Oakland Center Update

Presented to: IPACG 45

By: Holly King

Date: 12/11/2019

ZOA Update

- **Website**
- **FIR/Traffic**
  - Volume
- **Aircraft Type Distribution**
- **Equipage Updates**
- **Oceanic Equipage by Traffic Flow**
- **ADS-C CDP & ADS-B ITP**
- **Un-Announced Speed Changes**
- **Tailored Arrivals**

Oakland ARTCC Webpage

Oakland Air Route Traffic Control Center (ZOA) - Windows Internet Explorer

http://www.faa.gov/about/office_org/headquarters_offices/ato/artcc/oakland/

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Air Traffic Organization

- ATO Organization
- **Air Route Traffic Control Centers (ARTCC)**
- Airport Traffic Control Towers (ATCT)
- Terminal Radar Approach Control Facilities (TRACON)

Oakland Air Route Traffic Control Center (ZOA)

Print

At the heart of Oakland ARTCC is a team of Air Traffic and Technical Operations Professionals. Oakland Center is unique in that two distinctly different air traffic control functions are handled here. There is the normal en route air traffic control as well as an oceanic air traffic operation that manages the largest volume of international airspace in the world at one facility.

- KZOA Domestic ATC Operations
- KZAK Oceanic ATC Operations
- NOTAMs, TFRs, SUAs

Oakland ARTCC
5125 Central Ave.
Fremont, CA. 94536
Phone: (510) 745-3000

Rohitkumar Desai,
Web POC
ZOA Web Site
Feedback

http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/air_traffic_services/artcc/oakland/

Air Traffic Services

Flight Plan Filing

Air Route Traffic Control Centers (ARTCC)

Airport Traffic Control Towers (ATCT)

Terminal Radar Approach Control Facilities (TRACON)

FAA Home ▸ Offices ▸ Air Traffic Organization ▸ Service Units ▸ Air Traffic Services ▸ Air Route Traffic Control Centers (ARTCC)

