in the fall of 2017 and discussed the condition of the pavement. The City was advised that the pavement was in poor condition, but the runway was not unsafe. The City was also advised that unless some action was taken the runway would soon become unusable and have to be closed. In May 2018 a routine safety inspection was conducted at the airport. Upon arrival inspectors were informed that there had been three incidents over the winter that could be associated to the runway conditions. Visual inspection of the runway and other pavements confirmed that conditions had deteriorated over the winter. The inspectors reported the unsafe conditions and talked with City officials to suggest it was time to close the runway.

Obstructions have been observed in the runway approach surfaces during safety inspections over the years. Approach obstructions limit visibility for pilots and compromise safety.

As the pavement at Silver Bay Municipal Airport did not meet the minimum standard required for safety, and since the Silver Bay Municipal Airport had not demonstrated that the primary surface and approach surface are free from obstructions, the license for the Silver Bay Municipal Airport was revoked by Commissioner's Order No. 620 on June 8, 2018.

In order for the airport to obtain a new license, the runway must be repaired to allow the safe operation of aircraft; and the primary and approach surfaces must have been surveyed and confirmed clear of obstructions.

Public investment in the airport:

Federal funds	\$2,498,456.62
State funds	\$764,015.88
Local funds	\$557,076.19*
State Navigation Aids	\$369,700.00
Other public funds	\$ <u>Unknown</u> **
<b>Total</b>	<b>\$4,189,248.69</b>

\* These are the local funds used to match State and Federal grants. Additional local funds may have been used by the City of Silver Bay on projects without State or FAA assistance.

\*\* EDA, IRRRB, or other sources of public funding may have been used in airport projects by the City of Silver Bay as local share, the City is the only source of this information and has chosen not to participate in the preparation of this report.

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Economic impact on Silver Bay and Lake County:

According to the University of Minnesota's Airport Economic Impact Calculator activity at the Silver Bay Municipal Airport generated \$96,256.00 and supported 1.42 jobs county-wide in the year 2017.

Impact on the State Airport System:

Closing this airport will have a significant impact on the State Airport System. Every airport serves the important system role of providing access to aviation transportation during emergency situations. Whether serving as an alternative landing site for an aircraft in distress, or providing support for the community and region during medical or civil emergencies, closure of the Silver Bay Airport will cause a large system gap in this relatively remote area of the State of Minnesota. Closure will also require the relocation of 9 aircraft and 3,500 estimated annual operations to other airports.

Grant Obligations and Remaining Life/Current Value of the Assets

Total repayments to MnDOT and FAA required of the City of Silver Bay, MN are in the amount of \$761,609.05. This is based on a 20-year life for each project from the date of the last grant payment. This is exclusive of any repayment for land purchases, or other costs for navigation systems, or expenses of activities required to proceed with closure.

<b>Silver Bay Municipal Airport - 20 year Project List (1998 - 2018) Excluding Land Purchases</b>							
Item	Fed Funding Share	State Funding Share	Final Payment Date	Time (in years)	Remaining useful life (yrs) assuming a 20-year life	Federal Prorated Share	State Prorated Share
				Elapsed as of 5/31/2018			
Obstr. Removal, Crack Repair, Snow Blower		\$23,021.65	1/31/2002	16.3397	3.6603	\$ -	\$4,213.28
Rehab Hangar Floor		\$ 4,650.00	2/11/2002	16.3096	3.6904	\$ -	\$ 858.02
Obstruction Removal, Unicom Radios		\$ 3,705.30	9/23/2002	15.6959	4.3041	\$ -	\$ 797.40
Recon Pvmnt, minus Wetland Credit & Access Road	\$1,302,660.59	\$ -	3/27/2003	15.1890	4.8110	\$ 313,352.33	\$ -
Obstruction Removal		\$ 4,200.00	1/7/2005	13.4027	6.5973	\$ -	\$1,385.42
Fuel Tank Cleanout & Hangar Door Repair		\$ 2,480.65	12/8/2008	9.4822	10.5178	\$ -	\$1,304.55
ALP Update, Crack Seal, Fuel Relocate	\$ 237,803.00	\$ -	5/13/2009	9.0548	10.9452	\$ 130,140.13	\$ -
Relocate apron edge taxiway	\$ 218,501.00	\$ -	2/9/2009	9.3096	10.6904	\$ 116,793.27	\$ -
Design Arrival Departure Building	\$ 40,375.00	\$ -	1/5/2010	8.4055	11.5945	\$ 23,406.44	\$ -
Construct Arrival Departure Building	\$ 216,500.00	\$ -	6/30/2011	6.9233	13.0767	\$ 141,555.41	\$ -
Crack Seal Runway	\$ 43,817.00	\$ -	2/9/2011	7.3096	12.6904	\$ 27,802.79	\$ -
<b>Totals</b>						<b>\$ 753,050.37</b>	<b>\$8,558.67</b>
<b>Grand Total</b>						<b>\$761,609.05</b>	

Planning Next Steps

After the public hearing the City of Silver Bay may decide to continue the Airport Closure Process. Alternately, a plan to discontinue closure may become an option. Some alternatives exist:

An Airport Authority may be created following Minnesota Statute 360.0426. FAA has a process for sponsorship transfer if a willing sponsor can be identified.

## Evaluations

### Conditions leading to Runway Closure

In the fall of 2017 members of the MnDOT Aeronautics staff met with representatives of the City of Silver Bay and discussed the condition of the pavement. The City was advised that a recent inspection of the runway conditions had shown the pavement to be in poor condition, but that the runway was not at that time unsafe. The City was advised that unless some action was taken the runway would soon be unusable and have to be closed.

On May 31, 2018 inspectors arrived at the airport to conduct the 5010 Program Airport Inspection, a routine safety inspection. Upon arrival inspectors were informed that there had been three incidents over the winter that could be associated to the runway conditions. The person informed the inspectors that they had caught a tire in a crack and almost lost control of their aircraft. Another aircraft did lose control on landing and ended up 100 feet off the side of the runway in the snow, and a third aircraft had a gear collapse on landing at a nearby airport after departing Silver Bay.

