



**Lake Elmo Airport**  
**ADVISORY COMMISSION**  
LEAAC

**Educational Session #1**  
**Airports and Regulatory Structure**



## **Purpose:**

**Educate the Commission on the basics of  
airport and aviation operations**



# LEAAC Education Sessions

## Meeting 1: Airports and Regulatory Structure

Purpose: Educate the Commission on how airports are regulated and how 21D fits into that regulatory system

Topics:

1. Overview of Aviation
2. Overview of Local Aviation
3. Overview of 21D
4. Airport Regulators
5. Airport Funding & Economic Output

## Meeting 2: Aircraft and Flight Operations

Purpose: Educate the Commission on the basic principles of aircraft work and standard flight operations at general aviation airports like 21D

Topics:

1. Fundamentals of Flight
2. Pilot certificates
3. Typical Aircraft
4. Towered and Non-Towered Airport Traffic
5. 21D Specific Operations

## Meeting 3: Stakeholders and Common Issues and Solutions

Purpose: Educate the Commission on who has a stake in the airport and typical concerns and solutions at general aviation airports like 21D

Topics:

1. Stakeholders
2. Concerns: Noise, Environmental and Safety
3. Solutions: NAP, Engagement, Regulations, Pilot in Command
4. 21D Specific Stakeholders Issues and Solutions

# Session 1: Outline



## Today's Purpose:

Educate the Commission on how airports are regulated and how 21D fits into that regulatory system

## Airports and Regulatory Structure

1. Overview of Aviation
2. Overview of Local Aviation
3. Overview of 21D
4. Airport Roles and Responsibilities
5. Airport Funding & Economic Output



# 1. Overview of Aviation

# Introduction to Airports

- ✓ English is the official language of aviation worldwide
- ✓ Federal Aviation Administration has sole jurisdiction over aviation in the United States National Airspace System (Pilots, Aircraft, Airports, Airspace, Flight Procedures, etc.)
- ✓ Airspace is public in the United States except where protected for special uses
- ✓ Each airport in the world is assigned a four-character code –K21D is Lake Elmo Airport's code (All airport codes in the U.S. start with 'K')
  - When referring to local airports, the 'K' is dropped from the code for simplicity
- ✓ There are 5,193 public-use airports in U.S.



# Types of Aviation

## Commercial:

Passenger and cargo air transport for hire, operated by airlines under scheduled or charter services. It's the most visible type of aviation, regulated heavily for safety and reliability.

## General Aviation:

All civil aviation operations other than scheduled commercial airline and cargo flights. This includes recreational flying, private business jets, training, aerial photography, agricultural operations, and emergency services.