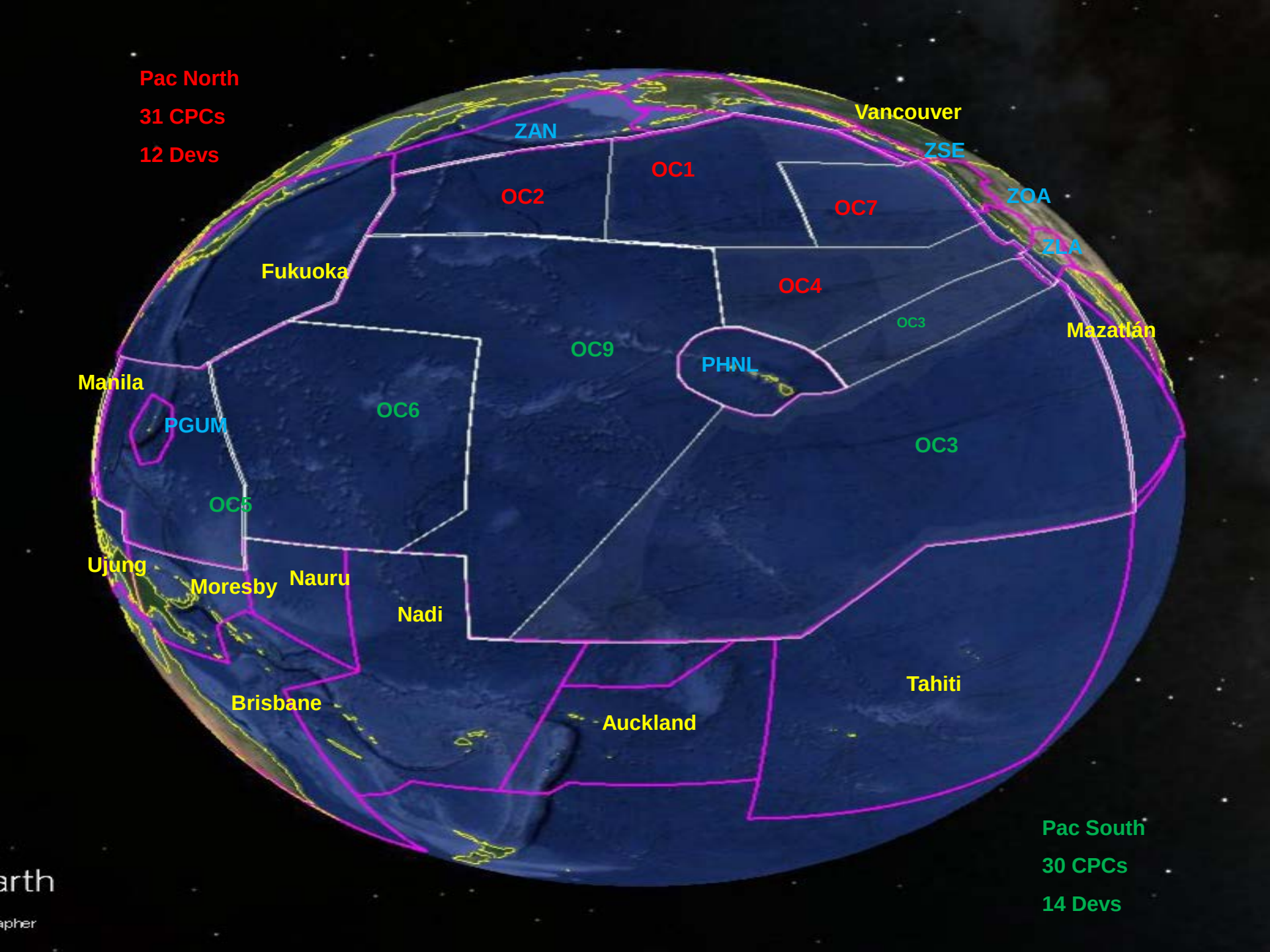
Print Share

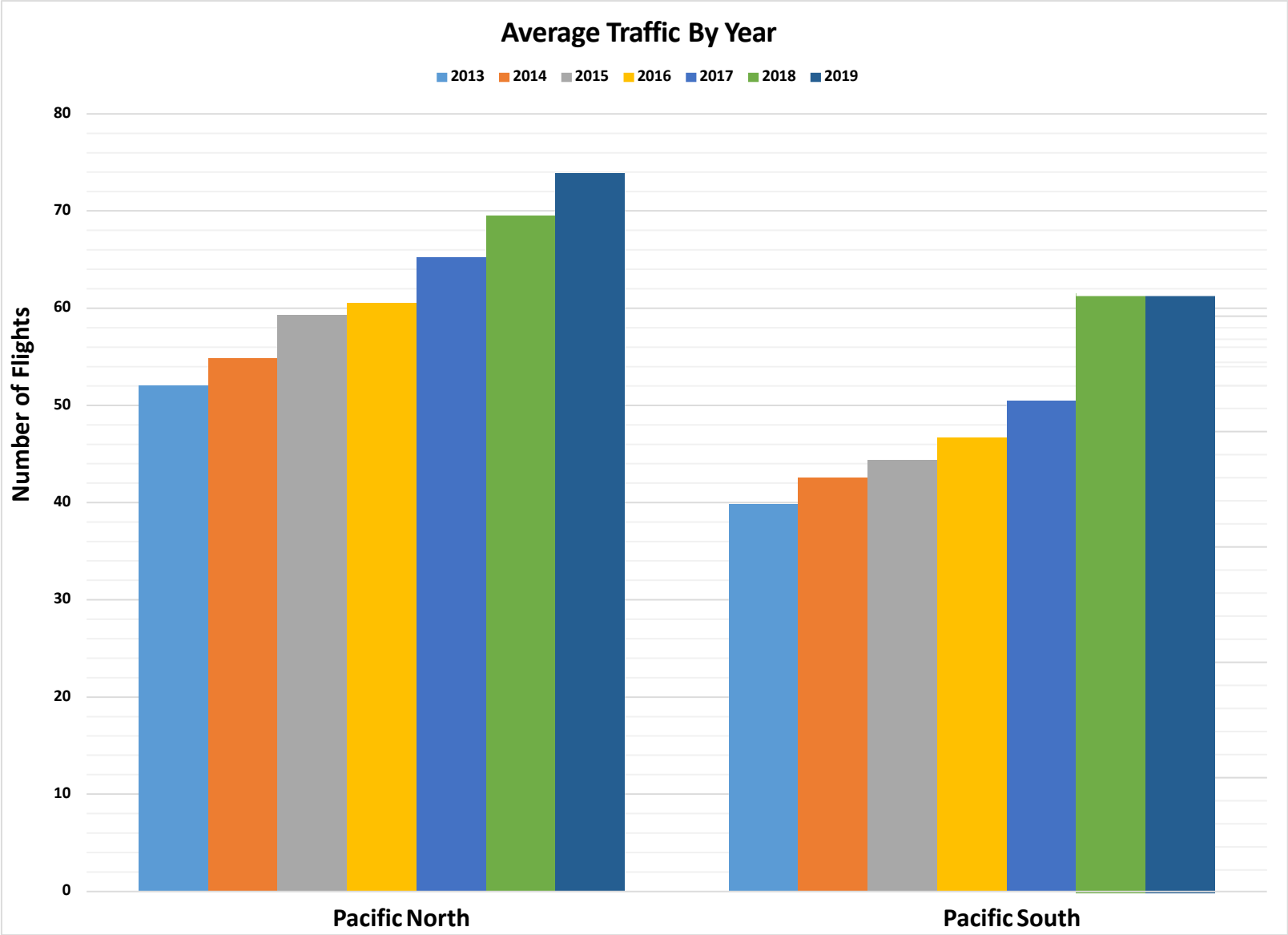
KZAK Oceanic ATC Operations

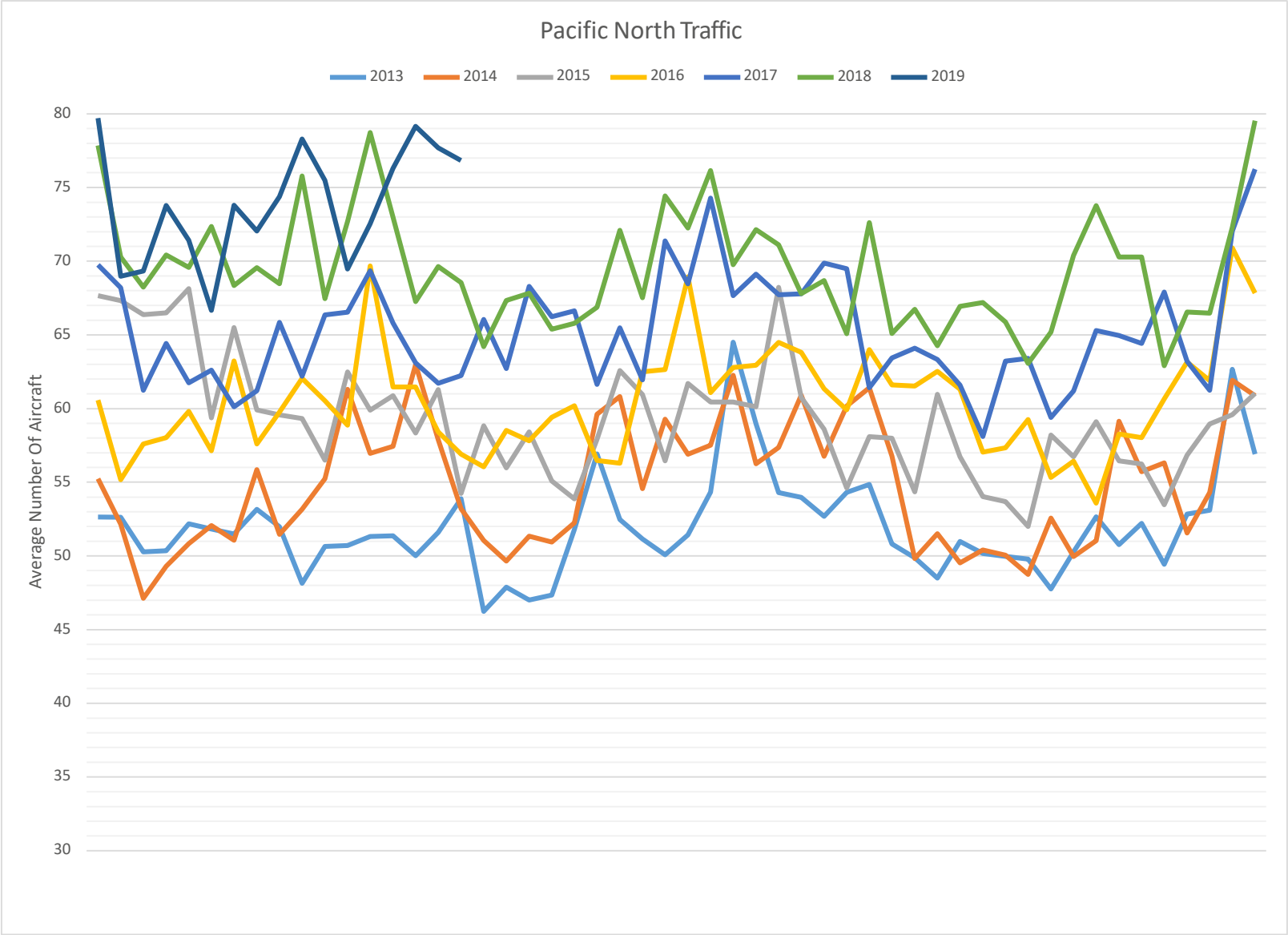
- Central East Pacific (CEP) Routes Guidelines (PDF)
- Guam Area Preferential Routings (PDF)
- High Altitude User Preferred Routes (PDF)
- Oakland ARTCC Oceanic Points of Contact (PDF)
- Oakland Oceanic Controlled Airspace/Flight Information Region (OCA/FIR) (PDF)
- Oakland Oceanic CPDLC (PDF)
- Pacific Organized Track System (PACOTS) Guidelines (PDF)
- Track Advisory User's Guide for Dispatchers (Effective May 6, 2015) (PDF)
- User Preferred Route (UPR) Flight Planning Guidelines (PDF)

