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NOTAMs

Getting Back to Basics

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Federal Aviation
Administration

Overview

Background

Audience

NOTAM Components

Classes of NOTAMs

Unique NOTAMs

Frequently Asked Questions

References

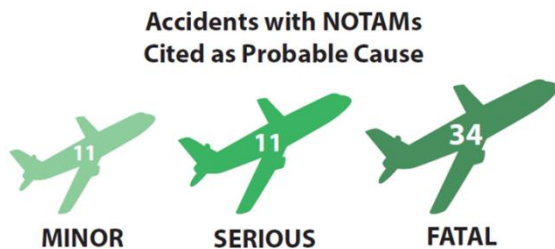


Background



The Federal Aviation Administration (FAA) is committed to permanent, measurable risk reduction in the National Airspace System (NAS). The Top 5 is derived from the output of our national Quality Assurance efforts. It is the culmination of our proactive approach to safety management, which identifies the hazards that contribute to the highest risks identified each year.

A cross-section of FAA representatives from the field come together for the Safety Roundtable to select the Top 5. To do so, the team reviews data extracted from high-risk airborne, surface, and technical functionality events, mandatory and electronic occurrence reports, direct feedback from facilities, Voluntary/Confidential Safety Reports, accident and National Transportation Safety Board data, and data from other sources.



1,930,385

Total number of National, International, Military and Flight Data Center (FDC) NOTAMs created between January 1, 2016, and December 31, 2016.

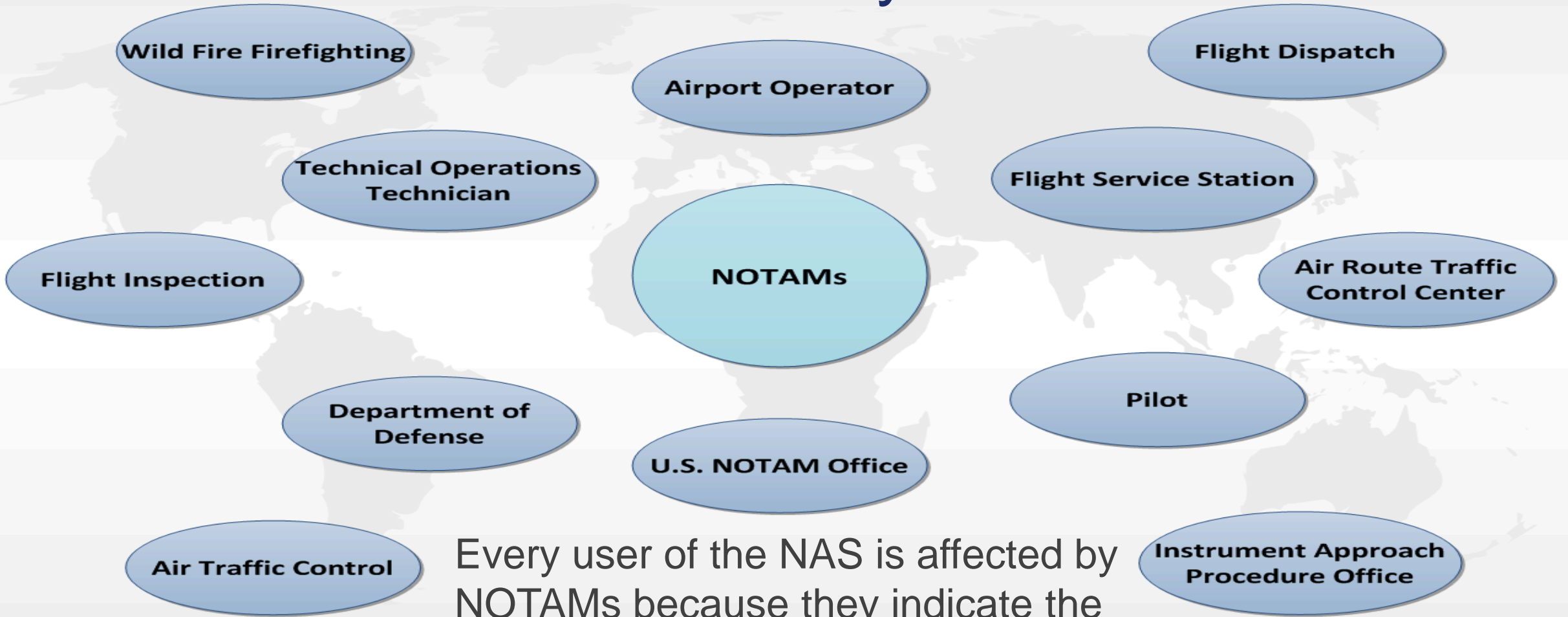
Top 5 NOTAM Initiatives



In 2017, two of the five Safety Initiatives pertained specifically to Notices to Airmen (NOTAMs) issues within the NAS:

- 1.) NOTAM Issuance/Cancellation - Lack of, untimely, or outdated NOTAM in the system
- 2.) NOTAM Prioritization/Filtering - Inability of ATC or pilots to distinguish between applicable or pertinent NOTAMs.

Who Is Affected by NOTAMs?



Every user of the NAS is affected by NOTAMs because they indicate the real-time status of the NAS.

NOTAM

A NOTAM is a notice containing information that is essential to personnel concerned with flight operations but that is not known far enough in advance to be publicized by other means. NOTAMs concern the establishment, condition, or change of any component (facility, service, procedure, or hazard) in the NAS. They must state the abnormal status of a component of the NAS — not the normal status.

In 1947, it was agreed to begin issuing NOTAMs via telecommunications. NOTAMs were modeled after Notice to Mariners, which advised ship captains of hazards in navigating the high seas.



NOTAM Contractions

NOTAMs have a unique language characterized by the use of specialized contractions.

Contractions are imperative to the NOTAM structure because they make communication more efficient.

The International Civil Aviation Organization (ICAO) is the leading authority standardizing contractions in the international aeronautical community. ICAO contractions should be used whenever possible.

