

# **Notices to Airmen Publication Part 1 Dissolution**

## **Safety Risk Management Document**



**Version 1.5**

**April 2, 2018**

## SRM Document Change Page

Date	Change Summary	Version Number
9/8/2017	Initial Draft	0.1
10/12/2017	Changes incorporating SRM Panel comments	1.0
11/17/2017	Changes incorporating comments from ATO Safety Engineering Team (AJI-314) review	1.2
4/2/2018	Incorporates modifications and additions required by approving authorities	1.5

## Contents

Section 1. Executive Summary .....	1
1.1. Administrative Information .....	1
1.2. Current System .....	1
1.3. Change Proposed .....	4
1.4. Risk Summary .....	5
1.5. Risk Treatment and Monitoring .....	11
1.6. Hazard and Risk Analysis .....	13
1.7. Attachments .....	21
Section 2. SRM Document Signatures .....	22
Section 3. SRM Panel Attendees .....	23

## Tables

Table 1.1: 5M Model .....	3
Table 1.2: Hazard List .....	5
Table 1.3: Safety Requirements .....	12
Table 1.4: Monitoring Plan and Safety Performance Targets .....	13
Table 1.5A: Hazard Analysis Worksheet for Hazard NTAP-01 .....	14
Table 1.5B: Hazard Analysis Worksheet for Hazard NTAP-02 .....	17
Table 3.1: SRM Panel Members, SMEs, Observers, and Facilitation Team .....	23

## Figures

Figure 1.1: Hazard NTAP-01 Initial Risk .....	8
Figure 1.2: Hazard NTAP-02 Initial Risk .....	11

## Appendices

Appendix A. NTAP Part 1 Dissolution Hazard Analysis Worksheets .....	A1
Appendix B. SMS Hazard Severity and Likelihood Definition Tables .....	B1
Appendix C. AOPA Letter to U.S. NOTAM Office (AJR-B11) .....	C1
Appendix D. Document Change Proposals .....	D1
Appendix E. Acronyms .....	E1

# SECTION 1. EXECUTIVE SUMMARY

## 1.1 Administrative Information

**Title:** Notices to Airmen Publication Part 1 Dissolution Safety Risk Management Document

**Initiating Organization:** U.S. NOTAM Governance and Operations Group, AJR-B3

**Safety Analysis Type:** Operations

## 1.2 Current System

### Introduction

The Notices to Airmen Publication (NTAP) is published every 28 days. Data in this publication which is current on the effective date of the next Chart Supplement will be transferred to the supplements and removed from this publication. Notice to Airmen (NOTAM) information of a temporary nature is not expected to remain current for an extended period and is carried until expiration or cancellation. NOTAMs of a permanent nature are carried until published on the proper charts or in the Chart Supplements.

Part 1 of the NTAP contains flight data center (FDC) NOTAMs that are critical to the safe planning and execution of a flight for a pilot operating under instrument flight rules (IFR). Part 1 includes three sections:

- Section 1: Airway NOTAMs. NOTAMs are sorted alphabetically by ARTCC and in descending FDC NOTAM numerical order.
- Section 2: Airport, Facility and Procedural NOTAMs. Categories may include Chart Corrections, Airports, Facilities, Procedural NOTAMs, and others, as required. NOTAMs in section 2 are sorted alphabetically by state, city, airport name and in descending NOTAM numerical order.
- Section 3: General NOTAMs. Contains NOTAMs that are general in nature and not tied to a specific airport/facility identifier; i.e., flight advisories and restrictions. NOTAMs in section 3 are sorted by descending NOTAM numerical order.

It should be noted that, prior to December 7, 2017, the NTAP was not electronically searchable. As a result, the format of the document made it difficult for the pilot to quickly find the information that is pertinent to his/her particular flight. The NTAP is now available in HTML format, and the process of searching for pertinent NOTAMs is considerably easier.

Facilities are responsible for forwarding NOTAM information to be included in Part 1 to the National Flight Data Center (NFDC). These NOTAMs are also available via NOTAM Search and Pilot Web, both of which are public, searchable databases. Pilots are able to view FDC NOTAMs when receiving a weather briefing and filing a flight plan through online media such as CSRA, Inc. Direct User Access Terminal Service (DUATS) and Leidos 1800wxbrief.com.

FDC NOTAMs reflect changes to the Terminal Procedures Publication, flight restrictions, and aeronautical chart revisions. The date and number of the last FDC NOTAM included in this issue is indicated on the Table of Contents page. This ensures that FDC NOTAMs issued after the NTAP cutoff date can be identified. So, for example the Table of Contents page for the NTAP published on June 22, 2017 contains the following statement:

“Flight Data Center (FDC) NOTAM information current as of May 31, 2017  
FDC NOTAMs listed through 7/4611 dated May 31, 2017”

The NTAP states that “current NOTAMs are available from Flight Service Stations at 1-800-WX-BRIEF. Notices, restrictions, and advisories may change at any time and without notice. Do not attempt any operation in the National Airspace System without first obtaining and understanding a thorough pre-flight briefing.” In addition, the Table of Contents page presents the following statement: “Prior to flight, pilots should always check with Flight Service for current NOTAMs (1-800-WX-BRIEF).”

Flight Service Station (FSS) specialists are required to inform a pilot of all applicable NOTAMs for the planned route of flight when briefing a pilot over the phone or face-to-face. Currently, according to FAA Order JO 7110.10Z: Flight Services, paragraph 3.2.1.c-8(b), FSS specialists are only required to brief NOTAMs carried in the NTAP upon request. A specialist would have to search the actual publication to identify the relevant NTAP NOTAMs for a particular route of flight. Verification of the validity of NOTAMs published in the NTAP is required to ensure that a Pilot Weather Briefer is not disseminating obsolete information.

Flight Service Stations in the continental United States use Leidos Flight Service 21 (FS21) for their flight service duties and responsibilities. FAA Flight Service Stations in Alaska use the Operational and Supportability Implementation System (OASIS) to perform their duties and responsibilities. NTAP NOTAMs are not included in either of these systems. FS21 and OASIS suppress these NOTAMs from being visible to the Specialist. Once the new publication is received, only changes are updated in the two operational computer systems. It is important to note that only 5 percent of the total volume of flight planning services are provided through face-to-face or phone interactions.

### **Need for an SRM Panel**

On February 1, 2017, a representative from the Aircraft Owners and Pilots Association (AOPA) wrote a letter to the manager of the FAA U.S. NOTAM Governance and Operations Group (AJR-B3) stating concerns about NTAP Part 1 and its visibility to pilots. AOPA pointed out that NOTAMs are a pilot compliance issue as well as a safety issue, and the ramifications of a pilot missing a critical NOTAM are potentially severe.

Per the Federal Aviation Regulations Part 91.103, before beginning a flight a pilot must become familiar with all available information concerning that flight, including all applicable NOTAMs. NOTAMs contained in the NTAP lack visibility to pilots due to the volume of NOTAMs and the lack of a search capability in the NTAP. NOTAMs contained in NTAP Part 1 are available on NOTAM Search and Pilot Web.

Nevertheless, there is growing confusion among pilots regarding what is and what is not being briefed by the FSS specialist. It is also believed that the availability of NOTAMs published in the NTAP on FAA NOTAM websites is having the unintended consequence of letting pilots think that they do not need to check the NTAP since all the NOTAMs should be visible on NOTAM Search. AOPA notes that this is incorrect and is increasing the unsafe condition of important information being missed by pilots.

As mentioned, the NTAP is published every 28 days; therefore, there is considerable lag in the information that it provides. It is 22 days old by the effective date of the publication, and NOTAMs may become invalid by being cancelled mid-cycle, providing inaccurate and outdated information. This conflict causes safety concerns for pilots.

### Scope of SRM Panel

Scoping a safety analysis is essential to developing the most targeted and measurable mitigations possible. A 5M Model is a useful tool for scoping the analysis. For this safety assessment, the 5M Model was completed as follows:

**Table 1.1: 5M Model**

<b>Mission:</b> The clearly defined and detailed purpose of the NAS change proposal or system/operation being assessed	Modify the Notice to Airmen Publication (NTAP) by removing Part 1.
<b>(hu)Man:</b> Operators, maintainers, and affected stakeholders	<ul style="list-style-type: none"> <li>• Air Traffic Controllers</li> <li>• Pilots</li> <li>• AJV—Aeronautical Information Services</li> <li>• Air Traffic Procedures</li> <li>• Department of Defense</li> <li>• Flight Service</li> <li>• Flight Data</li> <li>• Dispatchers</li> <li>• NOTAM Office</li> <li>• Flight Standards</li> </ul>
<b>Machine:</b> Equipment used in the system	<ul style="list-style-type: none"> <li>• The Federal NOTAM System (FNS),</li> <li>• United States NOTAM System (USNS),</li> <li>• Flight Service 21</li> <li>• OASIS</li> <li>• Alaska administrative and operational computer</li> <li>• FAA Telecommunications Infrastructure (FTI)</li> </ul>

<p><b>Management:</b> Procedures and policies that govern the system's behavior</p>	<ul style="list-style-type: none"> <li>• NTAP</li> <li>• FAA Order 7110.10Z: Flight Services</li> <li>• FAA Order 7110.65X: Air Traffic Control</li> <li>• FAA Order 7930.2: Notices to Airmen</li> <li>• Aeronautical Information Publication (AIP)</li> <li>• Aeronautical Information Manual / Pilot Controller Glossary (AIM/PCG)</li> <li>• FAA-H-8083-25B: Pilot's Handbook of Aeronautical Knowledge</li> <li>• FAA-H-8083-16A: Instrument Procedures Handbook</li> <li>• FAA-H-8083-15B: Instrument Flying Handbook</li> <li>• FAA Order 8260.19: Flight Procedures and Airspace</li> </ul>
<p><b>Media:</b> The environment in which the system is operated/maintained</p>	<ul style="list-style-type: none"> <li>• National Airspace System (NAS)</li> </ul>

### 1.3 Change Proposed

It has been proposed that Part 1 Sections 1, 2, and 3 be removed from the NTAP. Part 1 contains FDC NOTAMs that pertain to routes and procedures. However, the removal of Part 1 and the availability of that information in USNS/FNS is not intended to create a requirement for this information to be briefed by FSS specialists. In fact, the number of pilots who would request this type of information from FSS, regardless of duration (longer than 30 days would be published), is extremely low. All FDC NOTAMs pertaining to routes and procedures should be "on request items" only. Amendments should be made to impacted documents such as FAA Order 7110.10, the Aeronautical Information Manual (AIM), etc.

A suggested amendment to FAA Order 7110.10Z is to delete sub-paragraph 3-2-1c.8(b) and add the following verbiage to paragraph 3-2-1c: "FDC NOTAMs containing amendments to Airways, Airport, and Facility Instrument Flight Rules (IFR) procedures and General Information are on request items only. Also note that General FDC NOTAMs include Chart amendments, Special Security Instructions, and Special Advisory Notices."

Parts 2, 3 and 4 of the NTAP contain information not directly related to the safety of flight operations. Removing Part 1 of the document would make the remainder of the NTAP more useful as a stand-alone document for flight planning. With the availability of NOTAM Search, there is no need to publish permanent NOTAMs elsewhere, and removing Part 1 from the NTAP will reduce pilot and controller confusion. In addition, the 28-day publication cycle for the NTAP and its impact on delaying the visibility of

critical NOTAM information will no longer be a concern after the transition to hosting the information online in real-time on NOTAM Search.

The Panel identified the following five assumptions that were used in the hazard identification and risk analysis processes:

- All valid NOTAMs in Part 1 of the NTAP are in the U.S. NOTAM System, later to be replaced by the Federal NOTAM System.
- All types of current NOTAMs are in USNS/FNS.
- After the change, the automated system will no longer be suppressing Part 1 NOTAMs. However, Service providers may filter or parse these types of NOTAMs as not to hinder the FSS specialist. For example, the automated system places these NOTAMs in an on request only tab.
- Flight Service 21 and OASIS will be tested for proper functionality if any changes to these systems are necessary.
- Flight Service specialists will be briefed on the change to NTAP Part 1, that is, that previous Part 1 FDC NOTAMs will no longer be suppressed.

## 1.4 Risk Summary

After completing a preliminary hazard list, the panel identified two hazards introduced by this change.