Visual inspection of the runway and other airport pavements confirmed that conditions had deteriorated over the winter. The inspectors reported the unsafe conditions and talked with City officials, saying it was time to close the runway.

MnDOT Aeronautics safety inspection records beginning in 1965 illustrate challenges with tree obstructions over the years. Clear approaches were the norm when the airport was new. Whereas more recent inspections indicate the existence of obstructions more often than not. Approach obstructions limit visibility for pilots and compromise safety.

Runway Approach Condition		
Date	Clear	Obstructed
7-9-65	Clear	
5-12-66	Clear	
5-23-67	Clear	
5-15-68	Clear	
8-16-68	Clear	
11-21-68	Clear	
5-7-69	Clear	
6-2-70	Clear	
11-27-70	Clear	
7-23-71		Obstructed
10-6-72	Clear	
5-30-73	Clear	
7-6-74		Obstructed
6-7-77		Obstructed
9-20-78		Obstructed
10-8-80		Obstructed
9-8-81		Obstructed

Runway Approach Condition		
Date	Clear	Obstructed
12-10-82		Obstructed
6-28-85		Obstructed
9-8-88		Obstructed
4-24-89		Obstructed
3-16-90	Clear	
3-29-91	Clear	
6-25-93		Obstructed
7-26-95	Clear	
5-16-97		Obstructed
1-10-00		Obstructed
9-13-02		Obstructed
9-24-06		Obstructed
8-3-09		Obstructed
11-19-12		Obstructed
6-10-15		Obstructed
5-31-18		Obstructed

As the pavement at Silver Bay Municipal Airport did not meet the minimum standard required for safety as specified in Minnesota Rules part 8800.1600, subpart 4. And, since the Silver Bay Municipal Airport had not demonstrated that the primary surface and approach surface are free from obstructions pursuant to Minnesota Rules part 8800.1600, subpart 5. The license for the Silver Bay Municipal Airport was revoked by Commissioner's Order No. 620 on June 8, 2018. Commissioner's Order No. 620 is attached as Appendix A.

In order for the airport to obtain a new license, the runway must be repaired to allow the safe operation of aircraft; and the primary and approach surfaces must have been surveyed and confirmed clear of obstructions.

### Runway Pavement Condition

The Office of Aeronautics maintains an Airport Pavement Management system for 103 paved airports in Minnesota. Data are housed in a software package called MicroPAVER. Airports are surveyed on a three year cycle, and until the year 2007, the data was collected by Office of Aeronautics staff. In 2008, the Office of Aeronautics contracted with Applied Research Associates (ARA) to collect the annual pavement field distress data. ARA also updates the MicroPAVER database with any new pavement construction data, as well as any pavement maintenance, rehabilitation, and reconstruction data.

The runway pavement condition has been in decline for a number of years. The most recent complete ARA pavement condition report from 2015 shows the runway to be in fair condition with a PCI (Pavement Condition Index) rating of 50. ARA recommends a major rehabilitation with this rating. Of note, the taxilanes and taxiways had a PCI rating of poor or very poor in 2015. ARA has completed a 2018 pavement inspection this past summer and we have received key portions in advance of the official report. The overall runway PCI was rated at 42, a rating of fair, though just 2 points from poor. See the pavement report summaries and pictures below.

Pictures and PCI ratings can underestimate pavement issues. Several sample units on the runway are in the 20s and 30s which is in the poor and very poor range. A key reason for the airport closure was the sizable cracks that have opened up. They are large enough to cause significant shock to an aircraft and a small aircraft tire could become lodged creating a hazard to aircraft.