Reference: FAA Order JO 7340.2, *Contractions*, the manual for ICAO contractions

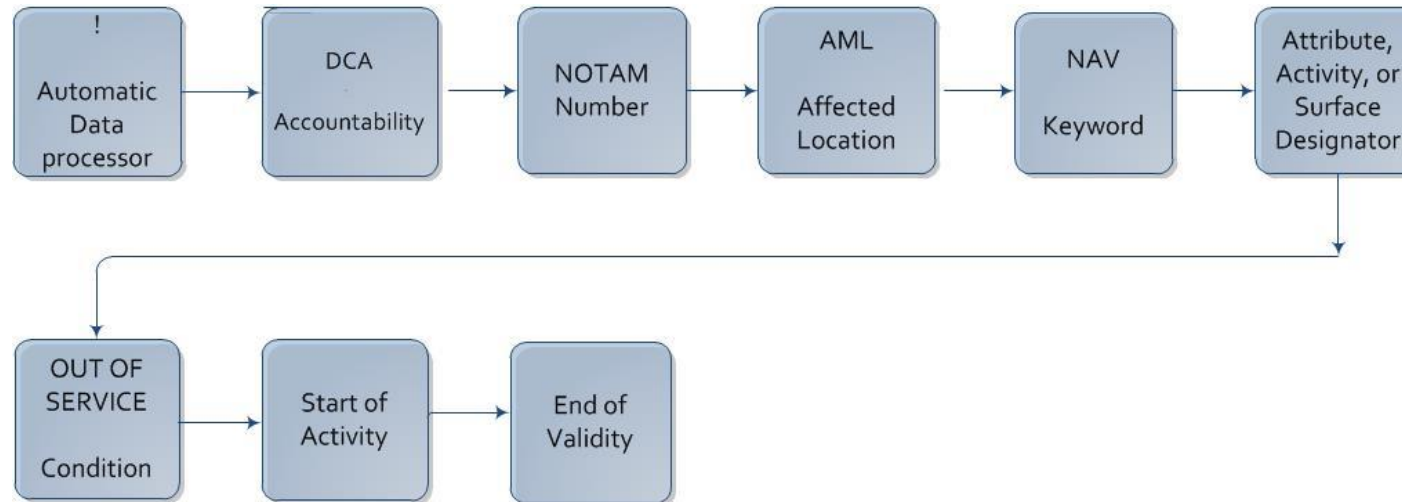
Building Blocks of a NOTAM



NOTAM Components

**!DCA 06/005 AML NAV VOR/DME
OUT OF SERVICE 1706082230-
1706302200**

All NOTAMs follow a specific format, which includes several required elements.



NOTAM Components

The graphic on the previous page shows the mandatory elements of each NOTAM.

Several additional elements are to be included “when needed.”

The slides with “when needed” in the title show optional components in their proper placement in the NOTAM structure, but those components may or may not be used.

NOTAM Components: Automatic Data Processing

!DCA YY/NNN AML NAV VOR/DME
OUT OF SERVICE 1706082230-
1706302200

Automatic Data Processing (ADP) Code/Exclamation Point.

This is a computer code with the Aeronautical Fixed Telecommunication Network used to identify the start of a new NOTAM.

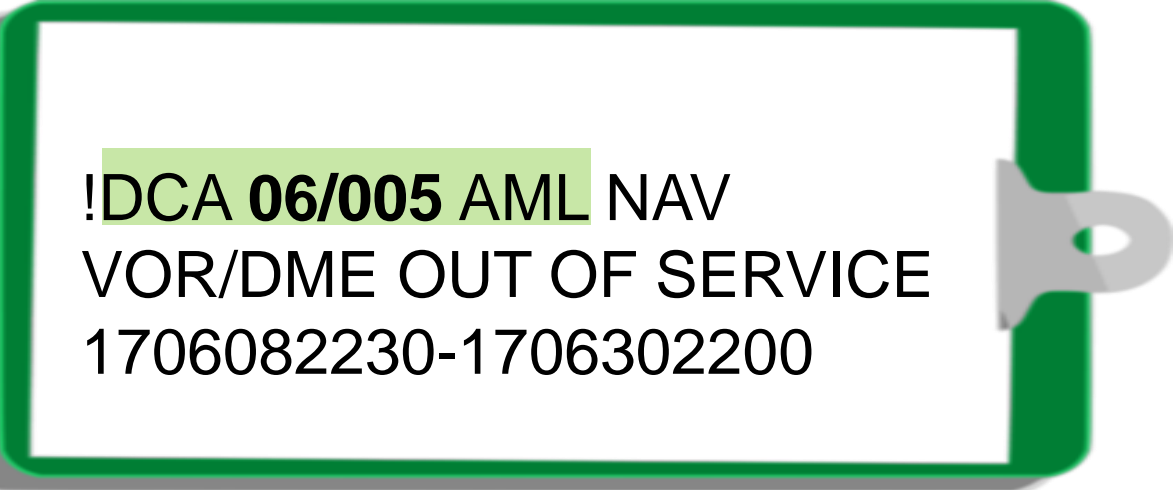
NOTAM Components: Accountability, Number, Location Identifier

The identifier of the accountability location. *Ex.:* A facility (such as DCA), FDC, Central Altitude Reservation Facility (CARF)

Here, AML is the name of the VOR/DME, Armel.

The Location Identifier component is the affected facility or location (airport, Navigational Aid (NAVAID), or Air Route Traffic Control Center (ARTCC)) appears after the NOTAM number (YY/NNN, where YY is the two-digit year, and NNN is the three-digit number, 001)

Approach controls or airspace that occupy multiple ARTCCs must have a separate NOTAM for each ARTCC.



!DCA 06/005 AML NAV
VOR/DME OUT OF SERVICE
1706082230-1706302200

Common Issue

1) A NAVAID may not show up under every airport it serves, as it may serve more than one.



Best Practices

- 1) Check 25 nautical miles (NM) to either side of your full route of flight to ensure relevant NAVAID NOTAMs are displayed.
- 2) Do not rely only on reviewing Departure, Destination, and Alternate Airport NOTAMs.

NOTAM Components - Keyword

Include one of the following keywords:

- RWY - Runway
- IAP – Instrument Approach Procedure
- VFP – Visual Flight Procedure
- DVA – Diverse Vector Area
- TWY - Taxiway
- AD - Aerodrome
- OBST - Obstruction
- NAV - Navigation
- COM - Communication
- SVC - Services
- ODP – Obstacle Departure Procedure
- SID – Standard Instrument Departure
- STAR – Standard Terminal Arrival Route

- CHART
- DATA
- AIRSPACE
- SPECIAL
- SECURITY
- ROUTE
- APRON



Common Issue

- 1) NOTAMs are displayed in no particular order.
- 2) Confusing the name of a taxiway with cardinal directions.