**Table 1.2: Hazard List**

Hazard ID	Hazard Description	Initial Risk	Predicted Residual Risk
NTAP-01	Current configurations of OASIS and FS 21 do not display all Part 1 FDC NOTAM information.	4D – Low	4D – Low
NTAP-02	An increase in the amount of information that needs to be scanned may lead to a greater chance of missing NOTAMs previously contained in Part 1 of the NTAP.	4D – Low	4D – Low



## **1.4.1 Hazard NTAP-01**

### **1.4.1.1 Hazard Identification and Causes**

Currently, both FS21 and OASIS are suppressing NTAP NOTAMs from being presented to Flight Service Station Specialists. These systems have the option to end the suppression of these NOTAMs. The concern is that once suppression is stopped, previous NOTAMs contained in Part 1 will still continue to be suppressed. This will lead to a FSS not seeing the NOTAM and, therefore, not relaying critical information to a pilot. It would be caused by suppression of NTAP Part 1 NOTAMs by the software.

### **1.4.1.2 System States**

The system state was determined to be during an initial transition period in which Part 1 NOTAMs will no longer be included in the NTAP. Telephone and face-to-face pilot weather briefings using FS 21 and OASIS in which a pilot requests NTAP NOTAMs are also included in the system state. The panel established the duration of the transition period as two NTAP publication cycles, or 56 days.

### **1.4.1.3 Controls**

The panel acknowledged several policy documentation controls currently in place that address the issue of NOTAMs not being available to specialists. These include:

- FAA Order JO 7110.10Z, *Flight Services*: Chapter 3, Section 2 addresses Pilot Pre-Flight Briefings. Paragraph 3-2-1.c specifies that FSSs should provide NOTAM information (e.g., airport/runway closures, air traffic delays, TFRs, etc.) when it is applicable to the proposed flight. Specifically, sub-paragraph 3-2-1.c-8(b) requires specialists to provide FDC NOTAM information affecting the particular flight that is not already carried in the NTAP. Thus, route and procedure FDC NOTAMs are briefed upon request, but controllers are not required to brief FDC NOTAMs that are contained in the NTAP.
- FAA Order JO 7110.65X, *Air Traffic Control*: Chapter 2, Section 9 specifies Automatic Terminal Information Service (ATIS) procedures. Paragraph 2-9-2.a3 requires controllers to maintain an ATIS message that reflects the most current arrival and departure information and to make a new ATIS recording when there is any change to NOTAM information, such as new or canceled NOTAMs. In addition Paragraph 2-9-3.g specifies that NOTAM information pertinent to operations in the terminal area shall be included in the ATIS broadcast. Air traffic control has the requirement to issue NOTAMs to flight crews on arriving flights.
- Title 14 of the Code of Federal Regulations (14 CFR): Section 91.103 requires that pilots shall, before beginning a flight, become familiar with all available information concerning that flight, including NOTAM information.

#### 1.4.1.4 Effects

The panel agreed that the worst credible effect from this hazard would be that a pilot does not receive a NOTAM that was previously contained in Part 1 of the NTAP.

#### 1.4.1.5 Severity

The panel agreed that Air Traffic Control Specialists (ATCS) will be able to intervene. This intervention may lead to working an aircraft back into the traffic flow after a missed approach or go-around, slightly increasing the workload of the ATCS and flight crew. Using the severity classifications from the ATO SMS Manual shown in Appendix B, the consensus position of the panel was that the increase in ATC workload would be potentially significant, there would be an increased flight crew workload, and there would be a slight reduction in safety margin if a pilot did not receive a NOTAM for an airport condition. Therefore, the panel assigned a severity rating of **4-MINOR** for this hazard.

#### 1.4.1.6 Likelihood

The panel agreed that this hazard would be present during the short transition period identified in the system state. In the ensuing discussion of the likelihood of occurrence, one panel member questioned whether it is certain that no action will need to be taken to suppress the NOTAMs as soon as the change to remove Part 1 NOTAMs from the NTAP is implemented. After the change, the automated system will no longer be suppressing Part NOTAMs. However, Service providers may filter or parse these types of NOTAMs as not to hinder the FSS specialist. For example, the automated system places these NOTAMs in an on request only tab. Verification would be needed that the automation system is functioning as intended after the change is implemented. Subject matter experts from Leidos responded that the system's functionality would be verified after the change. They know what NOTAMs are in Part 1, and after the change they would check to see that those NOTAMs are now displayed to the specialist. Considering the assumption that the functionality of FS 21 and OASIS will be verified prior to implementing the change, the panel unanimously agreed that the likelihood of a pilot not receiving a NOTAM during the 56-day transition period is **D-EXTREMELY REMOTE**. As a result, the initial risk for this hazard was assessed to be **4D-LOW**.

The initial risk for Hazard NTAP-01 is depicted on the risk matrix in Figure 1.1.

Severity Likelihood	Minimal 5	Minor 4	Major 3	Hazardous 2	Catastrophic 1
Frequent A	Low	Medium	High	High	High
Probable B	Low	Medium	High	High	High
Remote C	Low	Medium	Medium	High	High
Extremely Remote D	Low	NTAP-01	Medium	Medium	High
Extremely Improbable E	Low	Low	Low	Medium	High* Medium

\*Risk is high when there is a single point or common cause failure.

**Figure 1.1: NTAP-01 Initial Risk**

## 1.4.2 Hazard NTAP-02

### 1.4.2.1 Hazard Identification and Causes

In the current system, NTAP Part 1 NOTAMs are suppressed as prescribed by policy in FAA Order JO 7110.10Z. This is done because these NOTAMs are available in the NTAP, and it allows the FSSs to see fewer NOTAMs for their briefing. Once the Part 1 NOTAMs are no longer included in the NTAP and, thus, are no longer suppressed by the flight planning systems, there will be an increase in the number of NOTAMs presented to FSSs. This could lead to a greater chance of a Specialist missing NOTAMs previously shown in NTAP Part 1. The new system will display more information since it will need to display FDC NOTAMs that were previously contained in NTAP Part 1. This raised a concern among panel members about whether the new NOTAM information is sorted and filtered properly and a concern about missing information that pilots require for safe flight.

A panel member representing Alaska Flight Service commented that Specialists in Alaska will only turn to administrative computers for NOTAM information when the need arises to locate NOTAMs in the NTAP. The standard tool used to obtain NOTAM information is OASIS. The removal of Part 1 of the NTAP could result in more NOTAM information populating OASIS, leading to an increased possibility of missing a NOTAM during a standard pilot brief.

#### **1.4.2.2 System States**

The panel believed this hazard to be present during phone and face-to-face pilot weather briefings using FS 21 and OASIS without the suppression of former Part 1 NOTAMs (Part 1 NOTAMs are displayed).

#### **1.4.2.3 Controls**

Existing controls include the same policy documentation controls indicated in Hazard NTAP-01, namely:

- FAA Order JO 7110.10Z, *Flight Services*
- FAA Order JO 7110.65X, *Air Traffic Control*
- Title 14 of the Code of Federal Regulations (14 CFR) Section 91.103

In addition, the panel identified two procedural or functional controls that mitigate the risk of this hazard:

- The existing sorting and filtering capabilities on FS 21 and OASIS systems can reduce the number of NOTAMs that the specialist needs to brief.
- The Quality Assurance / Quality Control (QA/QC) process currently in place, as outlined in FAA/Leidos Flight Services PM Scoring Deskguide, Version 7, ensures proper delivery of NOTAMs. Specifically, Section 4 PM 2a specifies the process for reviewing and scoring NOTAMs for accuracy of delivery.

#### **1.4.2.4 Effects**

The panel agreed that the worst credible effect from this hazard is that a pilot does not receive critical FDC NOTAMs applicable to his or her flight, resulting in a pilot deviation or possibly a missed approach.

#### **1.4.2.5 Severity**

The panel agreed that air traffic controllers will be able to intervene to mitigate the adverse effects of this hazard. Also, the existing control in 14 CFR Section 91.103 requiring the pilot self-brief to obtain current NOTAM information was considered in determining the severity level. ATC intervention may lead to working an aircraft back into the traffic flow after a missed approach or go-around, slightly increasing the workload of the controller and flight crew. Using the severity classifications from the

ATO SMS Manual shown in Appendix B, the panel determined that the increase in ATC workload would be potentially significant and there would be a slight reduction in safety margin if a pilot did not receive a relevant FDC NOTAM. Therefore, the panel assigned a severity level of **4-MINOR** for this hazard.

#### **1.4.2.6 Likelihood**

After the change to eliminate Part 1 from the NTAP, the number of FDC NOTAMs seen by Flight Service specialists will increase unless systems are configured to filter and parse these NOTAMs out of the specialist's view. So, the chance of missing any FDC NOTAM, not only a former NTAP Part 1 NOTAM, also increases. However, it was stated that only approximately 5% of flights call Flight Service to request a verbal briefing and also that this situation is applicable only to flights operating under Instrument Flight Rules (IFR) since FDC NOTAMs apply to IFR flights. Although no relevant quantitative data is available to support a likelihood determination, the panel considered the relatively low number of effected flights and concluded on a qualitative basis that a missed FDC NOTAM requiring ATC intervention and pilot corrective action is possible but highly unlikely. The panel's unanimous likelihood rating was **D-EXTREMELY REMOTE**. The resulting initial risk for this hazard was assessed to be **4D-LOW**.

The initial risk for Hazard NTAP-02 is shown on the risk matrix in Figure 1.2.

Severity Likelihood	Minimal 5	Minor 4	Major 3	Hazardous 2	Catastrophic 1
Frequent A	Low	Medium	High	High	High
Probable B	Low	Medium	High	High	High
Remote C	Low	Medium	Medium	High	High
Extremely Remote D	Low	NTAP-02	Medium	Medium	High
Extremely Improbable E	Low	Low	Low	Medium	High* Medium

\*Risk is high when there is a single point or common cause failure.

Figure 1.2: NTAP-02 Initial Risk

## 1.5 RISK TREATMENT AND MONITORING

### 1.5.1 Safety Requirements

Although the two identified hazards were determined to be Low risk, the panel discussed a variety of possible safety requirements that would assure the required NOTAM information would continue to be disseminated to flight crews after Part 1 of the NTAP is eliminated.

**Table 1.3: Safety Requirements**

<b>Hazard ID: NTAP-01</b>		<b>Planned for implementation?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Safety Requirement</b> OASIS and FS 21 will be tested to ensure proper functionality prior to implementation and verified post-implementation.			
<b>Responsible Organization</b>	Flight Service Safety and Operations Group (FSSOG) Leidos Harris	<b>POC Name and Contact Information</b>	Anthony Brent AJR-B1 <a href="mailto:anthony.brent@faa.gov">anthony.brent@faa.gov</a> 202-267-6316

<b>Hazard ID: NTAP-01</b>		<b>Planned for implementation?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Safety Requirement</b> Add a statement on the title page of the Notices to Airmen Publication stating that Part 1 will be removed from the document effective on the implementation date and that these types of NOTAMs are still considered on request items when obtaining a briefing from FSS. Users will be directed to NOTAM Search to find the NOTAMs previously contained in Part 1.			
<b>Responsible Organization</b>	ATO Mission Support Services, Air Traffic Procedures Group (AJV-8)	<b>POC Name and Contact Information</b>	Natking Estevez AJV-81 <a href="mailto:natking.estevez@faa.gov">natking.estevez@faa.gov</a> 202-267-0859

<b>Hazard ID: NTAP-01 / NTAP-02</b>		<b>Planned for implementation?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Safety Requirement</b> Update policy documents and orders (AIM/AIP, FAA Order JO 7110.10Z, etc.) to include a statement that FDC NOTAMs containing amendments to Airways, Airport, and Facility IFR procedures and General Information are on request items only. General FDC NOTAMs include Chart amendments, Special Security Instructions, and Special Advisory Notices.			
<b>Responsible Organization</b>	FSSOG U.S. NOTAM Governance and Operations Group Air Traffic Procedures Group	<b>POC Name and Contact Information</b>	Anthony Brent, AJR-B1 202-267-6316 Natking Estevez, AJV/8 202-267-0859

### 1.5.2 Monitoring Plan

To measure whether the defined safety performance targets are being achieved, the panel developed monitoring plans for each safety requirement. Monitoring will entail validating that no FDC NOTAMs are inadvertently suppressed after NTAP Part 1 is eliminated as well as monitoring reports on a quarterly basis of any incidents that may result from a missed NOTAM following a phone or face-to-face pilot weather briefing.