# Impacts of Closing the Silver Bay Municipal Airport (BFW) November 29, 2018

## 2015 Pavement Report

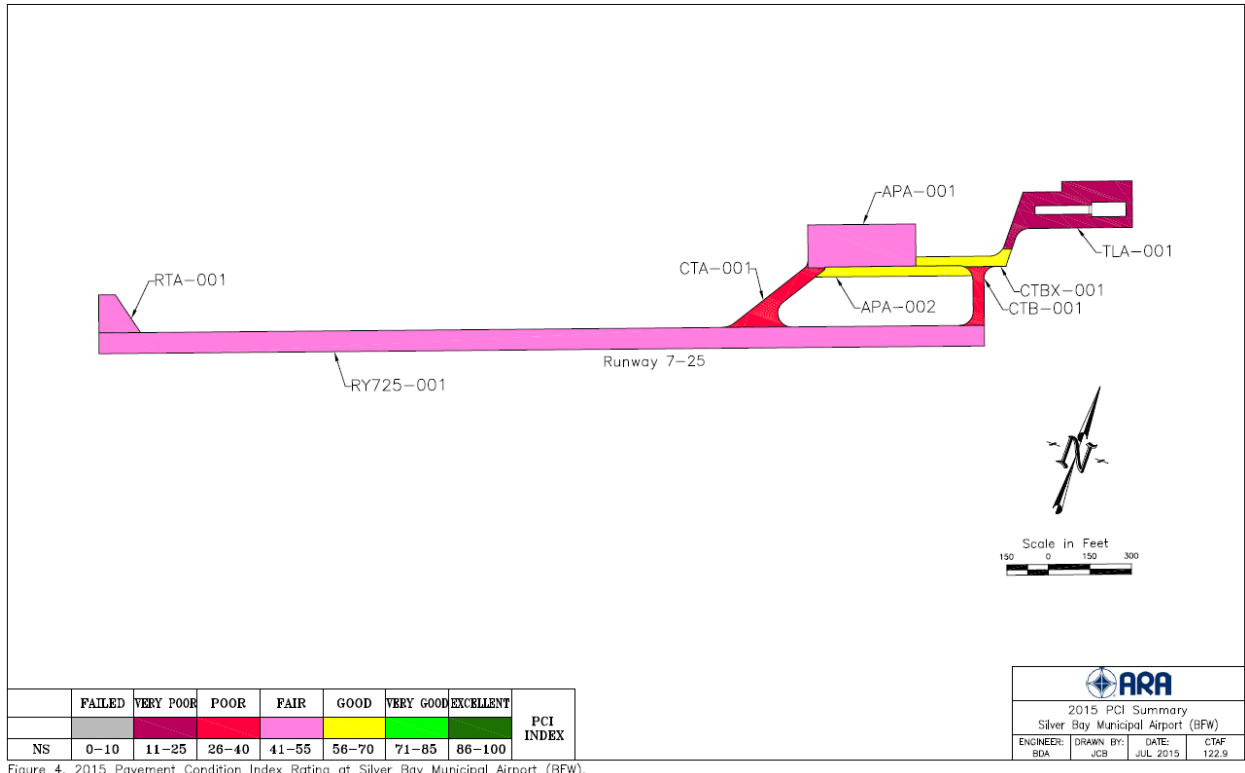


Figure 4. 2015 Pavement Condition Index Rating at Silver Bay Municipal Airport (BFW).

## 2018 Pavement Report

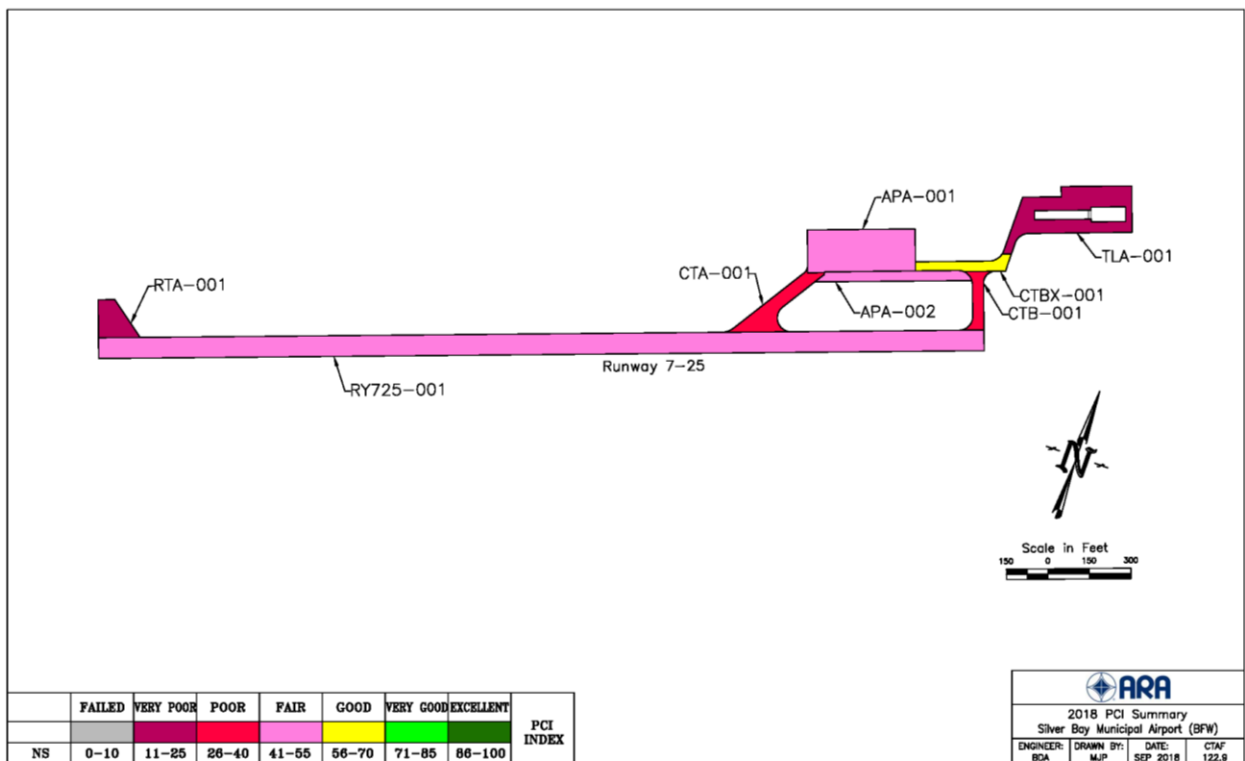


Figure 4. 2018 Pavement Condition Index Rating at Silver Bay Municipal Airport (BFW).



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### Public Investment in the Airport

Project files were researched to determine how much public funding has been invested in the Silver Bay Municipal Airport. Since 1964, State, Federal, and Local funds were used to support the acquisition of nine parcels of land totaling 206.14 acres. Easements were also acquired on eight parcels, totaling 84.99 acres.

The City of Silver Bay used Local funds to supplement State grants in the amount of \$258,798.24 and another \$298,277.95 to supplement FAA federal grants for a total of \$557,076.19. Additional local funds may have been used by the City of Silver Bay on projects without State or FAA assistance. The City of Silver Bay is the only source of information regarding projects funded solely with Local monies. The City not participated in the preparation of this document.

EDA, IRRRB, and/or other sources of public funding may have been used as investment in the airport as a portion of the local share of FAA and SAF projects. The City of Silver Bay is the contact for information on the source of local share funds and has not participated in the preparation of this document.

Grant records show that the FAA issued grants totaling \$2,498,456.62 in federal dollars. A list of those projects follows. The chart also illustrates \$98,298.27 of State Airport Funds used to supplement federal grants.