Best Practice

- 1) The creation of NOTAM keywords in 2008 has allowed users to sort and filter based on those keywords.
- 2) With TWY, the cardinal direction is spelled out so it is not confused with the name of the taxiway.

*Example: Use **NORTHEAST TWY** instead of **TWY NE***

Examples of NOTAMs

... **RWY 03/21 CLSD** ...
•Runways 03 and 21 are closed to aircraft.

... **AD AP ABN OUT OF SERVICE** ...
The airport beacon is out of service.

... **TWY F EDGE LGT OUT OF SERVICE** ...
•Taxiway F edge lights are out of service

... **COM REMOTE COM OUTLET 122.0 OUT OF SERVICE** ...
The frequency 122.0 is out of service

... **OBST TOWER LGT (ASR 1050171) 383430.80N0844921.70W (18.9NM ESE 811) 1229FT (289FT AGL) OUT OF SERVICE** ...
•An obstruction tower 18.9 nautical miles east/southeast of 811 airport is not lighted in accordance with current regulations.



Examples of NOTAMs (cont'd.)

... **NAV** VOR OUT OF SERVICE ...
The VHF Navigational Aid (VOR) located on this airport is out of service.

... **SVC** TWR CLSD MON-SUN 0100-1100,
CLASS D SVC NOT AVBL CTC
JACKSONVILLE APP AT 121.725...

the air traffic control tower at Cecil airport (VQQ) has changed hours of operation and is now closed between 0100UTC and 1100UTC daily. When closed, Class D services are not available and Jacksonville Approach Control controls the traffic..

... **AIRSPACE** PJE WI AN AREA DEFINED
AS 5NM RADIUS OF APT SFC-15000FT...

Parachute activity 15,000 feet and below within a 5 nautical mile radius of APT airport

... **IAP** LOS ANGELES INTL, Los Angeles, CA. RNAV (GPS) Y RWY 24L,
AMDT 5... LPV DA 628/ HAT 505 ALL CATS, VISIBILITY ALL CATS RVR
6000. LNAV/VNAV DA 632/ HAT 509 ALL CATS. TEMPORARY CRANE
342 MSL 5513FT EAST OF RWY 24L (2016-AWP-6554-OE)...

There is a temporary crane east of runway 24L which is creating amended minimums.

NOTAM Components: Attribute and Surface Designator

!DCA YY/NNN AML NAV VOR/DME
OUT OF SERVICE 1706082230-
1706302200

In the above example, the Armel VOR/DME (attribute) is out of service for a specified time frame.

A surface designator is required with the keywords RWY, TWY, and APRON.

Example: ...RWY 03 CLSD...and...APRON MAIN RAMP CLSD... and... TWY DB OPN...



NOTAM Components (When Needed): Surface Segment

TWY A BTN TWY B AND TWY C

In other words, a portion of the surface, instead of the entire surface segment.

Example:

...SOUTH 100FT...

...BTN TWY C AND TWY B...

...NORTH OF RWY 09/27...



NOTAM Components (When Needed): Facility, Feature, Service, System, and/or Components Thereof

!MLB YY/NNN MLB RWY 27 HLDG
PSN SIGN FOR RWY 18/36 NOT
LGTD

Examples:

...HLDG PSN SIGN...

...ILS LOC...



Common Issue

Both taxiways and runways have
HLDG PSN SIGN

Example:

...RWY 01 HLDG PSN SIGN NOT LGTD...

Where is this sign? On the runway
as it says, or on the taxiway holding
short of RWY 01?

Best Practice

When originating a NOTAM, ensure that you
use the keyword that matches the location of
the sign—in other words, where the pilot will be
sitting when he or she sees this sign.

To avoid confusion with runway holding
position signs, ALWAYS include the crossing
runway.

Example:

...TWY A HLDG PSN SIGN...

The pilot is on TWY A holding short of RWY 01.

Example:

...RWY 01 HLDG PSN SIGN FOR RWY 09/27...

The pilot is on runway 01 holding short of RWY
09/27

NOTAM Components (When Needed): Location Description



This is a plain-language explanation that helps better define the location of the issue.

Example:

...WIP MOWING LEFT SIDE APCH END RWY 10...

...SOUTHEAST SIDE FOR RWY 13L/31R...

NOTAM Components (When Needed): Lower Limit/Upper Limit

!GNV YY/NNN ZJX AIRSPACE PJE WI AN
AREA DEFINED AS 3NM RADIUS OF
CEW080025 (05FA) **SFC-14500FT**
AVOIDANCE ADVISED

Example:

...500FT AGL-10000FT...

...10000FT-FL590...



NOTAM Components: Condition

!DCA YY/NNN AML NAV VOR/DME
OUT OF SERVICE 1706082230-
1706302200

OUT OF SERVICE

OPN – OPEN

ACT – ACTIVE

CLSD – CLOSED – may be followed by TO (limitation) or EXC (exception)

Example:

...RWY 36 CLSD CONST

...RWY 14/32 CLSD EXC TAX 15MIN PPR...



NOTAM Components (When Needed): Remarks

Remarks are any additional pieces of information that might benefit the pilot.

Example:

*a frequency (134.72)
expected altitude for unmanned free balloons
(Northeast Bound NEB 150000FT)*

!ORF YY/NNN ORF AIRSPACE
UNMANNED FREE BALLOON
ORF338019 (19NM NW ORF) SFC-FL600
NEB



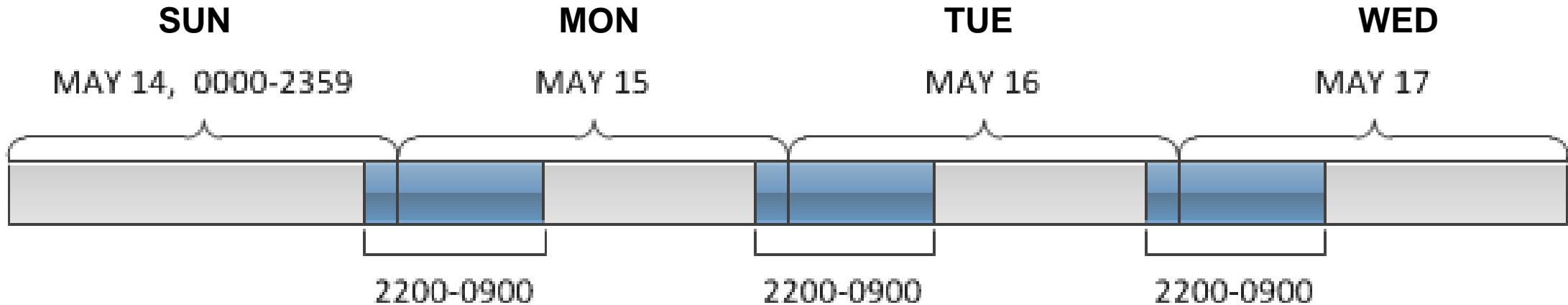
NOTAM Components (When Needed): Schedule

