

State Fiscal Years 2016-2019

Aviation Tax Report

June 30, 2020



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Cover photo: Flying Cloud Airport, Eden Prairie, Minnesota

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Legislative Request

This report is issued to comply with [Minnesota Statute 360.675](#).

360.675 AVIATION TAX REPORT.

On or before June 30, 2016, and every four years thereafter, the commissioner of transportation, in consultation with the commissioner of revenue, shall prepare and submit to the chairs and ranking minority members of the senate and house of representatives committees with jurisdiction over transportation policy and budget, a report that identifies the amount and sources of annual revenues attributable to each type of aviation tax, along with annual expenditures from the state airports fund, and any other transfers out of the fund, during the previous four years. The report must include draft legislation for any recommended statutory changes to ensure the future adequacy of the state airports fund.

The cost of preparing this report is \$6,000

Executive Summary

Purpose and Scope of the Report

The Aviation Tax Report is submitted in accordance with the requirements of [Minn. Stat. 360.675](#). The report was prepared by the Minnesota Department of Transportation in consultation with the Minnesota Department of Revenue. Financial information contained in this report comes from data created and compiled by MnDOT's Office of Financial Management. As directed by the law, the report identifies the following for state fiscal years 2016-2019:

- the amount and sources of annual revenues attributable to each type of aviation tax
- the annual expenditures from the State Airports Fund
- the transfers out of the fund
- the transfers into the State Airports Fund

Finally, the report summarizes how the fund functions relative to changes in revenue streams and provides a brief synopsis of State Airports Fund operations.

Aviation Tax Revenues, Expenditures, and Changes

Per [Minn. Stat. 360.017](#), the State Airports Fund contains money appropriated to it, or directed to be paid into it, by the legislature. The fund is paid out on authorization of the commissioner of transportation and used to:

- Acquire, construct, improve, maintain and operate airports and other air navigation facilities
- Assist municipalities in the acquisition, construction, improvement and maintenance of airports and other air navigation facilities
- Assist municipalities to initiate, enhance and market scheduled air service at their airports
- Promote interest and safety in aeronautics through education and information.
- Pay MnDOT salaries and expenses for work related to aeronautic planning, administration and operation

All allotments of money from the fund for salaries and expenses are approved by the commissioner of management and budget.

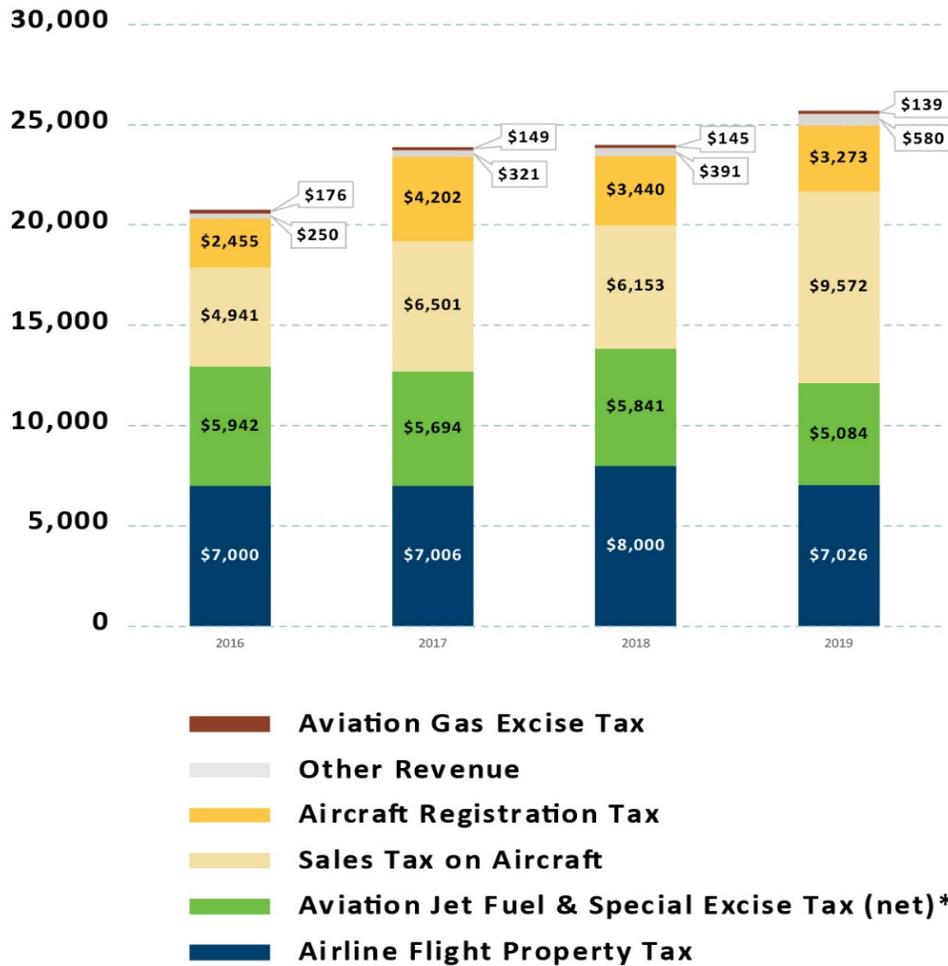
Annual Revenues Attributable to Each Type of Aviation Tax

