



What's New

Teterboro Users Group

Rev 09192023

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Space Based ADS-B

NAV CANADA announced a mandate for Space Based ADS-B:

- ▶ The mandate went into effect as follows:
 - ▶ Class A Canadian airspace implemented on August 10, 2023
 - ▶ Class B Canadian airspace on May 16, 2024
 - ▶ Class C, D, and E to occur no sooner than 2026 and will be determined pending further assessment
- ▶ ADS-B Out Performance Requirements Mandate:
 - ▶ Be equipped with an appropriate transponder with ADS-B out capabilities and performance.
 - ▶ Have antenna capability for broadcast toward space-based ADS-B receivers emitting 1090 MHz extended squitter.



Space Based ADS-B

- ▶ Equipment Filing Requirements for Suitably Equipped Aircraft
 - ▶ Item 10b must include “B1” (Out), or “B2” (Out and In) , and
 - ▶ Item 18 must include “SUR/CANMANDATE
- ▶ NAV Canada compliance grace period of 90 days (Nov 8/2023) announced.
- ▶ Accommodation of Non-Equipped Aircraft
 - ▶ Manual process based on safety, type of ATC separation service available and impact to other airspace users
 - ▶ Accommodation is not guaranteed
 - ▶ Accommodation requests required to be submitted at least 3 business days in advance
 - ▶ First come-first served basis
 - ▶ Priority flights (MEDEVAC, VIP, SAR) will receive prioritization
- ▶ Refer to NAV CANADA AIC 17/23 for complete details

North Atlantic Oceanic Update

- ▶ NAT HLA RVSM planned to increase to FL 450
- ▶ NAT OTS now FL 340 to FL 400
- ▶ PBCS TRACKS in NAT TRACK message RNP 4, RCP 240, and RSP 180
- ▶ Datalink Mandate (DLM) FL 290 to FL 410 (CPDLC, ADS-C required)

152003 EGGXZ0ZX
@NAT-2/2 TRACKS FLS 340/390 INCLUSIVE
JUN 16/1130Z TO JUN 16/1900Z

PART TWO OF TWO PARTS-
G DOGAL 54/20 54/30 53/40 51/50 ALLRY
EAST LVLS NIL
WEST LVLS 340 350 360 370 380 390
EUR RTS WEST NIL
NAR N356E N362A-
REMARKS.
1. TMI IS 167 OPERATORS ARE REMINDED TO INCLUDE THE
TMI NUMBER AS PART OF THE OCEANIC CLEARANCE READ BACK.
2. SEND RCL 90-30 MINUTES PRIOR TO OCEANIC ENTRY POINT
3. PBCS OTS LEVELS 350-390. PBCS TRACKS AS FOLLOWS
TRACK B
TRACK C
TRACK D
TRACK E
TRACK F
END OF PBCS OTS
4. INCLUDE THE MAX LEVEL IN RCL. IF NO MAX LEVEL IS PROVIDED THE
RCL LEVEL WILL BE CONSIDERED HIGHEST ACCEPTABLE FL THAT CAN BE
MAINTAINED AT THE OCEANIC ENTRY POINT.
5. CLEARANCE MAY DIFFER FROM THE FLIGHT PLAN, FLY THE CLEARANCE.
6. STRATEGIC LATERAL OFFSET PROCEDURE SHOULD BE USED FOR
ALL OCEANIC CROSSINGS. LEFT SLOP IS PROHIBITED.
7. 30 MINUTES AFTER ENTERING NAT AIRSPACE OR AFTER LEAVING
SURVEILLANCE AREA, USE CODE 2000 ON TRANSPONDER.
8. NAVIGATION ERRORS CAN BE PREVENTED BY THE USE OF PROPER FMS
WAYPOINT PROCEDURES.
9. ADS-C AND CPDLC ARE MANDATED FOR LEVELS 290-410 IN NAT AIRSPACE
10. UK AIP: ENR 2.2.4.2 PARA 5.2 STATES THAT
NAT OPERATORS SHALL FILE PRM'S.
11. OPERATORS SHOULD REFERENCE NAT DOC 007 CHAPTER 8 AND 13 FOR
SPECIFIC NAT OCEANIC PROCEDURES.
12. DATA LINK EQUIPPED FLIGHTS NOT LOGGED ONTO DOMESTIC AIRSPACE,
PRIOR TO ENTERING THE SHANWICK OCA, MUST INITIATE A LOGON TO
EGGX 10-25 MINS PRIOR TO OCA ENTRY.-
END OF PART TWO OF TWO PARTS)