Specified in the element before the Start of Activity

Example:

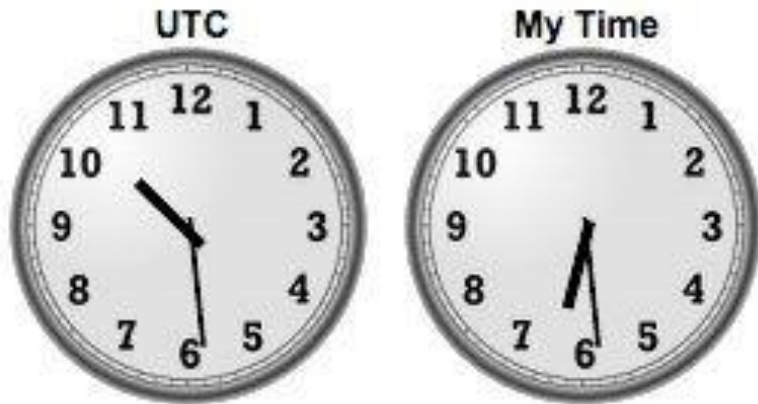
!GNV YY/NNN F95 AIRSPACE MIL ACT WI AN AREA DEFINED AS 3NM RADIUS OF F95 SFC-14000FT **DLY 2200-0900 1705142200-1705170900**

Explanation: The military activity is occurring between 2200UTC and 0900UTC each day starting on Sunday May 14, 2017, and ends on Wednesday May 17, 2017.



Common Issue

Determining the schedule within the valid times may be confusing especially when the schedule includes overnight activity across a period of several days.

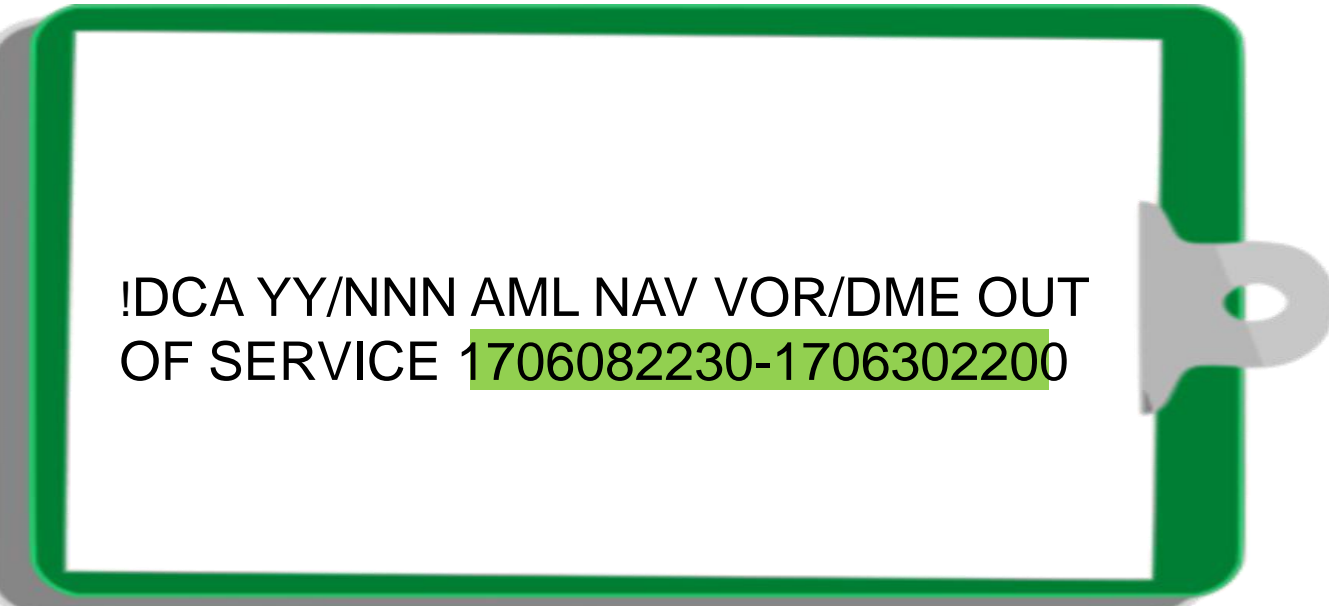


Best Practice

Ensure the schedule times match the Start of Activity and End of Validity times.

Referencing the example on the previous slide... Since NOTAMs use Coordinated Universal Time (UTC), the activity starts Sunday at 2200 UTC, occurs again on Monday and Tuesday at 2200 UTC, then ends on Wednesday at 0900 UTC.