**Table 1.4: Monitoring Plan and Safety Performance Targets**

<b>Hazard ID:</b>	<b>NTAP-01</b>
<b>Monitoring POC</b>	Flight Service Safety and Operations Group (FSSOG)
<b>Initial Risk:</b> LOW (4D)	<b>Predicted Residual Risk:</b> LOW (4D)
<b>Monitoring Activities:</b> Validate that no FDC NOTAMs are inadvertently suppressed. The NTAP is issued every 28 days; monitor twice – that is, for two NTAP publication cycles.	
<b>Safety Performance Target:</b> All previous NTAP Part 1 NOTAMs will be visible to Flight Service Specialists during one publication cycle following implementation of the change. Validate for two publication cycles.	

<b>Hazard ID:</b>	<b>NTAP-02</b>
<b>Monitoring POC</b>	Flight Service Safety and Operations Group (FSSOG), Quality Performance Management Group (QPMG), and Alaska Flight Services Information Area Group (AFSIAG)
<b>Initial Risk:</b> LOW (4D)	<b>Predicted Residual Risk:</b> LOW (4D)
<b>Monitoring Activities:</b> Monitor reports of incidents resulting from a missed FDC NOTAM following a phone or face-to-face PWB. These should be monitored quarterly for a period of two years.	
<b>Safety Performance Target:</b> Zero accidents and incidents will occur as a result of a missed FDC NOTAM following a phone or face-to-face PWB.	

## 1.6 HAZARD AND RISK ANALYSIS

The Safety Management Tracking System (SMTS) Data Entry Worksheet below provides the necessary details to support the Executive Summary.



**Table 1.5A: Hazard Analysis Worksheet for Hazard NTAP-01**

1.	<b>Hazard ID</b>  NTAP-01
2a.	<b>Hazard Category and Subcategory</b>  Choose among the following: <ul style="list-style-type: none"> <li>• <b>Controller:</b> Error; Other</li> <li>• <b>Pilot/Operator:</b> Error; Other</li> <li>• <b>Equipment:</b> Failure; Malfunction; Error; Outage; Other</li> <li>• <b>Runway/Airport:</b> Intersection; Convergence; Other</li> <li>• <b>Route:</b> Intersection; Convergence; Other</li> <li>• <b>Obstacle:</b> Terrain; Structure; Aircraft; Parachutist; Other</li> <li>• <b>Wake Turbulence</b></li> </ul> <b>Equipment:</b> Other – System Configuration
2b.	<b>Hazard Description</b>  Current configurations of OASIS and FS 21 do not display all Part 1 FDC NOTAM information.
3a.	<b>Cause and Subcause</b>  Choose among the following: <ul style="list-style-type: none"> <li>• <b>Controller:</b> Situational Awareness; Complacency; Compliance; Understanding; Experience; Communication; Distraction; Fatigue; Other</li> <li>• <b>Technician:</b> Situational Awareness; Complacency; Compliance; Understanding; Experience; Communication; Distraction; Fatigue; Other</li> <li>• <b>Pilot:</b> Situational Awareness; Complacency; Compliance; Understanding; Experience; Communication; Distraction; Fatigue; Other</li> <li>• <b>Equipment:</b> Failure; Malfunction; Error; Outage; Other</li> <li>• <b>Runway/Airport:</b> Intersection; Convergence; Other</li> <li>• <b>Route:</b> Intersection; Convergence; Other</li> <li>• <b>Obstacle:</b> Terrain; Structure; Aircraft; Parachutist</li> </ul> <b>Equipment:</b> Error
3b.	<b>Cause/Subcause Description</b>  NTAP Part 1 NOTAMs will be suppressed and, therefore, will not be available to the Flight Service Specialists.

4a.	<b>System State</b>  Indicate a category from the following: <ul style="list-style-type: none"> <li>• Weather</li> <li>• Traffic</li> <li>• Runway/Airport</li> <li>• Route</li> <li>• Airspace</li> <li>• Equipment</li> <li>• Other</li> </ul>
	Other
4b.	<b>System State Description</b>  During the initial transition period following dissolution of the NTAP Part 1 NOTAMs; phone or face-to-face PWB using OASIS/FS 21 in which pilot requests NTAP NOTAMs.
5a.	<b>Controls Category</b>  Indicate a category among the following: <ul style="list-style-type: none"> <li>• Equipment</li> <li>• Policy/Procedure</li> <li>• Regulation</li> <li>• Best Practice</li> <li>• Work Aid</li> <li>• Other</li> </ul>
	Policy, Regulation
5b.	<b>Controls Description</b>  FAA Order JO 7110.10Z, <i>Flight Services</i> paragraph 3-2-1.c-8(b); FAA, Order JO 7110.65X, <i>Air Traffic Control</i> , Section 9 paragraph 2-9-2.a-3; 2-9-2.b; 2-9-3.g; 2-10-1.e; 14 CFR Section 91.103a
6.	<b>Control Justification / Supporting Data</b>  <ul style="list-style-type: none"> <li>• FAA Order JO 7110.10Z, <i>Flight Services</i>: Chapter 3, Section 2 addresses Pilot Pre-Flight Briefings. Paragraph 3-2-1.c specifies that FSSs should provide NOTAM information (e.g., airport/runway closures, air traffic delays, TFRs, etc.) when it is applicable to the proposed flight. Specifically, sub-paragraph 3-2-1.c-8(b) requires specialists to provide FDC NOTAM information affecting the particular flight that is not already carried in the NTAP. Thus, route and procedure FDC NOTAMs are briefed upon request, but controllers are not required to brief FDC NOTAMs that are contained in the NTAP.</li> <li>• FAA Order JO 7110.65X, <i>Air Traffic Control</i>: Chapter 2, Section 9 specifies Automatic Terminal Information Service (ATIS) procedures. Paragraph 2-9-2.a-3 requires controllers to maintain an ATIS message that reflects the most current arrival and departure information and to make a new ATIS recording when there is any change to NOTAM information, such as new or canceled NOTAMs. In addition Paragraph 2-9-3.g specifies that NOTAM information pertinent to operations in the terminal area shall be included in the ATIS broadcast. Air traffic control has the requirement to issue NOTAMs to flight crews on arriving flights.</li> <li>• Title 14 of the Code of Federal Regulations (14 CFR): Section 91.103 requires that pilots shall, before beginning a flight, become familiar with all available information concerning that flight, including NOTAM information.</li> </ul>

7.	<b>Effect</b>
	A pilot does not receive a NOTAM that was previously contained in Part 1 of the NTAP.
8.	<b>Severity</b>
	Minor (4)
9.	<b>Severity Rationale</b>
	The panel agreed that Air Traffic Control Specialists (ATCS) will be able to intervene. This intervention may lead to working an aircraft back into the traffic flow after a missed approach or go-around, slightly increasing the workload of the ATCS and flight crew. Using the severity classifications from the ATO SMS Manual shown in Appendix B, the consensus position of the panel was that the increase in ATC workload would be potentially significant, there would be an increased flight crew workload, and there would be a slight reduction in safety margin if a pilot did not receive a NOTAM for an airport condition.
10.	<b>Likelihood</b>
	Extremely Remote (D)
11.	<b>Likelihood Rationale</b>
	The panel agreed that this hazard would be present during the short transition period identified in the system state. In the ensuing discussion of the likelihood of occurrence, one panel member questioned whether it is certain that no action will need to be taken to suppress the NOTAMs as soon as the change to remove Part 1 NOTAMs from the NTAP is implemented. The assumption is that after the change, the automation system will no longer be suppressing Part 1 NOTAMs. Verification would be needed that the automation system is functioning as intended after the change is implemented. Subject matter experts from Leidos responded that the system's functionality would be verified after the change. They know what NOTAMs are in Part 1, and after the change they would check to see that those NOTAMs are now displayed to the specialist. Considering the assumption that the functionality of FS 21 and OASIS will be verified prior to implementing the change, the panel unanimously agreed that the likelihood of a pilot not receiving a NOTAM during the 56-day transition period is Extremely Remote–D.
12.	<b>Initial Risk Level</b>
	LOW (4D)
13a.	<b>Safety Requirements Category</b>
	Indicate a category among the following options: <ul style="list-style-type: none"> <li>• System Design</li> <li>• Equipment</li> <li>• Work Aid</li> <li>• Policy/Procedure</li> <li>• Regulatory Requirement</li> <li>• Training</li> <li>• Other</li> </ul>
	Equipment, Policy/Procedure
13b.	<b>Safety Requirements</b>
	1. OASIS and FS 21 will be tested to ensure proper functionality prior to implementation and

	<p>verified post-implementation.</p> <ol style="list-style-type: none"> <li>Add a statement on the title page of the Notices to Airmen Publication stating that Part 1 will be removed from the document effective on the implementation date and that these types of NOTAMs are still considered on request items when obtaining a briefing from FSS. Users will be directed to NOTAM Search to find the NOTAMs previously contained in Part 1.</li> <li>Update policy documents and orders (AIM/AIP, FAA Order JO 7110.10Z, etc.) to include a statement that FDC NOTAMs containing amendments to Airways, Airport, and Facility IFR procedures and General Information are on request items only. General FDC NOTAMs include Chart amendments, Special Security Instructions, and Special Advisory Notices.</li> </ol>
<b>14.</b>	<b>Organization Responsible for Implementing Safety Requirements</b> <ol style="list-style-type: none"> <li>Flight Service Safety and Operations Group (FSSOG)</li> <li>ATO Mission Support Services, Air Traffic Procedures Group (AJV-8)</li> <li>U.S. NOTAM Governance and Operations Group (AJR-B3)</li> <li>Leidos, Harris</li> </ol>
<b>15.</b>	<b>Predicted Residual Risk</b> <p>LOW (4D)</p>
<b>16.</b>	<b>Safety Performance Targets</b> <p>All previous NTAP Part 1 NOTAMs will be visible to Flight Service Specialists during one publication cycle following implementation of the change. Validate for two publication cycles.</p>

**Table 1.5B: Hazard Analysis Worksheet for Hazard NTAP-02**

<b>1.</b>	<b>Hazard ID</b> <p>NTAP-02</p>
<b>2a.</b>	<b>Hazard Category and Subcategory</b> <p>Choose among the following:</p> <ul style="list-style-type: none"> <li><b>Controller:</b> Error; Other</li> <li><b>Pilot/Operator:</b> Error; Other</li> <li><b>Equipment:</b> Failure; Malfunction; Error; Outage; Other</li> <li><b>Runway/Airport:</b> Intersection; Convergence; Other</li> <li><b>Route:</b> Intersection; Convergence; Other</li> <li><b>Obstacle:</b> Terrain; Structure; Aircraft; Parachutist; Other</li> <li><b>Wake Turbulence</b></li> </ul> <p><b>Controller (FSS):</b> Error</p>
<b>2b.</b>	<b>Hazard Description</b> <p>An increase in the amount of information that needs to be scanned may lead to a greater chance of missing NOTAMs previously contained in Part 1 of the NTAP.</p>

3a.	<b>Cause and Subcause</b>  Choose among the following: <ul style="list-style-type: none"> <li>• <b>Controller:</b> Situational Awareness; Complacency; Compliance; Understanding; Experience; Communication; Distraction; Fatigue; Other</li> <li>• <b>Technician:</b> Situational Awareness; Complacency; Compliance; Understanding; Experience; Communication; Distraction; Fatigue; Other</li> <li>• <b>Pilot:</b> Situational Awareness; Complacency; Compliance; Understanding; Experience; Communication; Distraction; Fatigue; Other</li> <li>• <b>Equipment:</b> Failure; Malfunction; Error; Outage; Other</li> <li>• <b>Runway/Airport:</b> Intersection; Convergence; Other</li> <li>• <b>Route:</b> Intersection; Convergence; Other</li> <li>• <b>Obstacle:</b> Terrain; Structure; Aircraft; Parachutist</li> </ul>
	<b>Controller:</b> Situational Awareness
3b.	<b>Cause/Subcause Description</b>  NTAP Part 1 NOTAMs are no longer being suppressed in the OASIS and FS 21 systems.
4a.	<b>System State</b>  Indicate a category from the following: <ul style="list-style-type: none"> <li>• Weather</li> <li>• Traffic</li> <li>• Runway/Airport</li> <li>• Route</li> <li>• Airspace</li> <li>• Equipment</li> <li>• Other</li> </ul>
	Other
4b.	<b>System State Description</b>  Phone/face-to-face PWB using OASIS/FS 21 in proposed configuration, displaying NTAP NOTAMs
5a.	<b>Controls Category</b>  Indicate a category among the following: <ul style="list-style-type: none"> <li>• Equipment</li> <li>• Policy/Procedure</li> <li>• Regulation</li> <li>• Best Practice</li> <li>• Work Aid</li> <li>• Other</li> </ul>
	Policy, Regulation
	<b>Controls Description</b>

