

Editor's note: only 3 Dec 2012 change is to paragraph 4b & 4c (NonRNP 10 aircraft procedures).

3 DECEMBER 2012 UPDATE

GULF OF MEXICO 50 NM LATERAL SEPARATION / RNAV ROUTES PROJECT

OPERATIONAL POLICY AND PROCEDURES

Phase 2 Implementation – 10 January 2013. On 10 January 2013 at approximately 0630 UTC, new Area Navigation (RNAV) routes will be implemented in GoMex Oceanic CTAs to replace most of the existing ATS routes. The Federal Aviation Administration (FAA), Servicios a la Navegacion en el Espacio Aéreo Mexicano (SENEAM) and the Direccion General de Aeronautica Civil (DGAC) Mexico will implement new RNAV routes in the GoMex CTA's identified in the paragraphs below. 50 Nautical Mile (NM) lateral separation will continue to be applied between aircraft authorized RNP 10 or RNP 4. RNP 10 is the minimum navigation specification (NavSpec) required for the application of 50 NM lateral separation.

Note: guidance to operators for filing and flying on individual GoMex RNAV routes is posted on the Gulf of Mexico 50 NM Lateral Separation / RNAV Routes Project Webpage. (See paragraph 1 for the Webpage URL).

Phase 2 Implementation Sequence of Events. The FAA/SENEAM coordinated sequence of events and specific timing for transitioning to the new GoMex RNAV routes is published in Houston and Miami Center NOTAMS that are also posted on the GoMex Webpage.

Phase 1 Implementation – 20 October 2011. In Phase 1, the FAA, SENEAM and DGAC Mexico implemented 50 Nautical Mile (NM) lateral separation between aircraft authorized Required Navigation Performance 10 (RNP 10) or RNP 4 operating in the Gulf of Mexico (GoMex) Oceanic Control Areas (CTA). **For Phase 1 implementation, existing Air Traffic Service (ATS) routes and route operating policies did not change.**

FAA ICAO Flight Plan (FPL) 2012. This Notice incorporates the ICAO FPL 2012 provisions that are required on 15 November 2012. See the next page, as well as, **paragraph 4** (Provisions for Accommodation of NonRNP10 Aircraft) and **paragraph 7** (Flight Planning Requirements)

Policy and Procedures Coordination With SENEAM and DGAC Mexico. The policies and procedures contained in this Notice have been coordinated with SENEAM and DGAC Mexico. They will be applied in the Gomex CTA's where the FAA and SENEAM provide Air Traffic Control.

RNP 10 Versus RNAV 10 Terminology. "RNP 10" has the same meaning and application as "RNAV 10". The ICAO Performance-based Navigation (PBN) Manual (ICAO Doc 9613), Volume II, Part B, Chapter 1 (**Implementing RNAV 10, Designated and Authorized as RNP 10**) explains that the term "RNP 10" was in use before the publication of the ICAO PBN Manual and the manual has "grandfathered in" its continued use when implementing an "RNAV 10" navigation specification.

Control Areas (CTA) Affected. On 10 January 2013, new RNAV routes will be implemented and 50 NM lateral separation will continue to be applied in the following CTAs/FIRs/Upper Control Areas (UTA).

- The Houston Oceanic CTA/FIR and the Gulf of Mexico portion of the Miami Oceanic CTA/FIR.
- The Monterrey CTA and Merida High CTA within the Mexico FIR/UTA

Summary of Phase 2 Project Objectives. The Phase 2 project objectives are to:

- Implement new RNAV routes in the GoMex Oceanic CTA's on 10 January 2013.
- Continue to apply 50 NM lateral separation between aircraft authorized RNP 10 (minimum) or RNP 4.
- Have close to 100% of flights operating in GoMex Oceanic CTA's authorized for RNP 10 or RNP 4 by the appropriate State authority.
- Accommodate the operation of the small percentage of flights not authorized RNP 10.
- Continue to apply the policy that aircraft equipped with a **Single Long-Range Navigation System (S-LRNS)** can qualify for RNP 10 operations in the Gulf of Mexico in accordance with the ICAO PBN Manual and the appropriate FAA and DGAC documents.