NOTAM Components: Start of Activity/End of Validity



!DCA YY/NNN AML NAV VOR/DME OUT
OF SERVICE 1706082230-1706302200

A 10-digit date-time group (YYMMDDHHMM)
UTC indicating:

The time at which the NOTAM comes into force
(the date/time a condition will begin)

The time at which the NOTAM ceases to be in
force and becomes invalid (the expected time of
return to service, return to normal status, or the
end of the activity)



Common Issue

Misunderstanding the use of “estimated” (EST)



Best Practice

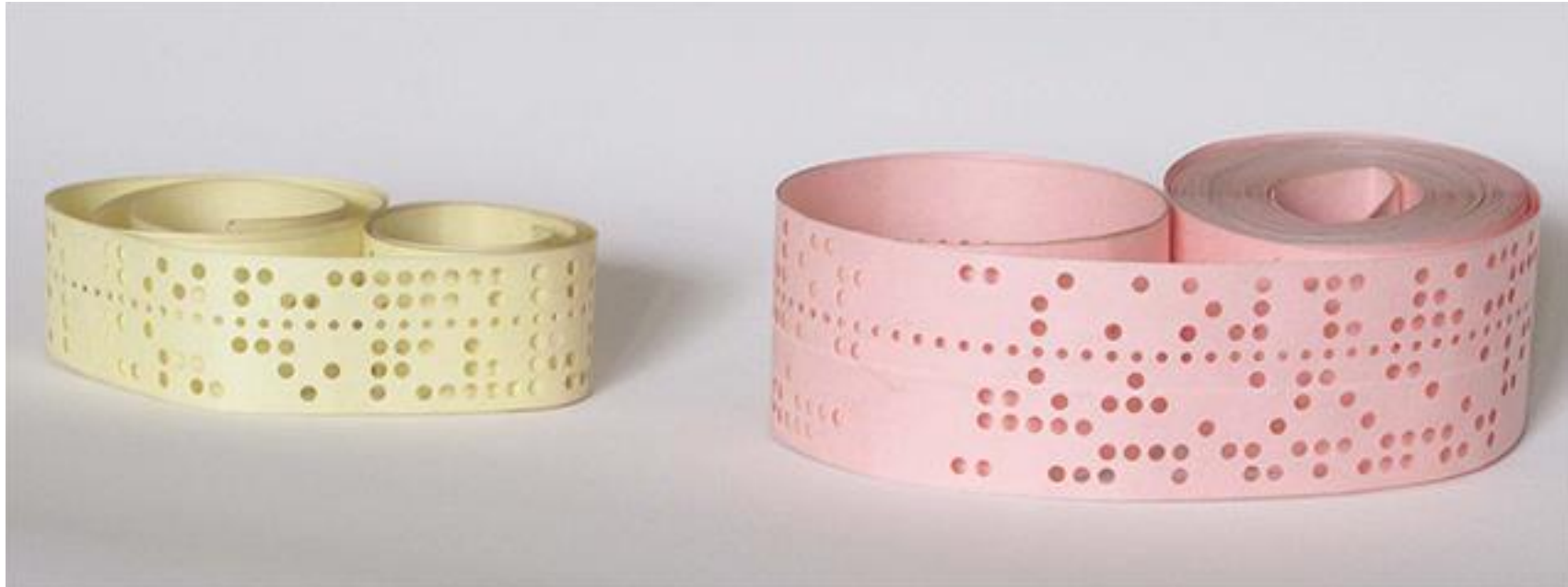
Use EST when the condition may finish and resume normal operations earlier than anticipated.

All NOTAMs (except PERM) will auto-cancel at the End of Validity.

A NOTAM is not valid past its End of Validity time and must not be used for navigation purposes.

Verify the accuracy of NOTAMs on a daily basis.

Classification of NOTAMs



NOTAM D

**!DAY 07/030 DAY TWY K HLDG PSN SIGN
NOT LGTD 1707280307-1708072200**



These are NOTAMs containing information concerning the establishment, condition, or change of any:

- Aeronautical facility
- En Route NAVAIDS
- Services
- Procedures
- Hazards
- Civil public-use airports listed in the U-S- Chart Supplement

NOTAM Ds are numbered consecutively each month by the NOTAM System starting with 001 for each accountability. This would be the 30th NOTAM issued for the month of July for the DAY accountable location.

Common Issue

The time it takes a NOTAM to process from origination to the end user is not immediate.



Best Practice

The airport should coordinate the activity with the overlying Air Traffic facility.

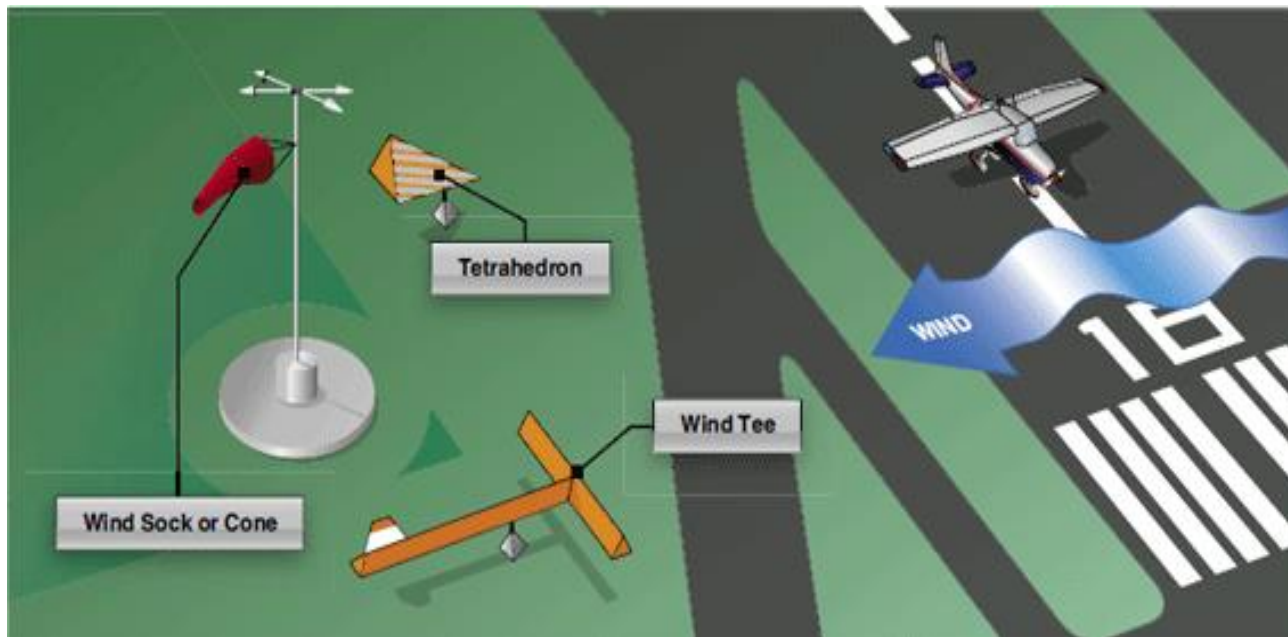
Technical Operations should coordinate the activity with the facility before implementing.