5b.	FAA Order JO 7110.10Z, <i>Flight Services</i> , paragraph 3-2-1c; FAA Order JO 7110.65X, <i>Air Traffic Control</i> ; 14 CFR Section 91.103a, Pilot Self Brief; Current sorting and filtering capabilities of OASIS/FS 21; QA/QC Process.
6.	<b>Control Justification / Supporting Data</b> <ul style="list-style-type: none"> <li>FAA Order JO 7110.10Z, <i>Flight Services</i>: Chapter 3, Section 2 addresses Pilot Pre-Flight Briefings. Paragraph 3-2-1.c specifies that FSSs should provide NOTAM information (e.g., airport/runway closures, air traffic delays, TFRs, etc.) when it is applicable to the proposed flight. Specifically, sub-paragraph 3-2-1.c-8(b) requires specialists to provide FDC NOTAM information affecting the particular flight that is not already carried in the NTAP. Thus, route and procedure FDC NOTAMs are briefed upon request, but controllers are not required to brief FDC NOTAMs that are contained in the NTAP.</li> <li>FAA Order JO 7110.65X, <i>Air Traffic Control</i>: Chapter 2, Section 9 specifies Automatic Terminal Information Service (ATIS) procedures. Paragraph 2-9-2.a-3 requires controllers to maintain an ATIS message that reflects the most current arrival and departure information and to make a new ATIS recording when there is any change to NOTAM information, such as new or canceled NOTAMs. In addition Paragraph 2-9-3.g specifies that NOTAM information pertinent to operations in the terminal area shall be included in the ATIS broadcast. Air traffic control has the requirement to issue NOTAMs to flight crews on arriving flights.</li> <li>Title 14 of the Code of Federal Regulations (14 CFR): Section 91.103 requires that pilots shall, before beginning a flight, become familiar with all available information concerning that flight, including NOTAM information.</li> <li>The existing sorting and filtering capabilities on FS 21 and OASIS systems can reduce the number of NOTAMs that the specialist needs to brief.</li> <li>The Quality Assurance / Quality Control (QA/QC) process currently in place, as outlined in FAA/Leidos Flight Services PM Scoring Deskguide, Version 7, ensures proper delivery of NOTAMs. Specifically, Section 4 PM 2a specifies the process for reviewing and scoring NOTAMs for accuracy of delivery.</li> </ul>
7.	<b>Effect</b> <p>Pilot does not receive FDC NOTAMs applicable to his or her flight, resulting in a pilot deviation or possibly a missed approach.</p>
8.	<b>Severity</b> <p>Minor (4)</p>
9.	<b>Severity Rationale</b> <p>The panel agreed that air traffic controllers will be able to intervene to mitigate the adverse effects of this hazard. Also, the existing control in 14 CFR Section 91.103 requiring the pilot self-brief to obtain current NOTAM information was considered in determining the severity level. ATC intervention may lead to working an aircraft back into the traffic flow after a missed approach or go-around, slightly increasing the workload of the controller and flight crew. Using the severity classifications from the ATO SMS Manual shown in Appendix B, the panel determined that the increase in ATC workload would be potentially significant and there would be a slight reduction in safety margin if a pilot did not receive a relevant FDC NOTAM.</p>
10.	<b>Likelihood</b> <p>Extremely Remote (D)</p>

11.	<b>Likelihood Rationale</b>  After the change to eliminate Part 1 from the NTAP, the number of FDC NOTAMs seen by Flight Service specialists will increase. So, the chance of missing any FDC NOTAM, not only a former NTAP Part 1 NOTAM, also increases. However, it was stated that only approximately 5% of flights call Flight Service to request a verbal briefing and also that this situation is applicable only to flights operating under Instrument Flight Rules (IFR) since FDC NOTAMs apply to IFR flights. Although no relevant quantitative data is available to support a likelihood determination, the panel considered the relatively low number of effected flights and concluded on a qualitative basis that a missed FDC NOTAM requiring ATC intervention and pilot corrective action is possible but highly unlikely.
12.	<b>Initial Risk Level</b>  LOW (4D)
13a.	<b>Safety Requirements Category</b>  Indicate a category among the following options: <ul style="list-style-type: none"> <li>• System Design</li> <li>• Equipment</li> <li>• Work Aid</li> <li>• Policy/Procedure</li> <li>• Regulatory Requirement</li> <li>• Training</li> <li>• Other</li> </ul> Policy/Procedure, Other
13b.	<b>Safety Requirements</b>  1. Update policy documents and orders (AIM/AIP, FAA Order JO 7110.10Z, etc.) to include a statement that FDC NOTAMs containing amendments to Airways, Airport, and Facility IFR procedures and General Information are on request items only. General FDC NOTAMs include Chart amendments, Special Security Instructions, and Special Advisory Notices.
14.	<b>Organization Responsible for Implementing Safety Requirements</b>  1. Flight Service Safety and Operations Group (FSSOG) 2. ATO Mission Support Services, Air Traffic Procedures Group (AJV-8) 3. U.S. NOTAM Governance and Operations Group (AJR-B3)
15.	<b>Predicted Residual Risk</b>  LOW (4D)
16.	<b>Safety Performance Targets</b>  Zero accidents and incidents will occur as a result of a missed FDC NOTAM following a phone or face-to-face PWB.

## **1.7 ATTACHMENTS**

- NTAP Part 1 Dissolution Hazard Analysis Worksheet
- SMS Hazard Severity and Likelihood Definition Tables
- AOPA Letter to U.S. NOTAM Office Operations and Policy Group (AJR-B11)
- Draft Document Change Proposals
- Acronyms



## SECTION 2. SRM DOCUMENT SIGNATURES

Title: Notices to Airmen Publication Part 1 Dissolution Safety Risk Management Document


**Submitted By:** LYNETTE M MCSPADDEN  
Digitally signed by LYNETTE M MCSPADDEN  
Date: 2018.04.12 10:23:23 -04'00'

4-12-2018  
Date

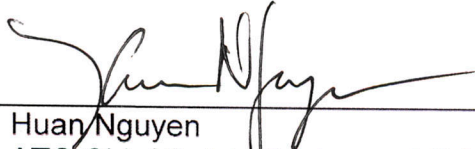
Lynette McSpadden, Air Traffic Control Specialist, U.S. NOTAM Governance and Operations Group, AJR-B3

**Approved By:**   
Jerry Torres, Manager, U.S. NOTAM Governance and Operations Group, AJR-B3

4/23/2018  
Date

**Risk Accepted By:**   
Steven Villanueva, Director of Flight Services, AJR-B

5/4/18  
Date

**Approved By:**   
Huan Nguyen  
ATO Chief Safety Engineer, AJI-3

7/18/18  
Date

## SECTION 3. SRM PANEL ATTENDEES

The SRM panel convened on August 8-9, 2017 to perform a thorough analysis of the mission statement. SMEs from across the agency, as well as stakeholders from several organizations outside the ATO, were invited to contribute their expertise and leverage their operational experience. Experts in the SRM process were present to maintain its integrity. Table 3.1 lists the panel participants by their organizations.

**Table 3.1: SRM Panel Members, SMEs, Observers, and Facilitation Team**

Name	Organization	Email	Phone	SRM	
				Yes	No
Change Proponent					
Jerry Torres	AJR-B3	jerry.torres@faa.gov	(202) 267-1434	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Panel Members					
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Observers					
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Mark Land	Leidos	mark.land@leidos.com		<input checked="" type="checkbox"/>	<input type="checkbox"/>
Jacquie Lee	AJR-B11	jacquie.lee@faa.gov	(540) 422-4552	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Billy Stocks	AJR-B11	billy.ctr.stocks@faa.gov	(540) 422-4534	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Facilitation Team					
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Alphonso McCode	AJI-314	alphonso.mccode@faa.gov	(202) 267-4596	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tiffany Todd	AJI-31/GGTI	tiffany.ctr.todd@faa.gov	(202) 267-1830	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Appendix A. NTAP Part 1 Dissolution Hazard Analysis Worksheets

**Table A1: Hazard Analysis Worksheet for Hazard NTAP-01**

1.	2.	3.	4.	5.	6.	7.	8.
Hazard ID	Hazard Description	Cause(s)	System State(s)	Controls	Control Justification	Effect	Severity
NTAP-01	Current configurations of OASIS and FS 21 do not display all Part 1 FDC NOTAM information.	NTAP Part 1 NOTAMs will be suppressed and, therefore, will not be available to the Flight Service Specialists.	During the initial transition period following dissolution of the NTAP Part 1 NOTAMs  Phone or face-to-face PWB using OASIS/FS 21 in which pilot requests NTAP NOTAMs.	FAA Order JO 7110.10Z, <i>Flight Services</i> , Paragraph 3.2.1 (c)(8)(b)	Chapter 3, Section 2 addresses Pilot Pre-Flight Briefings. Paragraph 3-2-1.c specifies that FSSs should provide NOTAM information (e.g., airport/runway closures, air traffic delays, TFRs, etc.) when it is applicable to the proposed flight. Specifically, sub-paragraph 3-2-1.c-8(b) requires specialists to provide FDC NOTAM information affecting the particular flight that is not already carried in the NTAP. Thus, route and procedure FDC NOTAMs are briefed upon request, but controllers are not required to brief FDC NOTAMs that are contained in the NTAP.	A pilot does not receive a NOTAM that was previously contained in Part 1 of the NTAP.	4 – Minor
				FAA Order JO 7110.65X, <i>Air Traffic Control</i> , Section 9, Paragraphs 2-9-2.a-3; 2-9-2.b; 2-9-3.g; 2-10-1.e	Chapter 2, Section 9 specifies Automatic Terminal Information Service (ATIS) procedures. Paragraph 2-9-2.a-3 requires controllers to maintain an ATIS message that reflects the most current arrival and departure information and to make a new ATIS recording when		

					there is any change to NOTAM information, such as new or canceled NOTAMs. In addition Paragraph 2-9-3.g specifies that NOTAM information pertinent to operations in the terminal area shall be included in the ATIS broadcast. Air traffic control has the requirement to issue NOTAMs to flight crews on arriving flights.		
				14 CFR Section 91.103a	Section 91.103 requires that pilots shall, before beginning a flight, become familiar with all available information concerning that flight, including NOTAM information.		