The aviation taxes that are directed to the State Airports Fund are the following:

- Aircraft Sales and Use Tax
- Aircraft Registration Tax
- Aviation Gasoline Excise Tax
- Aviation Jet Fuel and Special Fuel Excise Tax
- Airline Flight Property Tax

The amount and sources of annual revenues attributable to each type of aviation tax are shown in [Figure 1](#).

Figure 1: State Airports Fund, Summary of Revenues, \$1,000's, SFY 2016 – 2019



Annual Expenditures for the State Airports Fund

Annual expenditures from the State Airports Fund, based on fund appropriation categories, are shown in [Figure 2](#). The primary expenditure categories are:

2. The primary expenditure categories are:

- Airport Development Grants
- Airport Maintenance and Operation Grants
- MnDOT Operations
- Navigation System Grants
- Miscellaneous/Other

Figure 2: State Airports Fund, Summary of Expenditures, \$1,000's, SFY 2016 - 2019



Notable miscellaneous and/or other expenditures in 2018 and 2019 are, in part, the product of legislative earmarks for the Duluth Airport Authority (\$4.292k and \$668k, respectively); Rochester International airport (\$2.334k in 2018); and the Saint Cloud Airport Study (\$250k in 2018)

State Airports Fund: Revenues and Expenditures

Introduction

This report identifies the amounts and sources of annual revenues attributable to each type of aviation tax, annual expenditures and transfers in and out of the State Airports Fund for state fiscal years 2016 through 2019. Finally, the report summarizes how the State Airports Fund operates generally, how the fund functions when there are changes in revenue streams and it also provides a brief synopsis of State Airports Fund operations.

The State Airports Fund is used in accordance with the provisions laid out in [Minn. Stat., Chap. 360](#). In [Minn. Stat. 360.017](#), the law directs that the State Airports Fund consists of all money appropriated to it, or directed to be paid into it, by the legislature.

The aviation taxes that are directed to the State Airports Fund are the following:

- Aircraft Sales and Use Tax
- Aircraft Registration Tax
- Aviation Gasoline Excise Tax
- Aviation Jet Fuel and Special Fuel Excise Tax
- Airline Flight Property Tax

The fund is paid out on authorization of the commissioner of transportation and used to:

- Acquire, construct, improve, maintain and operate airports and other air navigation facilities
- Assist municipalities in the acquisition, construction, improvement and maintenance of airports and other air navigation facilities
- Assist municipalities to initiate, enhance, and market scheduled air service at their airports
- Promote interest and safety in aeronautics through education and information
- Pay MnDOT salaries and expenses for work related to aeronautic planning, administration and operation.

All allotments of money from the fund for salaries and expenses are approved by the commissioner of management and budget.

Aviation Taxes and Other Revenues (SFY 2016 - 2019)

The following section provides information about the types of revenues and the amounts of revenues that are directed into the State Airports Fund.

Aircraft Sales and Use Tax

Most of the aircraft sales and use tax is deposited into the State Airports Fund per [2013 Laws of Minnesota, Chapter 143, Article 5](#). This includes sales and use tax on leased aircraft.

The tax rate on aircraft sales and use tax is 6.875 percent; however, 6.5 percent of tax revenues collected are deposited into the State Airports Fund and the remaining 0.375 percent is deposited in DNR accounts, required under laws for the Minnesota Legacy Fund.

Aircraft Registration Tax

An annual registration tax is imposed on aircraft based in Minnesota or used in the state for more than 60 days in a calendar year. This tax is in lieu of all other taxes. This flat rate tax amount is computed based on the manufacturer's list price of aircraft when new and ranges from \$100 minimum to \$75,000 maximum ([2013 Laws of Minn., Ch. 143, Art. 5](#)).