ICAO Flight Plan (FPL) 2012 Implementation. ICAO FPL 2012 implements a NEW ICAO flight plan format and entries in accordance with Amendment 1 to ICAO Document 4444 (Procedures for Air Navigation Services – Air Traffic Management). Amendment 1 revises Doc 4444, Appendix 2 (Flight Plan) to provide the NEW flight plan format and NEW entries to indicate aircraft communication, navigation and surveillance capabilities.

Note: “NEW” in this Notice refers to the Amendment 1 ICAO FPL 2012 provisions for ICAO flight plans.

15 November 2012, 0000 UTC: ICAO FPL 2012 Implementation. IFR or VFR flight plans **must** be filed using the NEW ICAO flight plan content and format starting 15 November 2012 at 0000 UTC. ICAO flight plans filed using the old ICAO flight plan format will not be accepted after that time. See the “FAA Implementation of the Amendment” section of the ICAO FPL webpage for details.

FAA ICAO FPL 2012 Webpage Information. For up to date information on FAA ICAO FPL 2012 implementation, see the “Planned Changes to Filed Flight Plans in 2012” webpage at: <http://www.faa.gov/go/fpl2012>. The webpage includes an “ICAO 2012 Quick Reference Brochure” or guide for NEW ICAO flight plan entries.

NonRNP 10 Aircraft: NEW Flight Plan Entries. Paragraph 4 provides information on NEW flight plan entries and pilot reports for aircraft not authorized Required Navigation Performance 10 or RNP 4 (NonRNP 10 aircraft).

Flight Plan Entries for RNP 10 and RNP 4 Aircraft. Paragraph 7 (Flight Plan Requirements) provides information on NEW flight plan entries for RNP 10 and RNP 4 aircraft.

Table of Contents. The following is a list of the major paragraphs that follow:

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2. Lateral Separation Minima to be Applied
3. Operation in Areas or on Routes within the Gulf of Mexico not affected by the project.
4. Provisions for Accommodation of **NonRNP10 Aircraft** (Aircraft not authorized RNP 10 or RNP 4)
5. Operator Action
6. RNP 10 or RNP 4 Authorization: Policy and Procedures for Aircraft and Operators
7. Flight Planning Requirements
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OPERATIONAL POLICY AND PROCEDURES

1. Webpage: Gulf of Mexico 50 NM Lateral Separation / RNAV Routes Project Webpage: Policy, Procedures and Guidance for Operators and Regulators

Information on plans, policies and procedures for 50 NM lateral separation is posted on the “Gulf of Mexico 50 NM Lateral Separation / RNAV Routes Project Web Page”:

[http://www.faa.gov/about/office org/headquarters offices/ato/service units/enroute/oceanic/gomex/](http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/enroute/oceanic/gomex/)

The web page contains detailed guidance on operator and aircraft authorization for RNP 10 or RNP 4 and includes Job Aids with FAA and ICAO document references.

2. Lateral Separation Minima To Be Applied Outside Radar Coverage

- 50 NM lateral separation will continue to be applied in the GoMex CTA’s between aircraft authorized RNP 10 or RNP 4 at all altitudes above the published MEA.
- A lateral separation minima of 100 NM in the Houston, Monterrey and Merida CTAs, and 90 NM in the Miami Oceanic CTA will continue to be applied between aircraft not authorized RNP 10 or RNP 4.

3. Operation on Routes on the periphery of the Gulf of Mexico CTAs

Operations on certain routes that fall within the boundaries of affected CTAs will not be affected by the introduction of 50 NM lateral separation. Operation on the following routes is **not** affected:

- a. Routes that are flown by reference to ICAO standard ground-based navigation aids (VOR, VOR/DME, NDB).
- b. Special Area Navigation (RNAV) routes Q100, Q102 and Q105 in the Houston, Jacksonville and Miami CTA’s.