9.	10.	11.	12.	13.	14.	15.	16.
Severity Rationale	Likelihood	Likelihood Rationale	Initial Risk	Safety Requirements	Organization Responsible for Implementing Safety Requirements	Predicted Residual Risk	Safety Performance Targets
The panel agreed that Air Traffic Control Specialists (ATCS) will be able to intervene. This intervention may lead to working an aircraft back into the traffic flow after a missed approach or go-around, slightly increasing the workload of the ATCS and flight crew. Using the severity	D – Extremely Remote	The panel agreed that this hazard would be present during the short transition period identified in the system state. In the ensuing discussion of the likelihood of occurrence, one panel member questioned whether it is certain that no action will need to be taken to suppress the NOTAMs as	4D – LOW	OASIS and FS 21 will be tested to ensure proper functionality prior to implementation and verified post-implementation.	Flight Service Safety and Operations Group (FSSOG)  Leidos  Harris	4D – LOW	FSSs will have all previous NTAP Part 1 NOTAMs during one chart cycle

<p>classifications from the ATO SMS Manual shown in Appendix B, the consensus position of the panel was that the increase in ATC workload would be potentially significant, there would be an increased flight crew workload, and there would be a slight reduction in safety margin if a pilot did not receive a NOTAM for an airport condition.</p>		<p>soon as the change to remove Part 1 NOTAMs from the NTAP is implemented. The assumption is that after the change, the automation system will no longer be suppressing Part 1 NOTAMs. Verification would be needed that the automation system is functioning as intended after the change is implemented. Subject matter experts from Leidos responded that the system's functionality would be verified after the change. They know what NOTAMs are in Part 1, and after the change they would check to see that those NOTAMs are now displayed to the specialist. Considering the assumption that the functionality of FS 21 and OASIS will be verified prior to implementing the change, the panel unanimously agreed that the likelihood of a pilot not receiving a NOTAM during the 56-day transition period is Extremely Remote–D.</p>					
				<p>To educate pilots and advertise the change, add a statement on the title page of the Notices to Airmen Publication stating that Part 1 will be removed from the document effective on the implementation date and that these types of NOTAMs are still considered on request items when obtaining a briefing from FSS. Users will be directed to NOTAM Search to find the NOTAMs previously contained in Part 1.</p>	<p>ATO Air Traffic Procedures Group, AJV-8</p>		
				<p>Update policy documents and orders (AIM/AIP, FAA Order JO 7110.10Z, etc.) to include a statement that FDC NOTAMs</p>	<p>FSSOG U.S. NOTAM Governance and Operations Group (AJR-B3) AJV-8</p>		

				<p>containing amendments to Airways, Airport, and Facility IFR procedures and General Information are on request items only. General FDC NOTAMs include Chart amendments, Special Security Instructions, and Special Advisory Notices.</p>			
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**Table A2: Hazard Analysis Worksheet for Hazard NTAP-02**

1.	2.	3.	4.	5.	6.	7.	8.
Hazard ID	Hazard Description	Cause(s)	System State(s)	Controls	Control Justification	Effect	Severity
NTAP-02	An increase in the amount of information that needs to be scanned may lead to a greater chance of missing NOTAMs previously contained in Part 1.	NTAP Part 1 NOTAMs are no longer being suppressed in the OASIS and FS 21 systems.	Phone/face-to-face PWB using OASIS/FS 21 in proposed configuration, displaying NTAP NOTAMs.	FAA Order JO 7110.10Z, <i>Flight Services</i> , Paragraph 3.2.1 (c)(8)(b)	Chapter 3, Section 2 addresses Pilot Pre-Flight Briefings. Paragraph 3-2-1.c specifies that FSSs should provide NOTAM information (e.g., airport/runway closures, air traffic delays, TFRs, etc.) when it is applicable to the proposed flight. Specifically, sub-paragraph 3-2-1.c-8(b) requires specialists to provide FDC NOTAM information affecting the particular flight that is not already carried in the NTAP. Thus, route and procedure FDC NOTAMs are briefed upon request, but controllers are not required to brief FDC NOTAMs that are contained in the NTAP.	Pilot does not receive FDC NOTAMs applicable to his or her flight, resulting in a pilot deviation or possibly a missed approach.	4 – Minor
				FAA Order JO 7110.65X, <i>Air Traffic Control</i> , Section 9, Paragraphs 2-9-2.a-3; 2-9-2.b; 2-9-3.g; 2-10-1.e	Chapter 2, Section 9 specifies Automatic Terminal Information Service (ATIS) procedures. Paragraph 2-9-2.a-3 requires controllers to maintain an ATIS message that reflects the most current arrival and departure information and to make a new ATIS recording when there is any change to NOTAM information, such as new or canceled NOTAMs. In addition Paragraph 2-9-3.g specifies that NOTAM information pertinent to operations in the terminal area shall be included in the ATIS broadcast. Air traffic control has the requirement to issue NOTAMs to flight crews on arriving flights.		

				14 CFR Section 91.103a	Section 91.103 requires that pilots shall, before beginning a flight, become familiar with all available information concerning that flight, including NOTAM information.		
				Sorting and filtering capabilities of OASIS/FS21	The existing sorting and filtering capabilities on FS 21 and OASIS systems can reduce the number of NOTAMs that the specialist needs to brief.		
				QA/QC Process	The Quality Assurance / Quality Control (QA/QC) process currently in place, as outlined in FAA/Leidos Flight Services PM Scoring Deskguide, Version 7, ensures proper delivery of NOTAMs. Specifically, Section 4 PM 2a specifies the process for reviewing and scoring NOTAMs for accuracy of delivery.		

9.	10.	11.	12.	13.	14.	15.	16.
Severity Rationale	Likelihood	Likelihood Rationale	Initial Risk	Safety Requirements	Organization Responsible for Implementing Safety Requirements	Predicted Residual Risk	Safety Performance Targets
The panel agreed that air traffic controllers will be able to intervene to mitigate the adverse effects of this hazard. Also, the existing control in 14 CFR Section 91.103 requiring the pilot self-brief to obtain current NOTAM information was considered in determining the severity level. ATC intervention may lead to	D – Extremely Remote	After the change to eliminate Part 1 from the NTAP, the number of FDC NOTAMs seen by Flight Service specialists will increase. So, the chance of missing any FDC NOTAM, not only a former NTAP Part 1 NOTAM, also increases. However, it was stated that only approximately 5% of flights call Flight Service to request a verbal briefing	4D – Low	Update policy documents and orders (AIM/AIP, FAA Order JO 7110.10Z, etc.) to include a statement that FDC NOTAMs containing amendments to Airways, Airport, and Facility IFR procedures and	AJR-B3, AJV-8, Flight Service Safety and Operations Group (FSSOG)	4D – Low	Zero accidents and incidents will occur as a result of a missed FDC NOTAM following a phone or face-to-face PWB.



working an aircraft back into the traffic flow after a missed approach or go-around, slightly increasing the workload of the controller and flight crew. Using the severity classifications from the ATO SMS Manual shown in Appendix B, the panel determined that the increase in ATC workload would be potentially significant and there would be a slight reduction in safety margin if a pilot did not receive a relevant FDC NOTAM.		and also that this situation is applicable only to flights operating under Instrument Flight Rules (IFR) since FDC NOTAMs apply to IFR flights. Although no relevant quantitative data is available to support a likelihood determination, the panel considered the relatively low number of effected flights and concluded on a qualitative basis that a missed FDC NOTAM requiring ATC intervention and pilot corrective action is possible but highly unlikely.		General Information are on request items only. General FDC NOTAMs include Chart amendments, Special Security Instructions, and Special Advisory Notices.			
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## Appendix B. SMS Hazard Severity and Likelihood Definition Tables

	Hazard Severity Classification				
	<i>Note: Severities related to ground-based effects apply to movement areas only.</i>				
	Minimal 5	Minor 4	Major 3	Hazardous 2	Catastrophic 1
	CONDITIONS RESULTING IN ANY ONE OF THE FOLLOWING:				
ATC Services	A minimal reduction in ATC services  CAT D Runway Incursion  Proximity Event, Operational Deviation, or measure of compliance greater than or equal to 66 percent	Low Risk Analysis Event severity, two or fewer indicators fail  CAT C Runway Incursion	Medium Risk Analysis Event severity, three indicators fail  CAT B Runway Incursion	High Risk Analysis Event severity, four indicators fail  CAT A Runway Incursion	Ground collision  Mid-air collision  Controlled flight into terrain or obstacles
NAS Equipment	Flight crew inconvenience  Slight increase in ATC workload	Increase in flight crew workload  Significant increase in ATC workload  Slight reduction in safety margin	Large increase in ATC workload  Significant reduction in safety margin	Large reduction in safety margin	Collision between aircraft and obstacles or terrain

Hazard Severity Classification					
<i>Note: Severities related to ground-based effects apply to movement areas only.</i>					
Flight Crew	Minimal 5	Minor 4	Major 3	Hazardous 2	Catastrophic 1
	CONDITIONS RESULTING IN ANY ONE OF THE FOLLOWING:				
	<p>Pilot is aware of traffic (identified by Traffic Collision Avoidance System traffic alert, issued by ATC, or observed by flight crew) in close enough proximity to require focused attention, but no action is required</p> <p>Pilot deviation where loss of airborne separation falls within the same parameters of a Proximity Event or measure of compliance greater than or equal to 66 percent</p> <p>Circumstances requiring a flight crew to initiate a go-around</p>	<p>Aircraft is in close enough proximity to another aircraft (identified by Traffic Collision Avoidance System resolution advisory, issued by ATC, or observed by flight crew) to require specific pilot action to alter or maintain current course/ altitude, but intentions of other aircraft are known and a potential collision risk does not exist</p> <p>Pilot deviation where loss of airborne separation falls within the same parameters of a Low Risk Analysis Event severity</p> <p>Reduction of functional capability of aircraft, but overall safety not affected (e.g., normal procedures as per Airplane Flight Manuals)</p> <p>Circumstances requiring a flight crew to abort takeoff (rejected takeoff); however, the act of aborting takeoff does not degrade the aircraft performance capability</p>	<p>Aircraft is in close enough proximity to another aircraft (identified by Traffic Collision Avoidance System resolution advisory, issued as a safety alert by ATC, or observed by flight crew) on a course that requires corrective action to avoid potential collision; intentions of other aircraft are not known</p> <p>Pilot deviation where loss of airborne separation falls within the same parameters of a Medium Risk Analysis Event severity</p> <p>Reduction in safety margin or functional capability of the aircraft, requiring crew to follow abnormal procedures as per Airplane Flight Manuals</p> <p>Circumstances requiring a flight crew to reject landing (i.e., balked landing) at or near the runway threshold</p> <p>Circumstances requiring a flight crew to abort takeoff (i.e., rejected takeoff); the act of aborting takeoff degrades the aircraft performance capability</p>	<p>Near mid-air collision results due to a proximity of less than 500 feet from another aircraft, or a report is filed by pilot or flight crew member that a collision hazard existed between two or more aircraft</p> <p>Pilot deviation where loss of airborne separation falls within the same parameters of a High Risk Analysis Event severity</p> <p>Reduction in safety margin and functional capability of the aircraft requiring crew to follow emergency procedures as per Airplane Flight Manuals</p>	<p>Ground collision</p> <p>Mid-air collision</p> <p>Controlled flight into terrain or obstacles</p> <p>Failure conditions that would prevent continued safe flight and landing</p>

## Likelihood Definitions

<b>Likelihood</b>	<u><b>Quantitative</b></u> <b>Operations: Expected Occurrence Rate</b> (Per operation / flight hour / operational hour)  <b>Quantitative (ATC / Flight Procedures / Systems Engineering)</b>	<u><b>Qualitative</b></u> <b>Operations: Expected Occurrence Rate</b> (Calendar-Based)  <b>Qualitative (Domain-wide: NAS-wide, Terminal, or En Route)</b>
<b>A Frequent</b>	(Probability) $\geq$ 1 per 1000	Equal to or more than once per week
<b>B Probable</b>	1 per 1000 $\geq$ (Probability) $\geq$ 1 per 100,000	Less than once per week and equal to or more than once per three months
<b>C Remote</b>	1 per 100,000 $\geq$ (Probability) $\geq$ 1 per 10,000,000	Less than once per three months and equal to or more than once per three years
<b>D Extremely Remote</b>	1 per 10,000,000 $\geq$ (Probability) $\geq$ 1 per 1,000,000,000	Less than once per three years and equal to or more than once per 30 years
<b>E Extremely Improbable</b>	1 per 1,000,000,000 $\geq$ (Probability) $\geq$ 1 per 10 <sup>14</sup>	Less than once per 30 years

## **Appendix C. AOPA Letter to U.S. NOTAM Office (AJR-B11)**



50 F St. NW, Suite 750  
Washington, D.C. 20001

T. 202-737-7950  
F. 202-273-7951

[www.aopa.org](http://www.aopa.org)

February 1, 2017

Mr. Jerry Torres  
Manager, US NOTAM Office  
Operations and Policy Group (AJR-B11)  
Federal Aviation Administration  
1575 I St NW  
Washington, DC 20005

**RE: Request to Evaluate Discontinuing the Notices to Airmen Publication (NTAP)**

Dear Mr. Torres,

The Aircraft Owners and Pilots Association (AOPA), the world's largest aviation membership association, has been engaged in various NOTAM modernization initiatives over the past few years to increase the visibility of safety critical NOTAMs and to identify those NOTAMs that should otherwise be communicated to users via another means such as charting. The increasing number of NOTAMs pertinent to even a short General Aviation flight can be overwhelming. There were approximately 1.8 million NOTAMs issued in 2015 with that total number growing each year. The ramifications of a pilot missing a critical NOTAM can be severe. AOPA believes the Notices to Airmen Publication (NTAP) is contributing to the unsafe condition of pilots missing NOTAMs and we believe this publication's purpose and value must be reviewed.