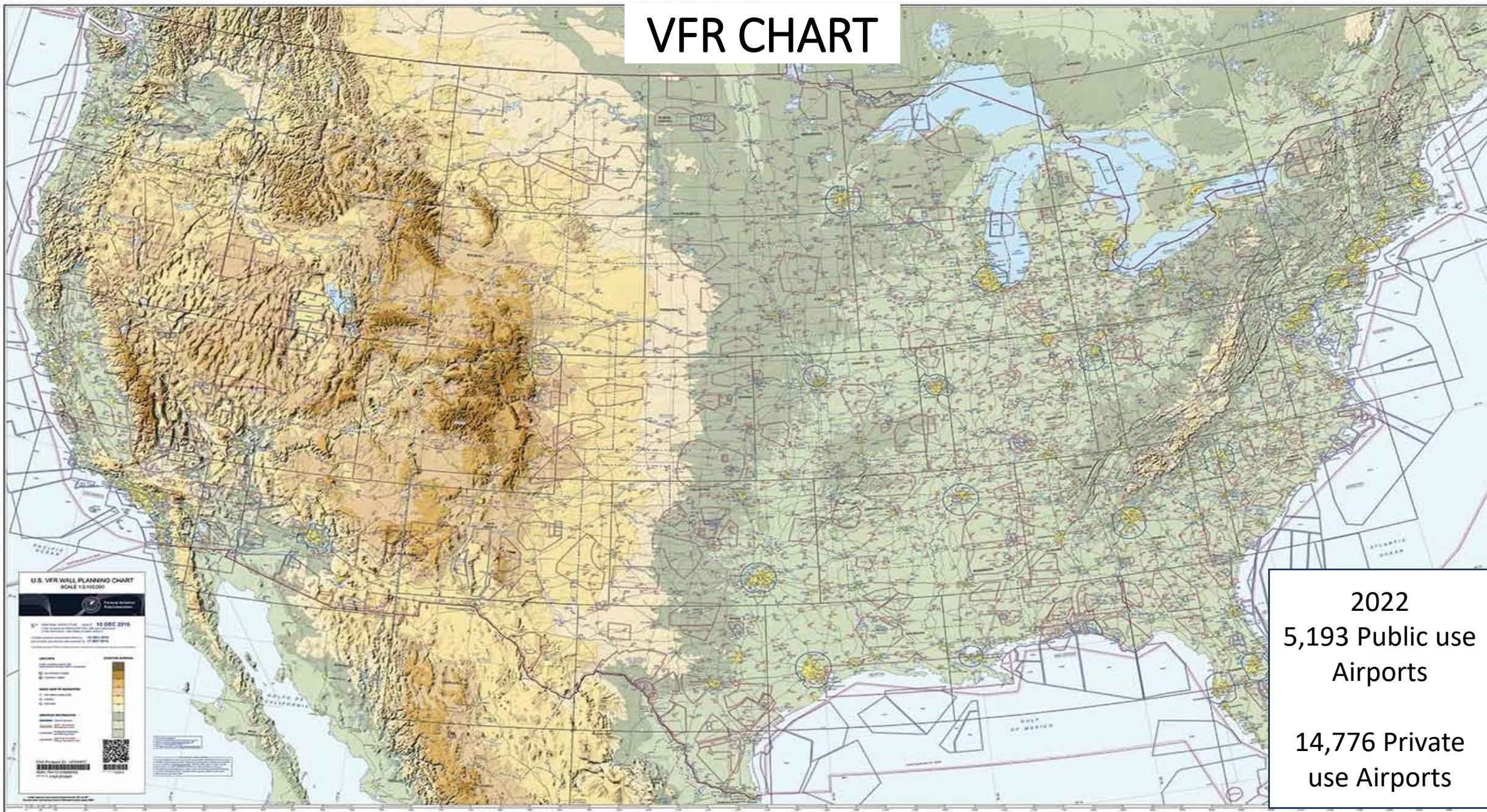
## Military

Aircraft and air operations conducted by the armed forces for defense, combat, training, transport, reconnaissance, and humanitarian missions.





