International Civil Aviation Organization

Thirtieth Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/30)

Bangkok, Thailand, 14 – 17 July 2025

Agenda Item 5: Airspace Safety Monitoring Activities/Requirements in the Asia/Pacific Region

NAARMO RVSM LONG TERM HEIGHT MONITORING BURDEN

(Presented by NAARMO)

SUMMARY

This paper presents an assessment of the monitoring burden associated with the long-term height monitoring requirements for airframes for which the NAARMO is the responsible Regional Monitoring Agency (RMA). NAARMO RVSM approval records as of 31 May 2025 were used to assess the monitoring burden.

1. INTRODUCTION

1.1. The North American Approvals Registry and Monitoring Organization (NAARMO), a service provided by the United States (U.S.) Federal Aviation Administration's William J. Hughes Technical Center, has served since 2003 as the regional monitoring agency (RMA) for the airspace covering the United States, Canada, and Mexico.

1.2. To meet the ICAO Annex 6 Long Term Height Monitoring (LTHM) requirements, NAARMO maintains a database of approvals and height monitoring history for aircraft registered within States under NAARMO responsibility (Canada, Mexico, and the United States.) This paper provides the NAARMO monitoring burden based on the approvals contained within the NAARMO approvals database and global monitoring data available as of 31 May 2025.

2. DISCUSSION

2.1 The NAARMO approvals database was examined to determine the current NAARMO monitoring burden. First, the approvals for the countries under NAARMO responsibility were compiled. Subsequently, the U.S. aircraft were grouped by Operator(s) using the aggregated corresponding designators derived from Letters of Authorization (LOA). Then, each airframe having a current full approval was paired with the appropriate monitoring category by applying the most current version of the Minimum Monitoring Requirements (MMR) table (as of 14 June 2024). Any aircraft types missing from the current MMR table were assigned to MMR Category 3: RVSM Monitoring Non-Group Aircraft. Finally, each airframe was then paired to its last successful monitoring (if it exists) occurring within the past 2 years from 31 May 2023 to 31 May 2025.

2.2 The total number of unique airframes identified as having a full RVSM approval from a state of registry under NAARMO responsibility was **23,697** with a resultant monitoring burden of **14,988** and a total of **493** aircraft or **3%** of the total approved airframes not successfully monitored within the past two years. This total may include airframes under the 1,000-hour monitoring requirement. **Table 1** provides a summation by State of Registry of airframes that require monitoring due to having no successful monitoring record within two years as of 31 May 2025.

Table 1. Summary of NAARMO Monitoring Burden

State	Total # of Approved Airframes	Resultant Monitoring Burden (# Airframes)	Total # of Airframes Not Monitored within two years as of 31 May 2025
CANADA	1,499	800	80
MEXICO	605	208	14
US – *Section 3	21,593	13,980	399
NAARMO Total	**23,697**	**14,988**	**493**

*Section 3 = Operators who operate in airspace where RVSM specific authorization is required.

2.3 Each airframe having a current full RVSM approval was categorized under either Commercial or international general aviation (IGA) operations. **Table 2** presents NAARMO monitoring burden summaries by type of operator and State of Registry.

2.4 As summarized in **Table 2**, there are **13,643** unique U.S. IGA airframes operated by **8,898** unique operators. The remainder of airframes to be monitored is **388** or a burden of **3%** of the total of U.S. IGA approved airframes.

2.5 With reference to commercial operators, there are **7,950** unique U.S. Commercial airframes operated by **66** unique operators. The remainder of airframes to be monitored is **11** or a remaining burden of **3%.**

Table 2. Itemized NAARMO Monitoring Burden

Canada	Total # of Approved Airframes	Resultant Monitoring Burden (# Airframes)	Total # of Airframes Not Monitored within two years as of 31 May 2025
Commercial	1,040	341	21
IGA	459	459	59
Canada Total	**1,499**	**800**	**80**
Mexico	**Total # of Approved Airframes**	**Resultant Monitoring Burden (# Airframes)**	**Total # of Airframes Not Monitored within two years as of 31 May 2025**
Commercial	589	192	13
IGA	16	16	1
Mexico Total	**605**	**208**	**14**
United States	**Total # of Approved Airframes**	**Resultant Monitoring Burden (# Airframes)**	**Total # of Airframes Not Monitored within two years as of 31 May 2025**
Commercial	7,950	337	11
IGA	13,643	13,643	388
United States Total	**21,593**	**13,980**	**399**
NAARMO Total	**23697**	**14988**	**493**

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper; and

b) discuss any relevant matters as appropriate.

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