The NTAP is one of those historical methods of communicating critical information that has not yet been charted, primarily permanent NOTAMs. This publication, largely unchanged for decades, has been proven to have limited value and visibility to General Aviation pilots given the technology being employed in the modern National Airspace System (NAS). The NTAP contains operationally significant information; however, the format the FAA provides it in limits a user's ability to ascertain the pertinent information, which raises safety concerns. To improve the visibility of the valuable information contained within the NTAP and to further our mutual goals of a safe NAS, AOPA requests the FAA evaluate the NTAP jointly with industry to determine its value as a sole source of NOTAMs and aeronautical information, and to determine if this document should be discontinued.

### **Industry Consensus that NTAP Needs Evaluation**

Several different committees with FAA and industry participation have noted the deficiencies of the NTAP. The RTCA Tactical Operations Committee (TOC) recently delivered the *Improving Graphical Temporary Flight Restrictions in the National Airspace System* consensus recommendations to the FAA. Recommendation 24 documented the poor utility of the NTAP and noted the safety concerns of pilots. This recommendation stated the information in the NTAP should be provided entirely on NOTAM Search and the NTAP should be evaluated to determine if it is acceptable to be discontinued. The committee participants all agreed the NTAP format was impacting information getting to pilots.

In early 2016, AOPA submitted to the Aeronautical Charting Forum (ACF) a recommendation regarding Cold Temperature Restricted Airport (CTRA) Standard Instrument Approach Procedure Segment Depiction (ACF-CG RD 16-01-302). Much of the discussion at the forum centered on the need for CTRA to have a permanent procedure so that the instructions to pilots could be removed from the NTAP and placed in the Aeronautical Information Manual (AIM). There was consensus among industry that the NTAP is a poor place to house this information as the NTAP is not frequently referenced by pilots and it is rarely checked for changes on the established 28-day cycle. AOPA's recommendation was centered on removing the need for CTRA information to be published in the NTAP as it could either be on the chart or in the AIM. This proposal was accepted and is now being implemented by the FAA, allowing us to move closer to the CTRA procedure no longer being in the NTAP.

The visibility of critical NOTAMs is also being addressed in two FY17 ATO Top 5 NOTAM Corrective Action Plans (CAP). The CAP addressing NOTAM prioritization and filtering states there is a need to "perform an assessment to determine existing processes for incorporation of NOTAM information into permanent publications and subsequent cancellation and provide the gap analysis report." AOPA strongly supports this recommendation and believes the NTAP, as a default storage location for certain information, must also be reviewed to ensure it is contributing to the CAP's goal. Another CAP addresses NOTAM issuance and cancellation with one of the recommendations noting there is a need to "promote the importance of proper NOTAM issuance." The NTAP would be the home to many permanent NOTAMs so we believe this publication must be addressed as part of this consensus recommendation. As the work on these CAPs proceed, the FAA must include General Aviation representation in the effort to ensure the determined solution will be successful.

### **Pilot Confusion Regarding NOTAM Resources**

In a review of the January 5, 2017, NTAP, one can find scores of FDC NOTAMs applicable to routes and procedures that are no longer authorized or that have changes to approved altitudes. These are safety critical NOTAMs for pilots that should be reviewed prior to any IFR flight. As Flight Service specialists will not review NOTAMs published in the NTAP when providing a briefing over the phone, unless specifically asked, it is likely many pilots fail to obtain this important information. The lack of prompt by the Flight Service specialist contributes to the misunderstanding by many pilots that the briefing by the specialist will cover all pertinent NOTAMs.

AOPA believes the availability of NOTAMs found in the NTAP on NOTAM Search, while highly desirable, is contributing to pilot confusion regarding what is and what is not being briefed by the Flight Service specialist. Prior to the FAA's online NOTAM websites, pilots would not see NTAP NOTAMs unless they personally looked in the NTAP document or explicitly asked the specialist to brief those NOTAMs. There is growing confusion among pilots due to the false assumption that the NOTAMs they find on NOTAM Search will be what a specialist will brief. This misunderstanding is raising the question for many pilots of why Flight Service specialists are failing to brief the NOTAMs that the pilot is able to view on their computer.

In a call with Leidos Flight Service on January 27<sup>th</sup>, an abbreviated briefing was requested for San Luis County Regional Airport (SBP) seeking only NOTAMs. The specialist first reviewed the NOTAMs not in the NTAP, a total of two, and then, at my additional request, reviewed the other

eight NOTAMs in the NTAP. All ten NOTAMs were visible to users on NOTAM Search, DINS NOTAMs, and PilotWeb with no differentiation of whether they are or are not in the NTAP. Several of the NOTAMs in the NTAP noted a change in the required climb gradient in order to safely fly the standard instrument departure procedures – critical information. Notably, Flight Service specialists do not inform pilots that NOTAMs exist for that airport in the NTAP allowing critical information to easily be overlooked by a pilot who must be concerned with many other aspects of a flight and could forget to ask. It is also easy for a Flight Service specialist to fail to brief NOTAMs published in the NTAP for airways, due to the confusing layout, even though they may be requested by the pilot.

The availability of NOTAMs published in the NTAP on FAA NOTAM websites is having the unintended consequence of letting pilots think that they do not need to check the NTAP as all the NOTAMs should be visible on NOTAM Search. This is incorrect and is increasing the unsafe condition of important information being missed by pilots. For example, the charting NOTAMs listed in the NTAP Part 1, Section 3, are not all available on NOTAM Search. This charting information is critical for pilots to see given it is not yet published in the Aeronautical Chart Bulletins section of the Chart Supplement. These NOTAMs may be the only way for a pilot to become aware of a serious safety condition.

The lack of utilization of the NTAP by pilots, despite the FAA's reliance on it for the publication of important information, is largely because of how the FAA references it. The NTAP is referenced with the vague title of "Published NOTAMs" and posted on the "external links" or "aeronautical information" tab of FAA NOTAM websites. Accessing it requires navigating several menus. Rather than being integrated with NOTAM resources, the NTAP appears to be deliberately kept separate and poorly advertised.

### **Reported Safety Concerns**

The NTAP is an obscure resource that is not a regular flight planning document for many pilots which has caused operational and safety impacts on actual flights. AOPA believes the solution must be to integrate the important information found within the NTAP into those resources that pilots do utilize, such as NOTAM Search, and not to continue segregating information into various places. Below is one NASA Aviation Safety Reporting System (ASRS) report filed by a General Aviation pilot who failed to check the NTAP and became flustered due to unusual instructions from Air Traffic Control (ATC).

I checked NOTAMs on DUATS before my flight yesterday. There was no NOTAM listed saying that the Annual Fly-In Procedures were in effect. Therefore, I was surprised when Approach Control directed me toward the lake after being cleared for the visual approach shortly before noon. I figured I'd screwed up and missed the Annual Fly-In Arrival Procedure NOTAM, assuming that the fly-in arrival procedures didn't take effect until the next day, when the fly-in starts, which is how I recall it working previous years...I was embarrassed and got flustered and managed not to change to the right radio to talk to the Tower. There was a bit more confusion when I talked to the Tower, as I assumed they knew I wasn't familiar with the arrival procedure...Later I confirmed that indeed the DUATS briefing system does NOT include a NOTAM stating that the Annual Fly-In Procedure was in effect. I called Flight Service to ask about this and the specialist told me that because the Annual Fly-



In Arrival Procedure was published in the printed NTAP Notice to Airman Publication it was removed from the NOTAM system. When I suggested this might not be in the best interest of safety, since pilots expect complete briefings from Flight Service or DUATS, he replied "it had always been done this way". I'm an ATP rated pilot and was under the impression that I could get current NOTAM's from Flight Service or DUATS. I hope this was a mistake on the FAA's part and that in the future one will be able to get a complete flight briefing, including all relevant NOTAM's, using DUATS or Flight Service, and that each pilot will not have to review the printed NTAP document. (ACN 940866)

Another ASRS report from a General Aviation pilot indicates confusion on what NOTAMs will be verbally briefed to pilots and how to access information for Special Use Airspace (SUA). Certain SUA may prohibit normal operations, such as temporary Restricted Areas, and these can be published in the NTAP without being published on any aeronautical chart.

Preflight planning was accomplished using vendor weather info. I checked the NTAP for NOTAMs in NC, VA, WV, and PA, since there are no indications of state lines on low enroute charts, and no indication of the MD/WV borders on the Washington sectional in the vicinity of ZZZ. Special notices were also checked. TFR's for the area were not found...A call was placed to the FSS for a standard weather briefing. The weather briefer said there were 'no NOTAMs'...departure was VFR with intention to pick up the flight plan before VOR and GPS indicated we were on the airway. Approach informed us to fly 180 immediately because we were 2 miles inside the prohibited area. We complied with ATC instructions and then the flight was cleared with rerouting...NTAP is predicated on states and therefore MD NOTAMs were not adequately checked...FSS briefers never indicated any NOTAMs and this continued to the false sense of confidence. (ACN 539063)

In the first ASRS report, the pilot became flustered which can result in missing checklist items, distraction, and possibly loss of control. In the second case, the pilot was met by the sheriff after landing and could have faced FAA enforcement action. Both pilots had attempted to access all pertinent information to their flight but, because of the NTAPs lack of visibility, they missed key information. Aircraft accidents have occurred because of a pilot's lack of awareness of a NOTAM.

Pilots report they do not consult the NTAP because of its poor user interface and the belief that it does not contain important information. For example, AOPA has been working with Memphis ARTCC to improve the visibility of arrival procedures to University-Oxford Airport (UOX), located near the University of Mississippi, as it is the only airport at a top-25 school that does not have a TRACON working the airspace. This puts a tremendous amount of workload on Memphis ARTCC during game days. For the 2016 football season, Memphis ARTCC published the UOX arrival and departure procedure in the NTAP with a pointer NOTAM for UOX. Memphis ARTCC informed AOPA after the football season that it was rare a pilot knew the procedure because they did not check the NTAP or they could not find the notice. Memphis ARTCC is exploring other opportunities for outreach outside of the NTAP given it was not effective. Pilots and controllers need an effective method to communicate information so that the NAS is efficient and safe for all.

## **NTAP Format Obstructing NOTAMs in the Cockpit and Third Party Innovation**

In 2016, AOPA and the FAA conducted a series of surveys to better understand how pilots utilize Flight Service and access critical flight information. We learned over 80% of General Aviation pilots routinely use an Electronic Flight Bag (EFB) in the cockpit. Most modern EFBs can display NOTAM information and can continuously update while inflight. Many pilots are embracing the FAA's FIS-B service which facilitates near real-time NOTAM information in the cockpit and can augment or, in some cases, replace Flight Service for pilots. The utilization of these services is growing as more pilots embrace technology and rely less on Flight Service. Therefore, it is important that the communication of that information is effective and usable by the many pilots flying with advanced technology.

As more pilots embrace EFBs, the expectation is that the information being provided to them is complete. Most, but not all, NOTAMs published in the NTAP are being uplinked by FIS-B to pilots while inflight. This issue is similar to the misunderstanding pilots have with NTAP NOTAMs being visible on NOTAM Search as they believe the NTAP may no longer be a necessary resource. The PDF format of the NTAP creates several issues when trying to access NOTAMs for route changes while inflight such as due to a diversion. Pilots rarely reference the NTAP while inflight but the NOTAMs contained within, which are not always uplinked to pilots via FIS-B, contain operationally significant information.

The NTAP has considerable technical limitations that inhibits the information it contains to be properly accessed by EFBs or automation. The publication lacks a user-friendly approach or organization that leads to pilots checking it for only specific information, such as procedures for the Super Bowl, and no definitive way of searching it to ensure all pertinent notices are found for their route of flight. The PDF format limits innovation and prevents third party vendor automation from easily parsing the lengthy document. In fact, no sorting or filtering is provided with the NTAP, contrary to the goals of the 2012 Pilot's Bill of Rights. Pilots must use the CTRL+F document search function to query the publication, which is regularly over 600 pages, and to do so means the pilot must know what they are looking for. Searching using the wrong keyword could mean important information is overlooked. It is not realistic for a pilot to use CTRL+F to search every airway they may need to fly on a cross-country flight to ensure they are not missing any NOTAM. Pilots need clear guidance of what is or is not in the NTAP so that they do not need to be concerned that they are missing something.