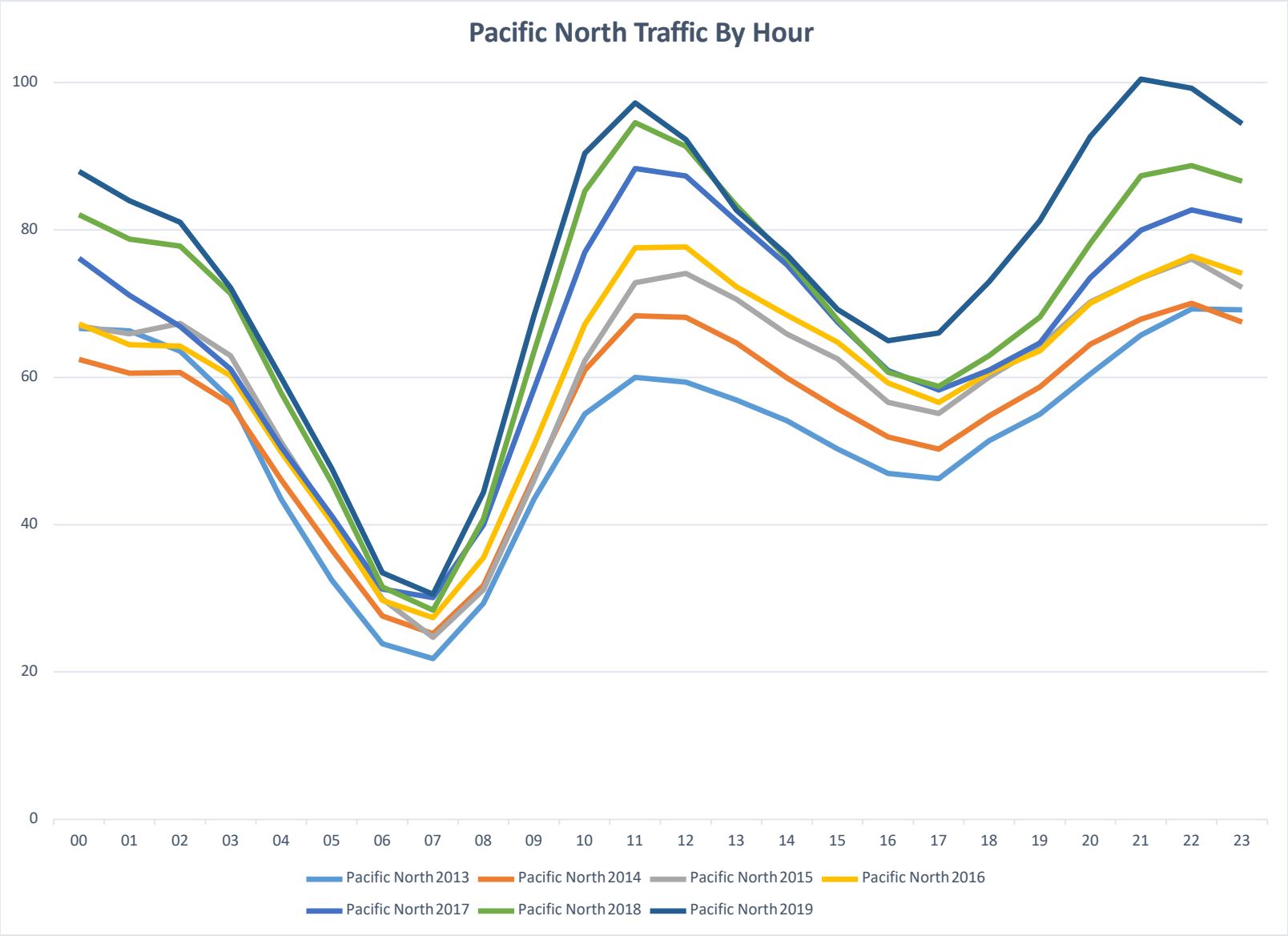
Pacific Meetings

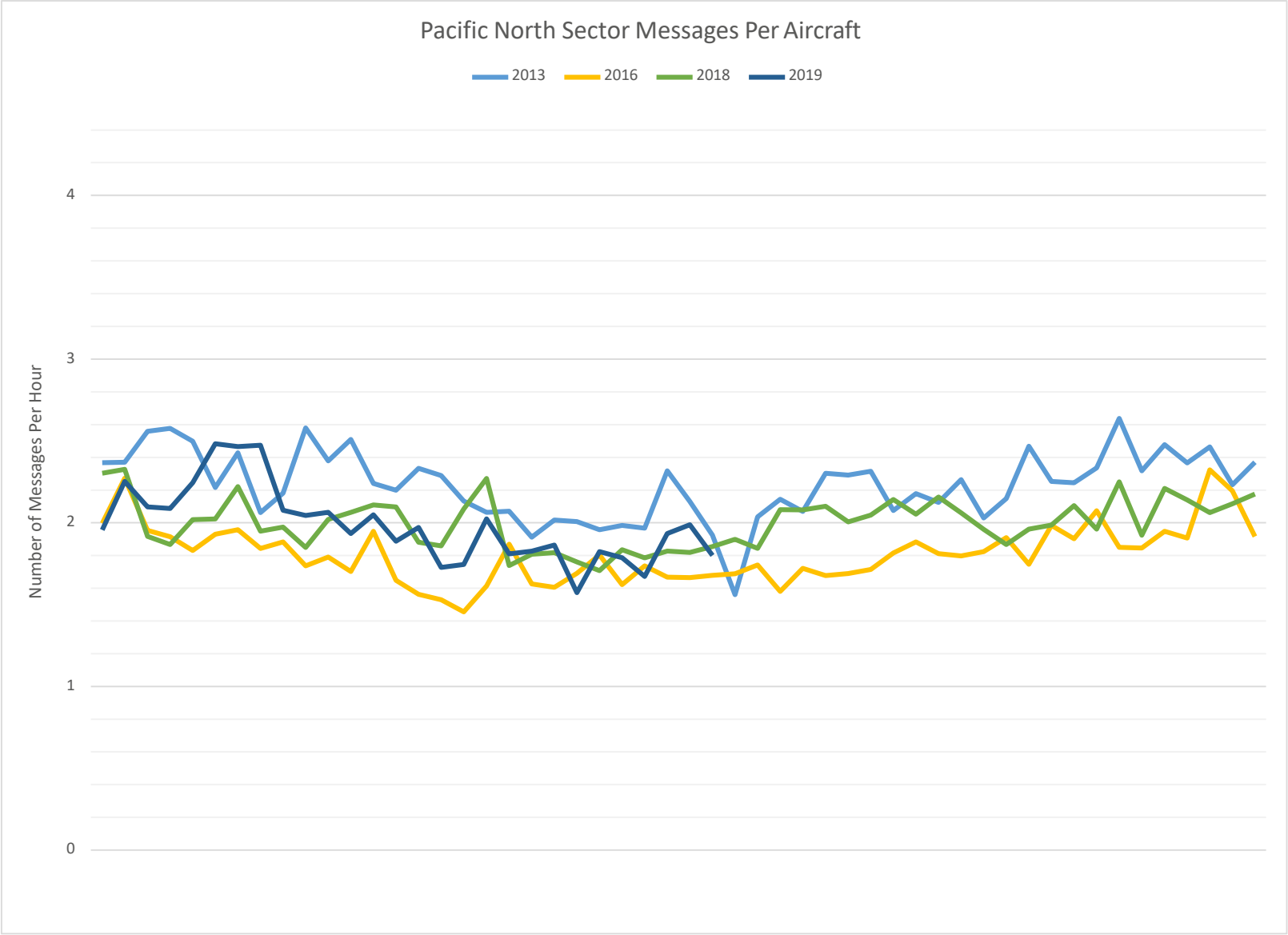
- Informal Pacific Coordinating Group (IPACG)
- Informal South Pacific Coordinating Group (ISPACG)
- Oceanic Workgroup Meeting (OWG)

