

Very High Frequency Omnidirectional Range (VOR) Minimum Operational Network (MON) Implementation Program

Status Briefing

Presented to: Aeronautical Charting Forum (ACF)

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Federal Aviation
Administration



Agenda

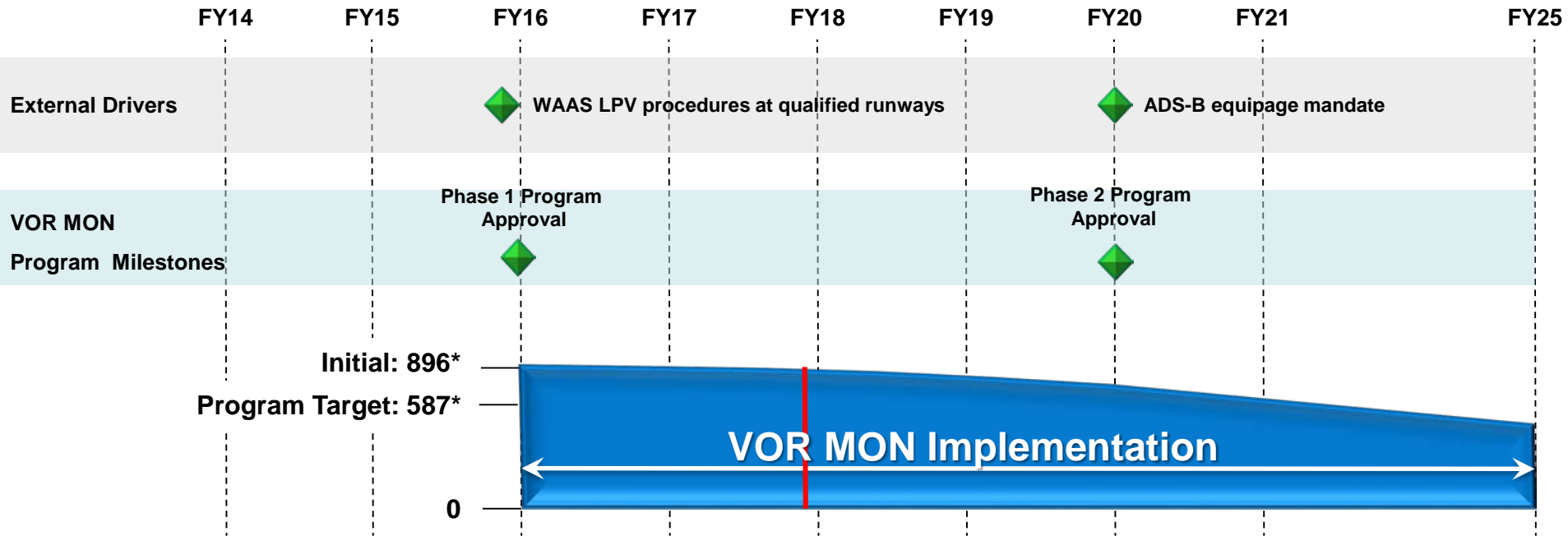
- VOR MON Program Objectives
- Program Timeline
- Program Accomplishments
- CONUS Candidate Discontinued VORs & MON Airports
- VORs Planned for Discontinuance in the Next 6 Months
- Next Steps



VOR MON Program Objectives

- Support the NAS transition from VOR based routes to a more efficient Performance Based Navigation (PBN) structure consistent with NextGen goals.
- Within the contiguous 48 states (CONUS), the program will enable pilots to:
 - Revert from PBN to conventional navigation in the event of a Global Positioning System (GPS) outage;
 - Tune and identify a VOR at and above 5,000 feet above ground (coverage may be available at lower altitudes)
 - Navigate to a MON airport within 100 nautical miles to fly a Localizer (LOC), Instrument Landing System (ILS) or VOR instrument approach without Distance Measuring Equipment (DME), Automatic Direction Finder (ADF), surveillance, or GPS where the capability currently exists; and
 - Navigate along VOR Airways especially in mountainous terrain where surveillance services are not available and Minimum En Route Altitudes (MEAs) offer lower altitude selection for options in icing conditions.
- Discontinue approximately 30% (309) VORs by 2025, following guidance in FAA Order 7400.2 and established policies.

Program Timeline



The VOR MON Program will be completed in 2 phases:

Phase 1: FY16 – FY20
Phase 2: FY21 – FY25

*VORs in the CONUS

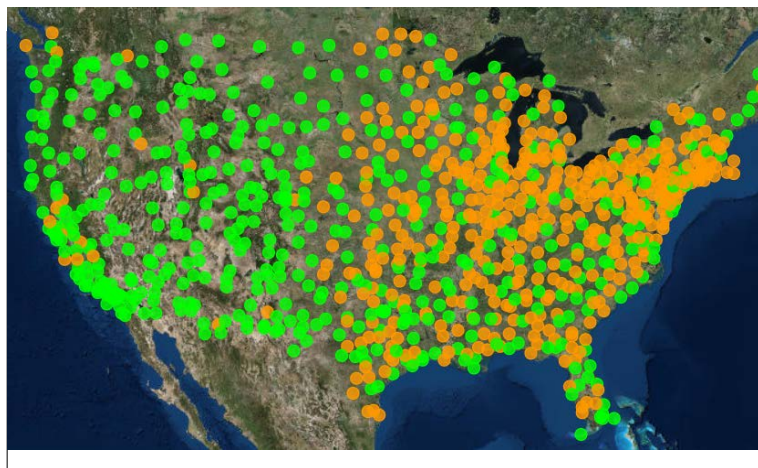
Phase 1	Phase 2
<ul style="list-style-type: none"> Published Final Policy FRN: "Provision of Navigation Services for the Next Generation Air Transportation System (NextGen) Transition to Performance Based Navigation (PBN)" Remove, Replace, Amend affected Instrument Flight Procedures (IFPs) Discontinue 74 VORs Plan for Phase 2 Final Investment Decision (FID) 	<ul style="list-style-type: none"> Achieve Phase 2 FID Continue IFP work Discontinue 235 VORs



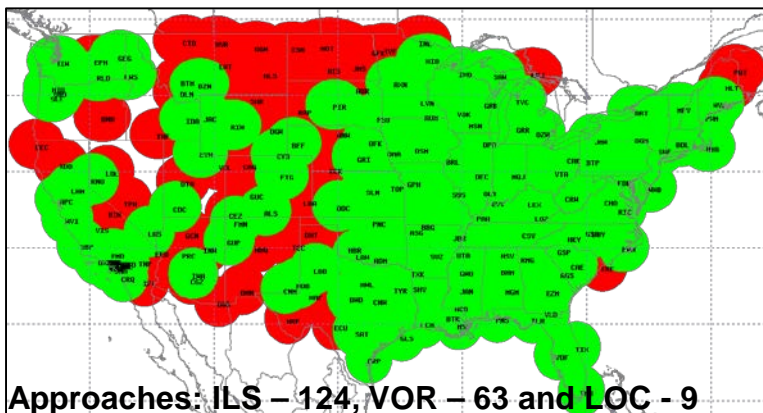
Program Accomplishments

- Discontinued sixteen (16) VORs to date:
 - [EDS] Edisto, in Orangeburg, SC – *February 4, 2016*
 - [BUA] Buffalo, in Buffalo, SD – *July 21, 2016*
 - [PNN] Princeton, in Princeton ME – *July 21, 2016*
 - [PLB] Plattsburgh, in Plattsburgh, NY – *September 15, 2016*
 - [AOH] Allen County , in Lima, OH – *September 15, 2016*
 - [ABB] Nabb, in Nabb Indiana – *January 5, 2017*
 - [SYO] Sayre, in Sayre Oklahoma – *April 27, 2017*
 - [ENW] Kenosha, in Kenosha Wisconsin – *June 22, 2017*
 - [BTL] Battle Creek, in Battle Creek, Michigan – *June 22, 2017*
 - [HRK] Horlick, in Horlick Wisconsin – *June 22, 2017*
 - [HUW] West Plains, Missouri – *August 17, 2017*
 - [RIS] Kansas City, Missouri – *September 14, 2017*
 - [DDD] Port City, in Muscatine, IA – *October 12, 2017*
 - [JKS] Jacks Creek, TN – *October 12, 2017*
 - [MXW] Maxwell, CA – *October 12, 2017*
 - [STE] Stevens Point, WI - *October 12, 2017*
- Published the VOR MON Program's FAA.gov webpage – *March 28, 2017*
 - www.faa.gov/go/VORMON

CONUS Candidate Discontinued VORs & MON Airports



MON Airports



MON airports ensure that an aircraft is within 100 nm of a location where an LOC, ILS or VOR approach may be flown.

- Retained VORs (587*)
- Target Discontinued VORs (309*)

<i>VOR MON Discontinuance Target</i>	
Service Area	# Discontinued
Western	15
Central	162
Eastern	132*
Total Target	309*

**Atlanta (ATL) VORTAC has been added to the Target Discontinuance List and removed from the MON (Retention) List.*

<i>VOR Configurations (as of October 2017)</i>				
	Retention Target	Discontinuance Target (Remaining)	Current Total	Total Discontinued
VOR	17	11	28	1
VOR/DME	213	146	359	9
VORTAC	357	136	493	6
Total	587	293	880	16

VORs Planned for Discontinuance in the Next 6 Months

- **[AOO] Altoona, PA**
- **[BRD] Brainerd, MN**
- **[DKK] Dunkirk, NY**
- **[HVN] New Haven, CT**
- **[PNE] North Philadelphia, PA**
- **[RNL] Rainelle, WV**
- **[RUT] Rutland, VT**



Next Steps

- Continue coordinating with Metroplex, other PBN development projects, and IFP removal teams to develop an aligned process to discontinue VORs.
- Continue VOR discontinuance.
- Conduct service volume expansion flight checks.