Some of the information contained within the NTAP is not searchable, particularly the graphic notices. Enhancing the notices found within the publication so that they can be ingestible by automation would allow much better search and identification functions. Due to the publication's deficiencies, most third party vendors simply provide the PDF to pilots with no way of separating pertinent NTAP NOTAMs.

## **NTAP Must Be Evaluated**

The FAA and industry must work together to address the confusion among pilots caused by the NTAP. AOPA contends the technology utilized by the majority of General Aviation pilots allows the valuable information in the NTAP to be provided via other avenues that would improve the

transmission of that information. As AOPA stated in our comments to the ATO Top 5 effort, we believe the FAA should incorporate all notices, advisories, and other information that is currently provided in the NTAP into the NOTAM Search website.

The NOTAM Search website would need to be enhanced in order to accommodate the inclusion of additional information. Most graphic notices can be associated with a specific airport identifier; however, in order to provide those notices that are applicable to a larger geographic area and not associated with a specific airport identifier, NOTAM Search should have a new tab developed to include other information pertinent to flight operations. Making this information available in an intuitive manner, such that a pilot planning a cross-country flight would be able to view it, is important to improving the visibility of this information. One example of this information is CTRA procedures which are pertinent to more than one airport. Another example of information that the FAA should post to this new tab is the GPS interference flight advisories, which is information based on a NOTAM. These advisories are currently only provided on the FAA Safety Team webpage which is another resource not commonly checked by pilots during preflight planning.

The FAA should also review the notices published in the NTAP as many are no longer necessary given the information is published permanently in other guidance, such as the Precision Object Free Zone information is in the AIM. Some of the notices should be transitioned to Letters to Airmen, such as the LAHSO operations at Bradley International Airport, as they do not make sense to be retained in the NTAP or in any other NOTAM format.

Another consideration is the 28-day cycle would no longer be relevant if the FAA was to transition to hosting the information online in real-time on NOTAM Search. There would no longer be a concern for important information failing to make the publication cycle and thus impact or delay the visibility of critical information, including temporary SUA. The FAA should embrace this modern online interface and cease the disjointed and archaic method of publishing information in multiple places. Consolidating the information will assist with increasing its visibility for pilots, and reduce cost and workload for the agency. Notably, the Association understands the NTAP's development each cycle is still largely a manually intensive process, which likely contributes to the publications lack of innovation over the decades.

As part of the FAA and industry evaluation, we believe inclusion of many stakeholders is important given the large number of NTAP customers. The military relies on the NTAP for publication of dozens of temporary SUA annually. Flight Service would need to be included in the decision making as the removal of the NTAP could impact the workload of Flight Service specialists unless new guidance was provided that detailed what is not necessary to brief to pilots. This work group would also look at the best format for the data as many vendors previously found the HTML format of the NTAP useful but this needs to be validated. Finally, this is an opportunity to look at other NOTAMs and guidance, such as Altitude Reservations, and international NOTAMs and procedures, to determine the best method to provide this information to pilots.

## Conclusion

The FAA, in coordination with industry, should evaluate the discontinuation of the NTAP given this publication's poor user-friendliness and its negative impact on a pilot's ability to stay apprised of flight critical information. The information found within this publication that is of value to pilots should be made better accessible. With the availability of NOTAM Search, there is no need to publish permanent NOTAMs elsewhere and continuing to do so will likely contribute to further pilot and controller confusion.

Given the ever increasing number of NOTAMs being published in the NAS, AOPA believes the FAA's NOTAM initiatives that are underway, such as the ATO Top 5, must address the concerns we have raised regarding the NTAP. We believe the improvement or discontinuation of the NTAP is necessary for the FAA to accomplish the goals set forth in the 2012 Pilot's Bill of Rights, and that this is an important opportunity to initiate action to address the safety concerns being raised in the NAS.

Thank you in advance for your support and we welcome the opportunity to provide additional information and input. We appreciate your continuing efforts to improve the safety and operational efficiency of the NAS. Please feel free to contact me at 202-509-9515 if you have any questions.

Sincerely,



Rune Duke  
Director, Airspace and Air Traffic

The Aircraft Owners and Pilots Association (AOPA) is a not-for-profit individual membership organization of General Aviation Pilots and Aircraft Owners. AOPA's mission is to effectively serve the interests of its members and establish, maintain and articulate positions of leadership to promote the economy, safety, utility and popularity of flight in General Aviation aircraft. Representing two thirds of all pilots in the United States, AOPA is the largest civil aviation organization in the world.

## **Appendix D. Draft Document Change Proposals**

This Appendix provides draft versions of the following Document Change Proposals (DCPs) that accompany this Safety Risk Management Document:

1. FAA Order 7110.10AA, Flight Services
2. Aeronautical Information Manual (AIM)
3. Pilot Controller Glossary (PCG)

## Document Change Proposal/Briefing Sheet

INITIAL

**Order/Publication:** 7110.10 AA **KSN Tracking #:**  
**Change:** Basic  
**Effective Date:** August 15, 2019  
**HQ Control Lead/Routing:** ( ) –  
**HQ Specialist/Routing:** ( ) –  
**Field Office Change Initiator:** Anthony Brent AJR-B1 (202) 267–6316

### 1. Paragraph Number and Title:

3–2–1.

**2. Background:** In an effort to modernize, meet the needs of our stakeholders, and provide the most accurate NOTAM information available to users of the NAS, the FAA is removing Part 1, Sections 1, 2, and 3 of the Notice to Airmen Publication (NTAP). This section contains amendments to FDC NOTAMs that pertain to IFR routes and procedures. The NTAP currently contains many inaccurate and outdated FDC NOTAMs as the publication cycle is 28 days and many NOTAMs are cancelled mid-cycle. This conflict causes safety concerns for pilots. The most current and up-to-date information on NOTAMs is contained in the FAA's official NOTAM Search website (<https://notams.aim.faa.gov/notamSearch/>) or an approved Flight Service web portal. Pilots should obtain preflight IFR route and amendment FDC NOTAM information via the NOTAM Search website, an approved Flight Service web portal, or upon request by calling a Flight Service Station.

**3. Explanation of Change:** This change advises NAS users of updates to FAA publications to reflect a more accurate means of obtaining IFR route and procedures FDC NOTAM information.

### 4. Change:

#### OLD

#### NEW

#### 3-2-1. CONDUCT OF STANDARD BRIEFING

#### 3-2-1. CONDUCT OF STANDARD BRIEFING

Title through Subparagraph c.8.a.*NOTE*

No Change

b. Flight Data Center (FDC) NOTAMs not already carried in the Notices to Airmen publication.

Delete

Subparagraph c.8.c through c.12.e.

No Change

Add

**(f) FDC NOTAMs containing amendments to Airways, Airport, and Facility Instrument Flight Rules (IFR) procedures and General Information**

Add

**NOTE–  
General FDC NOTAMs include Chart amendments, Special Security Instructions, and Special Advisory Notices.**

Add

**(g) Information contained in the Notice to Airmen Publication to include Part 95 Revisions, International NOTAMs and Graphic Notices.**

No further changes to paragraph.

**5. Index Changes:** None

**6. Reference Changes:** None

**7. Graphics:** None

**8. Genot/Notice:** None

**9. Safety Risk Management:** (Check appropriate box).

☒ **Safety Finding With Hazards.** In this scenario, a NAS change or existing safety issue is assessed by an SRM panel, and the panel perceives or determines that hazards could be introduced or that safety risk could increase. (Refer to SMS Manual, Section 5.4.3.)

☐ **Safety Finding Without Hazards.** An SRM panel uses an SRM document to reflect a safety analysis that was performed but did not reveal new hazards or any perceived or calculated increase in safety risk. (Refer to SMS Manual, Section 5.4.3.)

☐ **No Safety Documentation Required.** The proposed change does not meet the requirements for performing a Safety Analysis as highlighted in the ATO Safety Management System Manual, Paragraph 3.2.1. Note that editorial and administrative changes (i.e., any changes that do not affect the substantive elements of a procedure or system) do not require SRM.

**10. ICAO Differences:** Yes ☐ No ☒

Natking Estevez  
Manager, Air Traffic Procedures Support

Date:

**ICAO DIFFERENCES IDENTIFICATION FORM**

AJV-8 SME:

DATE:

ATO DCP #:

**ICAO DIFFERENCE SARP/PANS**

**SPECIFIC US  
REGULATION AND  
REFERENCE**

**PANS ATM, ANNEX  
PROVISION**

**DESCRIPTION OF  
DIFFERENCE**

**REMARKS**

**DIFFERENCE CATEGORY:**

**DETERMINATION OF DIFFERENCE: YES ☐ NO ☐**

**VALIDATOR NAME:**

**VALIDATOR PHONE: (     )     -**



## Document Change Proposal/Briefing Sheet

### INITIAL

**Order/Publication:** AIM                      **KSN Tracking #:**  
**Change:** Basic  
**Effective Date:** August 15, 2019  
**HQ Control Lead/Routing:** (      )      –  
**HQ Specialist/Routing:** (      )      –  
**Field Office Change Initiator:** Anthony Brent AJR-B1 (202) 267-6316

#### 1. Paragraph Number and Title:

PREFACE: BASIC FLIGHT INFORMATION AND ATC PROCEDURES

5-1-1. PREFLIGHT PREPARATION

5-1-3. NOTICE TO AIRMEN (NOTAM) SYSTEM

7-1-5. PREFLIGHT BRIEFING

**2. Background:** In an effort to modernize, meet the needs of our stakeholders, and provide the most accurate NOTAM information available to users of the NAS, the FAA is removing Part 1, Sections 1, 2, and 3 of the Notice to Airmen Publication (NTAP). This section contains amendments to FDC NOTAMs that pertain to IFR routes and procedures. The NTAP currently contains many inaccurate and outdated FDC NOTAMs as the publication cycle is 28 days and many NOTAMs are cancelled mid-cycle. This conflict causes safety concerns for pilots. The most current and up-to-date information on NOTAMs is contained in the FAA's official NOTAM Search website (<https://notams.aim.faa.gov/notamSearch/>) or an approved Flight Service web portal. Pilots should obtain preflight IFR route and amendment FDC NOTAM information via the NOTAM Search website, an approved Flight Service web portal, or upon request by calling a Flight Service Station.

**3. Explanation of Change:** This change advises NAS users of updates to FAA publications to reflect a more accurate means of obtaining IFR route and procedures FDC NOTAM information.

#### 4. Change:

##### OLD

#### AERONAUTICAL INFORMATION MANUAL (AIM) BASIC FLIGHT INFORMATION AND ATC PROCEDURES

Title through 3<sup>rd</sup> Subparagraph

Notices to Airmen publication - A publication containing current Notices to Airmen (NOTAMs) which are considered essential to the safety of flight as well as supplemental data affecting the other operational publications listed here. It also includes current Flight Data Center NOTAMs, which are regulatory in nature, issued to establish restrictions to flight or to amend charts or published Instrument Approach Procedures. This publication is issued every four weeks and is

##### NEW

#### AERONAUTICAL INFORMATION MANUAL (AIM) BASIC FLIGHT INFORMATION AND ATC PROCEDURES

No Change

Notices to Airmen publication - A publication containing **data** essential to the safety of flight as well as supplemental data affecting the other operational publications listed here. **Issued every four weeks, this publication** is available through subscription from the Superintendent of Documents.

available through subscription from the Superintendent of Documents.

No further changes to paragraph

### 5-1-1. PREFLIGHT PREPARATION

Title through Subparagraph d.

#### **NOTE-**

NOTAMs which are known in sufficient time for publication and are of 7 days duration or longer are normally incorporated into the Notices to Airmen Publication and carried there until cancellation time. FDC NOTAMs, which apply to instrument flight procedures, are also included in the Notices to Airmen Publication up to and including the number indicated in the FDC NOTAM legend. Printed NOTAMs are not provided during a briefing unless specifically requested by the pilot since the FSS specialist has no way of knowing whether the pilot has already checked the Notices to Airmen Publication prior to calling. Remember to ask for NOTAMs in the Notices to Airmen Publication. This information is not normally furnished during your briefing.