NAT DOC 007 Update

- ▶ NAT HLA Flight Ops and Nav Procedures complete re-write
- ▶ Cruise Climb vs. Block FL clarified (Section 5.5)
- ▶ When Able Higher Reports should be given when entering Santa Maria OCA
 - ▶ Optional for other NAT OCAs (Section 6.4)
- ▶ Sample Oceanic Checklist in Attachment 4
- ▶ Checklist for Dispatchers in Attachment 9



NAT Doc 007

NORTH ATLANTIC OPERATIONS AND AIRSPACE MANUAL

V.2023-1 (Applicable from January 2023)

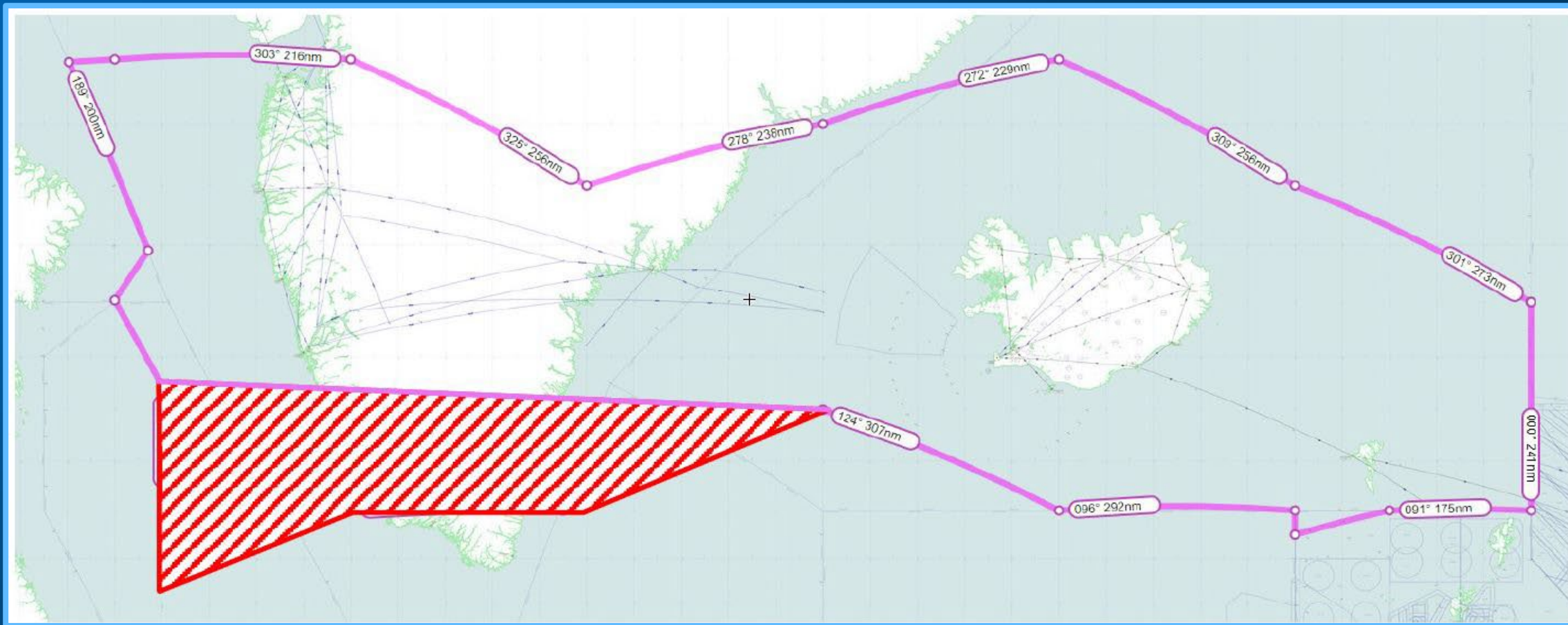
*Prepared by the ICAO European and North Atlantic Office
on behalf of the North Atlantic Systems Planning Group (NAT SPG)*



