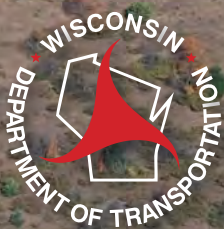Wisconsin Department of Transportation

# BUREAU OF AERONAUTICS

# 2020 Annual Report

Providing leadership to maintain
and develop a safe and efficient
air transportation system

Wausau Downtown Airport

## Director's Message



I am pleased to present the Wisconsin Department of Transportation, Bureau of Aeronautics 2020 Annual Report. This report reviews the aviation activity and accomplishments in Wisconsin that occurred during the last year.

Wisconsin, the nation and the world have faced unprecedented challenges in 2020. With the unexpected emergence of the global pandemic and its impact on aviation, our commitment has been to assist airports in addressing the transformed environment in which we all do business. Our mission is to provide leadership to maintain and develop a safe and efficient air transportation system. Assisting airport sponsors to identify, manage and address the many challenges they face to develop and maintain a safe and efficient airport is also an important element in our mission.

Our bureau managed more than $73 million in funding and 94 airport projects in 2020.

Airport projects varied widely, from pavement reconstruction to purchasing snow removal equipment and building fuel facilities.

In addition to specialized engineering and planning services, our team assists airport sponsors on environmental matters, land use planning, runway safety issues and federal grant assurances. Our bureau takes pride in working with the airport sponsors to ensure they have all the tools needed to maintain and develop their airport.

Pilot safety courses, aviation education and airport security are also part of our commitment to the Wisconsin aviation community. We conducted several virtual aviation education and outreach events last year, as well as over 40 Pro-Tips Webinars in partnership with the Federal Aviation Administration Milwaukee and Minneapolis Flight Standards District Offices.

This report illustrates our bureau's commitment to provide assistance to Wisconsin's aviation community. We look forward to another successful year.

David M. Greene
Director


General Mitchell International Airport

### PDF navigation

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- Click on an item in the Table of Contents listing to go to its page.
- Click COVER in blue navigation bar to go to cover page.
- Click MAP in blue navigation bar to go to Wisconsin State Airport System Map.
- To print this PDF guide, do so on an 8.5 by 11 inch paper, selecting the "portrait" and "actual size" settings for best results.
- Because this is a large document, consider printing the single pages of interest to you.

## Table of Contents

# Wisconsin State Airport System Map



# Facts and Figures



La Crosse Regional Airport

## Service Providers

| | |
|---|---|
| Scheduled air carrier airports | 8 |
| Commercial airlines serving the state | 10 |
| Cargo-air charter | 4 |
| Airports with based jets | 32 |
| Airports with 5000-foot or greater runways | 41 |

Source: Bureau of Aeronautics

## Registered Aircraft

| | |
|---|---|
| Airplanes | 4,335 |
| Rotorcrafts | 85 |
| Ultralights | 56 |
| Sail Planes | 33 |
| Lighter than Air | 51 |
| Light Sport | 217 |
| Sea Planes | 52 |

Source: Bureau of Aeronautics

## Weather Gathering and Dissemination Systems

| | |
|---|---|
| State-owned automated weather observation system (AWOS) | 51 |
| Federal-owned automated surface observation system (ASOS) | 18 |

Source: FAA

## Landing Facilities in Wisconsin

| | |
|---|---|
| Airports in the State Airport System | 97 |
| Privately-owned, public use airports | 30 |
| *Private use airports | 290 |
| Heliports (public and private) | 109 |
| Seaplane bases (public and private) | 16 |