No further changes to paragraph

### 5-1-3. NOTICE TO AIRMEN (NOTAM) SYSTEM

Title through Subparagraph b.

#### **c. Notices to Airmen Publication (NTAP).**

The NTAP is published by Mission Support Services, ATC Products and Publications, every 28 days. Data of a permanent nature can be published in the NTAP as an interim step between publication cycles of the Chart Supplement U.S. and aeronautical charts. The NTAP is divided into four parts:

1. Notices in part 1 are provided by ATC Products and Publications. This part contains selected FDC NOTAMs that are expected to be in effect on the effective date of the publication. This part is divided into three sections:

(a) Section 1, Airway NOTAMs, reflects airway changes that fall within an ARTCC's airspace.

(b) Section 2, Procedural NOTAMs.

(c) Section 3, General NOTAMs, contains NOTAMs that are general in nature and not tied to a specific airport/facility (for example, flight advisories and restrictions, open duration special security instructions, and special flight rules area).

No further changes to paragraph

### 5-1-1. PREFLIGHT PREPARATION

No Change

#### **NOTE-**

NOTAMs, graphic notices, and other information published in the Notices to Airmen Publication (NTAP) are not provided during a briefing unless specifically requested by the pilot since the FSS specialist has no way of knowing whether the pilot has already checked the NTAP prior to calling. Airway NOTAMs, procedural NOTAMs, and NOTAMs that are general in nature and not tied to a specific airport/facility (for example, flight advisories and restrictions, open duration special security instructions, and special flight rules area) are briefed solely by pilot request. Remember to ask for NOTAMs and graphic notices published in the NTAP if you have not already reviewed this information, and to request all pertinent NOTAMs specific to your flight.

No further changes to paragraph

### 5-1-3. NOTICE TO AIRMEN (NOTAM) SYSTEM

No Change

#### **c. Notices to Airmen Publication (NTAP).**

The NTAP is published by Mission Support Services, ATC Products and Publications, every 28 days. Data of a permanent nature can be published in the NTAP as an interim step between publication cycles of the Chart Supplement U.S. and aeronautical charts. The NTAP is divided into **two** parts:

1. Part 1, provided by NFDC, contains Part 95 Revisions, Revisions to Minimum En Route IFR Altitudes and Changeover Points.

Delete

Delete

Delete

2. Part 2, provided by NFDC, contains Part 95 Revisions, Revisions to Minimum En Route IFR Altitudes and Changeover Points.

3. Part 3, International NOTAMs, is divided into two sections:

(a) Section 1, International Flight Prohibitions, Potential Hostile Situations, and Foreign Notices.

(b) Section 2, International Oceanic Airspace Notices.

4. Part 4, Graphic Notices, compiled by ATC Products and Publications from data provided by FAA service area offices and other lines of business, contains special notices and graphics pertaining to almost every aspect of aviation such as: military training areas, large scale sporting events, air show information, Special Traffic Management Programs (STMP), and airport-specific information. This part is comprised of 6 sections: General, Special Military Operations, Airport and Facility Notices, Major Sporting and Entertainment Events, Airshows, and Special Notices.

No further changes to paragraph

## 7-1-5. PREFLIGHT BRIEFING

Title through b.8(b) **NOTE 1**

2. NOTAM (D) information and FDC NOTAMs which have been published in the Notices to Airmen Publication are not included in pilot briefings unless a review of this publication is specifically requested by the pilot. For complete flight information you are urged to review the printed NOTAMs in the Notices to Airmen Publication and the Chart Supplement U.S. in addition to obtaining a briefing.

Subparagraph 9 through 10.(a)

(b) A review of the Notices to Airmen Publication for pertinent NOTAMs and Special Notices.

Delete

2. Part 2, International NOTAMs, is divided into two sections:

(a) Section 1, International Flight Prohibitions, Potential Hostile Situations, and Foreign Notices.

(b) Section 2, International Oceanic Airspace Notices.

3. Part 3, Graphic Notices, compiled by ATC Products and Publications from data provided by FAA service area offices and other lines of business, contains special notices and graphics pertaining to almost every aspect of aviation such as: military training areas, large scale sporting events, air show information, Special Traffic Management Programs (STMP), and airport-specific information. This part is comprised of 6 sections: General, Special Military Operations, Airport and Facility Notices, Major Sporting and Entertainment Events, Airshows, and Special Notices.

No further changes to paragraph

## 7-1-5. PREFLIGHT BRIEFING

No Change

2. Airway NOTAMs, procedural NOTAMs, and NOTAMs that are general in nature and not tied to a specific airport/facility (for example, flight advisories and restrictions, open duration special security instructions, and special flight rules area) are briefed solely by pilot request. NOTAMs, graphic notices, and other information published in the Notices to Airmen Publication (NTAP) are not included in pilot briefings unless the pilot specifically requests a review of this publication. For complete flight information, pilots are urged to review the printed information in the NTAP and the Chart Supplement U.S. in addition to obtaining a briefing.

No Change

(b) A review of airway NOTAMs, procedural NOTAMs, NOTAMs that are general in nature and not tied to a specific airport/facility (for example, flight advisories and restrictions, open duration special security instructions, and special flight rules area), graphic notices, and other information published in the Notices to Airmen Publication.

No further changes to paragraph.

**5. Index Changes:** None

**6. Reference Changes:** None

**7. Graphics:** None

**8. Genot/Notice:** None

**9. Safety Risk Management:** (Check appropriate box).

- ☒ **Safety Finding With Hazards.** In this scenario, a NAS change or existing safety issue is assessed by an SRM panel, and the panel perceives or determines that hazards could be introduced or that safety risk could increase. (Refer to SMS Manual, Section 5.4.3.)
- ☐ **Safety Finding Without Hazards.** An SRM panel uses an SRM document to reflect a safety analysis that was performed but did not reveal new hazards or any perceived or calculated increase in safety risk. (Refer to SMS Manual, Section 5.4.3.)
- ☐ **No Safety Documentation Required.** The proposed change does not meet the requirements for performing a Safety Analysis as highlighted in the ATO Safety Management System Manual, Paragraph 3.2.1. Note that editorial and administrative changes (i.e., any changes that do not affect the substantive elements of a procedure or system) do not require SRM.

**10. ICAO Differences:** Yes ☐ No ☒

Natking Estevez  
Manager, Air Traffic Procedures Support

Date:

**ICAO DIFFERENCES IDENTIFICATION FORM**

AJV-8 SME:

DATE:

ATO DCP #:

**ICAO DIFFERENCE SARP/PANS**

**SPECIFIC US  
REGULATION AND  
REFERENCE**

**PANS ATM, ANNEX  
PROVISION**

**DESCRIPTION OF  
DIFFERENCE**

**REMARKS**

**DIFFERENCE CATEGORY:**

**DETERMINATION OF DIFFERENCE: YES ☐ NO ☐**

**VALIDATOR NAME:**

**VALIDATOR PHONE: (     )     -**

## Document Change Proposal/Briefing Sheet

### INITIAL

**Order/Publication:** PCG **KSN Tracking #:**  
**Change:** Basic  
**Effective Date:** August 15, 2019  
**HQ Control Lead/Routing:** ( ) –  
**HQ Specialist/Routing:** ( ) –  
**Field Office Change Initiator:** Anthony Brent AJR-B1 (202) 267–6316

#### 1. Paragraph Number and Title:

N – NOTICES TO AIRMEN PUBLICATION

**2. Background:** In an effort to modernize, meet the needs of our stakeholders, and provide the most accurate NOTAM information available to users of the NAS, the FAA is removing Part 1, Sections 1, 2, and 3 of the Notice to Airmen Publication (NTAP). This section contains amendments to FDC NOTAMs that pertain to IFR routes and procedures. The NTAP currently contains many inaccurate and outdated FDC NOTAMs as the publication cycle is 28 days and many NOTAMs are cancelled mid-cycle. This conflict causes safety concerns for pilots. The most current and up-to-date information on NOTAMs is contained in the FAA's official NOTAM Search website (<https://notams.aim.faa.gov/notamSearch/>) or an approved Flight Service web portal. Pilots should obtain preflight IFR route and amendment FDC NOTAM information via the NOTAM Search website, an approved Flight Service web portal, or upon request by calling a Flight Service Station.

**3. Explanation of Change:** This change advises NAS users of updates to FAA publications to reflect a more accurate means of obtaining IFR route and procedures FDC NOTAM information.

#### 4. Change:

##### OLD

NOTICES TO AIRMEN PUBLICATION -  
A publication issued every 28 days, designed primarily for the pilot, which contains current NOTAM information considered essential to the safety of flight as well as supplemental data to other aeronautical publications. The contraction NTAP is used in NOTAM text.

##### NEW

NOTICES TO AIRMEN PUBLICATION -  
A publication issued every 28 days, designed primarily for the pilot, which contains NOTAMs, graphic notices, and other information considered essential to the safety of flight as well as supplemental data to other aeronautical publications. The contraction NTAP is used in NOTAM text.

No further changes to paragraph.

**5. Index Changes:** None

**6. Reference Changes:** None

**7. Graphics:** None

**8. Genot/Notice:** None

**9. Safety Risk Management:** (Check appropriate box).

- ☒ **Safety Finding With Hazards.** In this scenario, a NAS change or existing safety issue is assessed by an SRM panel, and the panel perceives or determines that hazards could be introduced or that safety risk could increase. (Refer to SMS Manual, Section 5.4.3.)

- ☐ **Safety Finding Without Hazards.** An SRM panel uses an SRM document to reflect a safety analysis that was performed but did not reveal new hazards or any perceived or calculated increase in safety risk. (Refer to SMS Manual, Section 5.4.3.)
- ☐ **No Safety Documentation Required.** The proposed change does not meet the requirements for performing a Safety Analysis as highlighted in the ATO Safety Management System Manual, Paragraph 3.2.1. Note that editorial and administrative changes (i.e., any changes that do not affect the substantive elements of a procedure or system) do not require SRM.

**10. ICAO Differences:** Yes ☐ No ☒

Natking Estevez  
Manager, Air Traffic Procedures Support

Date:

**ICAO DIFFERENCES IDENTIFICATION FORM**

AJV-8 SME:

DATE:

ATO DCP #:

**ICAO DIFFERENCE SARP/PANS**

**SPECIFIC US  
REGULATION AND  
REFERENCE**

**PANS ATM, ANNEX  
PROVISION**

**DESCRIPTION OF  
DIFFERENCE**

**REMARKS**

**DIFFERENCE CATEGORY:**

**DETERMINATION OF DIFFERENCE: YES ☐ NO ☐**

**VALIDATOR NAME:**

**VALIDATOR PHONE: (     )     -**



## Appendix E. Acronyms

Acronym	Definition
AIM	Aeronautical Information Manual
AIP	Aeronautical Information Publication
AJI	ATO Safety and Technical Training
AJR	ATO System Operations Services
AJV	ATO Mission Support Services
ALPA	Air Line Pilots Association
AOPA	Aircraft Owners and Pilots Association
ARTCC	Air Route Traffic Control Center
ATC	Air Traffic Control
ATIS	Automatic Terminal Information Service
ATO	Air Traffic Organization
DCP	Document Change Proposal
DUATS	Direct User Access Terminal Service
FAA	Federal Aviation Administration
FDC	Flight Data Center
FNS	Federal NOTAM System
FS	Flight Service
FSS	Flight Service Station
HAW	Hazard Analysis Worksheet
IFR	Instrument Flight Rules
NAGE	National Association of Government Employees
NAS	National Airspace System
NATCA	National Air Traffic Controllers Association
NBAA	National Business Aviation Association
NFDC	National Flight Data Center
NOTAM	Notice to Airmen
NTAP	Notices to Airmen Publication
OASIS	Operational and Supportability Implementation System
PCG	Pilot Controller Glossary
PHL	Preliminary Hazard List
POC	Point of Contact
PWB	Pilot Weather Briefing
QA/QC	Quality Assurance / Quality Control
SMS	Safety Management System
SRM	Safety Risk Management
SRMD	Safety Risk Management Document
USNS	United States NOTAM System