4. Provisions for Accommodation of NonRNP10 Aircraft (Aircraft Not Authorized RNP 10 or RNP 4). Operators of NonRNP10 aircraft shall follow the practices detailed in the paragraphs below.

- a. **When filing an ICAO flight plan under NEW ICAO FPL 2012 provisions**, operators of NonRNP10 aircraft shall annotate ICAO flight plan Item 18 as follows:

First remark, if possible: “RMK/NONRNP10” (no space between letters and numbers).

Note: as of 15 November 2012 at 0000 UTC, the NEW ICAO FPL 2012 flight plan format and entries must be used. (See page 2).

- b. Prior to departure (**no earlier than two hours prior**), the operator shall call the Houston Center Operational Supervisor at +1-281-230-5552 with: (1) Call sign (2) Estimated time of entry into the Houston Oceanic Control Area (3) Planned route of flight through Gulf of Mexico airspace.

c. Pilots of NonRNP10 aircraft that operate in GoMex CTA's shall report the lack of authorization by stating "**Negative RNP 10**":

- on initial call to ATC in a GoMex CTA; or...
- when approval status is requested by the controller. (See paragraph 8e below).

d. Operators of NonRNP10 aircraft shall **not** indicate RNP 10 or RNP 4 capabilities in ICAO flight plan Item 18 (Other Information) if they have **not** obtained RNP 10 or RNP 4 authorization.

e. NonRNP10 operators/aircraft may file any route at any altitude in a GoMex CTA. They will be cleared to operate on their preferred routes and altitudes as traffic permits. 50 NM lateral separation will **not** be applied to NonRNP10 aircraft.

f. NonRNP10 aircraft should plan on completing their climb to or descent from higher FLs within radar coverage, if possible.

5. Operator Action

In order to maximize operational flexibility provided by 50 NM lateral separation, operators capable of meeting RNP 10 or RNP 4 that operate on oceanic routes or areas in the GoMex CTA's should obtain authorization for RNP 10 or RNP 4 and annotate the ICAO flight plan accordingly.

Note 1: RNP 10 is the minimum "Navigation Specification (NavSpec)" required for the application of 50 NM lateral separation. RNP 4 is an operator option. Operators/aircraft authorized RNP 4 are not required to also obtain RNP 10 authorization.

Note 2: "RNP navigation specification" (e.g., RNP 10) is the term adopted in the ICAO Performance-based Navigation (PBN) Manual (Doc 9613). It replaced the term "RNP type".

6. RNP 10 or RNP 4 Authorization: Policy and Procedures for Aircraft and Operators

a. **RNP NavSpecs Applicable To Oceanic Operations.** In accordance with ICAO guidance, RNP 10 and RNP 4 are the only NavSpecs currently applicable to oceanic and remote area operations, however, Edition 4 of the ICAO PBN Manual is planned to introduce RNP 2 into oceanic operations. This Notice will be updated at the appropriate time. Other RNAV and RNP NavSpecs are applicable to continental en route, terminal area and approach operations.

b. **Responsible State Authority (ICAO Guidance).** The following is ICAO guidance on the State authority responsible for authorizations such as RNP 10, RNP 4 and RVSM.

- **International Commercial Operators.** The State of Registry makes the determination that the aircraft meets the applicable RNP requirements. The State of Operator issues operating authority (e.g., Operations Specifications (OpSpecs)).
- **International General Aviation (IGA) Operators.** The State of Registry makes the determination that aircraft meets the applicable RNP requirements **and** issues operating authority (e.g., Letter of Authorization (LOA)).