<b>Silver Bay Federal Grant History</b>							
<b>State Proj #</b>	<b>FAA Proj #</b>	<b>Year</b>	<b>Description</b>	<b>Federal \$</b>	<b>State \$</b>	<b>Local \$</b>	<b>Total</b>
3809-02		1968	EXT. STRIP AND SURFACE RUNWAY	\$58,923.44	\$33,233.71	\$33,233.72	\$125,390.87
3809-DF1		1968	LAND	\$5,611.00	\$0.00	\$0.00	\$5,611.00
3809-07	5-27-0090-01	1981	RUNWAY REHABILITATION	\$279,207.18	\$65,064.56	\$63,161.80	\$407,433.54
3809-23	3-27-0090-01	2002	1.RECON. PAVE - W/LTS-LAND-ACCESS Rd	\$1,397,719.00	\$0.00	\$162,035.48	\$1,559,754.48
3809-27	3-27-0090-02-05	2005	2. ALP Update, Cracks & Seal, Fuel Relo	\$237,803.00	\$0.00	\$12,517.25	\$250,320.25
3809-28	3-27-0090-03-06	2007	3.Relocate apron edge taxiway	\$218,501.00	\$0.00	\$11,501.19	\$230,002.19
3809-30	3-27-0090-04-08	2008	4.Design A/D Building	\$40,375.00	\$0.00	\$2,125.00	\$42,500.00
3809-31	3-27-0090-05-09	2009	Construct A/D Building	\$216,500.00	\$0.00	\$11,396.22	\$227,896.22
3809-32	3-27-0090-06-10	2010	6. Crack Seal Rwy 7/25	\$43,817.00	\$0.00	\$2,307.29	\$46,124.29
<b>Total</b>				<b>\$2,498,456.62</b>	<b>\$98,298.27</b>	<b>\$298,277.95</b>	<b>\$2,895,032.84</b>

State Airport Fund construction grants were issued to the City of Silver Bay totaling \$665,717.61 for state-only grants and \$98,298.27 for supplemental funds on federal grants (illustrated above) for a grand total of \$764,015.88. These grants include engineering, construction and land grants but do not include funds for navigational aids, or for Maintenance and Operation grants (M&O).



<b>Silver Bay State-Only Grant History</b>					
<b>State Proj #</b>	<b>Year</b>	<b>Description</b>	<b>State \$</b>	<b>Local \$</b>	<b>Total</b>
3809-01	1964	First Grant, no description given	\$31,720.70	\$0.00	\$31,720.70
3809-03	1972	SEAL	\$7,680.12	\$3,840.06	\$11,520.18
3809-04	1972	RUNWAY LIGHTING	\$8,333.33	\$4,326.67	\$12,660.00
3809-05	1978	RUNWAY CRACK REPAIR	\$9,301.33	\$4,650.67	\$13,952.00
3809-06	1980	PRELIM ENGINEERING - CANCELLED	\$0.00	\$0.00	\$0.00
3809-08	1991	APRON & TAXIWAY CONSTRUCTION	\$182,471.80	\$84,182.15	\$266,653.95
3809-09	1984	SAFETY SIGNING	\$1,492.57	\$636.00	\$2,128.57
3809-10	1984	LAND ACQUISITION	\$59,991.33	\$29,995.67	\$89,987.00
3809-10X	1990	LAND ACQUISITION	\$23,064.12	\$11,532.05	\$34,596.17
3809-11	1985	SECURITY FENCING	\$1,850.00	\$925.00	\$2,775.00
3809-12	1986	MODIFICATIONS TO A.D. BUILDING	\$6,780.81	\$3,390.40	\$10,171.21
3809-13	1986	ENG. SERVICES-CRACK RESEARCH	\$51,990.25	\$0.00	\$51,990.25
3809-14	1987	RESEARCH PAVEMENT CRACK REPAIR	\$75,051.82	\$0.00	\$75,051.82
3809-15	1992	REPLACE AVGAS FUEL FACILITY	\$32,675.43	\$29,720.09	\$62,395.52
3809-16	1995	RUNWAY CRACK REPAIR-RESEARCH	\$12,573.33	\$0.00	\$12,573.33
3809-17	1995	PRELIMINARY ENG W/ REPORT-FED. ELIGIBLE	\$17,432.43	\$8,716.22	\$26,148.65
3809-18	1996	ENG. FOR DRAINAGE/HANGAR APRON	\$6,912.74	\$3,456.37	\$10,369.11
3809-19	1996	OVERLAY HANGAR APRON-IMPROVE DRAINAGE	\$89,791.56	\$44,895.78	\$134,687.34
3809-20	1997	AIRPORT PAINT STRIPING	\$1,442.49	\$721.24	\$2,163.73
3809-21	1998	PAVEMENT CRACK REPAIR & HANGAR BERMS	\$7,084.50	\$4,723.00	\$11,807.50
3809-22	1999	OBST. REMVL, CRACK REP. SNOW BLOWER	\$23,021.65	\$11,666.67	\$34,688.32
3809-24	2002	Rehab Hangar Floor	\$4,650.00	\$4,650.00	\$9,300.00
3809-25	2002	Obstruction removal, unicom radios	\$3,705.30	\$2,470.20	\$6,175.50
3809-26	2005	Obstruction Removal	\$4,200.00	\$1,800.00	\$6,000.00
3809-29	2008	Fuel Tank Cleanout & Hngr Door Repair	\$2,500.00	\$2,500.00	\$5,000.00
		<b>Total</b>	<b>\$665,717.61</b>	<b>\$258,798.24</b>	<b>\$924,515.85</b>

Navigational Systems have been installed by the State to serve the Silver Bay Municipal Airport and the aviation public in the region. MnDOT Aeronautics owns and maintains the Navigation Systems located on the Silver Bay Municipal Airport listed in the table below.

<b>Navigation Systems</b>	<b>Estimated Value</b>	<b>New Value *</b>
AWOS (Automated Weather Observing System)	\$ 80,000.00	\$ 150,000.00
PAPIs (Precision Approach Path Indicator)	\$ 30,000.00	\$ 87,000.00
REILs (Runway End Identifier Lights)	\$ 20,000.00	\$ 24,000.00
MIRLs (Medium Intensity runway lights)	\$ 4,800.00	\$ 35,200.00
NDB (Non-Directional Beacon)	\$ 3,000.00	\$ 30,000.00
Rotating Beacon	\$ 16,000.00	\$ 32,000.00
Lighted Windsock	\$ 6,000.00	\$ 11,500.00
<b>TOTALS</b>	<b>\$ 159,800.00</b>	<b>\$ 369,700.00</b>

\* The New Value for each item in the table above is based on the 2012 SASP Appendix F Unit Cost Assumptions, with the exception of the NDB.