# VFR CHART

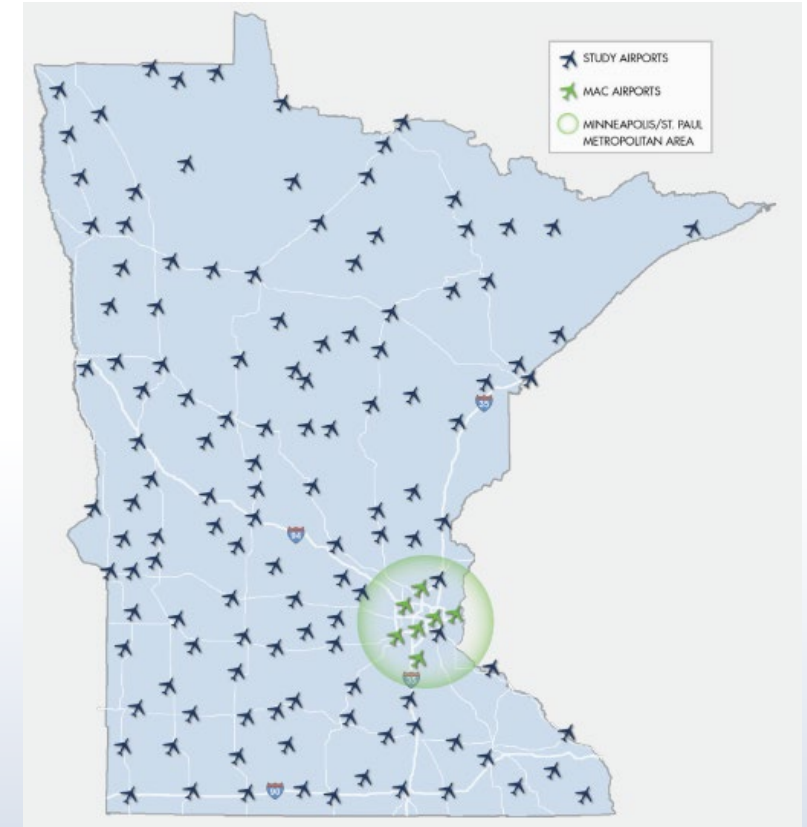




## 2. Overview of Local Aviation

# Overview of Local Aviation

- ✓ Airports are classified according to the role they serve in the airspace system
- ✓ Lake Elmo Airport is included in a classification that restricts runways to 5,000 feet or shorter according to Minnesota Law and Metropolitan Council policies
- ✓ MAC owns seven airports: one commercial aviation airport (MSP) and six general aviation airports including 21D
- ✓ The Lake Elmo Airport (21D) is established as a Reliever Airport, along with MAC's other general aviation airports to enhance and support aviation system needs and relieve corporate air traffic congestion at MSP
- ✓ Reliever airports are maintained to the same safety standards as MSP



# Overview of Local Aviation

- ✓ MAC reliever airports have 372,00 flights annually making up 52% of all MAC flight operations

| MAC Airport Operations | 2023    | 2024    | Change 2023 - 2024 |
|------------------------|---------|---------|--------------------|
| MSP                    | 323,945 | 342,254 | 5.7%               |
| 21D                    | 41,593  | 41,854  | 0.6%               |
| ANE                    | 69,908  | 71,614  | 2.4%               |
| FCM                    | 136,622 | 132,744 | -2.8%              |
| LVN                    | 38,678  | 42,611  | 10.2%              |
| MIC                    | 45,451  | 41,310  | -9.1%              |
| STP                    | 38,167  | 42,344  | 10.9%              |
| Operations Total       | 694,364 | 714,731 | 3.0%               |



- ✓ Peak number of flights in 1975: 115,000
- ✓ 2024 number of flights: 41,854 (36% of peak operations)