c. **FAA Documents.** The guidance and direction of FAA Order 8400.12 (as amended) (RNP 10 Operational Authorization) will be used to grant RNP 10 authorization to operators and aircraft for which the FAA is responsible. FAA Order 8400.33 (as amended) (Procedures for Obtaining Authorization for RNP 4 Oceanic/Remote Area Operations) will be used to authorize RNP 4. The FAA RNP 10 and RNP 4 orders are consistent with the ICAO PBN Manual guidance discussed below. FAA and ICAO documents are posted on the FAA Gulf of Mexico 50 NM Lateral Separation Initiative Web Page.

d. **ICAO Performance-based Navigation (PBN) Manual (ICAO Doc 9613).** Guidance for authorization of RNP 10 and RNP 4 is provided in ICAO Doc 9613. RNP 10 is addressed in Volume II, Part B; Chapter 1. RNP 4 is addressed in Volume II, Part C; Chapter 1.

e. **RNP 10 and RNP 4 Job Aids.** Operators and authorities are encouraged to use the RNP 10 or RNP 4 Job Aids posted on the Gulf of Mexico 50 NM Lateral Separation / RNAV Routes Project Web Page. For U.S. operators, one set of RNP 10 and RNP 4 Job Aids provides references to FAA documents. For international operators, a second set of Job Aids provide references to the ICAO PBN Manual. These Job Aids address the operational and airworthiness elements of aircraft and operator authorization and provide references to appropriate document paragraphs. The Job Aids provide a method for operators to develop and authorities to track the operator/aircraft program elements required for RNP 10 or RNP 4 authorization.

f. **Qualification of Aircraft Equipped With a Single Long-Range Navigation System (S-LRNS) For RNP 10 Operations In GoMex CTA's.**

(1) **Background.** S-LRNS operations in the Gulf of Mexico, the Caribbean Sea and the other designated areas have been conducted for at least 25 years. Provisions allowing aircraft equipage with a S-LRNS for operations in specified oceanic and off-shore areas are contained in the following sections of 14 Code Of Federal Regulations (CFR): 91.511, 121.351, 125.203 and 135.165.

(2) **ICAO PBN Manual Reference.** In reference to RNP 10 authorization, the ICAO PBN Manual, Volume II, Part B, Chapter 1, paragraph 1.3.6.2 states that: "A State authority may approve the use of a single LRNS in specific circumstances (e.g., North Atlantic MNPS and 14 CFR 121.351 (c) refer). An RNP 10 approval is still required."

(3) **Policy Development.** The FAA has worked with the ICAO NACC Office (North American, Central American and Caribbean), State regulators and ATS providers in the GoMex and Caribbean areas to implement a policy for S-LRNS equipped aircraft to qualify for RNP 10 **for GoMex operations.** Allowing S-LRNS equipped aircraft to qualify for RNP 10 will enable more operator aircraft to be authorized RNP 10, thereby creating a more uniform operating environment for the application of 50 NM lateral separation. The factors considered were: the shortness of the legs outside the range of ground navigation aids, the availability of radar and VHF coverage in a large portion of GoMex airspace and the absence of events attributed to S-LRNS in GoMex operations.

(4) **Document Revision.** The following documents have been revised or created to enable implementation of the S-LRNS/RNP 10 qualification policy:

- FAA Order (FAAO) 8400.12
- FAA Order 8900.1 (Flight Standards Information Management System (FSIMS))

- Paragraph B054 of FAA Operations Specifications and Management Specifications (Class II Navigation Using Single Long-Range Navigation System)
- LOA B054 (Class II Navigation Using Single Long-Range Navigation System (S-LRNS) Equipped Airplane Authorized RNP 10) (LOA's are applicable to International General Aviation operators.)
- FAA RNP 10 Job Aid with FAAO 8400.12 references
- RNP 10 Job Aid with ICAO PBN Manual references

(5) S-LRNS/RNP 10 Authorization Limited To GoMex. At this time, S-LRNS qualification for RNP 10 will only apply to GoMex operations. Any expansion of this provision will require assessment and agreement by the appropriate State authorities.