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MnDOT Aeronautics assists airports in the State Airports System with funding for Maintenance and Operations (M&O) of the airport. M&O grants are encumbered after appropriation by the legislature at the beginning of the first State Fiscal Year (SFY) of each biennium and are offered as 2 year grants. SFYs begin on July first of each year. M&O expenses are not considered as an investment in the airport since they serve the operating expense needs at the airport rather than capital improvement costs. A portion of the M&O is also paid with local funds at the match rate specified in the grant. A ceiling amount is established by formula for each airport in the system. A summary of M&O paid at Silver Bay in SFYs 1990 - 2019 (this current year) follows. M&O funds have only annual grant assurances and are not usually subject to repayment because of airport closure.

State of Minnesota  
Department of Transportation  
Office of Aeronautics  
Airport Development Section

**M & O by Airport**

FY	Region	Municipality	State Encumb. M & O	State Paid M & O	Encumb. Balance M & O	Local Paid M & O
1990	N	SILVER BAY	\$6,500.00	\$6,500.00	\$0.00	\$13,154.23
1991	N	SILVER BAY	\$6,500.00	\$6,500.00	\$0.00	\$37,927.43
1992	N	SILVER BAY	\$7,800.00	\$7,707.91	\$92.09	\$19,302.96
1993	N	SILVER BAY	\$7,800.00	\$7,669.51	\$130.49	\$15,219.60
1994	N	SILVER BAY	\$7,800.00	\$7,715.43	\$84.57	\$15,141.57
1995	N	SILVER BAY	\$7,800.00	\$7,608.00	\$192.00	\$18,505.84
1996	N	SILVER BAY	\$7,800.00	\$7,500.00	\$300.00	\$17,529.07
1997	N	SILVER BAY	\$7,800.00	\$7,500.00	\$300.00	\$16,575.44
1998	N	SILVER BAY	\$8,500.00	\$8,500.00	\$0.00	\$13,231.19
1999	N	SILVER BAY	\$8,500.00	\$8,500.00	\$0.00	\$14,830.34
2000	N	SILVER BAY	\$8,831.00	\$8,831.00	\$0.00	\$7,934.23
2001	N	SILVER BAY	\$8,966.71	\$8,966.71	\$0.00	\$12,263.81
2002	N	SILVER BAY	\$11,812.95	\$11,812.95	\$0.00	\$7,536.76
2003	N	SILVER BAY	\$11,648.00	\$11,648.00	\$0.00	\$16,427.71
2004	N	SILVER BAY	\$14,057.00	\$14,057.00	\$0.00	\$16,034.23
2005	N	SILVER BAY	\$14,057.00	\$14,057.00	\$0.00	\$26,796.93
2006	N	SILVER BAY	\$13,757.00	\$13,757.00	\$0.00	\$19,086.25
2007	N	SILVER BAY	\$13,757.00	\$13,757.00	\$0.00	\$7,804.87
2008	N	SILVER BAY	\$13,757.00	\$13,757.00	\$0.00	\$9,647.69
2009	N	SILVER BAY	\$13,757.00	\$13,757.00	\$0.00	\$29,219.26
2010	N	SILVER BAY	\$13,757.00	\$13,757.00	\$0.00	\$32,580.40
2011	N	SILVER BAY	\$13,757.00	\$13,757.00	\$0.00	\$7,670.29
2012	N	SILVER BAY	\$13,757.00	\$13,757.00	\$0.00	\$15,812.15
2013	N	SILVER BAY	\$13,757.00	\$13,757.00	\$0.00	\$14,883.39
2014	N	SILVER BAY	\$15,132.70	\$15,132.70	\$0.00	\$14,873.58
2015	N	SILVER BAY	\$19,782.00	\$19,267.13	\$514.87	\$6,422.84
2016	N	SILVER BAY	\$19,782.00	\$19,782.00	\$0.00	\$18,311.94
2017	N	SILVER BAY	\$19,782.00	\$19,782.00	\$0.00	\$9,562.75
2018	N	SILVER BAY	\$19,782.00	\$19,782.00	\$0.00	\$7,264.31
2019	N	SILVER BAY	\$19,782.00	\$0.00	\$19,782.00	\$0.00
			\$370,271.36	\$348,875.34	\$21,396.02	\$461,551.06

Economic impact on Silver Bay and Lake County:

An analysis was made to determine the economic value of the airport to the City of Silver Bay and the surrounding region in Lake County. Resource information was received from Silver Bay Municipal Airport and MnDOT:

Year: 2017

Airport Location (County): Lake County

0 Fixed Base Operator and other Aviation Businesses

NO Commercial Scheduled Air Service

0 Retail Businesses Located at the Airport

30 Overnight uses by GA Pilots\*

30 Overnight uses by other Visitors\*

0 Businesses that Ship Freight

0 Businesses that Own Hangars and Do Their Own Aircraft Maintenance

0 Non-Profit or Government Entities\*

NO Other Expenses

Funds budgeted for maintaining and operating this airport \$35510.36

Reported capital improvement expenditure of \$0.00.