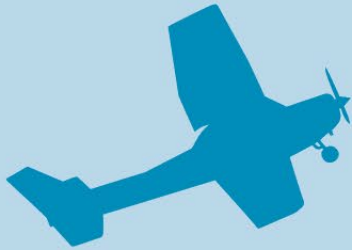
Lake Elmo Airport



ADVISORY COMMISSION

## 2. Overview of 21D





# LAKE ELMO AIRPORT<sup>(21D)</sup>

## BY THE NUMBERS



**196**  
based  
aircraft



**143**  
leases



**41,854**  
annual flight  
operations

**\$12.8M**  
economic output  
annually

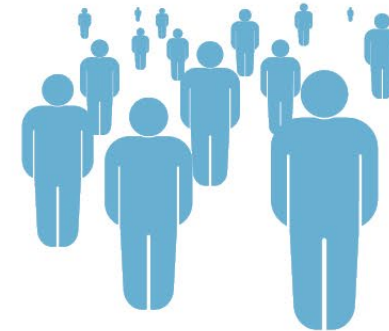


**\$307,342**  
annual operating  
revenue

**624**  
acres

**1**  
fixed based  
operators  
(FBO)

**60**  
jobs supported



**2**  
runways



**5,996**  
total feet of  
runway  
pavement

**390**  
runway and  
taxiway lights

**13**  
pieces of  
equipment

maintaining the airfield  
and airport grounds



2 Full-time Airport Maintenance Staff ▶ 1 Flight school ▶ No Air Traffic Control Tower ▶ In the community since 1951

1 Experimental Aircraft Association ▶ Owned by the MAC since 1951 ▶ On-site public viewing area

# Anatomy of Lake Elmo Airport (21D)

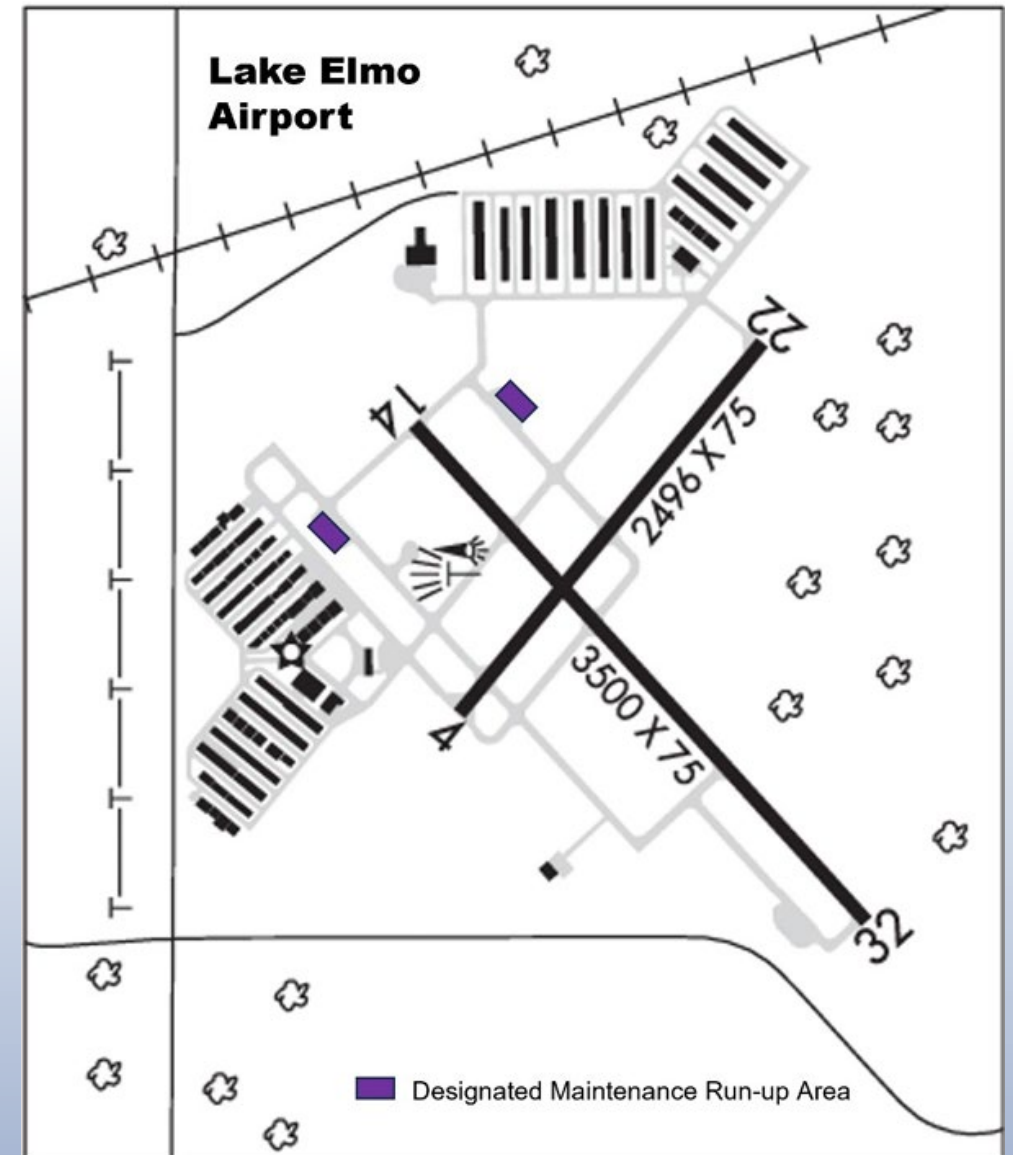
## Basic Airport Features of Lake Elmo Airport:

### ✓ Runway

- Surface designated for take-off and landing movements
- Named based on alignment with compass headings:
- Runway 14-32 (northwest/southeast)  
3,500 feet long x 75 feet wide
- Runway 4-22 (northeast/southwest)  
2,496 feet long x 75 feet wide

