



Federal Aviation
Administration

Operations in the New York Center Oceanic CTA/FIR

Presented to: Teterboro User Group

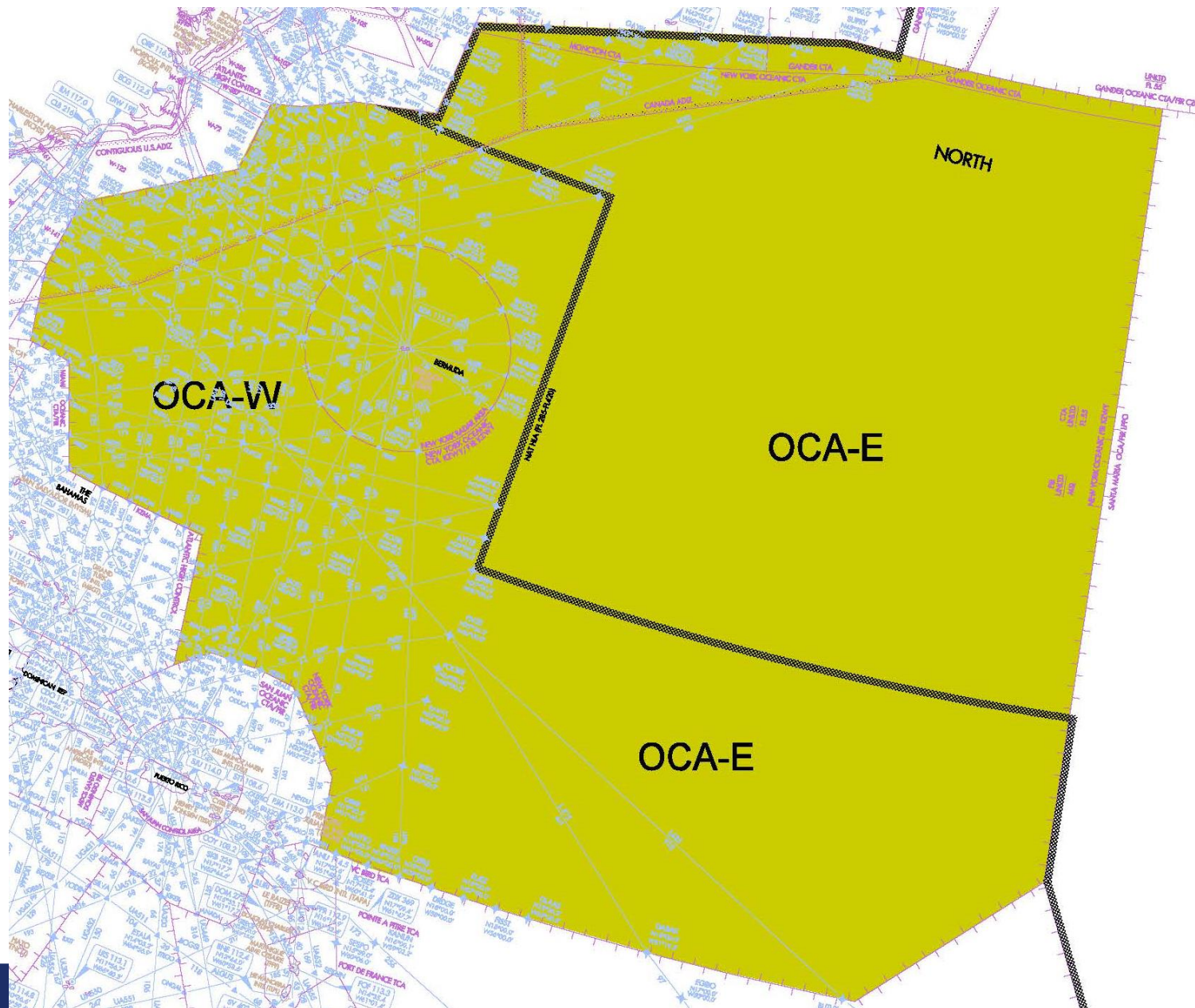
By: Workforce Development

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- The New York Oceanic FIR is divided into two Oceanic Control Areas (OCA):
 - OCA-East- Comprises the North Atlantic and South Atlantic ICAO regions
 - OCA-West- Comprises the Caribbean ICAO region. This area was formally called WATRS





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ICAO Flight Plan AFTN Addressing For Operations in the entire New York Oceanic CTA/FIR

- The ICAO identifier for the entire New York Oceanic FIR is **KZWY**
- All flights entering the New York Oceanic CTA/FIR **shall** address flight plans to KZWYZOZX.
- CHG messages should be filed to update the FPL.
- All flights entering the New York Oceanic CTA/FIR and departing a US domestic airport (including Bermuda) shall address flight plans to both KZWYZOZX and the U.S. ARTCC overlying that airport.