Source: FAA
*2020 FAA audit of private air facilities

# Facts and Figures



Flight for Life

## Air Medical Services based in Wisconsin

| SERVICE NAME | BASE SITE | CITY |
|---|---|---|
| Eagle III (Heli and fixed wing) | Austin Straubel International Airport | Green Bay |
| Flight for Life | Waukesha County Airport<br>Fond du Lac County Airport | Waukesha<br>Fond du Lac |
| GundersenAIR | Sparta/Fort McCoy Airport | Sparta |
| Thedastar | Theda Clark Medical Center | Neenah |
| UW Med Flight | University Hospital<br>Iowa County Airport<br>Divine Savior Healthcare | Madison<br>Mineral Point<br>Portage |
| Aspirus MedEvac | Wausau Downtown Airport | Wausau |
| Mayo Clinic Medical Transport | Chippewa Valley Regional Airport | Eau Claire |
| Life Link III | Rice Lake Regional Airport<br>Marshfield Medical Center | Rice Lake<br>Marshfield |
| North Memorial Air Care | Burnett County Airport | Siren |
| Ascension Wisconsin Spirit Medical Transport | Central Wisconsin Regional Airport | Mosinee |

Source: FAA

# Facts and Figures

## AIRPORT OPERATIONS AT TOWERED AIRPORTS

| LOCATION/COMMERCIAL AIRPORTS | CY2016 | CY2017 | CY2018 | CY2019 | CY2020 | % CHANGE (19–20) |
|---|---|---|---|---|---|---|
| Milwaukee—General Mitchell International | 113,715 | 112,345 | 111,712 | 106,561 | 71,096 | -33% |
| Madison—Dane County Regional | 81,419 | 83,529 | 87,578 | 81,786 | 68,038 | -17% |
| Green Bay—Austin Straubel International | 49,479 | 45,358 | 47,752 | 44,904 | 31,238 | -30% |
| Appleton—Appleton International Airport | 34,302 | 32,234 | 34,458 | 37,809 | 31,072 | -18% |
| La Crosse—La Crosse Municipal | 19,323 | 18,416 | 19,608 | 20,090 | 15,104 | -25% |
| Eau Claire—Chippewa Valley Regional | 22,509 | 20,149 | 21,836 | 19,694 | 17,406 | -12% |
| Mosinee—Central Wisconsin | 12,375 | 12,424 | 12,624 | 13,574 | 11,792 | -13% |
| Subtotal | 333,122 | 324,455 | 335,568 | 324,418 | 245,746 | -24% |
| **LOCATION/GENERAL AVIATION TOWERED AIRPORTS** | **CY2016** | **CY2017** | **CY2018** | **CY2019** | **CY2020** | **% CHANGE (19–20)** |
| Kenosha—Kenosha Regional | 46,868 | 48,722 | 59,128 | 68,899 | 56,067 | -19% |
| Oshkosh—Wittman Regional | 66,950 | 62,952 | 74,558 | 59,029 | 48,252 | -18% |
| Janesville—Southern Wisconsin Regional | 31,222 | 32,606 | 37,674 | 55,806 | 48,642 | -13% |
| Waukesha—Crites Field | 38,178 | 33,543 | 44,044 | 44,048 | 48,402 | 10% |
| Milwaukee—Lawrence Timmerman | 24,875 | 27,730 | 26,030 | 31,988 | 35,112 | 10% |
| *Sparta—Ft. McCoy—Sparta | 19,978 | 10,669 | 10,108 | 10,302 | 6,364 | -38% |
| Subtotal | 228,071 | 216,222 | 251,542 | 270,072 | 242,839 | -10% |
| **TOTAL** | **561,193** | **540,677** | **587,110** | **594,490** | **488,585** | **-18%** |

*Sparta-Ft.McCoy airport tower was closed March-September (COVID); Source: FAA Air Traffic Activity System - Airport Operations 1/22/21