Military NOTAM

***M0318/09 - APCH END RWY 30 WIND
DIRECTION INDICATOR UNSERVICEABLE.
16 JUL 18:17 2016 UNTIL 25 OCT 23:59 2016.
CREATED: 16 JUL 18:18 2016***

Military NOTAMs are issued by the US Air Force, Army, Marines, Navy, and Coast Guard against NAVAIDS and airports.

These NOTAMs are numbered consecutively by accountability, location, and series (beginning with “S0001” each year, where S stands for a generic series the military may have). The NOTAM number and year of issuance are separated by a forward slash.



Common Issue

Military and civil NOTAMs do not use the same format



Best Practice

Read both the civil and military NOTAMs at Joint-Use Airfields.

Understand that Military uses the International NOTAM format and follows their own guidance for writing NOTAM text.

■

FDC NOTAM

These NOTAMs contain flight information that is normally regulatory in nature, including but not limited to:

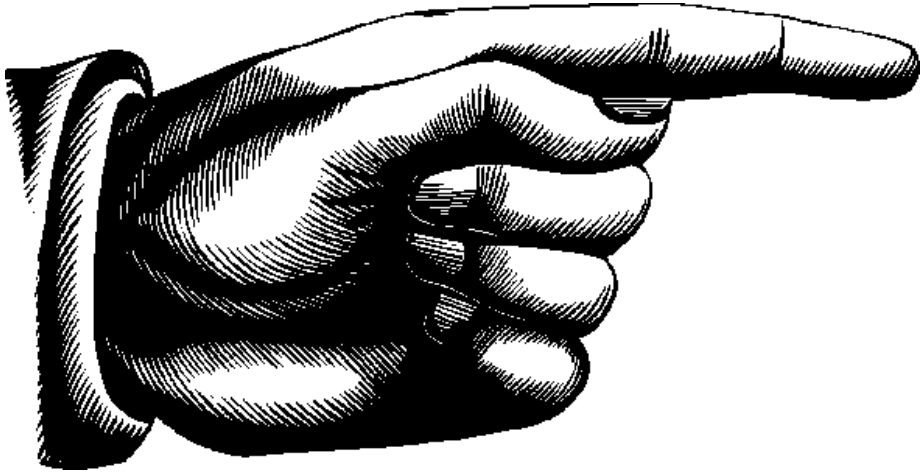
- Changes to Instrument Flight Rules (IFR) charts
- Procedures
- Airspace usage

FDC NOTAM numbers are assigned consecutively by the NS, beginning with “0001” each year. The year of issuance and the serial number are separated by a forward slash (Y/NNNN).

!FDC 7/7848 (A2765/17) JFK IAP JOHN F KENNEDY INTL, New York, NY. VOR RWY 4L, AMDT 1... DME OR RADAR REQUIRED EXCEPT FOR AIRCRAFT EQUIPPED WITH SUITABLE RNAV SYSTEM WITH GPS, CRI R-153 UNUSABLE. 1705011218-1712111218EST



Pointer NOTAM



A Pointer NOTAM is a NOTAM D issued to point to another NOTAM.

The keyword in the pointer NOTAM must match the keyword in the original NOTAM.

Original:

!ATL 05/754 ZTL SVC STANLY APP CLSD 1706011700-1706170200

Explanation: The Stanly Approach Control is closed.

Pointer:

!VUJ 05/023 VUJ SVC SEE ZTL 05/754 STANLY APP CLSD 1706011700-1706170200

Unique NOTAMs



International NOTAM

International NOTAMs are received from other countries and are also generated by the US NOTAM Office (USNOF). International NOTAMs are stored in the NOTAM System.



CO101/08 NOTAM

A) AUSTRALIAN FLIGHT INFORMATION REGION

B) 0812240745(SUNSET CHRISTMAS EVE) C) 0812252315(SUNRISE CHRISTMAS MORNING)

E) ALL TIMES IN UTC (UNIVERSAL TIME)

AIRSERVICES AUSTRALIA SPECIAL NOTICE TO AIRMEN.

ALL ACFT INCLUDING REGULAR PUBLIC TRANSPORT, EMERGENCY MEDICAL FLIGHTS, FLYING DOCTOR, FIRE FIGHTERS, POLICE AND THOSE JUST GOING TO BE WITH FRIENDS AND FAMILY THIS NIGHT ARE ADVISED TO BE ALERT TO THE REGULAR YEARLY OCCURENCE - ASSOCIATED WITH CHRISTMAS PRESENT DELIVERY.

DEPARTURE POINT: NORTH POLE

DURATION OF FLIGHT: THE AUSTRALIAN SECTION COMMENCES AT SUNSET NORFOLK ISLAND AND WILL BE COMPLETED BY SUNRISE COCOS ISLAND IN THE INDIAN OCEAN WITH A 30MINUTE BUFFER AT START AND FINISH TO ALLOW FOR THE UNLIKELY DELAY.

TRACK: GPS ASSISTED FLEXIBLE AND SECRET.

TRACKING TO EACH LOCATION WHERE GOOD CHILDREN SLEEP.

ACFT: HEAVY LIFT, STEALTH SLEIGH

DRIVE TYPE: 9 DEER(9DR)DRIVE FITTED WITH ENVIRONMENTALLY FRIENDLY AFTER BURNERS

FUEL TYPE: BIO(SUSTAINABLE GREEN GRASS AND MOSS) SUPPLEMENTED WITH THE ODD BIT OF CHRISTMAS CAKE AND MILK OR ICE COLD WATER.

SEPARATION STANDARDS: EQUIPPED WITH TRAFFIC COLLISION AVOIDANCE SYSTEM (TCAS) AND OPERATION ON SEE BUT NOT BE SEEN VISUAL FLIGHT RULES.

OPERATING SPEED AT ALL LEVELS: ABSLOUTELY CLASSIFIED TOP SECRET.