Mach Number in FPL

- All aircraft entering the KZWY FIR must file a MACH number in Item 15a of their FPL:

(FPL-RAM203-IS

-B788/H-SDE1E3FGHIJ2J4J5LM1P2RWXYZ/LB1D1

-KJFK145

M085F390 DCT WAVEY DCT SHLEP J62 RIFLE J174 HTO DCT YAHOO DCT
DOVEY/M085F390 DCT 41N060W 40N050W 39N040W 38N030W/M085F410
37N020W DCT MANOX/N0494F410 DCT SUBAL DCT IBALU DCT LAKAM LAKAM3A

-GMMN0549 GMMX

-PBN/A1B1C1D1L1O1S1 DAT/FANS 1+ **SUR/RSP180** DOF/180311 REG/CNRGC
EET/KZBW0005 KZNY0006 KZBW0007 KZNY0033 KZWY0041 41N060W0115
40N050W0204 LPPO0252 38N030W0342 37N020W0433 LPPC0457 GMMM0513
SEL/AMFJ OPR/RAM RALT/CYQX LPLA RVR/200 RMK/TCAS 7.1)

- See NOTAM A0274/18



Flight Planning Requirements

- 50 NM lateral separation is applied in the entire New York Oceanic CTA/FIR with aircraft authorized RNP4 or RNP10, regardless of altitude.
- 30 NM and 50 NM longitudinal separation (30/30 or D50) is applied in the entire New York Oceanic CTA/FIR with aircraft:
 - RNP4 or RNP10 certification
 - FANS 1/A+ equipped and connected
 - RCP/240 and RSP/180 certification
- If operators do not address flight plans to KZWYZOZX with the proper information, these reduced separation standards cannot be applied. This will affect your ability to get certain altitudes or routes.



Flight Planning Requirements- RNP4/10

- To inform ATC that they have obtained RNP4 or RNP10 authorization and are eligible for 50 NM lateral separation, operators shall:
 - (1) annotate ICAO Flight Plan Item 10 (Equipment) with the letters “R” and “Z” and...
 - (2) annotate Item 18 (Other Information) with, as appropriate, PBN/A1 or PBN/L1 (no space between letters and numbers).
- Operators of non-RNP4 or non-RNP10 aircraft shall annotate ICAO flight plan Item 18 as follows:
 - “STS/NONRNP10” (no space between letters and numbers).



Performance Based Communication Standards



What is PBCS?

- PBCS is a globally coordinated and accepted specification for required communication performance (RCP) and required surveillance performance (RSP)
- Each RCP and RSP specification provides functional, safety and performance requirements
- With respect to performance monitoring, the FAA is measuring the time (95%) and continuity (99.9%) requirements when the aircraft are operating in the data link environment where 30/30/50 is applied
- RCP describes CPDLC performance
- RSP describes ADS-C performance



How to Obtain PBCS Certification?

- Individual airframes must prove eligibility in order to request an approval based on aircraft meeting a set of safety and performance requirements
- Operator must meet a set of requirements that includes training, documentation of procedures, monitoring, problem reporting.
- Approval then comes from the State regulator from which the aircraft is registered



Why Measure and report PBCS Data?

- Separation standards in Oceanic Airspace continue to be reduced by ICAO
- These reduced standards are dependent on the transmission and receipt of timely ADS-C and CPDLC messages.
- Many factors affect the transmission and receipt of these messages
 - Performance of the equipment in the aircraft
 - Performance of the flight crew
 - System performance of the Communication Service Provider (SITA or ARINC)
 - System performance of the ATC System
- Reduced separation can not be applied if ADS-C and CPDLC messages cannot be received in an appropriate amount of time



How Does a User Indicate It's PBCS Data?