## Air Carrier Revenue Passenger Enplanements

| LOCATION/COMMERCIAL AIRPORTS | CY2016 | CY2017 | CY2018 | CY2019 | CY2020 | % CHANGE (19–20) |
|---|---|---|---|---|---|---|
| Milwaukee—General Mitchell International | 3,327,536 | 3,414,477 | 3,496,724 | 3,374,073 | 1,309,967 | -61% |
| Madison—Dane County Regional | 903,155 | 943,363 | 1,043,185 | 1,162,024 | 422,167 | -64% |
| Appleton—Appleton International Airport | 270,633 | 281,552 | 348,909 | 386,737 | 190,282 | -51% |
| Green Bay—Austin Straubel International | 292,868 | 283,823 | 314,909 | 347,263 | 144,316 | -58% |
| Mosinee—Central Wisconsin | 119,222 | 116,404 | 124,632 | 141,123 | 56,782 | -60% |
| La Crosse—La Crosse Municipal | 94,047 | 92,101 | 99,651 | 97,069 | 44,853 | -54% |
| Rhinelander—Rhinelander—Oneida County | 20,414 | 23,014 | 24,477 | 27,203 | 13,652 | -50% |
| Eau Claire—Chippewa Valley Regional | 21,304 | 22,822 | 23,950 | 24,268 | 10,086 | -58% |
| **TOTAL** | **5,049,179** | **5,177,556** | **5,476,437** | **5,559,760** | **2,192,105** | **-61%** |

Source: FAA Air Carrier Activity Information System (ACAIS) for 2019 10/29/20; 2020 preliminary airport data

## Enplaned Freight at Commercial Airports

| LOCATION/COMMERCIAL AIRPORTS | CY2016 | CY2017 | CY2018 | CY2019 | CY2020 | % CHANGE (19–20) |
|---|---|---|---|---|---|---|
| Milwaukee—General Mitchell International | 80,336,000 | 79,214,423 | 79,010,065 | 75,874,000 | 74,298,000 | -2% |
| Madison—Dane County Regional | 15,090,373 | 13,267,346 | 14,297,349 | 13,061,697 | 12,829,158 | -2% |
| Appleton—Appleton International Airport | 9,685,052 | 10,156,234 | 10,978,383 | 10,805,803 | 8,203,186 | -24% |
| Rhinelander—Rhinelander—Oneida County | 1,693,783 | 1,501,408 | 1,562,840 | 1,420,686 | 1,419,884 | 0% |
| Mosinee—Central Wisconsin | 979,526 | 847,160 | 771,232 | 619,262 | 638,756 | 3% |
| Green Bay—Austin Straubel International | 181,034 | 206,259 | 155,695 | 174,403 | 165,176 | -5% |
| **MILLION POUNDS** | **108.0** | **105.2** | **106.8** | **102.0** | **97.6** | **-4%** |

Source: Airport preliminary data

# Facts and Figures



Richard I. Bong Airport

## Operations at Towered Airports



- 2016: 561,193
- 2017: 540,677
- 2018: 587,110
- 2019: 594,490
- 2020: 488,585

## Enplaned Freight at Commercial Airports



- 2016: 108
- 2017: 105.2
- 2018: 106.8
- 2019: 102
- 2020: 97.6
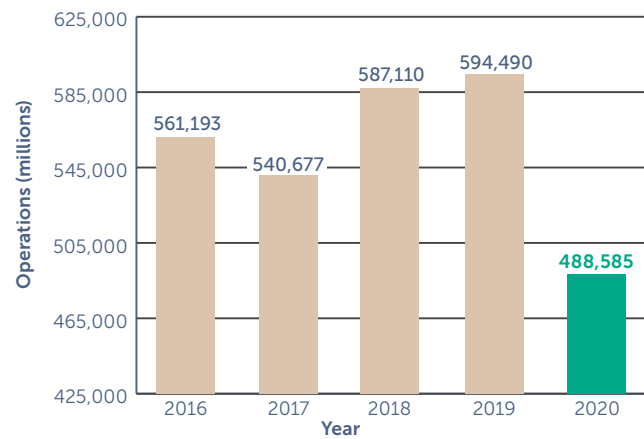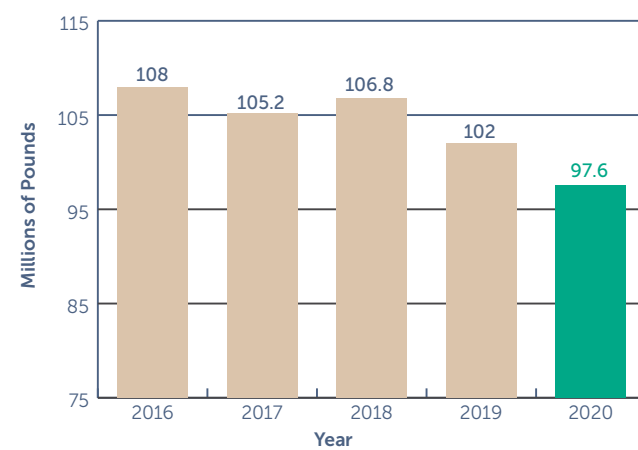
## Passenger Enplanements by Year (millions)