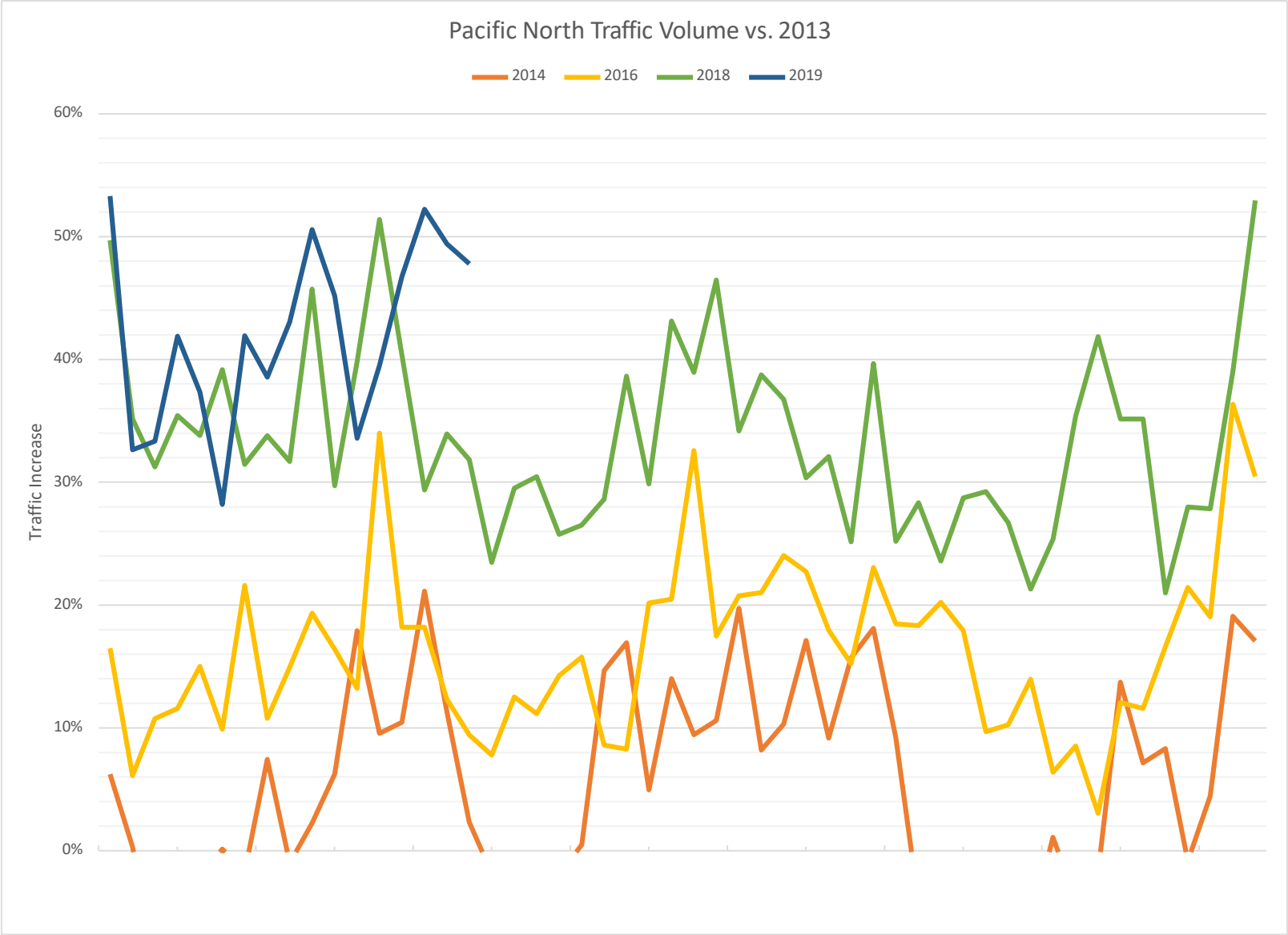

Pac North
31 CPCs
12 Devs
ZAN
Vancouver
ZSE
OC1
OC2
OC7
ZOA
ZLA
Fukuoka
OC4
OC3
Mazatlán
OC9
PHNL
Manila
OC6
PGUM
OC3
OC5
Ujung
Moresby
Nauru
Nadi
Tahiti
Brisbane
Auckland
Pac South
30 CPCs
14 Devs