AS FOR PREVIOUS YEARS THE OPERATING LEVELS WILL BE

LOWEST LEVEL: ROOF TOP (DURING DELIVERY SEGMENTS)

UPPER LEVEL: LOW EARTH ORBIT (IN TRANSIT)

OPERATING AUTHORITY: SANTA

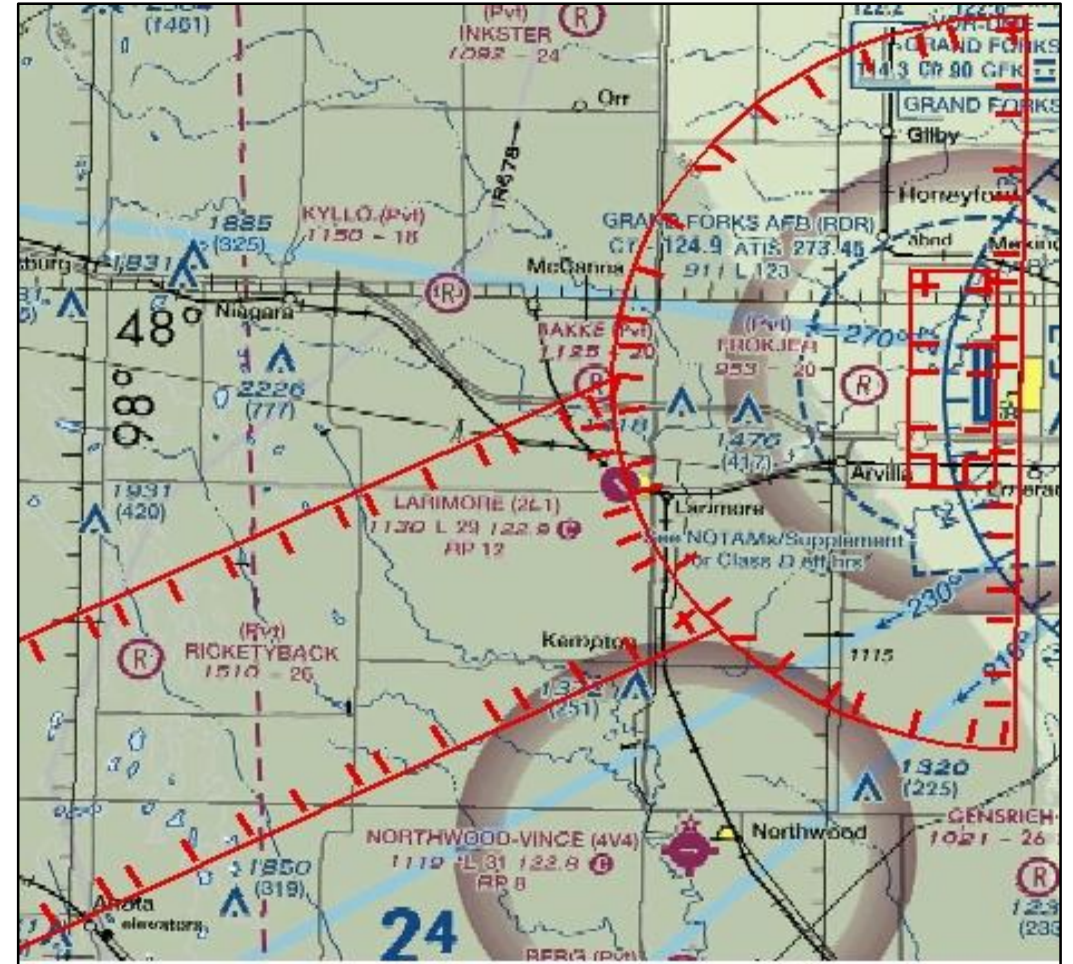
CONTACT: GOOGLE IT



Temporary Flight Restriction (TFR) NOTAM

A TFR is a type of NOTAM that defines an area restricted to air travel due to a hazardous condition or a special event, or that distributes a general warning for the entire FAA airspace.

You can find TFR NOTAMS online in the FAA's TFR Listing (<http://tfr.faa.gov>) or the FAA's NOTAM search engine (<https://notams.aim.faa.gov/notamSearch/>)



Central Altitude Reservation Facility (CARF) and Special Activity Airspace (SAA) NOTAMs

***!CARF YY/NNN ZOA AIRSPACE DCC
PIG SHED STNR ALT RESERVATION
WI AN AREA DEFINED AS
3953N11833W TO 3946N11843W TO
4012N11939W TO 4014N11921W TO
POINT OF ORIGIN FL190-FL220
1706161730-1706161930***

***!SUAE YY/NNN ZNY AIRSPACE
R5206 ACT SFC-5000FT 1706141000-
1706150400***

CARF NOTAMs contain airspace and altitude reservations transmitted by the USNOF after receipt of the candidate NOTAM from the CARF office.

SAA includes special use airspace (SUA) (restricted area, military operations area (MOA), warning area, and alert area airspace), instrument and visual military training routes, and aerial refueling tracks and anchors.

Field Condition (FICON) NOTAM

A FICON NOTAM contains information on the surface conditions of landing runways, taxiways and aprons.

Example:

...RWY 01 FICON 1/2/2 100 PRCT ICE, 100 PRCT 1IN SLUSH, 100 PRCT 1IN SLUSH...

Explanation: Runway 01 is the landing runway. The RWY Condition Code is 1/2/2. The first third is covered with between 90-100% ice. The remaining two-thirds are 100% covered in one inch of slush.



Global Positioning System (GPS) NOTAM



GPS interference missions are conducted to meet national security requirements and normally cover a wide geographical area. During the testing GPS signals may become unavailable. A NOTAM is issued to describe the affected area(s).

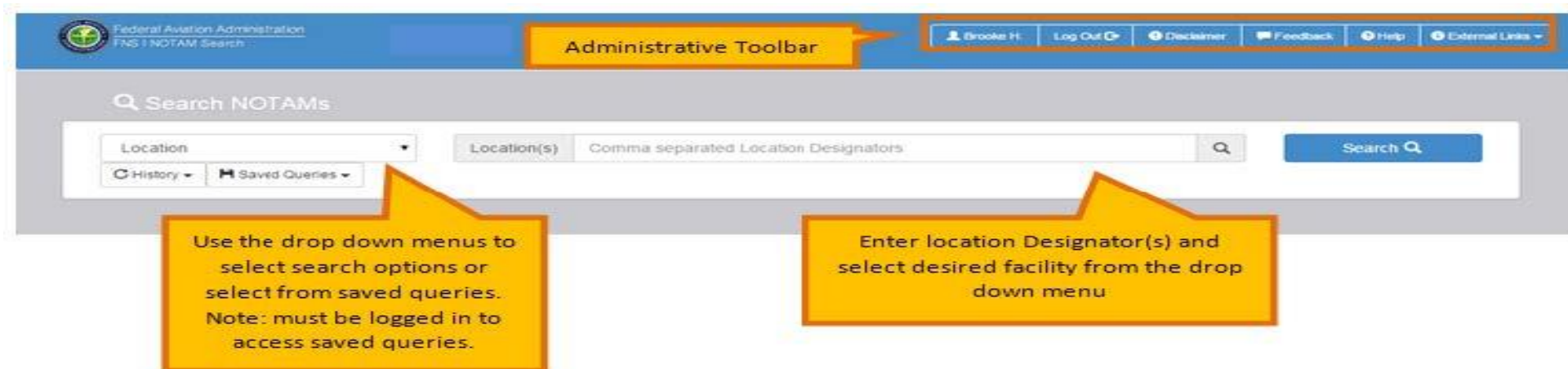
https://www.faa.gov/SPANS/notices_public.aspx