- 2016: 5.0
- 2017: 5.2
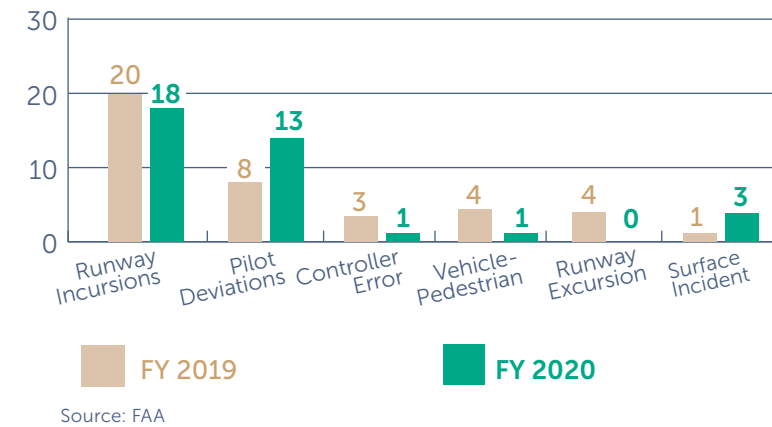- 2018: 5.5
- 2019: 5.6
- 2020: 2.2
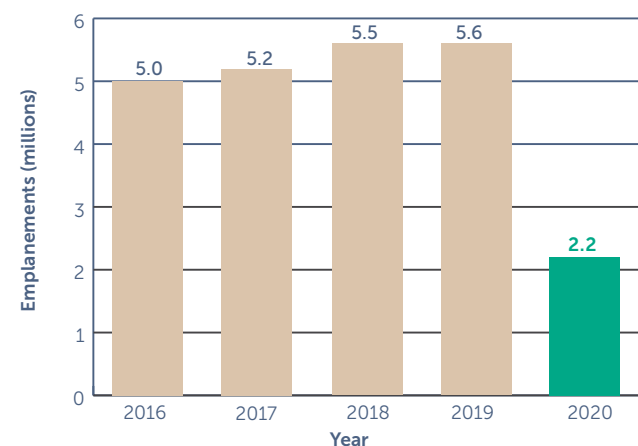
# Facts and Figures

## Airport Runway Safety

In an effort to improve airport runway safety in the state, the BOA has partnered with the FAA's Runway Safety Action Team to increase outreach and participation from all major airport interests including tenants, fixed base operators, airport operations and maintenance personnel. Participants are asked to help develop recommendations and solutions to enhance surface safety. Meetings have been held throughout the state.