### ✓ Taxiway

Surface designed for getting aircraft to and from the runway





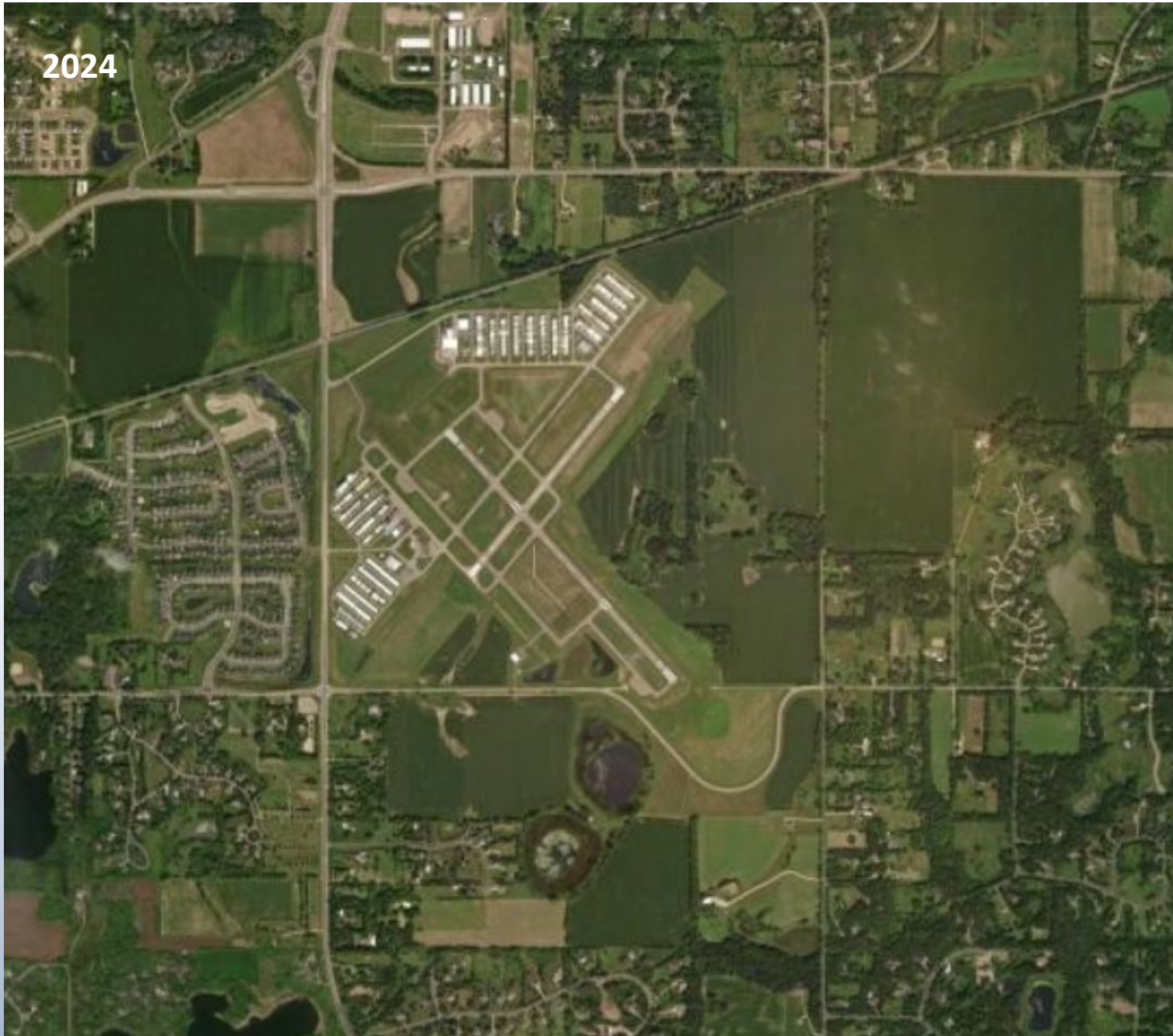
## Lake Elmo Airport (1957)

Then...





2024



Lake Elmo Airport

Now...