Airline Flight Property Tax

The airline flight property tax is paid on aircraft and associated equipment owned, leased, loaned or otherwise made available to an airline company engaged in air commerce in Minnesota. "Flight property" is defined as "...all aircraft and flight equipment used in connection therewith, including spare flight equipment." This tax is paid by airline companies in lieu of other personal property taxes on flight property.

[Minn. Stat. 270.075](#) requires MnDOT to determine the airline property tax portion of revenue for the State Airports Fund, which is defined as the difference between the "...total fund appropriation and the estimated total fund revenue from other sources for the state fiscal year in which the tax is payable..." ([Minn. Stat. 270.071](#) through [270.079](#)).

The "other sources" of revenue listed in statute are items such as aircraft sales, aircraft registration and aircraft fuel taxes. The amount of airline property tax collected varies annually depending on the total revenues collected from the "other sources" of State Airports Fund tax revenues. See [Figure 6](#) for a breakdown of revenue sources.

MnDOT calculates the airline flight property tax levy each year. To compute the tax, the airline's tax capacity is multiplied by an adjusted tax rate. The commissioner of revenue determines the rate of tax to be levied and collected against the net tax capacity. The commissioner of transportation may include a portion of the balance in the State Airports Fund in the calculation to account for unexpected revenue decreases. The airline property tax that is certified by the commissioner of transportation to the commissioner of revenue includes the full amount of estimated revenue from all airline taxes for a state fiscal year. The amount MnDOT certifies may not match total airline flight property taxes received in a state fiscal year due to this calculation and fluctuations in other sources.

Aviation Jet Fuel and Special Fuel Excise Tax

In [2013 Laws of Minn., Ch. 143, Art. 5](#), the excise tax on jet fuel and special fuel was increased from 5 cents per gallon to 15 cents per gallon. The excise tax increase applies to jet fuel received, sold, or withdrawn from storage for use as a substitute for aviation gasoline, but not taxed as gasoline.

Figure 3 shows the potential tax revenues at 15 cents per gallon, as compared to the adjusted tax revenues and net tax revenues for SFYs 2016-2019. The net tax revenues divided by gallons provides the effective tax rate for each year, which ranges from 88 to 89 percent less than the applied tax rate in statute.

Figure 3: Aviation Jet Fuel and Special Fuel Excise Tax Revenues and Effective Tax Rates, 2016-2019 State Fiscal Years

Aviation Jet Fuel and Special Fuel Excise Tax	Gallons	Potential Tax Revenue @ \$0.15/gal	Adjusted Tax Revenue (\$)	Less Refunds (\$)	Net Tax Revenues (\$)	Effective Tax Rate (\$/gal)
2016	359,837,687	53,975,653	7,965,160	2,023,182	5,941,977	0.016
2017	373,949,780	56,092,467	8,422,674	2,728,855	5,693,819	0.015
2018	377,282,082	56,592,312	9,106,665	3,265,184	5,841,481	0.015
2019	373,746,241	56,061,936	9,209,703	4,125,678	5,084,025	0.013
Total (2016-2019)	1,484,815,790	222,722,368	34,704,202	12,142,899	22,561,302	0.015

Assumes that all refund claims are for jet fuel and special fuel and not for aviation gasoline. Totals may not add up due to rounding.

Aviation Gasoline Excise Tax

Aviation gasoline is any gasoline capable of use for producing or generating power for propelling internal combustion engine aircraft that meets specifications in American Society for Testing Materials specification D910-11. The current aviation gasoline excise tax rate is 5 cents per gallon ([Minn. Stat. 296A.01, Subd. 7](#)). As opposed to aviation jet fuel and special fuel, the applied tax rate in statute and the effective tax rate for aviation gasoline are effectively the same, as reflected in **Figure 4**.