## Runway Incidents at Towered Airports



| Category | FY 2019 | FY 2020 |
|---|---|---|
| Runway Incursions | 20 | 18 |
| Pilot Deviations | 8 | 13 |
| Controller Error | 3 | 1 |
| Vehicle-Pedestrian | 4 | 1 |
| Runway Excursion | 4 | 0 |
| Surface Incident | 1 | 3 |

Source: FAA

### 10 Ways to Help Prevent Runway Incursions

1. **See the "Big Picture"** Monitor both ground and tower communications when possible.
2. **Transmit Clearly** Make your instructions and read backs complete and easy to understand.
3. **Listen Carefully** Listen to your clearance. Listen to what you read back. Do not let communications become automatic.
4. **Copy Clearances** Clearances can change. Keep a note pad and copy your clearance. If needed refer to your notes.
5. **Situational Awareness** Know your location. If unfamiliar with an airport keep a current airport diagram available for easy reference.
6. **Admit When Lost** If you get lost on an airport ask ATC for help. Better to damage your pride than your airplane.
7. **Sterile Cockpit** Maintain a sterile cockpit until reaching cruising altitude. Explain to your passengers that talking should be kept to a minimum.
8. **Understand Signs, Lights and Markings** Keep current with airport signs, lights and markings. Know what they mean and what action to take.
9. **Never Assume** Do not take clearances for granted. Look both ways before entering or crossing taxiways and runways.
10. **Follow Procedures** Establish safe procedures for airport operations. Then follow them.



Wind turbine

## Tall Structures and Airspace Studies

The bureau issues permits for the construction of tall structures under the provisions of Wisconsin State Statute 114.135, Airport Protection. In addition, the bureau also initiates studies for on-airport, non-rule-making action studies. The push for very tall, utility scale wind turbines has slowed somewhat, however, there is still interest in wind projects throughout the state.

In 2020 the bureau screened 351 proposed structures, processed applications, and issued 7 tall structure permits, including two renewable energy projects totaling a combined 48 wind turbines.
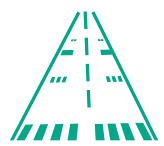
We also processed 1,199 on-airport non-rule making airspace studies that were filed in 2020.

# Facts and Figures



Wittman Regional Airport, taxiway construction

## Wisconsin Airport Pavement Health

Pavement condition ratings are a primary indicator of the long-term structural health of the state's airport system. Every year the bureau inspects one third of the pavements of Wisconsin's public-use airports using a pavement condition index (PCI). The index is used to evaluate the relative condition of a given section of pavement on a scale range from 0 (failed) to 100 (excellent). In 2020, 85 percent of primary airport pavements were rated fair or above for the 97 SASP airports.



Snow removal equipment facility

# Funding

In 2020, more than $73 million in federal, state and local funds supported 94 airport improvement projects (AIP). The funding is prioritized to maintain the safety and utility of Wisconsin's statewide system of airports.

## Funding Breakout

| AIRPORT TYPE | FAA | STATE | SPONSOR | TOTAL |
|---|---|---|---|---|
| Primary commercial service | $28,415,000 | $2,581,000 | $1,634,000 | $32,630,000 |
| General aviation | $27,283,000 | $6,322,000 | $6,312,000 | $39,917,000 |
| Statewide Projects | $0 | $492,000 | $0 | $492,000 |
| **TOTAL** | **$55,698,000** | **$9,395,000** | **$7,946,000** | **$73,039,000** |

## 2020 Work Items Funded

| TYPE OF WORK | NUMBER OF PROJECTS | AMOUNT FUNDED |
|---|---|---|
| Recon/Rehab Pavement Total | 11 | **$43,182,000** |
| Pavement Maintenance Total | 10 | **$1,502,000** |
| Airport Rescue & Firefighting Total | 1 | **$25,000** |
| Airfield Lighting Total | 4 | **$1,702,000** |
| Airfield Markings Total | 1 | **$67,000** |
| Navigational Aids Total | 1 | **$50,000** |
| Buildings Total | 8 | **$11,583,000** |
| Equipment Total | 8 | **$1,349,000** |
| Land Total | 6 | **$3,391,000** |
| Fuel Total | 10 | **$2,144,000** |
| Pro Design/Development Total | 27 | **$5,181,000** |
| General Planning Total | 5 | **$2,371,000** |
| Statewide Support (non-construction) | 2 | **$492,000** |
| **TOTAL** | **94** | **$73,039,000** |