## 4. Airport Roles and Responsibilities

# Airport Roles and Responsibilities



## U.S. Congress

- Passes laws that govern aviation in the U.S.



## Federal Aviation Administration

- Regulates airports
- Regulates airlines
- Operates Air Traffic Control (ATC) facilities



## Airlines

- Transport people and products domestically and internationally
- Determine number of flights, aircraft types and flight times based on market demands



## Metropolitan Airports Commission

- Owns and operates MSP and six reliever airports
- Provides a facility for airlines to conduct air commerce activities
- Does not determine where aircraft fly, runway use, or flight procedures

# LEAAC Roles and Responsibilities

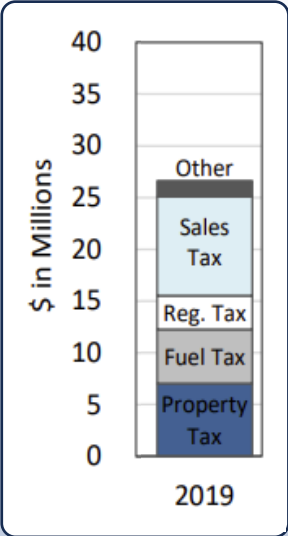
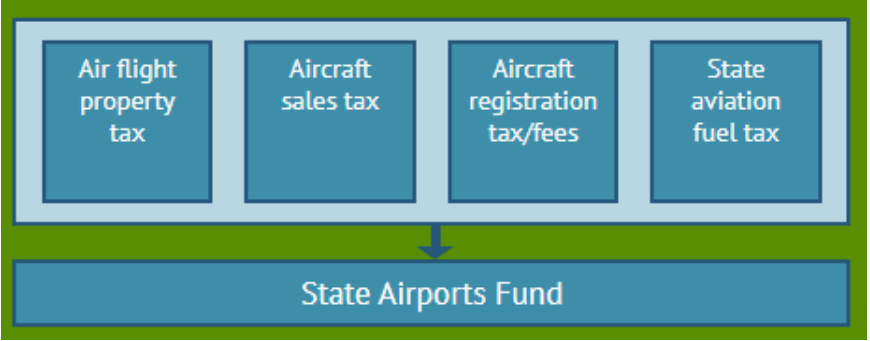


- ✓ This Commission is formed to further the general welfare of the community and the Lake Elmo Airport, a public airport in Baytown Township, County of Washington, state of Minnesota, through minimizing or resolving problems created by the aircraft operations at the airport.