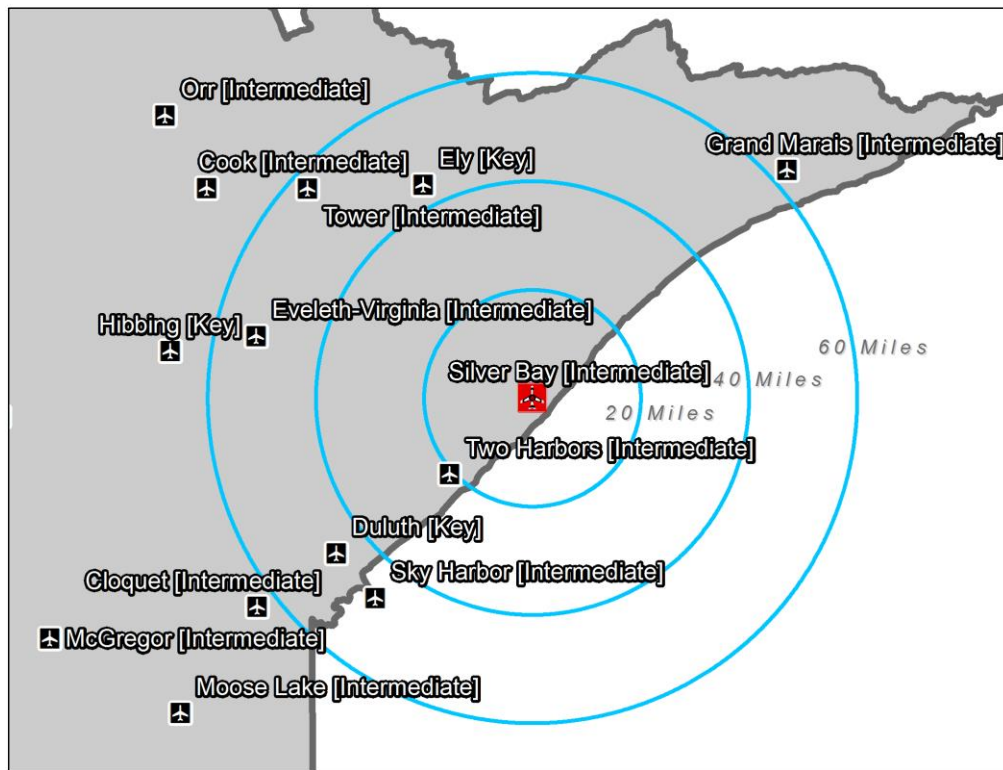
\*Estimated to be 1% of the total operations respectively.

This information was entered into the MnDOT economic model to estimate the economic value. The airport economic impact calculator prompts users to enter data on nine main types of economic activity to calculate the impact of their local airport. It allows for greater variability in the size and scale of these airport operations and contains new economic impact coefficients that reflect changes in the economy. To calculate the economic impact of the airport system in Minnesota, primary data were collected from airport managers, FBO's, corporate flight departments and governmental units. Secondary data were obtained from Minneapolis-St. Paul International, Rochester International, and Duluth International airports to provide a comprehensive economic impact analysis for the state.

The total economic impact of the activity reported at Silver Bay Airport amounts to \$96,256.00 and 1.42 jobs county-wide in the year 2017. The economic impact resulting from public ownership of this airport is \$41,192.00 which created a total of 0.29 full and part time jobs in the county. This economic impact is based on public ownership outlays of \$35,510.00 and reported capital improvement expenditure of \$0.00. The economic impact of GA pilots and other Visitors who use the airport for access is \$55,064.00 which supports 1.13 jobs. This economic impact estimate is based on a total of 60 visitors to the area. See attached copy of the output report from the economic model (Appendix B).

Airport Service Area

The service area of an airport is influenced by both the purpose of the aircraft operations as well as distance to other surrounding airports. The Silver Bay Airport is located in south-central Lake County, northeast Minnesota, where airport density is lower than most parts of the State. The airport serves Lake County, Cook County and Saint Louis County. Distances to other airports are illustrated on the map included below.



### Impacts on the State Airport System

The State Airport System classifies Silver Bay Airport as an intermediate general aviation airport. The FAA Airport Master Record shows 3,300 general aviation aircraft operations at the airport for the 12-month period ending 05/31/2015. The Minnesota State Aviation System Plan (SASP) estimates 2016 annual operations at 3,775.

Closing this airport will have a significant impact on the State Airport System. Every airport serves the important system role of providing access to aviation transportation during emergency situations. Whether serving as an alternative landing site for an aircraft in distress, or providing support for the community and region during medical or civil emergencies, closure of the Silver Bay Airport will cause a large system gap in this relatively remote area of the State of Minnesota.

Closure will require the relocation of 9 aircraft and 3,500 estimated annual operations to other airports. Aircraft owners are likely to move to one of the other airports in the region based on the next most convenient destination with hangar space available:

- |                        |                 |                                 |
|------------------------|-----------------|---------------------------------|
| • Two Harbors Airport  | 21 miles direct | 36.1 miles or 44 min drive      |
| • Ely Airport          | 44 miles direct | 66.6 miles or 1 hr 16 min drive |
| • Duluth Intl Airport  | 46 miles direct | 55.4 miles or 1 hr 10 min drive |
| • Duluth Sky Harbor    | 47 miles direct | 57.2 miles or 1 hr 16 min drive |
| • Eveleth Airport      | 52 miles direct | 73.2 miles or 1 hr 16 min drive |
| • Tower Airport        | 57 miles direct | 88.6 miles or 1 hr 39 min drive |
| • Grand Marais Airport | 63 miles direct | 70.3 miles or 1 hr 30 min drive |



Impacts of Closing the Silver Bay Municipal Airport (BFW)  
November 29, 2018

Two-Harbors Airport provides both commercial and private hangar building sites, on-site FBO, av-gas, jet fuel and a courtesy car. The runway length is 4,400 foot. It has been reported that hangar space is currently full. Construction of additional hangars is planned for SFY 2020 at a cost of \$1,000,000.

Ely Airport has a 5596 foot runway, av-gas and jet fuel, and an on-site FBO. The availability of hangar space is unknown.

Duluth International Airport has a 10,162 foot runway, Air Traffic Control Tower, 24 hour full service FBO with av-gas, jet fuel, and a maintenance and repair facility. The availability of hangar space is unknown.