**!GPS ZAB NAV GPS (NAFC GPS 15-01 E1)
(INCLUDING WAAS, GBAS, AND ADS-B) MAY NOT
BE AVBL WI AN AREA DEFINED AS A 468NM
RADIUS CENTERED AT 330702N1062540W
(TCS103044) FL400-UNL 425NM RADIUS AT FL250,
360NM RADIUS AT 10000FT, 354NM RADIUS AT
4000FT AGL, 327NM RADIUS AT 50FT AGL DLY
0400-1000 1808060400-1808081000**

NOTAM Search <https://notams.aim.faa.gov/notamSearch/>

The NOTAM Search tool allows all users to search for active NOTAMs in the United States NOTAM System (USNS).

Users are able to search for NOTAMs based on location, flight path, geography, latitude/longitude, free text, accountability, archives and NOTAMs in proximity to location. Users are also able to filter the results, as well as generate reports based on search results.



Notice to Airmen Publication (NTAP)

The main references for changes to the National Airspace System (NAS) are the Aeronautical Charts and the Chart Supplements. Most changes to the NAS meeting NOTAM criteria are known sufficiently in advance to be carried in these publications. When this cannot be done, changes are carried in the Notices to Airmen publication (NTAP) and/or the Service A telecommunications system as a NOTAM D item.

NOTICES TO AIRMEN
July 20, 2017

Flight Data Center (FDC) NOTAM information current as of June 28, 2017
FDC NOTAMs listed through 7/1935 dated June 28, 2017

Prior to flight, pilots should always check with Flight Service for current NOTAMs (1-800-WX-BRIEF).

TABLE OF CONTENTS

General Information

Title	Page	
Publication Schedule	v	■
Subscription Information	vi	
Foreword (criteria and procedures for submitting data for publication)	vii	
Contractions	x	
NOTAM	x	
Weather	xii	

PART 1. FDC NOTAMs

Section 1. Airway NOTAMs

Airway NOTAMs (listed alphabetically by ARTCC)	1-AN-1	■
--	--------	---

Section 2. Airport, Facility and Procedural NOTAMs

Content Criteria		
Airport, Facility, and Procedural NOTAMs (listed alphabetically by state or territory)	1-AFPN-1	■

Section 3. General NOTAMs

General NOTAMs (listed by NOTAM number, beginning with the most recent)	1-GN-1	■
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PART 2. Part 95 Revisions

Revisions to Minimum En Route IFR Altitudes & Changeover Points	1-IFR-1	
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Frequently Asked Questions

Q1) What is the purpose of a GPS NOTAM?

A1) To identify an area of coverage that may be affected by unreliable GPS signals.

Q2) What does the NOTAM format look like?

A2) See examples in the FAA Order 7930.2, *Notices to Airmen*; the Advisory Circular; and samples on the e-NOTAM II (ENII) website.

Q3) How do I access NOTAMs on the FAA website?

A3) They are fully accessible via NOTAM Search (see reference slide)

a) A search can be conducted on “location,” “free text,” “geographical radius,” or “flight path.”

b) Historical NOTAMs can be seen using the “archive” function:

1) The NOTAM history goes back five years.

2) You must provide a specific location on a specific date.

Frequently Asked Questions

Q4) Why do all NOTAMs have a start/stop time?

A4) Until Further Notice (UFN) and With Effect From (WEF) have been replaced with the ICAO Start of Activity/End of Validity.

Q5) When is the term “PERM” (permanent) used as the End of Validity?

A5) When NOTAM content is to be published in the U.S. Chart Supplement or other publication.

Q6) What is the difference between the Aeronautical Information Service (AIS) 24x7 NOTAM office and the U.S. NOTAM Office?

A6) The USNOF is charged with monitoring the NOTAM System for compliance with the criteria and procedures set in the 7930.2. Whereas the AIS office is responsible for originating FDC NOTAMs for revisions to instrument flight procedures.

Frequently Asked Questions

Q7) Crane operations off-airport

A7) Utilize the OE/AAA tracker at <https://oeaaa.faa.gov/oeaaa/external/portal.jsp> to have a better situational awareness at airports.

Q8) I'm the NOTAM Originator. What do I do when a NOTAM condition still exists, but the NOTAM is about to auto-cancel?

A8) The NOTAM Originator has the responsibility to ensure the NOTAM is replaced with a new End of Validity time. If a NOTAM drops out of the system, the end user will assume the situation rectified itself and is back to normal operations.

References

Internet Resources:

NOTAM Search: <https://notams.aim.faa.gov/notamSearch/>

National Flight Data Center Homepage: <https://nfdc.faa.gov/xwiki/bin/view/NFDC/WebHome>

Flight Service Homepage: www.faa.gov/go/flightservice

Flight Service Flight Briefing Website: www.1800wxbrief.com

FAA Website: www.faa.gov

Current Temporary Flight Restrictions: <http://tfr.faa.gov>

Flight Service ENII System: <https://notams.aim.faa.gov/en2/>

GPS Notices: https://www.faa.gov/SPANS/notices_public.aspx

FAA Documents:

The Aeronautical Information Manual (AIM) contains important NOTAM governance for pilots.

FAA Order 7930.2, *Notices to Airmen*, provides guidance for FAA users.

Advisory Circular (AC) 150/5200-28, NOTAMs for Airport Operators, provides information to the airport operator.

FAA Order JO 7340.2G, *Contractions*, contains guidance on appropriate abbreviations for NOTAM writing.