Figure 4: Aviation Gasoline Excise Tax Revenues & Effective Tax Rates, 2016-2019 State Fiscal Years

Aviation Gasoline Excise Tax	Gallons	Revenue @ \$0.05/gal	Adjusted Tax Revenue (\$)	Effective Tax Rate (\$/gal)
2016	2,751,292	137,565	176,377	0.064
2017	2,896,794	144,840	149,091	0.051
2018	2,944,841	147,242	145,482	0.049
2019	2,790,478	139,524	139,086	0.05
Total (2016-2019)	11,383,405	569,171	610,036	0.05

Totals may not add up due to rounding

Summary of Impacts on Revenues (2016 – 2019)

Since legislative changes enacted in 2013 restructured aviation taxes, revenues from the Aircraft Sales and Use Tax, Aircraft Registration Tax, Airline Flight Property Tax, Aviation Jet Fuel and Special Fuel Excise Tax and Aviation Gasoline Excise Tax are all deposited into the State Airports Fund. This resulted in a noticeable change in the amount of revenue contributed by each tax category to the State Airports Fund starting in state fiscal year 2014, which were reflected in the 2016 Aviation Tax Report.

Revenues from the four years during SFYs 2016 to 2019 total \$94.28 million, an increase of \$8.04 million, or 9.3 percent, from the preceding four years (SFYs 2012 to 2015). **Figure 6** provides revenue figures for SFYs 2016-2019. Below **Figure 5** shows the year-over-year revenue percent changes for each revenue source during the same period:

Figure 5: Year-Over-Year Percent Changes for State Airports Fund Revenue Sources, SFY 2016-2019

Revenue Source	Year-Over Year Percent Change: 2016	Year-Over Year Percent Change: 2017	Year-Over Year Percent Change: 2018	Year-Over Year Percent Change: 2019
Aircraft Sales and Use Tax	-39%	32%	-5%	56%
Airline Flight Property Tax	-13%	0%	14%	-12%
Aircraft Registration Tax	-33%	71%	-18%	-5%
Aviation Jet Fuel & Special Excise Tax (net)*	-2%	-4%	3%	-13%
Aviation Gas Excise Tax	27%	-15%	-3%	-4%
Miscellaneous/Other	25%	28%	22%	8%

Figure 6: State Airports Fund, Summary of Revenues (\$1,000s), 2016-2019 State Fiscal Years

STATE AIRPORTS FUND	2016	2017	2018	2019
Revenues				
Aircraft Sales and Use Tax	4,941	6,501	6,153	9,572
Airline Flight Property Tax	7,000	7,006	8,000	7,026
Aircraft Registration Tax	2,455	4,202	3,440	3,273
Aviation Jet Fuel & Special Excise Tax (net)*	5,942	5,694	5,841	5,084
Aviation Gas Excise Tax	176	149	145	139
Other Revenue Totals	250	321	391	580
Departmental Earnings	15	15	18	20
Investment Income	204	275	341	515
Sale of Salvage, Scrap, etc.	0	0	0	14
All Other Internal Reimbursements	31	31	32	31
Revenue Totals	20,764	23,873	23,970	25,674

Annual Expenditures (SFY 2016 - 2019)

Annual expenditures from the State Airports Fund are used for capital projects. Examples of the type of projects and services include the following:

- planning and constructing runways, taxiways and buildings
- airport maintenance and operations
- installation and maintenance of navigation systems

Funds are available and distributed on an annual cycle. The specific amount in each program varies from year to year based on needs and funds appropriated. See [Figure 7](#) on the next page for more details.

Airport Development Grants

This program is the largest of the state funded aeronautics programs. It funds most capital improvements at state system airports that benefit the air-traveling public. The airport development grant program, also known as the airport construction grant program, distributes funds to state system airports through a competitive process, with selection criteria and local contribution percentages set annually by MnDOT.

Airport Maintenance and Operations Grants

This program provides 75 percent state reimbursement to state system airports for their documented, routine maintenance expenses up to a limited amount. The limit is categorized by airport infrastructure. The program distributes funds to state system airports through a formula process.

Navigation Systems

This provides funding for infrastructure critical to safe aircraft navigation. Navigation systems include equipment such as ground-based instrument landing systems and automated weather observation stations. The State of Minnesota owns and maintains over 200 federally commissioned navigational systems that support the National Airspace System. Each of these systems are critical to pilot and aviation safety. The funds to purchase and maintain these systems are appropriated through the State Airports Fund.