Duluth Sky Harbor Airport is reported closed for runway reconstruction.

Eveleth Airport has a 4000 foot runway, av-gas and jet fuel, on-site FBO, plus a full maintenance and repair facility. Hangars at Eveleth are privately owned, so availability of hangar space is unknown.

Tower Airport has a 3400 foot runway, av-gas, a sea plane base, a courtesy van, and some aircraft services available. Hangars at Eveleth are privately owned, so availability of hangar space is unknown.

Grand Marias-Cook County Airport has a 5001 foot runway, av-gas and jet fuel, on-site FBO, plus a full maintenance and repair facility. Hangars at Grand Marias are privately owned, so availability of hangar space is unknown.

#### Grant Obligations and Remaining Life/Current Value of the Assets

An analysis was made of each of the facilities on the airport to determine its remaining useful life. Results below show the estimated remaining useful life for each facility purchased within 20 years of the airport closure date of May 31, 2018. Each of the state and federal grants received by the airport owner were reviewed to determine any grant obligations that have an impact on closing the airport. This review revealed the following table which summarizes the repayments to MnDOT and the FAA.

<b>Silver Bay Municipal Airport - 20 year Project List (1998 - 2018) Excluding Land Purchases</b>							
Item	Fed Funding Share	State Funding Share	Final Payment Date	Time (in years)	Remaining useful life (yrs) assuming a 20-year life	Federal Prorated Share	State Prorated Share
				Elapsed as of 5/31/2018			
Obstr. Removal, Crack Repair, Snow Blower		\$23,021.65	1/31/2002	16.3397	3.6603	\$ -	\$4,213.28
Rehab Hangar Floor		\$ 4,650.00	2/11/2002	16.3096	3.6904	\$ -	\$ 858.02
Obstruction Removal, Unicorn Radios		\$ 3,705.30	9/23/2002	15.6959	4.3041	\$ -	\$ 797.40
Recon Pvmnt, minus Wetland Credit & Access Road	\$1,302,660.59	\$ -	3/27/2003	15.1890	4.8110	\$ 313,352.33	\$ -
Obstruction Removal		\$ 4,200.00	1/7/2005	13.4027	6.5973	\$ -	\$1,385.42
Fuel Tank Cleanout & Hangar Door Repair		\$ 2,480.65	12/8/2008	9.4822	10.5178	\$ -	\$1,304.55
ALP Update, Crack Seal, Fuel Relocate	\$ 237,803.00	\$ -	5/13/2009	9.0548	10.9452	\$ 130,140.13	\$ -
Relocate apron edge taxiway	\$ 218,501.00	\$ -	2/9/2009	9.3096	10.6904	\$ 116,793.27	\$ -
Design Arrival Departure Building	\$ 40,375.00	\$ -	1/5/2010	8.4055	11.5945	\$ 23,406.44	\$ -
Construct Arrival Departure Building	\$ 216,500.00	\$ -	6/30/2011	6.9233	13.0767	\$ 141,555.41	\$ -
Crack Seal Runway	\$ 43,817.00	\$ -	2/9/2011	7.3096	12.6904	\$ 27,802.79	\$ -
<b>Totals</b>						<b>\$ 753,050.37</b>	<b>\$8,558.67</b>
<b>Grand Total</b>						<b>\$761,609.05</b>	

Additional analysis was made to estimate the current land value of the airport property. Since useful life is not a factor for land, it continues to have value. When the City sells the land or converts it to a non-aviation use, a percent of the current value shall be returned to MnDOT. The value returned will be in the same percent share that applied to the property when it was

purchased. Resource information on current land value was received from Lake County Land Assessor. Estimates show that the land is currently worth \$712,500. Publicly owned buildings on the airport have an estimated current value of \$196,400. These estimates will be verified or revised based on final values determined in a formal appraisal. An appraisal is currently underway by professionals in the MnDOT Land Management Office.

### Environmental Issues

Mn/DOT knows of no environmental issues at the Silver Bay Airport property. The fueling station at the airport was removed, with underground storage tanks dismantled. No ag-spray or other users of aviation chemicals are known to have been based or used the airport.

### Potential Additional Costs to the City

Closing the airport will generate some costs for the City which they will need to pay. Please note the Requirements for Closure in Minnesota State Law do not necessarily satisfy FAA requirements, which may require additional process with different timelines. Following are some actions and costs the City may need to deal with after the 180 day Preservation of Airport Property requirement in M.S. 360.046:

When the City closes their airport, they must prepare and file FAA Form 7480-1 to notify the FAA that the airport is closed. This notice will remove the airport from future aeronautical charts and other aviation publications. Under Vision 100, the current federal aviation act, a public agency is required to notify the FAA a minimum of 30 days prior to permanently closing an airport that is in the National Plan of Integrated Airport Systems (NPIAS). Failure to properly notify the FAA can result in a fine of \$10,000 per day for each day the airport is closed without giving the required notice.

When the airport is permanently closed, the runway markings must be obliterated and yellow "Xs" must be installed and maintained to denote that the runway is closed. These markings shall be in accordance with FAA Advisory Circular 150/5340-1. This Advisory Circular also requires that all runway and taxiway lighting circuits are to be disconnected. To minimize the City's liability from closing their airport, runways should be obliterated, especially pavements that may appear useable even though the runway has been appropriately marked.

The City will no longer receive Airport Improvement Program (AIP) entitlement funds of up to \$150,000 annually and will forfeit NPIAS eligibility. Additionally, the City will no longer be eligible to receive State Construction Grants and M&O Grants.

Hangars that no longer serve an aviation purpose may need to be torn down or relocated. There are no privately owned hangars on the airport.

Navigation systems, even though not owned by the City, will need to be removed when the airport is closed. MnDOT and/or the FAA may expect the City to pay for some expenses of the removal of these facilities.