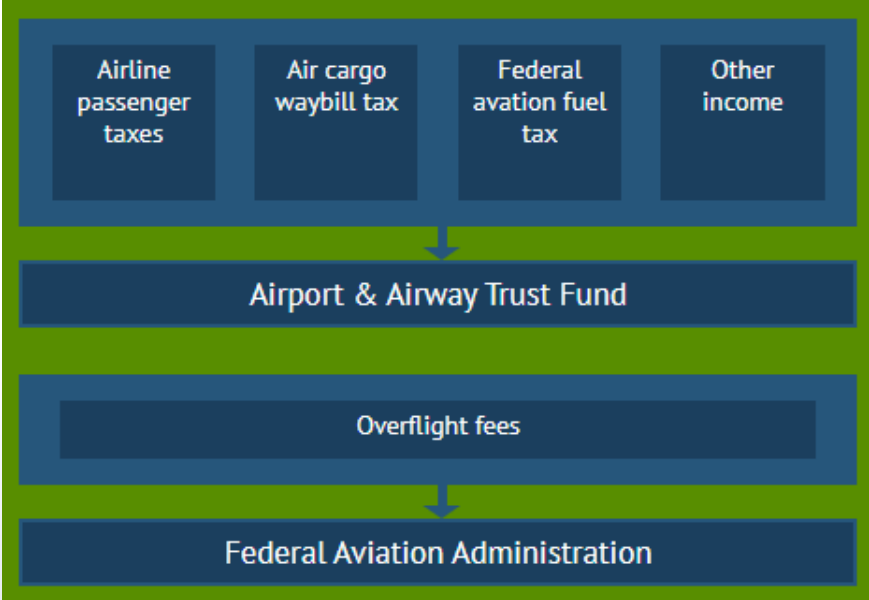
## 5. Funding and Economic Impact



# General Airport Grant Funding – Federal and State



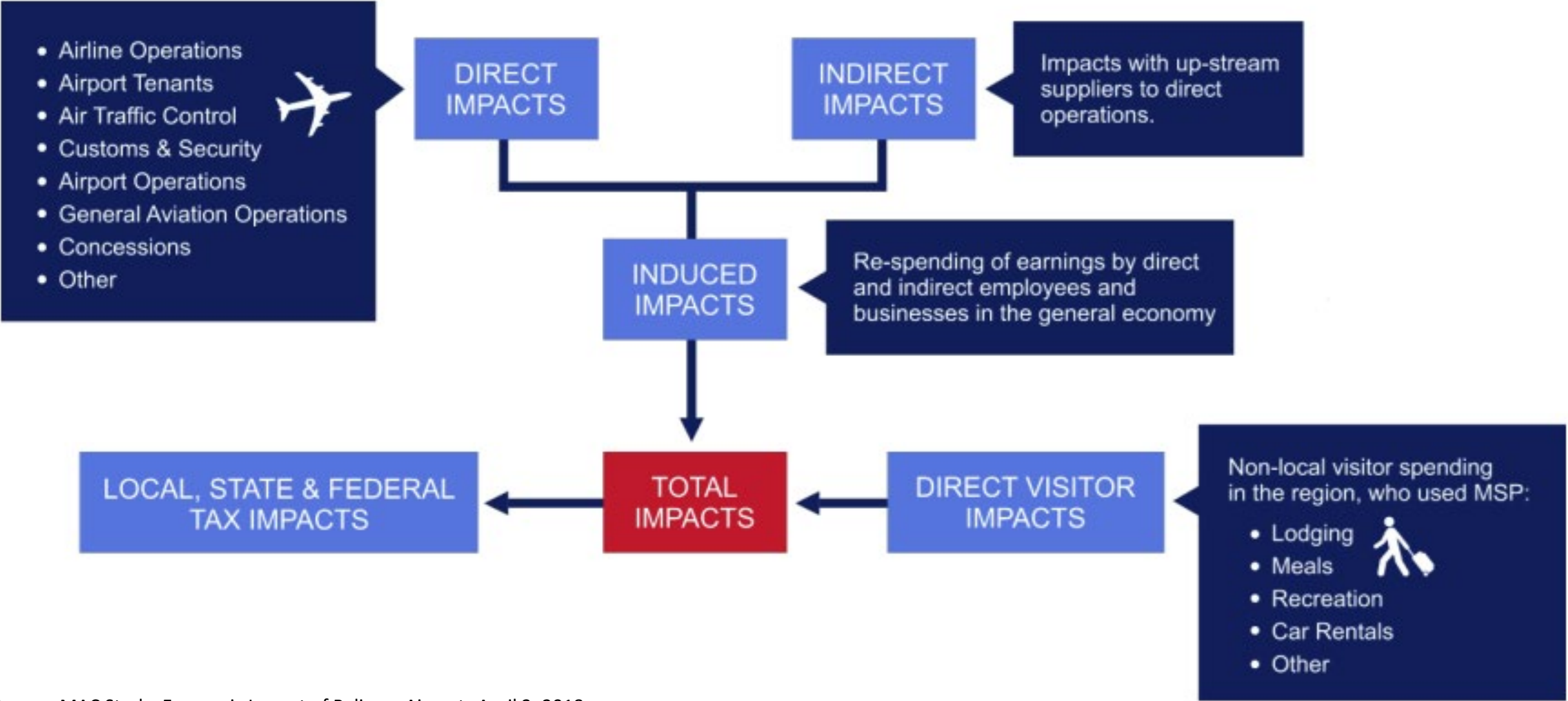
MnDOT distributes the MN State Airports Fund and channels funds from the Federal Aviation Administration Airport Improvement Program to airport sponsors



Grants and other funds to local airports

**2025 Budget**  
+\$20.2B (Trust Fund)  
+\$1.6B (General Fund)  
+\$5B (Bipartisan Infrastructure Law)  
FAA Budget \$26.8B (2025)