NAT FIR Updates

- ▶ Reykjavik (BIRD)
 - ▶ 15 NM Target to Target Spacing
 - ▶ Surveillance Airspace only: CPDLC required
- ▶ Santa Maria (LPPO)
 - ▶ Space based ADS-B was implemented in November 2022
- ▶ Gander (CYQX)
 - ▶ December 2022
 - ▶ Decommissioned last VHF (134.475) and ADS-B station in Southern Greenland
 - ▶ Non-Datalink aircraft must remain in the Reykjavik CTA and enter/exit Gander Domestic via the Gander Transition Area (GOTA)
 - ▶ Surveillance Airspace only: Verify Communications Requirements

Iceland – Greenland Surveillance Corridor Airspace Excluded from Data Link Mandate (DLM)





NAT Oceanic Clearance Removal-How will it work?

- ▶ Separate North Atlantic Oceanic Clearance is being removed
 - ▶ Planned for 1st quarter 2024
 - ▶ Departure clearance will be oceanic clearance unless modified by ATC
- ▶ Request for Clearance (RCL)
 - ▶ Flight Crews will continue to send an ACARS or voice RCL which shall include:
 - ▶ OEP (Oceanic Entry Point) – Estimated Time of Arrival
 - ▶ Requested Flight Level
 - ▶ Maximum Flight Level
 - ▶ Requested True MACH
 - ▶ In response flight crews will receive:
- ▶ RCL RECEIVED BY [Gander for example]. **FLY CURRENT FLIGHT PLAN OR AS AMENDED BY ATC**



NAT Oceanic Clearance Removal-How will it work?

▶ **ROUTE:**

- ▶ No distinct route clearance will be issued unless a reroute from the flight plan is required
- ▶ If a reroute is required, an FMS loadable CPDLC uplink clearance will be sent to those aircraft that are CPDLC capable
- ▶ A voice clearance will be delivered to non-CPDLC equipped aircraft



▶ **SPEED:**

- ▶ ATC will use the requested True MACH as the reference speed
- ▶ Aircraft are expected to fly “normal speed” (Cost Index / ECON) unless cleared to “maintain” a fixed True MACH speed by ATC
- ▶ Flight crews must advise ATC if the speed changes by True MACH 0.02 or more from the requested True MACH in the RCL



▶ **Flight Level:**

- ▶ ATC will store any requested flight level information. The aircraft shall not change flight level unless it is cleared for a flight level change by ATC
- ▶ Changes required will be issued prior to the OEP
- ▶ Flight crews can expect to be approved at their requested flight level and no higher than the max flight level
- ▶ Flight crews are reminded that a change in flight level can be expected at any time after the OEP as the traffic situation constantly changes and previously blocked flight levels may become available



NAT Oceanic Clearance Removal-How will it work?

▶ Entry Conditions:

- ▶ Enroute aircraft shall enter the oceanic airspace in accordance with the current flight plan (what is loaded in the FMS) and ATC assigned flight level
- ▶ Again, no separate oceanic clearance is required