The required information in an FPL to allow the application of 30/30 or D50 is:

- P2 in Item 10a of the FPL. This indicates a CPDLC RCP value of 240 seconds or better
- SUR/RSP180 in Item 18 of the FPL. This indicates an ADS-C RSP value of 180 seconds or better



Example of FPL With Required RCP and RSP Values

(FPL-RAM203-IS

-B788/H-SDE1E3FGHIJ2J4J5LM1P2RWXYZ/LB1D1

-KJFK1145

-N0496F390 DCT WAVEY DCT SHLEP J62 RIFLE J174 HTO DCT YAHOO DCT
DOVEY/M085F390 DCT 41N060W 40N050W 39N040W 38N030W/M085F410
37N020W DCT MANOX/N0494F410 DCT SUBAL DCT IBALU DCT LAKAM
LAKAM3A

-GMMN0549 GMMX

-PBN/A1B1C1D1L1O1S1 DAT/FANS 14 **SUR/RSP180** DOF/180311 REG/CNRGC
EET/KZBW0005 KZNY0006 KZBW0007 KZNY0033 KZWY0041 41N060W0115
40N050W0204 LPPO0252 38N030W0342 37N020W0433 LPPC0457 GMMM0513
SEL/AMFJ OPR/RAM RALT/CYQX LPLA RVR/200 RMK/TCAS 7.1)



How Does PBCS Affect You?

- Separation standards based upon ADS-C and CPDLC will no longer be available on aircraft that do not meet the required RCP and RSP standards.
 - Again, those standards are:
 - P2 in Item 10a
 - SUR/RSP180 in Item 18
- If **BOTH** of these values are not in the FPL then we cannot apply 30/30 or D50



- RCP or RSP has no impact on an aircraft's ability to connect to KZWY
- Aircraft can still connect to KZWY as long as they have filed J5 or J7 in Item 10a of the FPL or if you manually enter J5 or J7



Data Link Services

- New York Center provides both ADS-C and CPDLC services in the Oceanic FIR.
- The New York Oceanic FIR log-on address is KZWY
- Only aircraft that are Inmarsat or Iridium equipped can logon to KZWY
- The proper indicator must be included in Item 10a of the FPL
- If you do not file an FPL with KZWY and do not include J5 or J7 then you will not be able to connect
 - J5 is Inmarsat
 - J7 is Iridium
- Failure to connect via ADS-C and CPDLC will impact your ability to obtain certain routes or altitudes



FANS-1/A Data Link Support

- **AFN**
 - Logon automatically accepted
 - When FPL is filed with J5/J7 and matching REG
 - Automatic transfer of datalink to next facility
- **ADS-C**
 - Automatic Contract Initiation for Equipped Aircraft
 - Periodic (10 min), Event (5nm), Vertical and Waypoint
 - On- Demand available on each aircraft
 - Contract Parameters Can be Modified by Controller at any time
- **CPDLC**
 - Nearly Instantaneous. Messages received on both ends within seconds
 - Clearances can be auto loaded into FMC
 - Highly Integrated With Other Sector Operations
 - Full message set is supported
 - Clearances Always Composed Same Way
 - Automation Determines Appropriate Routing (HF or Datalink)
 - Downlinks Routed to Correct Sector
 - Indicators on ASD and Strips



•Datalink



LOGON Procedures for Aircraft entering the KZWY Data-link service area from NON-Data-link airspace.

- Log on to KZWY at least 15 minutes but not more than 45 minutes prior to entering the KZWY Data-link service area.



LOGON Procedures for Aircraft Entering the KZWY Data-link Service Area From Adjacent Data-link Airspace.

- ADS-C and CPDLC services will transfer automatically from Santa Maria, Moncton and Gander Oceanic to New York.
- Pilots should check the ACTIVE Center as they cross the FIR boundary inbound to New York to ensure that the KZWY is the ACTIVE Center.
- If the ACTIVE Center is not correct within 5 minutes after the boundary is crossed, pilots shall ensure all open uplinks from the previous ATC unit have been responded to, then terminate the CPDLC connection and log on to KZWY.



KZWY Data-link Service Area Exit Procedures to non-Data-Link Facility

- Aircraft exiting the KZWY Data-link service area to adjacent NON-CPDLC airspace (Piarco, San Juan, New York Center Domestic, Miami, Jacksonville, Bermuda Radar, and Gander Domestic):
- Aircraft approaching the airspaces above can expect the CPDLC “CONTACT” message containing the frequency for the next facility for VHF assignments only. HF frequency assignments will be managed by ARINC. CPDLC will be terminated approximately 5 minutes prior to the boundary crossing point.
- ADS-C Connection will be automatically terminated by Ocean21.



