



WORKING PAPER

**INTERNATIONAL AIRWAYS VOLCANO WATCH OPERATIONS GROUP
(IAVWOPSG)**

EIGHTH MEETING

Melbourne, Australia, 17 to 20 February 2014

Agenda Item 5: Operation of the IAVW (Deliverables 01, 03, 04 and 05)

**5.1: Implementation of the IAVW, including the IAVW management reports
(Deliverable 01)**

VAAC WASHINGTON MANAGEMENT REPORT

(Presented by United States)

SUMMARY

Pursuant to Conclusion 1/2 of the IAVWOPSG/1 Meeting, VAAC Provider States were invited to provide a concise IAVW management report to be presented at every IAVWOPSG meeting covering the period elapsed since the previous meeting and addressing the main features of the IAVW operations, highlighting any recent developments and difficulties and future planned developments. This paper presents the IAVW Management Report for VAAC Washington for the period December 2012 through October 2013.

1. INTRODUCTION

1.1 The Federal Aviation Administration (FAA), the United States Meteorological Authority, has accepted the responsibility for establishing a volcanic ash advisory centre (VAAC) within the framework of the International Airways Volcano Watch (IAVW) as defined in Annex 3 — *Meteorological Service for International Air Navigation*. The United States operates and maintains two VAACs, Anchorage and Washington.

1.2 This management report presents information on the operations of VAAC Washington as operated by the United States Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), and is a collaborative effort of both the National Centers of Environmental Prediction (NCEP) of the National Weather Service (NWS), and the Office of Satellite Products and Operations (OSPO), of the National Environmental Satellite, Data, and Information Service (NESDIS).

1.3 VAAC Washington's area of responsibility stretches from 40° West to 130° East and includes the areas of the United States Continental, New York and Oakland Oceanic flight information regions (FIR) and southward through Central America, the Caribbean to 10° South in South America. VAAC Washington supports twenty-four meteorological watch offices (MWOs) under its area of responsibility, numerous area control centers (ACCs) and the volcano observatories as listed in the CAR/SAM and ASIA/PAC facilities and services implementation document (FASID).

2. OPERATIONS OF VAAC WASHINGTON

2.1 This section describes operations of VAAC Washington in accordance with the IAVW on the issuance of volcanic ash advisories (VAAs), identification of significant eruptions that influenced the performance of operations, changes in operational procedures or use of technology to enhance operational capability of the VAAC and issues related to backup operations.

2.2 Issuance of VAAs

2.3 During the period from 1 December 2012 through 31 October 2013, VAAC Washington produced 1162 VAAs with 321 accompanying in the graphical format (VAG). Advisories were issued for 12 volcanoes within the VAAC Washington area of responsibility and for 4 volcanoes that produced ash that approached or entered the area (Kliuchevskoi - VAAC Tokyo and 3 Pavlof, Veniaminof and Katmai (re-suspension) – VAAC Anchorage).

2.4 The majority of the VAA issued by VAAC Washington were for Tungurahua volcano in Ecuador with 388 VAA/ 145 volcanic ash advisories in graphical format (VAG) issued. Popocatepetl volcano near Mexico City was a distant second with 279 VAA/108 VAG. In general, the eruptions from Tungurahua were short in duration and difficult to detect through remote sensing because of weather cloud obscuration. Popocatepetl volcano produces primarily brief duration "puffs" of light ash and gas emissions that dissipate within 3 to 5 hours.

2.5 Significant eruptions in the VAAC area of responsibility

2.5.1 During the period of this report no eruptions were determined to be significant.

2.6 Significant operation or technical changes

2.6.1 During the period of this report no significant operational or technical changes were made.

2.7 VAAC Backup

2.7.1 Test of backup operations are performed monthly between the United States Air Force Weather Agency (AFWA) and the VAAC Washington. These tests are conducted for an 8-hour period.

2.7.2 AFWA also provided operational backup to VAAC Washington twice (briefly for 1-2 hours) when operations were impacted by technical difficulties due to the loss of communications with the National Weather Service Telecommunications Gateway in Silver Spring, MD. One VAA was

required to be issued on VAAC Washington's behalf. VAAC Washington provided operational backup to the VAAC Buenos Aires once during 2013. VAAC Washington issued one VAA on behalf of VAAC Buenos Aires before they returned to service.

2.7.3 VAAC Washington is also the backup for both VAAC Anchorage and VAAC Montreal. There were no requests for operational backup services by either VAAC. There was a successful scheduled backup test conducted in July 2013 with Anchorage.

3. IAVW IMPLEMENTATION ISSUES

3.1 VAAC Washington participated in one volcanic exercise in the CAR/SAM region and one in the ASIA/PAC region. VAAC Washington observed but did not participate in North Atlantic/Europe volcano exercises, VOLCEX 13/01 and 13/02 and VOLCICE.

3.2 VAAC Washington attended the WMO-IUGG Inputs and Outputs Modeling Workshop held in Geneva from 18 to 21 November 2013. VAAC Washington provided an overview of their operations to the workshop.

3.3 VAAC Washington, VAAC Anchorage and NWS Headquarters Aviation Services Branch have developed a VAAC quality management system (QMS). Monthly reports from the VAAC are submitted to the NWS Aviation Services Branch.

4. FUTURE DEVELOPMENTS

4.1 VAAC Washington and VAAC Anchorage hope to continue further development and testing of the new collaborative forecasting tool for volcanic ash in conjunction with NOAA/NWS and NASA SPoRT.

4.2 In July 2014, VAAC Washington is scheduled to migrate to a new platform referred to as AWIPS-2 in support VAAC Washington operations. Forecasters will be trained on the operation and management of the new workstations and new standard operating procedures will be developed to support the operations for the forecasts.

5. ACTION BY THE IAVWOPSG

5.1 The IAVWOPSG is invited to note the information in this paper.

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