▶ Contingencies

- ▶ Review State AIPs, ICAO Doc 7030 and NAT Doc 007 for Revised procedures

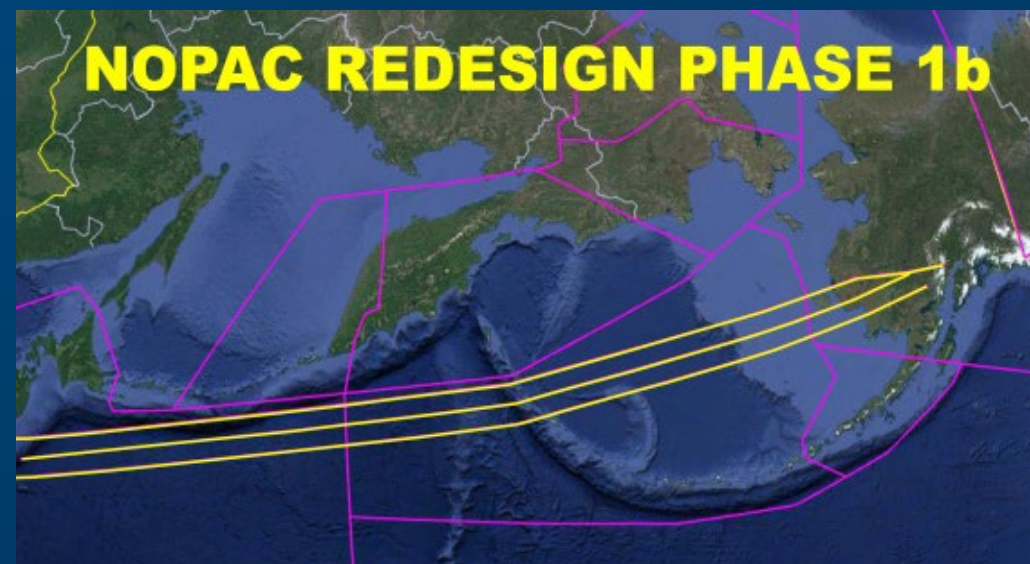


Flight Crew Education

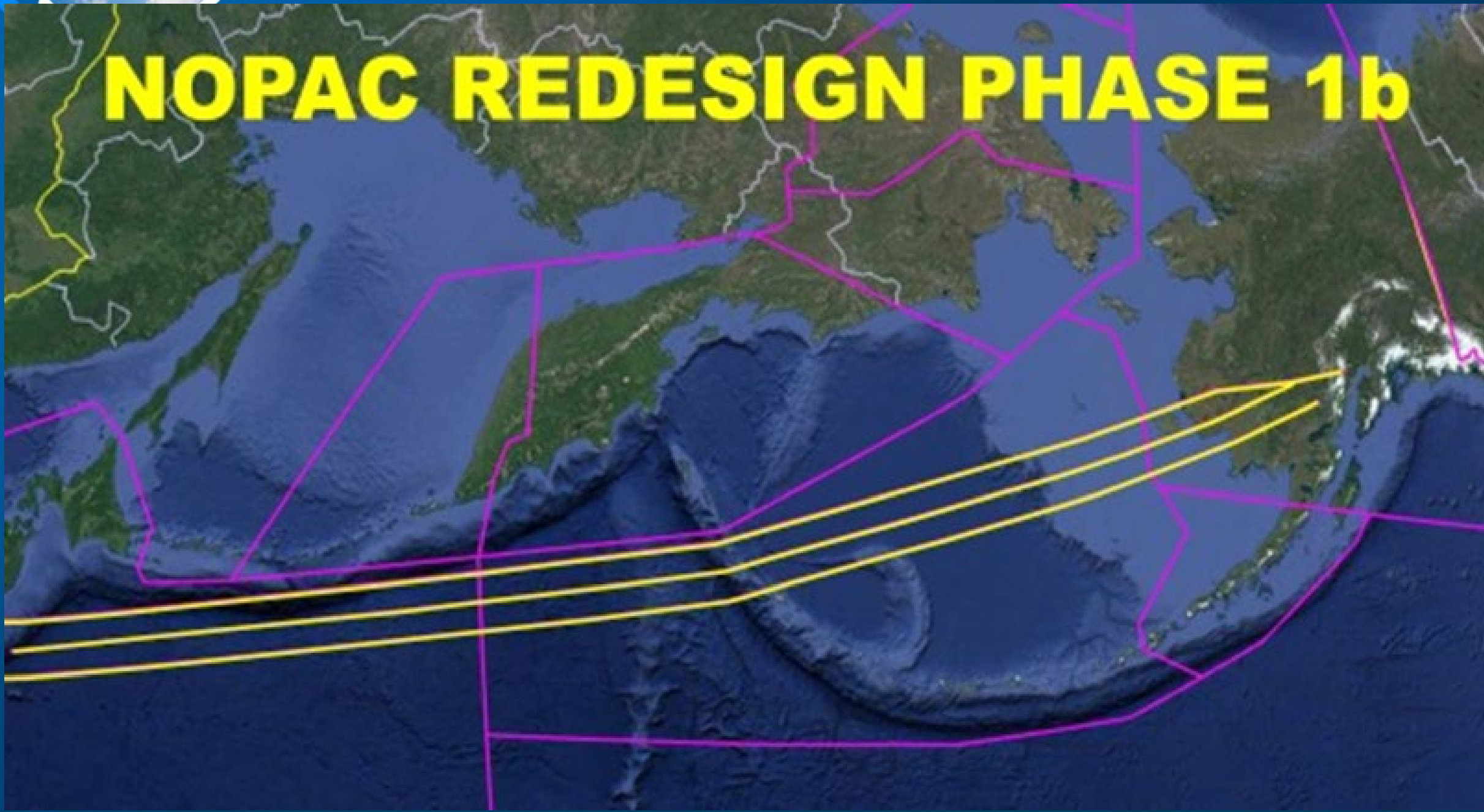
- ▶ NAT OPS Forum
- ▶ NAT OPS Bulletin
- ▶ Updated State AIPs
- ▶ ICAO State Letter
- ▶ Operator Briefings
- ▶ IFALPA / IATA Communications
- ▶ **All NAT sites are targeting an implementation of Q1 2024**