MnDOT Aeronautics Operations

The MnDOT Office of Aeronautics budget is funded by the State Airports Fund. The budget amount is determined through MnDOT's biennial budgeting process, and is used for the following aviation activities:

- system safety and operations
- aviation education
- aviation system planning
- aviation tax collection
- aircraft registration
- enforcement of regulations through inspections and licensure
- technical assistance

Figure 7: State Airports Fund, Summary of Expenditures (\$1,000s), 2016-2019 State Fiscal Years

Expenditures	2016	2017	2018	2019
Airport Development Grants	14,825	11,340	11,258	11,764
Airport Maintenance and Operation Grants	4,876	4,798	4,876	4,890
Navigation System Grants	3,842	2,006	1,835	2,655
Airport Development and Assistance Totals	23,543	18,144	17,969	19,309
Payroll	3,367	3,471	3,406	3,563
Non-Payroll	1,297	1,586	1,703	1,416
MnDOT Operations Totals	4,664	5,057	5,110	4,980
Civil Air Patrol	80	80	80	80
Duluth Airport Authority Aeronautics	0	0	4,292	668
Rochester International Airport Improvements	0	0	2,334	0
St. Cloud Airport Study	0	0	250	0
Statewide Indirect	36	37	45	48
Miscellaneous/Other Totals	116	117	7001	796
Total Expenditures	28,325	23,318	30,079	25,085

Totals may not add up due to rounding

Fund Transfers

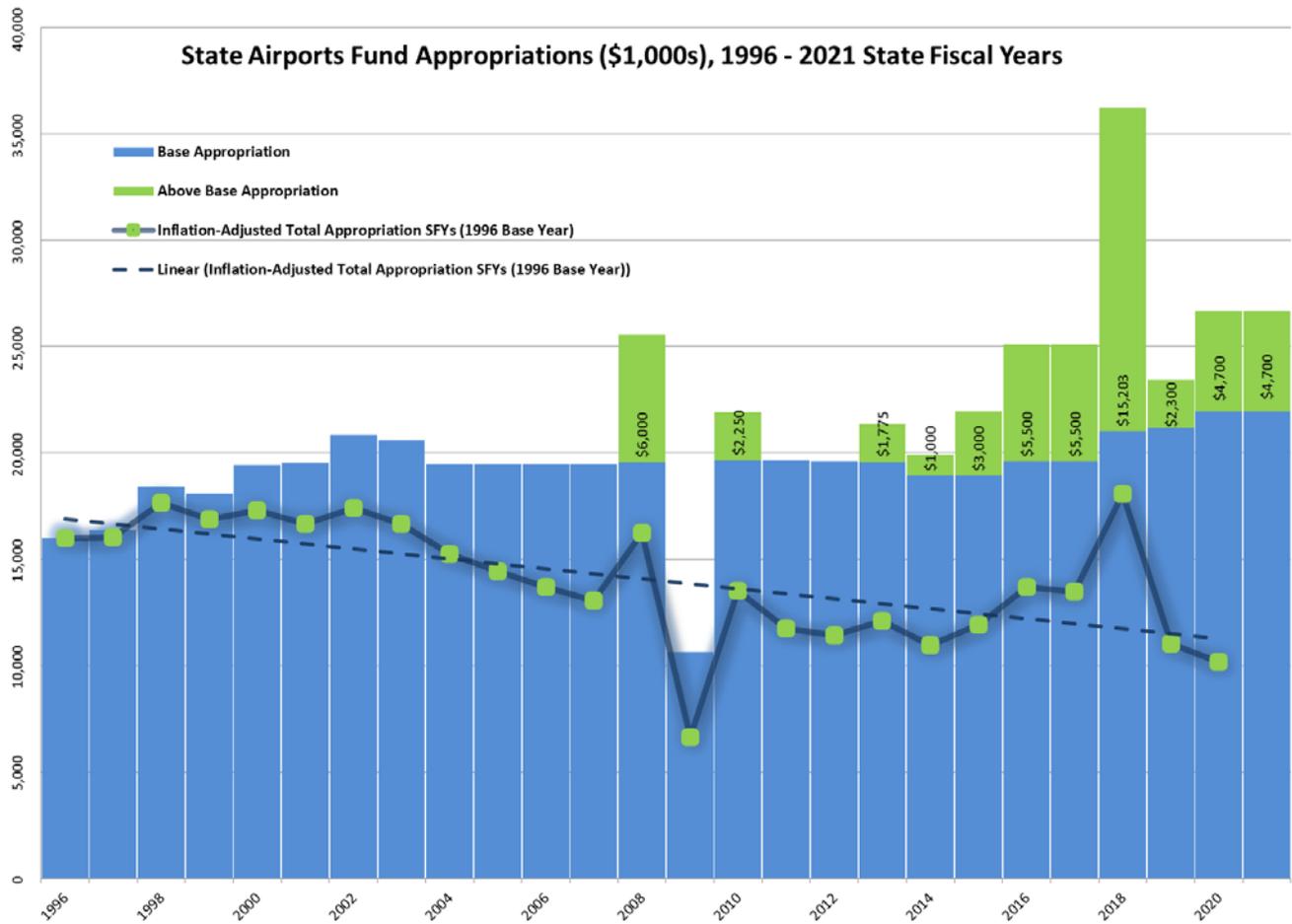
There was one transfer out of the State Airports Fund during state fiscal years 2016 - 2019. In FY2019, \$31,257 was transferred from the State Airports Fund to the General Fund. Based on the [2017 Laws of Minn., 1st SS, Ch. 4, Art. 1, Sec. 42](#), if there are non-general fund savings because employees were allowed to opt out of insurance coverage under the state employee group insurance plan, the savings may be transferred to the general fund.