### Planning Next Steps

After the public hearing the City of Silver Bay may decide to continue the Airport Closure Process. Alternately, a plan to discontinue closure may become an option. Some alternatives exist:

An Airport Authority may be created following Minnesota Statute 360.0426. A city together with another city, county, town, or an Indian tribe may create an airport authority for the

purpose of acquiring, establishing, constructing, maintaining, improving, and operating airports and other air navigation facilities by joint resolution with other willing governmental units.

FAA has a process for sponsorship transfer if a willing sponsor can be identified. Please note that Requirements for Closure in Minnesota State Law do not necessarily satisfy FAA. Formal closure with the FAA is a requirement that exists independently of the obligation to formally close under Minnesota Statute.

The City of Silver Bay has suggested a new classification of “safe harbor” airports that would be exempt from local matching funds requirements and grant assurances. The concept is not a legislative proposal that MnDOT is willing to carry at this time. MnDOT believes that both of these requirements are vital to the maintenance of a successful airport. However, the City of Silver Bay may wish to seek a new classification from the Minnesota Legislature and/or from Congress to address its current situation.

**Appendix A – Commissioner’s Order No. 620**

**STATE OF MINNESOTA  
DEPARTMENT OF TRANSPORTATION**

**IN THE MATTER OF:**

**Docket No. 244  
Order No. 620**

The license of  
Silver Bay Municipal Airport

**FINDINGS, CONCLUSIONS,  
AND ORDER**

**FINDINGS**

1. Silver Bay Municipal Airport is licensed with the State of Minnesota as a public airport.
2. On May 31, 2018, Minnesota Department of Transportation personnel inspected Silver Bay Municipal Airport. The inspectors found that runway conditions had deteriorated over the winter. Previously existing cracks have widened and secondary cracking has, in many cases, cupped under to increase the overall width of the cracks. Because of the continued deterioration of the pavement, the runway has become unsafe.
3. Inspectors also found that the taxiways and hangar areas contain pavement that is in poor condition. These areas are necessary for the safe operation of aircraft to and from the runway.
4. During a prior inspection, inspectors found the approach surface obstructed by trees. While Silver Bay Municipal Airport cut certain trees, a survey has not been completed to determine whether the primary surface and approach surface are free from obstructions.

**CONCLUSIONS**

1. The pavement at Silver Bay Municipal Airport does not meet the minimum standard required for safety as specified in Minnesota Rules part 8800.1600, subpart 4. In order for the Silver Bay Municipal Airport to be licensed as a public airport by the State of Minnesota, the pavement must to be repaired to meet this standard.
2. Silver Bay Municipal Airport has not demonstrated that the primary surface and approach surface are free from obstructions pursuant to Minnesota Rules part 8800.1600, subpart 5. In order for the Silver Bay Municipal Airport to be licensed as a public airport by the State of Minnesota, the primary surface and the approach surface must be surveyed and meet this standard.

Based upon the foregoing Findings and Conclusions, the substantial evidence contained in the record, and the applicable law, the Director of the Office of Aeronautics of the Department of Transportation of the State of Minnesota issues the following:

**ORDER**

Pursuant to Minnesota Statutes section 360.018, subdivision 10, and Minnesota Statutes section 360.019, subdivision 1, the license for the Silver Bay Municipal Airport is hereby revoked until: (1) the runway has been repaired to allow the safe operation of aircraft; and (2) the primary and approach surfaces have been surveyed and confirmed clear of obstructions.

**BY THE ORDER OF THE DIRECTOR OF THE OFFICE OF AERONAUTICS  
OF THE DEPARTMENT OF TRANSPORTATION OF THE STATE OF MINNESOTA**

\_\_\_\_\_(signed)\_\_\_\_\_  
Cassandra Isackson  
Director, Office of Aeronautics  
Minnesota Department of Transportation  
Date: \_\_\_\_\_(6-8-18)\_\_\_\_\_



## APPENDIX B

### Airport Economic Impact Calculator Report

This report has been prepared based on the answers you provided to the questions asked about the economic activity at Silver Bay Municipal Airport for the year 2017.

It is important to remember as you read through this report that economic impact is not revenue or profit. It is a measure of the change or additional money and jobs that have been created as a result of the current economic activity taking place at the airport. This is what is called the "multiplier effect". Multipliers summarize and consist of direct, indirect and induced effects. Regarding your airport, a direct effect is the change in production of goods and/or services by an organization or business that would not have occurred if it were not for the existence of the airport. Indirect effects describe the changes in production by businesses that provide inputs to the directly affected airport industries or businesses. Finally, induced effects are the changes in area household spending patterns caused by changes in household income generated by the direct and indirect airport effects. In this report, the impacts are expressed in monetary and job terms and the totals shown for both are the sum of all the direct, indirect and induced effects. All impacts are measured at the county level in which the airport is located. The national and state data sets used for economic impact estimation are based on actual spending that takes place at the county level.

The findings below are set up such that total economic impact, that is the sum of all the economic activity that has been calculated, is displayed first. After that the economic impact related to the different types of economic activity, which you have identified as occurring at the airport, are displayed. This way you can see the contribution to total economic impact due to each one of the different types of economic activity that take place at the airport.

### Total Economic Impact

The total economic impact of the activity reported at Silver Bay Municipal Airport amounts to \$96,256.00 and 1.42 jobs county-wide in the year 2017.

### Economic Impact of Airport Ownership

The economic impact resulting from public ownership of this airport is \$41,192.00 which created a total of 0.29 full and part time jobs in the county. This economic impact is based on public ownership outlays of \$35,510.00 and reported capital improvement expenditure of \$0.00.

### Overnight use by GA Pilots and other Visitors

The economic impact of GA pilots and other Visitors who use the airport for access is \$55,064.00 which supports 1.13 jobs. This economic impact estimate is based on a total of 60 visitors to the area.

This economic impact calculator was developed by William Gartner of the Department of Applied Economics and Daniel Erkkila of the North Central Research and Outreach Center, University of Minnesota. Financial support for its development was provided by the Center for Transportation Studies, University of Minnesota.