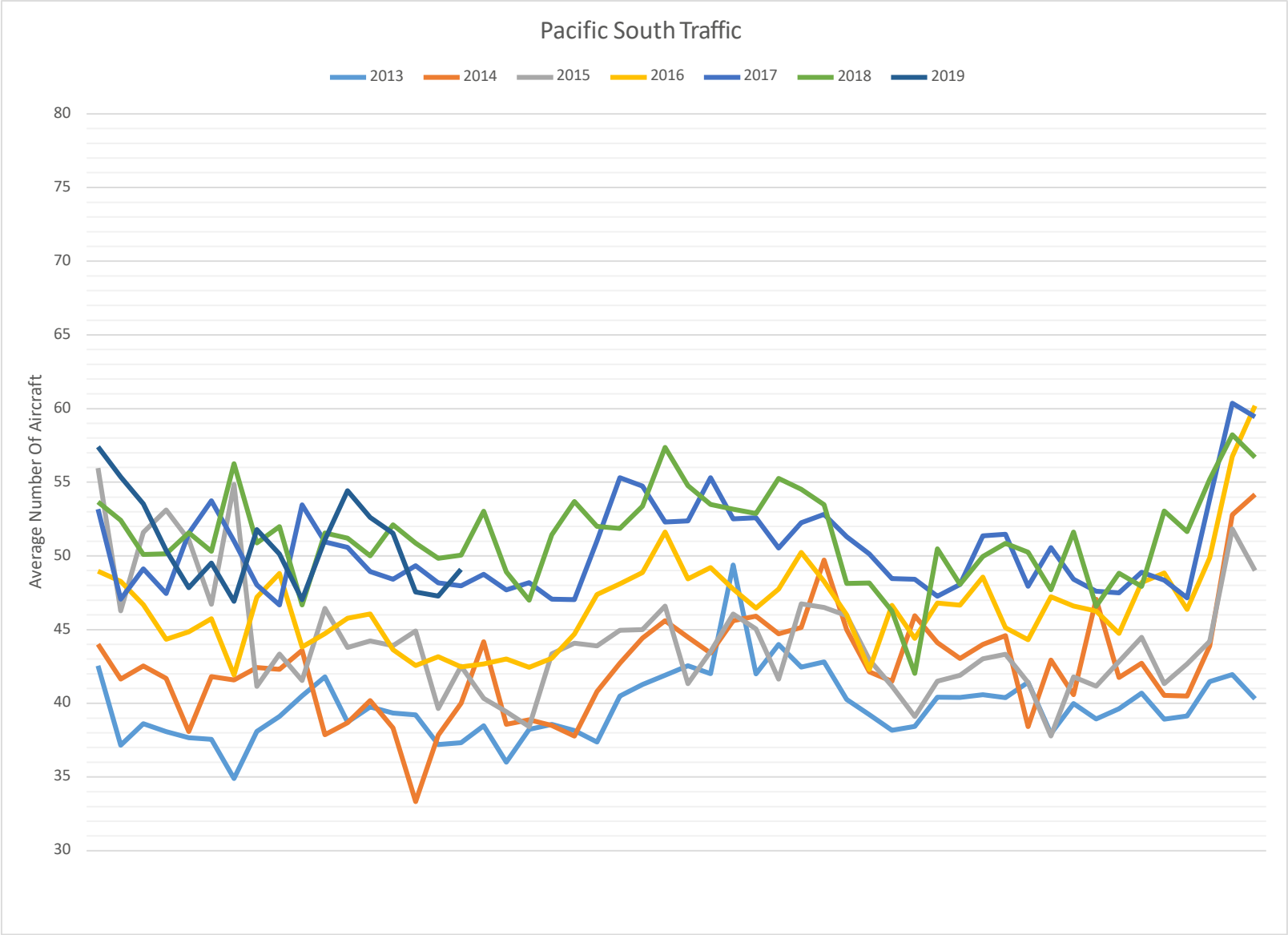

Average Traffic By Year
2013
2014
2015
2016
2017
2018
2019
Number of Flights
80
70
60
50
40
30
20
10
0
Pacific North
Pacific South