Further, in 2003, the Minnesota Legislature transferred \$15 million from the State Airports Fund to the general fund with a requirement that the funds be transferred back in 2007 ([2003 Laws of Minn., 1st SS, Ch. 18, Art. 1, Sec. 2](#)). Legislative changes enacted in 2013 authorized the transfer back starting in state fiscal year 2014 ([2012 Laws of Minn., Ch. 289, Sec. 1, Subd. 2\(5\)](#)). Additional spending above the typical “base” spending amount authorized by the transfer back was phased in based on a spending plan developed by MnDOT. The additional spending amounts were \$1 million in state fiscal year 2014, \$3 million in 2015, \$5.5 million in 2016 and \$5.5 million in 2017.

The State Airports Fund: Operations

Money in the State Airports Fund is appropriated annually to MnDOT based on each biennial transportation budget. Fund appropriations for the previous 20 state fiscal years (1996 through 2019) were relatively flat. When factoring in inflation, the buying power of the appropriations has declined. See [Figure 8](#).

Figure 8: State Airports Fund, Appropriations (\$1,000s), 1996-2021 State Fiscal Years



*In state fiscal year 2009, the \$15M transfer out of the State Airport Fund to the General Fund reduced the base. In 2014, the \$15M General Fund payback to the State Airport Fund started, with appropriation amounts phased in over state fiscal years 2014 - 2017. Inflation-adjusted based on Price Indices for Government Consumption Expenditures and Gross Investment, calendar year seasonally adjusted, US Bureau of Economic Analysis, March 2020.

Annual expenditures from the State Airports Fund are used for capital projects such as planning and constructing airport runways, taxiways, buildings, airport maintenance and operations, navigational systems and MnDOT Aeronautics operations. Local municipalities and airport authorities are responsible for capital improvement projects, which must be listed in the airport’s capital improvement program to be eligible for state and federal funding. The above base appropriation is the funding amount that is in addition to the base appropriation established in the previous biennial budget.

The Federal Aviation Administration runs an Airport Improvement Program that provides grant-in-aid funding for planning, land acquisition and capital improvement projects at the 97 airports in Minnesota included in the National Plan of Integrated Airport System. The following are the three categories of federal airport funds:

- state apportionment based on population
- entitlement funds that are set amounts
- discretionary/competitive funds

[Minn. Stat. 360.0161](#) requires municipalities to apply for federal financial airport assistance through MnDOT Office of Aeronautics. An airport that applies for a federal grant for a proposed project must program the project in the Airport Capital Improvement Program at least a year in advance.

Each year more projects are identified than are funded. The annual nature of the Airport Capital Improvement Program update cycle and the grant funding process makes identifying medium- and long-term improvements and maintenance and operation needs a challenge. MnDOT also works with airports to retain and better leverage federal funds.

Created in 2014, the State Airports Fund balance policy requires a level of reserve to protect against major fluctuations in revenue and to avoid a deficit at the end of a biennium. The fund maintains an undesignated, unreserved fund balance that is not less than 5 percent of total appropriations, not more than 15 percent of total appropriations and not more than \$3 million. If any forecast projects that the fund balance will not be met, MnDOT will propose mitigating action. There are actions that are, on occasion, used during a biennium including adjustments to the airline flight property tax, supplemental budget submissions, postponement or acceleration of grant applications and awards and modifications of local airport contribution rates to ensure the State Airports Fund remains viable. These steps are used as needed during the biennium, unless the commissioner finds that an emergency warrants a longer period of adjustment.