g. RNP 10 Time Limit for INS or IRU Only Equipped Aircraft. Operators should review their Airplane Flight Manual (AFM), AFM Supplement or other appropriate documents and/or contact the airplane or avionics manufacturer to determine the RNP 10 time limit applicable to their aircraft. They will then need to determine its effect, if any, on their operation. Unless otherwise approved, the basic RNP 10 time limit is 6.2 hours between position updates for aircraft on which Inertial Navigation Systems (INS) or Inertial Reference Units (IRU) provide the only source of long range navigation. **Extended RNP 10 time limits of 10 hours and greater are already approved for many IRU systems.** FAA Order 8400.12 contains provisions for extending RNP 10 time limits

7. Flight Planning Requirements. Operators shall make ICAO flight plan annotations in accordance with this paragraph **and**, if applicable, paragraph 4 (Provisions For Accommodation of NonRNP 10 Aircraft). (See the introductory paragraphs of this notice for information on ICAO Flight Plan (FPL) 2012 implementation).

a. ICAO Flight Plan Requirement. ICAO flight plans are required to operate on oceanic routes and areas in the Houston Oceanic CTA/FIR, the Gulf of Mexico portion of the Miami CTA/FIR, the Monterrey CTA and Merida High CTA.

b. When filing an ICAO flight plan under NEW ICAO FPL 2012 provisions, to inform ATC that they have obtained RNP 10 or RNP 4 authorization and are eligible for 50 NM lateral separation, operators shall:

(1) annotate ICAO Flight Plan Item 10a (Equipment) with the letter "R" and...

(2) annotate Item 18 (Other Information) with, as appropriate, "PBN/A1" for RNP 10 aircraft or "PBN/L1" for RNP 4 aircraft (**no space between letters and numbers**). ("PBN" is the acronym for "Performance-based Navigation").

Note 1: as of 15 November 2012 at 0000 UTC, the NEW ICAO FPL 2012 flight plan format and entries must be used. (See page 2).

Note 2: under NEW ICAO FPL 2012 provisions, letter "R" indicates that the performance-based navigation specification (e.g., RNP 10 or RNP 4) is specified in Item 18 following the indicator "PBN/".

c. 50 NM lateral separation will only be applied to operators/aircraft that annotate the ICAO flight plan in accordance with this policy. See 7b (1)(2) above.

d. Operators that have not obtained RNP 10 or RNP 4 authorization shall not annotate ICAO flight plan Item 18 (Other information) to indicate RNP 10 or RNP 4 capabilities, but shall follow the practices detailed in paragraph 4 of this notice.

e. **Filing to Show Domestic U.S. RNAV Capabilities.** The FAA program to enhance operators' capability to communicate their domestic U.S. RNAV capabilities to ATC has been in place since 2008. Detailed instructions are available on the following web page:
<http://www.faa.gov/ato?k=fpl>

8. Pilot and Dispatcher Procedures: Basic and In-flight Contingency Procedures

a. **Basic Pilot Procedures.** The RNP 10 and RNP 4 Job Aids contain references to pilot and, if applicable, dispatcher procedures contained in:

- (1) FAA Order 8400.12C (RNP 10), Appendix D (Training Programs and Operating Practices and Procedures)
- (2) FAA Order 8400.33 (RNP 4): paragraph 9 (Operational Requirements) and paragraph 10 (Training Programs, Operating Practices and Procedures)
- (3) ICAO PBN Manual, Volume II, Part B, Chapter 1 (RNP 10)
- (4) ICAO PBN Manual, Volume II, Part C, Chapter 1 (RNP 4)

b. **ICAO Doc 4444, Chapter 15, In-flight Contingency Procedures.** Doc 4444 Chapter 15 contains important guidance for pilot training programs. For ease of reference, significant Chapter 15 paragraphs are posted on the Gulf of Mexico 50 NM Lateral Separation Web Page. Chapter 15 paragraphs posted on the website include:

(1) **Paragraph 15.2 (Special Procedures For In-Flight Contingencies in Oceanic Airspace).** Paragraph 15.2.2 (General Procedures) provides guidance for in-flight diversions, turn-backs and for loss of, or significant reduction in, required navigation capability when operating in an airspace where the navigation performance accuracy is a prerequisite to the safe conduct of flight operations.