Northern Pacific Route System (NOPAC) redesign

- ▶ 5 parallel routes between Alaska and Japan, established in 1974 are now reduced to 3.
- ▶ The two southern most routes R591 and G344 were removed in February but their Waypoints were retained to assist in flight planning
 - ▶ This leaves 3 NOPAC routes R220, R580, R590



NOPAC REDESIGN PHASE 1b



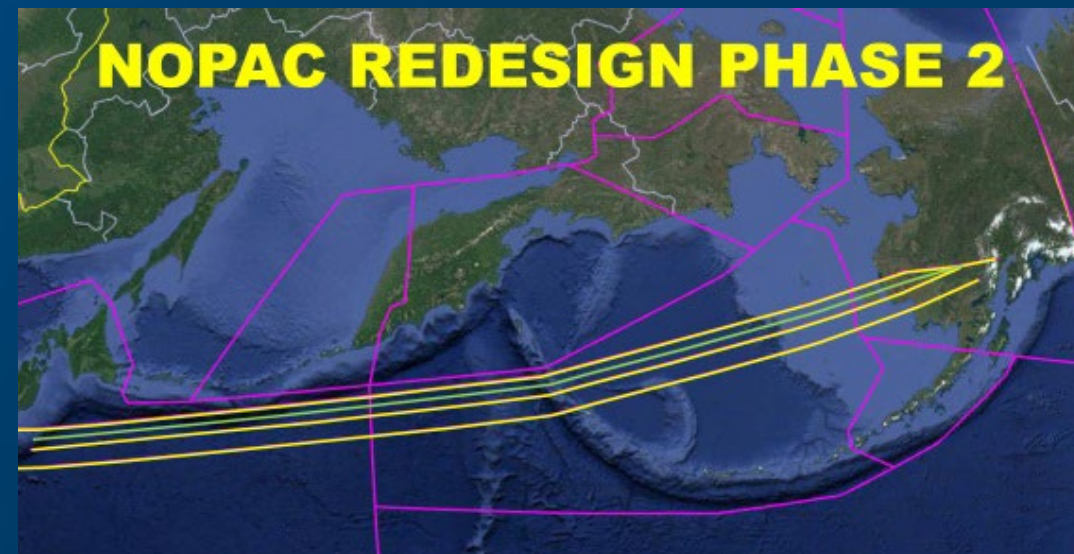


Lateral Separation will Change

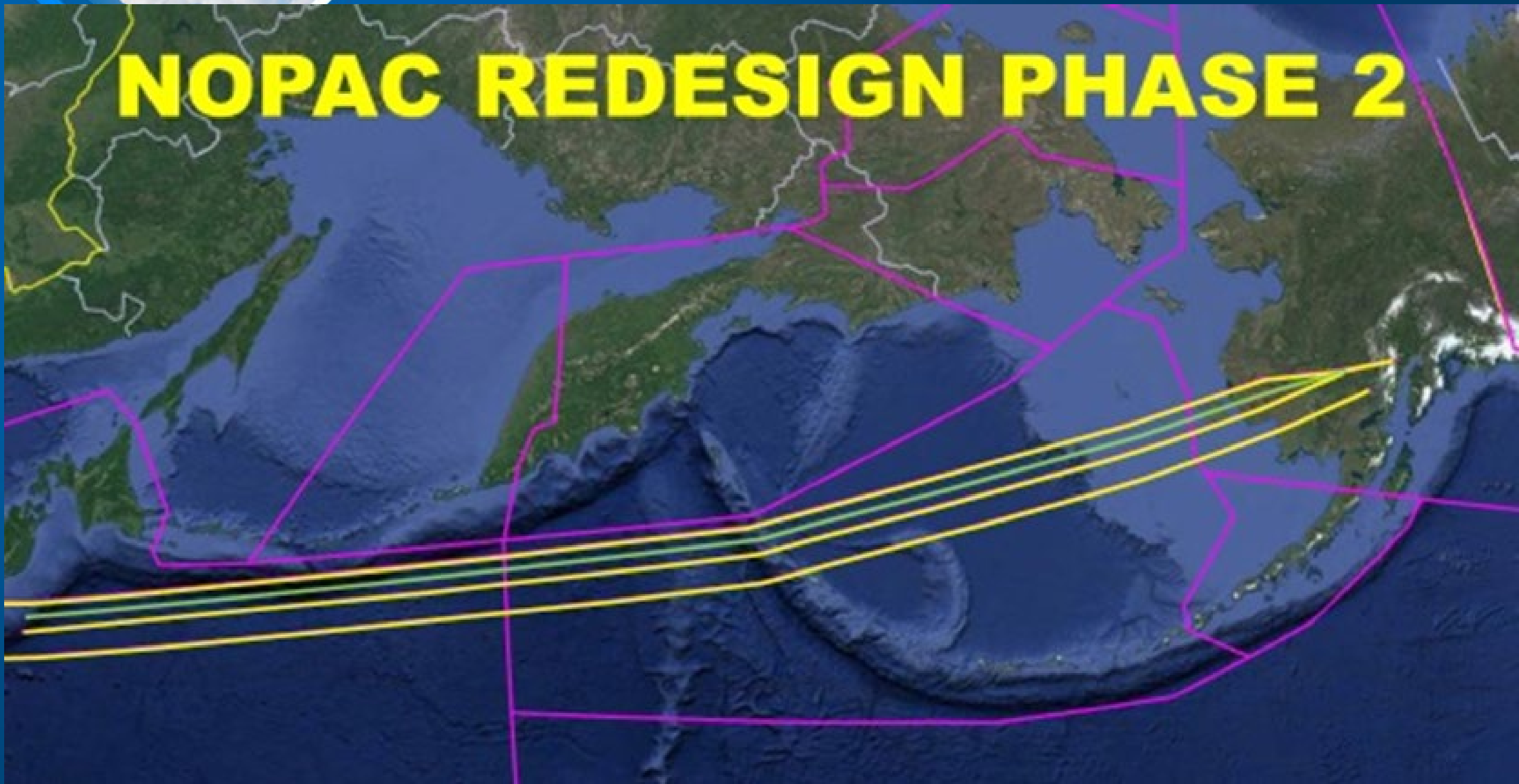
- ▶ Separation reduced from 50 NM RNAV 10 to 23 NM PBCS RNP 4
- ▶ Applicable for aircraft from FL 340 to FL 400
 - ▶ Will require RNP 4 with RCP 240 and RSP 180
- ▶ Currently operations between FL 340 and FL 400 on R220 west of NULUK must have RNP 4 with RCP 240 and RSP 180
- ▶ Non-capable aircraft may file R220 at or below FL 330 or at or above FL 410
- ▶ R580 (50 NM south of R220) has no RNP 4 or PBCS requirement

NOPAC Phase 2

- ▶ Phase 2 will begin around January 2024
- ▶ New westbound route M523 (in green) will be established between R220 and R580
 - ▶ FL 340 to FL 400 only (no other FL)
- ▶ R580 will change from a westbound route to an eastbound route
- ▶ Operations on R220, M523, R580 from FL 340 to FL 400 will require RNP 4 with RCP 240, and RSP 180
- ▶ Non capable aircraft may file R220 or R580 at or below FL 330 or at or above FL 410 or at least 50 NM south of A590 (eastbound route)



NOPAC REDESIGN PHASE 2





Mexico and Caribbean

- ▶ Do not mix Part 91 and Part 135 Rules within Mexico
- ▶ Procure Part 91 authorization
- ▶ Procure Part 135 permit
- ▶ Part 135
 - ▶ PIC less than 65 years of age
- ▶ Part 91
 - ▶ No age limit but Current 1st Class Medical
- ▶ Crews are allowed to bring anything related to their duties as pilots, golf clubs are not
- ▶ All GA aircraft operating into Mexico from the Caribbean (includes Bermuda, Bahamas, Puerto Rico, US Virgin Islands) , Central America and South America must stop in Cozumel (MMCZ) or Tapachula (MMTP) for illegal substance inspections. Review detailed procedures for this requirement