Other Effects on the State Airports Fund

Adequacy Statement

The State Airports Fund requires adequate revenues and funding to finance airport development, provide aviation support assistance and provide for services to maintain and operate the state aviation system for public purposes and matters of public necessity. An adequate State Airports Fund has enough resources to continue to deliver high quality airport development and support services. It also has cash reserves sufficient to ensure fund solvency during times of crises. The future adequacy of the state airport fund depends on sustained revenues and appropriations at inflationary rates to ensure the continued maintenance and improvement of the state aviation system that benefits the aviation community, traveling public, businesses and state and local economies.

The ability to effectively deliver the airport CIP will be influenced by the adequacy of future revenues in the State Airports Fund, broader state budgetary constraints and the availability of federal funding from the Federal Aviation Administration in the face of national economic uncertainty resulting from the COVID 19 pandemic.

Recreational Drones

Recreational aerial drones, also known as unmanned aircraft systems, or UAS, are becoming increasingly popular among consumers. Today, there are 1,563,263 drones registered with the Federal Aviation Administration and nearly three quarters, or 1,117,900, of those being recreational drones. The FAA does not share drone registration data with individual states and so MnDOT is unable to accurately account for the number of drones owned and operated within the state.

Under [Minn. Stat. 360.013 Subd. 37](#), recreational drones are considered aircraft. Recreational drones are exempt from registration and the aircraft sales and use tax per [Minn. Stat. 360.018, Subd. 3\(7\)](#), but as aircraft, sales tax paid on recreational drones should be deposited into the State Airports Fund. Given the extensive retail availability of recreational drones and the limited aircraft registration and sales tax reporting structure, the Department of Revenue is unable to collect drone-generated tax revenues.

The sale of recreational drones are subject to state sales tax collected and deposited into the State's general fund. There are three feasible options for identifying these revenues for transfer to the State Airport Fund:

- Gain access to FAA drone registration data, coupled with a scientific survey of recreational drone sales data to determine a defensible average sales price
- Hire a third party firm to conduct a periodic scientific survey of drone sales and prices to determine a defensible average of both
- Compel retailers to share UPC data to accurately account for the number of sales and individual unit price to scientifically estimate the total sum of recreational drone tax revenues

The Department of Revenue would need to conduct a limited scope audit to determine which, if any, of the above options may provide a positive cost-benefit outcome.

Airport Capital Improvement Program

The Airport Capital Improvement Program funds construction projects that develop and preserve the publicly owned system of Minnesota airports. Funding for the CIP equals the base appropriation for airport development and assistance, minus the sum of airport development operating cost, navigation systems, Aeronautics IT, and maintenance and operations. The CIP provides funding for the Airport Construction Grant Program and the Airport Maintenance and Operation Program.

Airport Construction Grant Program

This program funds the construction of runways, taxiways, aprons, arrival/departure buildings, utility lines and navigational systems; the acquisition of airport land for MnDOT clear zones; the removal of obstructions, such as trees; and other projects of a similar nature.

Airport Maintenance and Operation Program

This program funds eligible expenses and costs for the day-to-day labor, material, equipment and utility expenses of maintaining airport pavements, airport grounds, lighting systems, buildings and maintenance equipment.