(2) **Paragraph 15.2.3 (Weather Deviation Procedures).** Paragraph 15.2.3 provides guidance for events where the pilot is able to obtain a clearance prior to deviating from track to avoid convective weather and for events where the pilot is unable to obtain clearance prior to deviating.

c. **Strategic Lateral Offset Procedures (SLOP).** Pilots should use SLOP procedures in the course of regular oceanic operations. SLOP procedures are published in ICAO Document 4444, 15th Edition, Amendment 2, paragraph 16.5 and FAA Notices. They are posted on the Gulf of Mexico 50 NM Lateral Separation Web Page and are addressed in the RNP 10 and RNP 4 Job Aids.

d. **Pilot Report of NonRNP10 Status.** The pilot shall report the lack of RNP 10 or RNP 4 status in accordance with the following:

- When the operator/aircraft is not authorized RNP 10 or RNP 4. **See paragraph 4.**
- If approval status is requested by the controller in accordance with paragraph 8e below.

e. **Pilot Statement of RNP 10 or RNP 4 Approval Status, If Requested.** If requested by the controller, the pilot shall communicate approval status using the following phraseology:

Controller Request	Pilot Response
(call sign) confirm RNP 10 or 4 approved	<p>“Affirm RNP 10 approved” or “Affirm RNP 4 approved”, as appropriate, or...</p> <p>“Negative RNP 10” (See paragraph 4 for NonRNP10 aircraft procedures).</p>

f. **Pilot action when navigation system malfunctions.** In addition to the actions suggested in ICAO Doc. 4444, Chapter 15, when pilots suspect a navigation system malfunction, the following actions should be taken:

- Immediately inform ATC of navigation system malfunction or failure
- Accounting for wind drift, fly magnetic compass heading to maintain track
- Request radar vectors from ATC, when available

9. **Contacts for Questions.** The following individuals may be contacted with questions or requests. A response will be coordinated with the appropriate FAA subject matter expert, if necessary:

9a. **U.S. FAA Hq Contacts**

Name	Title	Phone	E-mail
Roy Grimes	FAA Separation Standards Program Support, CSSI, Inc.	+1 202-863-3692	rgrimes@cssiinc.com
Keith Dutch	Air Traffic Oceanic and Offshore Operations (AJE-32)	+1 202-385-8459	Keith.Dutch@faa.gov ;

9b. **U.S. FAA Center Contacts**

Name	Title	Phone	E-mail
John Beckman	Airspace Specialist, Houston ARTCC	+1 281-230-5521	john.beckman@faa.gov
Mike McGhee	Airspace Manager, Houston ARTCC	+1 281-230-5520	mike.mcghee@faa.gov
Mark Palazzo	Manager, Operations Support, Miami ARTCC	+1 305-716-1547	mark.palazzo@faa.gov
Juan Almanzar	Airspace Specialist, Miami ARTCC	+1 305-7161531	juan.almanzar@faa.gov

10. FAA Project Leads.

Name	Title	Phone	E-mail
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Madison Walton	Flight Standards Performance Based Flight Systems Branch (AFS-470)	+1 202-385-4596	madison.walton@faa.gov

11. Project Leads For DGAC Mexico

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Oscar Vargas Antonio	Air Traffic Inspector	+52-55-57-23-9300 Extension 18074	ovargasa@sct.gob.mx

12. SENEAM Project Leads.

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Martin Fuentes	Director - Navigation and Aeronautical Information	+52 55-57-86-55-19	ais_pcr@sct.gob.mx
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Jorge Carrión	Air Traffic Specialist	+52 55-57-86-55-14	jcarrion@sct.gob.mx

(AJE-32, 12/03/12)