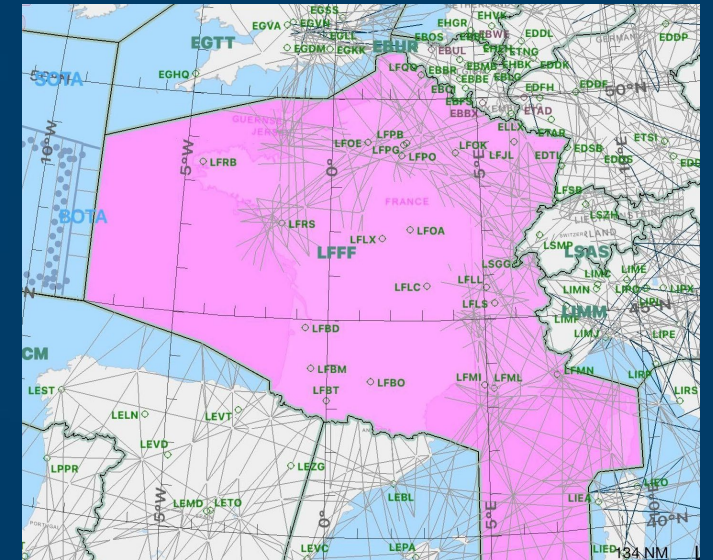


U.S. Update

- ▶ Use preferred routes!
 - ▶ Especially in the NY Metro Area
 - ▶ To and From Caribbean for non-radar routes
 - ▶ North American Routes (NARs) for North Atlantic Traffic
- ▶ Monitor 121.5
- ▶ RVSM
 - ▶ FAA Tech Center monitors ADS-B on Mondays only
 - ▶ RVSM OpSpec/MSpec/LOA B046 required outside the US
 - ▶ Multiple reports received monthly of US-Registered Aircraft flying without this authorization
- ▶ New equipment codes for Item 18 in flight plan (see AIM Appendix 4, US AIP Appendix 2)

France Datalink CPDLC Logon Mandate

- ▶ Effective July 13, 2023
- ▶ Must logon to CPDLC to operate above FL 195 if:
 - ▶ ATN B1 CPDLC equipped and operable
 - ▶ Crew is trained
 - ▶ In short, you must log on if you are capable
 - ▶ Not altitude restricted if not capable
- ▶ Differs from European Data Link Mandate (Equipage)
 - ▶ Applies only in France FIRs
 - ▶ Current European exemptions for CPDLC (filing CPDLCX) do not apply.
 - ▶ If you are equipped and capable, you must logon
- ▶ Refer to France AIC 10/23 for full details
 - ▶ https://www.sia.aviation-civile.gouv.fr/media/store/documents/file/l/f/lf_circ_2023_a_010_en.pdf
- ▶ Mandatory logon if capable also in Maastricht, Karlsruhe, and Cyprus above FL 285
 - ▶ Sources: Eurocontrol for Maastricht and Karlsruhe, Cyprus AIP GEN 3.4.5





Notable Additional Information

- ▶ SAFA main areas of concern
- ▶ U.S. FAA has just activated 169 new “Q”-Routes on the east coast replacing legacy “J” Routes
- ▶ Russia: Both the US and Russia prohibit N-Registered aircraft from entering
 - ▶ https://www.faa.gov/air_traffic/publications/us_restrictions
- ▶ Release of AC 91-70C Pending
- ▶ AC 91-67A MEL draft expected soon
- ▶ OpSpec/MSpec/LOA B036 B054 combined (pending)
- ▶ Space-Based VHF is being worked in Spain, Australia and Singapore (2025 possible target for implementation)



North Atlantic Oceanic Update

▶ Biggest Issues:

- ▶ Flying the Flight Plan instead of the Clearance
- ▶ “AT TIME” or “BY TIME” clearances
- ▶ Communications
 - ▶ Request deviation in miles left or right
 - ▶ “BACK ON ROUTE” sent only when back on centerline
 - ▶ CPDLC clearances must be acknowledged with a “WILCO”
 - ▶ Questions must be answered with “AFFIRM” or “NEGATIVE”
 - ▶ “ROGER” is an acknowledgement only

NAT Best Practices for Flight Plan

- ▶ Mirror a NAT TRACK as able when filing random routes above them
- ▶ Include an intermediate ETP in Iceland or the Azores as applicable
- ▶ Do not plan an altitude for fuel planning that requires a climb