# Economic Impact



# Economic Impact – All MN Public Airports

\$18.2B contributed to the Minnesota economy (2019)

MAC airports (particularly MSP) account for the largest majority



| ECONOMIC IMPACT CATEGORIES                                                                        |
|---------------------------------------------------------------------------------------------------|
| AIRPORT MANAGEMENT                                                                                |
| Activities associated with the daily operation of each airport                                    |
| BUSINESS TENANTS                                                                                  |
| On-airport aviation-related businesses that generate revenue and have employment                  |
| CAPITAL INVESTMENT                                                                                |
| Five-year average annual state, federal, airport, and private investment for airport improvements |
| GENERAL AVIATION VISITOR SPENDING                                                                 |
| Expenditures by visitors to Minnesota who arrive on general aviation airplanes                    |
| COMMERCIAL VISITOR SPENDING                                                                       |
| Expenditures by visitors to Minnesota who arrive on a scheduled commercial airline flight         |
| STATE & LOCAL TAX REVENUES                                                                        |
| Airport-supported sales and state income taxes                                                    |

# Economic Impact – MAC Reliever Airports

MAC's six reliever airports generate employment, business and personal transportation, capital investment, and facilitate visitor spending in the local markets

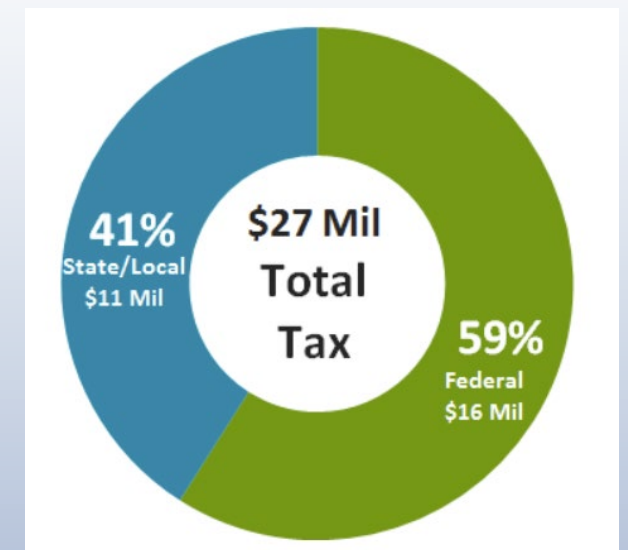
- \$756M contributed to MN economy (2016)
- \$11M local taxes generated (2016)

Consolidated Impact of MAC Reliever Airport Operations and Visitor Spending - 2016

| Impact             | <br>Employment |              | <br>Wages (\$ millions) | <br>GDP (\$ millions) | <br>Output (\$ millions) |
|--------------------|-------------------------------------------------------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
|                    | Jobs                                                                                            | FTEs         |                                                                                                          |                                                                                                          |                                                                                                             |
| Total Direct       | 1,650                                                                                           | 1,380        | \$71                                                                                                     | \$224                                                                                                    | \$403                                                                                                       |
| Total Indirect     | 890                                                                                             | 760          | \$50                                                                                                     | \$112                                                                                                    | \$200                                                                                                       |
| Total Induced      | 1,130                                                                                           | 960          | \$43                                                                                                     | \$85                                                                                                     | \$153                                                                                                       |
| <b>Grand Total</b> | <b>3,660</b>                                                                                    | <b>3,100</b> | <b>\$164</b>                                                                                             | <b>\$421</b>                                                                                             | <b>\$756</b>                                                                                                |

**Note:** Employment figures (jobs and FTEs) are rounded to the nearest ten. Totals may not sum due to rounding.

MAC Reliever Airport Tax Revenue - 2016



# Summary and Next Steps

## Today's Education Session: Airports and Regulations

*“Educate the Commission on how airports are regulated and how 21D fits into that regulatory system”*

## Next Education Session: Aircraft and Flight Operations

*“Educate the Commission on the basic principles of aircraft work and standard flight operations at general aviation airports like 21D”*

### Topics:

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