## Number of Airport Projects in 2020

| | |
|---|---|
| Federal AIP aid (includes state match) | 60 |
| State aid | 29 |
| Sponsor only | 3 |
| Statewide | 2 |
| **TOTAL PROJECTS** | **94** |

# Funding

## Funding History for Airport Improvement Projects (millions)



Legend:
- Sponsor
- State
- FAA
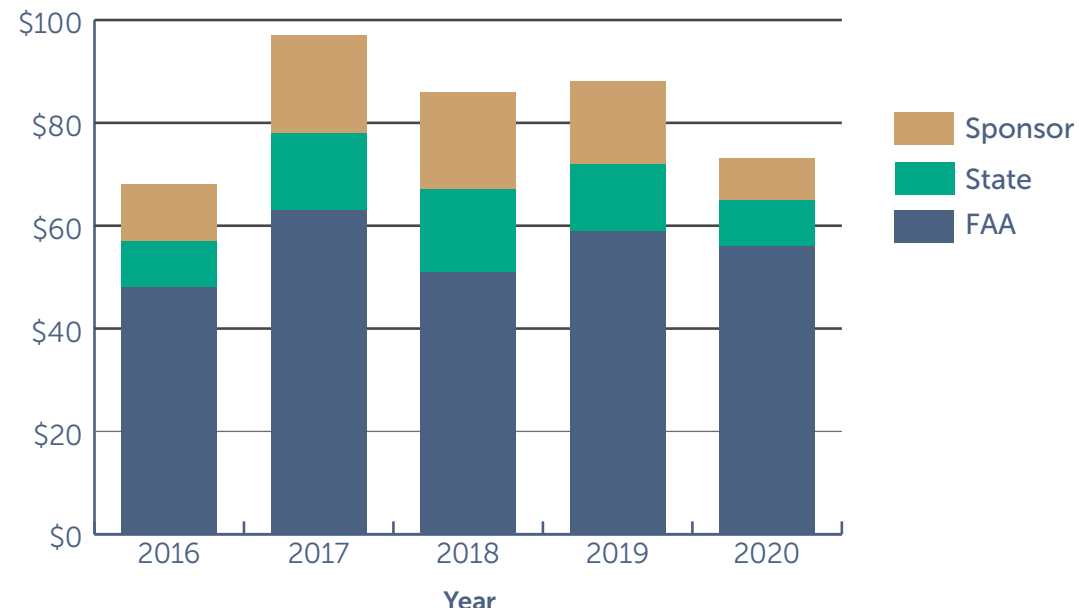


Richland Airport New Terminal

## Airport Facilities

Airports address passenger safety, multi-modal access and facilities to house aircraft and maintenance equipment. The bureau has responded to these needs over the past year with both federal and state aid.

## Major Projects 2020

Central Wisconsin Airport
Runway 17/35 Rehabilitation

Kenosha Regional Airport Runway 7L/25R,
Runway 15/33 Intersection and Taxiway A Rehab

General Mitchell International Airport
Runway 7R/25L Rehabilitation

# Outreach

## Unmanned Aircraft Systems (UAS)



Unmanned Aircraft Systems (UAS), commonly referred to as "drones," have entered the national airspace as a major user. The bureau's Director is a member of the FAA's Drone Advisory Committee which help the FAA prioritize its efforts to integrate drones in the national airspace. In addition, the bureau recently acquired a UAS for the purposes of conducting airport approach obstruction evaluations to more comprehensively and accurately identify penetrations to the approach surface and guide tree clearing activities. Information on the department's website is available that will help to inform and educate Wisconsin's aviation community. https://wisconsindot.gov/Pages/travel/air/pilot-info/uas.aspx.

The FAA is currently reporting 2,752 Part 107 pilots in Wisconsin. The bureau encourages all UAS pilots to be actively engaged with existing and emerging FAA regulatory and safety initiatives concerning the use of drones.