KZWY Data-link Service Area Exit Procedures to Adjacent Data-Link Facility

- ADS-C and CPDLC services will transfer automatically from New York to Santa Maria, Moncton or Gander.
- Pilots should check the ACTIVE Center as they cross the FIR boundary outbound and ensure that the FIR they are entering is the ACTIVE Center.
- Pilots should check the ACTIVE Center as they cross the FIR boundary to ensure that the FIR they are entering is the ACTIVE Center.
- If the active center is not correct within 5 minutes after the boundary is crossed, pilots shall ensure all open uplinks from the previous ATC unit have been responded to, then terminate the CPDLC connection and log on to the correct address.



Position Reporting- Data-Link

- After entering the New York Oceanic FIR (KZWY), normal waypoint position reports will be received via ADS.
- Due to the types of ADS contracts that are established, time revisions should **not** be passed via CPDLC or HF.
- Operators should not use CPDLC for position reports unless ADS is unavailable.
- Use CPDLC for clearance requests, or for communication not associated with waypoint position reports.
- ZWY cannot accept CPDLC position reports containing latitude and longitude (Lat/Long) in ARINC 424 format (e.g. 4050N). CPDLC position reports containing Lat/Long waypoints within the KZWY Data-link service area will be accepted in whole latitude and longitude format only (e.g. 40N050W).



HF Communications Requirement for Data-Link Aircraft

- Prior to entering the KZNY Oceanic area, contact New York Radio (ARINC) on HF or VHF and;
 1. If the flight will exit ZNY oceanic airspace into oceanic airspace:
 - identify the flight as A-D-S equipped
 - state the name of the next OCA/FIR to be entered
 - request a SELCAL check
- Expect to receive primary and secondary HF frequency assignments from New York Radio for the route of flight within the Data-link service area. Pilots must maintain HF communications capability with New York Radio at all times within the entire New York Oceanic FIR. It should be noted that ARINC may require flights to contact them at 60 West for HF frequency updates.



Position Reporting- HF

- Position Reports should be forwarded through HF for all charted compulsory reporting points.
- Position Reports should be forwarded through HF for all non-charted compulsory reporting points filed in the flight plan.



Preferential Routings

- Moncton
 - M201 all the way to CARAC
 - M202 all the way to LOMPI
- U.S. Domestic- All aircraft exiting the New York Oceanic FIR into San Juan, Miami, Jacksonville, or New York Domestic shall file a route that exits over a five letter boundary fix.



Requests in the vicinity of the FIR Boundary

- Due to the nature of manual coordination, requests should be kept to a minimum when within 30 minutes of the FIR boundary.



Weather Deviations

- Deviation Requests as a result of weather is one of our top priorities.
- Response times to deviation requests are very low.
- Every attempt should be made to request a clearance to deviate.
- In the event that a clearance cannot be granted, the procedures in ICAO 4444, Chapter 15 should be followed.
- Procedures document on:

http://www.faa.gov/pilots/intl/oceanic_ops/media/oceanic_wx_deviation_proc_land.pdf



Oceanic Clearances

- In 2013, The United States changed the method in which Oceanic Clearances are delivered to Eastbound aircraft
- These changes are published in NOTAM A0017/13
- Key changes are:
 - The airport clearance received at the departure airport is considered to be the route portion of the Oceanic Clearance. The entire route of flight will never be issued. Instead, most clearances will almost always contain a “then as filed”. Do not expect a full reading of the oceanic portion of your route.
 - A MACH speed will be assigned prior to entry into OCA-East or OCA-West
 - An altitude will always be assigned by Enroute. The last assigned altitude is always your “Oceanic” altitude.
 - All three elements will not be issued at the same time.
 - This procedure should be no different than flying domestically
- These procedures apply to aircraft that depart airports in the CONUS, Caribbean, Central America or South America



More Information

- All NOTAMs pertaining to New York Oceanic are filed under KZWY
- Global Oceanic Data Link Document:
https://icao.int/APAC/Documents/edocs/GOLD_2Edition.pdf
- United States AIP, Chapter 7 contains detailed information regarding operations in the KZWY Oceanic FIR:
https://www.faa.gov/air_traffic/publications/media/AIP.pdf



Questions????

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