

# NOTICE

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
Air Traffic Organization Policy

N JO 7110.698

**Effective Date:**  
December 10, 2015

**Cancellation Date:**  
May 26, 2016

**SUBJ:** Time Based Flow Management (TBFM)

---

- 1. Purpose of This Notice.** This notice amends Paragraphs 11-1-1, Duty Responsibility, 11-1-2, Duties and Responsibilities, 11-1-3, Time Based Flow Management (TBFM), and Pilot Controller Glossary, in Federal Aviation Administration (FAA) Order 7110.65, Air Traffic Control.
- 2. Audience.** This notice applies to all Air Traffic Organization (ATO) personnel and anyone using ATO directives.
- 3. Where Can I Find This Notice?** This notice is available on the MyFAA employee Web site at [https://employees.faa.gov/tools\\_resources/orders\\_notices/](https://employees.faa.gov/tools_resources/orders_notices/) and on the air traffic publications Web site at [http://www.faa.gov/air\\_traffic/publications/](http://www.faa.gov/air_traffic/publications/).
- 4. Explanation of Policy Change.** This change will incorporate responsibilities for the use of TBFM. It provides specific directions to facilities as to duties and responsibilities.
- 5. Procedures.**

a. *FAA Order JO 7110.65.* Amend the following paragraphs to read as follows:

## 11-1-1. DUTY RESPONSIBILITY

**Title** thru **a.**, no change

**b.** TBFM must be used to the maximum extent feasible in preference to miles-in-trail initiatives.

### **NOTE—**

*The benefits of TBFM are best realized through the coordinated effort of all facilities supporting Performance Based Navigation procedures or Traffic Management Initiatives (TMIs).*

**c.** It is recognized that the ATCS is integral in the execution of the traffic management mission.

No further changes to paragraph

## 11-1-2. DUTIES AND RESPONSIBILITIES

**Title** thru **a.**, no change

1. Ensure an operational briefing is conducted at least once during the day and evening shifts. Participants must include, at a minimum, the STMCIC, Front Line Manager-in-Charge (FLMIC)/Controller-in-Charge (CIC) and other interested personnel as designated by facility management. Discussions at the meeting should include meteorological conditions (present and forecasted), staffing, equipment status, runways in use, Airport Arrival Rate (AAR) /Metering Parameters and Traffic Management Initiatives (TMIs) (present and anticipated).

a.2., no change

3. Ensure that TMIs are carried out by personnel providing traffic management services.

a.4. thru a.5., no change

6. Ensure changes to restrictions/metering are implemented in a timely manner.

No further changes to paragraph

b. FLM/CIC must:

b.1., no change

2. Coordinate with the TMU and personnel providing air traffic services to develop appropriate TMIs for sectors and airports in their area of responsibility.

3. Continuously review TMIs affecting their area of responsibility and coordinate with TMU for extensions, revisions, or cancellations.

4. Ensure that TMIs are carried out by personnel providing air traffic services.

b.5. thru b.6., no change

7. Ensure changes to TMIs are implemented in a timely manner.

c. Personnel providing air traffic services must:

1. Ensure that TMIs are enforced within their area of responsibility. TMIs do not have priority over maintaining:

c.1.(a) thru (b), no change

2. Keep the FLM/CIC and TMU apprised of situations or circumstances that may cause congestion or delays.

3. Continuously review TMIs affecting their area of responsibility and coordinate with FLM/CIC and TMU for extensions, revisions, or cancellations.

c.4. thru d., no change

1. Support TBFM operations and monitor TBFM equipment to improve situational awareness for a system approach to TMIs.

d.2. thru e., no change

1. Support TBFM operations and monitor TBFM equipment to improve situational awareness for a system approach to TMIs.

e.2. thru f., no change

1. Monitor TBFM equipment to improve situational awareness for a system approach to TMIs.

No further changes to paragraph

### 11-1-3. TIME BASED FLOW MANAGEMENT (TBFM)

During periods of metering, personnel providing air traffic services must:

- a. Display TBFM schedule information on the main display monitor (MDM).
- b. Comply with TBFM-generated metering times within +/- 1 minute.

1. If TBFM-generated metering time accuracy within +/- 1 minute cannot be used for specific aircraft due to significant jumps in the delay countdown timer (DCT), other TMIs may be used between those aircraft such as miles-in-trail (MIT) or minutes-in-trail (MINIT) to assist in delay absorption until stability resumes.

b.2., no change

c. When compliance is not possible, coordinate with FLM/CIC, personnel providing traffic management services, and adjacent facilities/sectors as appropriate.

**NOTE-**

*TBFM accuracy of generated metering times is predicated on several factors, including vectoring outside of TBFM route conformance boundaries (route recovery logic), certain trajectory ground speed calculations, and when TMU resequences a specific flight or flight list. Caution should be used in these situations to minimize impact on surrounding sector traffic and complexity levels, flight efficiencies, and user preferences.*

No further changes to paragraph

b. *Pilot Controller Glossary.* The following definitions have been added, deleted or modified:

**SCHEDULED TIME OF ARRIVAL (STA)**– A STA is the desired time that an aircraft should cross a certain point (landing or metering fix). It takes other traffic and airspace configuration into account. A STA time shows the results of the TBFM scheduler that has calculated an arrival time according to parameters such as optimized spacing, aircraft performance, and weather.

**TIME BASED FLOW MANAGEMENT (TBFM)**

The hardware, software, methods, processes, and initiatives to manage air traffic flows based on time to balance air traffic demand with system capacity, and support the management of PBN. This includes, but not limited to, Adjacent Center Metering (ACM), En Route Departure Capability (EDC), Ground-Interval Management-Spacing (GIM-S), Integrated Departure/Arrival Capability (IDAC), Single Center Metering (SCM), Time-Based Metering (TBM), Time-Based Scheduling (TBS), and Extended/Coupled Metering.

TMA– Delete

(See TRAFFIC MANAGEMENT ADVISOR.) Delete

TRAFFIC MANAGEMENT ADVISOR (TMA) Delete

UNFROZEN– The Scheduled Time of Arrival (STA) tags, which are still being rescheduled by traffic management advisor (TBFM) calculations. The aircraft will remain unfrozen until the time the corresponding estimated time of arrival (ETA) tag passes the preset freeze horizon for that aircraft’s stream class. At this point the automatic rescheduling will stop, and the STA becomes “frozen.”

**6. Distribution.** This notice is distributed to the following ATO service units: Air Traffic Services, Mission Support, and System Operations; the Office of ATO Safety and Technical Training; the Air Traffic Safety Oversight Service; the William J. Hughes Technical Center; and the Mike Monroney Aeronautical Center.

**7. Background.** Traffic Management Advisor (TMA) was known as a comprehensive, automated method of planning efficient arrival trajectories from cruise altitude to the runway threshold. It increased situational awareness through its graphical displays, timelines, and load graphs. TMA trajectories have been optimized for each aircraft to permit an accurate estimated time of arrival at an airport and provide scheduled times of arrival (meter times) that optimize the flow of traffic into a terminal area. The next generation of TMA has begun. In this generation all references to TMA have been changed, now referencing its new name: Time-Based Flow Management (TBFM).

Original signed by/  
Heather Hemdal  
Director, Air Traffic Procedures  
Mission Support Services

November 05, 2015

---

Date Signed