## Airport Operations and Land Use Symposium

Since the Wisconsin Bureau of Aeronautics was unable to host the annual symposium in 2020, a series of free recorded webinars for airport managers, consultants, and other airport stakeholders were produced and shared instead. The webinars are available on the BOA website at: https://wisconsindot.gov/Pages/doing-bus/aeronautics/trng-evnts/opslu-sem.aspx. Topics included airport legislative and funding issues, Wisconsin accident statistics, the fundamentals of airport compliance, and the importance of airport planning.

## Fly Wisconsin Airport Passport Program
### wisconsindot.gov/FlyWI



The Fly Wisconsin Airport Passport program promotes safety and education by encouraging recreational flight to Wisconsin's public use airports. It also supports general aviation airports, area businesses and tourism. It is a collaborative program of the Wisconsin Department of Transportation (WisDOT), Bureau of Aeronautics (BOA) and the Wisconsin Airport Management Association (WAMA).

Any licensed pilot, from any state, and their passenger(s) may participate. Pilots and their passengers may earn three different levels of recognition awards by flying into airports, attending annual FAA safety seminars and visiting Wisconsin's aviation attractions. Since the program started in 2017, over 1,700 participants have registered.



Bear on New Richmond Municipal Airport runway

## Wildlife Studies

The bureau is currently conducting a baseline wildlife data collection study and synthesis across the state. This baseline work combined with concurrent personnel training will enable the bureau to directly conduct wildlife site visits and wildlife hazard assessments. Additionally, the bureau will be able to advise and assist airports on how to specifically mitigate their wildlife hazards. This approach will lead to more proactive rather than reactive response to the wildlife/aviation hazard interface.

Kenosha Regional Airport runway extension


Appleton International Airport
Aircraft Fire Fighting Training Facility

# Airport Safety and Pilot Education Events in 2020

## Mechanics Seminar

The Mechanics Conference held webinars in 2020 with 222 attendees.

## Pro-Tips Series Webinars

The bureau has partnered with the FAA Milwaukee and Minneapolis Flight Service District Offices, NAFI and others to hold monthly webinars featuring aviation professionals and subject matter experts willing to share knowledge and tips to help make aviation safer.



# Airport Projects Recognized

## Kenosha Regional Airport

The bureau recognized Michels Construction with the Outstanding Airport Construction Award for their work at the Kenosha Regional Airport. This $19 million project reconstructed the 5,500-foot-long primary runway and constructed a 1,100-foot extension. Additionally, it also reconstructed the full-length parallel taxiway. The project was anticipated to be constructed over two seasons due to funding uncertainties. The final work was not awarded until after July 4. Michels Construction committed to complete this additional work, along with the original work in a single year, reducing the impact to the airport businesses as well as the airport tenants and users.

## Appleton International Airport

Vinton Construction Company received Special Recognition for a $7 million project to construct a new Aircraft Fire Fighting Training Facility. This training facility represents the latest state of the art aircraft fire training facility in the nation. The project was completed on time, on budget, with high quality.

# Publications

wisconsindot.gov/av-pubs

The following is an example of publications available from the BOA. These publications and others may also be found on the department's website.

- Airport Development Handbook
- Airport Directory and Pilot's Guide
- Aviation Easements Brochure
- Aviation websites
- Fuel Services in Wisconsin
- Points of Interest near Wisconsin Airports
- State Airport System Plan 2030
- Wildlife Hazards Brochure
- Wisconsin Airport Maintenance Programs Brochure
- Wisconsin Aeronautical Chart



The Wisconsin Aeronautical Chart 2020-2021 now includes facts and figures, amenities and local attractions, as well as updated information sections that cover airport events, educations, publications, UAS and numerous safety topics.

WisDOT BOA Aeronautical Chart 2020-2021 https://wisconsindot.gov/Documents/doing-bus/aeronautics/resources/aerochart.pdf

wisconsindot.gov/av pubs