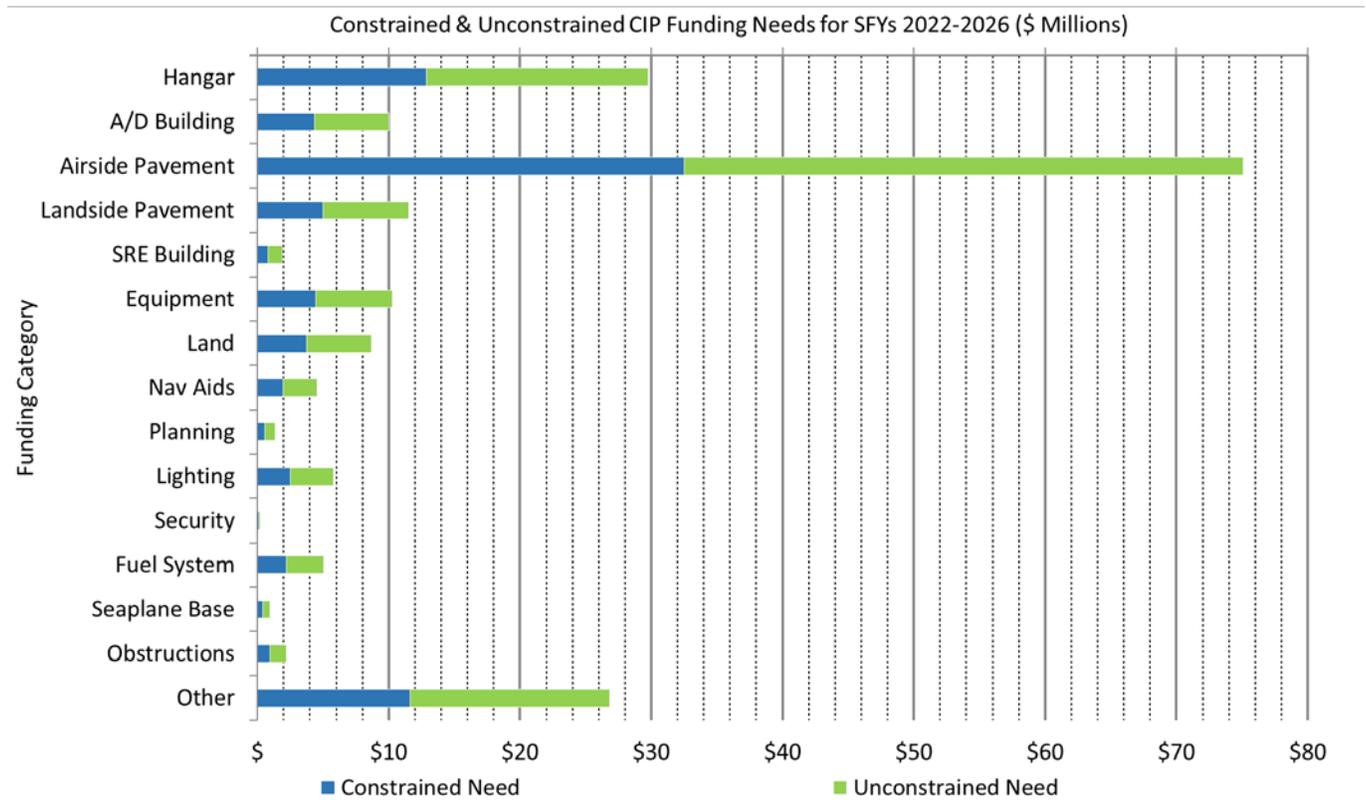
As of March 2018, the five-year (SFYs 2019-2023) constrained need for state funds was \$85 million in order to leverage \$225 million in federal funds and \$66 million in local funds. A five year projection (SFYs 2022-2026) based on proposed 2021 appropriations indicates a constrained need for state funds of \$84.1 million, which results in a constrained funding gap of \$43.35 million and an unconstrained funding gap \$69.43 million. [Figures 9 and 10](#) provide more detailed information on CIP funding needs and gaps.

Figure 9: Airport Capital Improvement Program Funding Gap, 2022-2026 State Fiscal Years

	Constrained	Unconstrained
Appropriations*	\$40,740,000	\$40,740,000
Need	\$84,093,728	\$110,171,266
Funding Gap	(\$43,353,728)	(\$69,431,267)
Percent Difference	-106%	-170%

*Based on the most recent revision of 2021 appropriations and applied as a constant over five years.

Figure 10: Airport Capital Improvement Program Funding Needs, 2022-2026 State Fiscal Years



Navigation Systems

Navigation Systems include ground-based navigation aids such as VHF Omni-directional range stations, instrument landing systems and automated weather observation stations. MnDOT owns and operates a number of these systems throughout the state.

The State’s legacy navigation systems are several decades old, many dating back to the 1960s and 1970s. Over the past decade, technology and satellite-based navigation systems have reduced the dependency on older radio based systems. Maintaining the existing radio based systems is an increasing challenge because of phased out production, limited availability of replacement parts and a shortage of qualified technicians. While satellite based GPS systems provide a more sophisticated and less expensive alternative to legacy systems, many pilots continue to depend on radio-based navigation systems. Further, these legacy systems provide an important redundancy should any disruptions to satellite-based GPS occur.

The estimated four-year (SFYs 2020-2023) constrained need in millions for navigational systems is as follows for each SFY:

- \$4.5M in 2020
- \$4.5M in 2021
- \$5.6M in 2022
- \$5.6M in 2023

Note that these figures represent the funding needs for the Office of Aeronautics, whereas the needs represented in [Figure 10](#) are those being requested by individual airports through the Capital Improvement Program.

Recommended Statutory Changes

[Minn. Stat. 360.675](#) requires this report to include draft legislation for any recommended statutory changes to ensure the future adequacy of the State Airports Fund.

MnDOT is not recommending any statutory changes at this time.