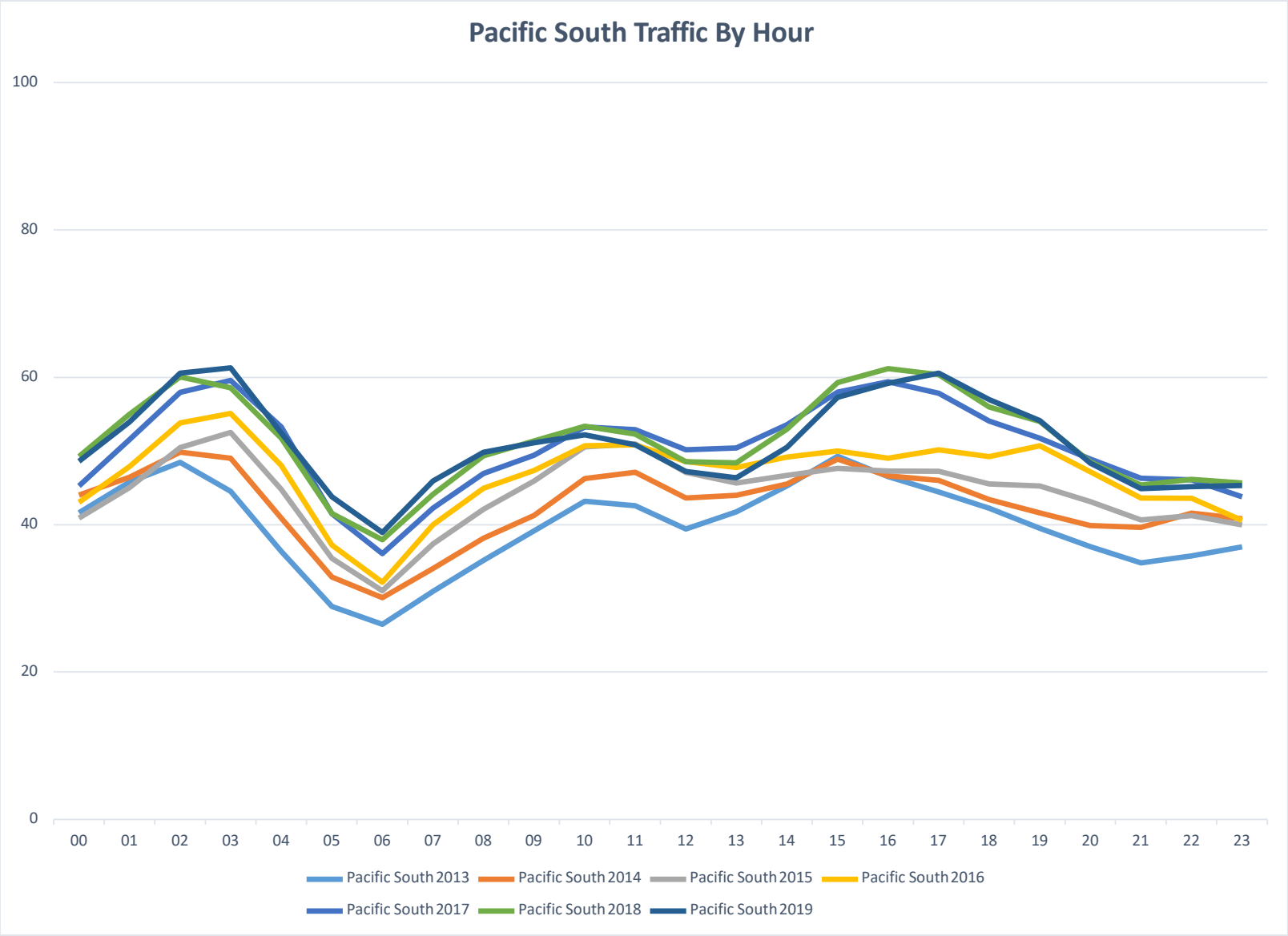

Pacific North Traffic
2013
2014
2015
2016
2017
2018
2019
Average Number Of Aircraft
80
75
70
65
60
55
50
45
40
35
30

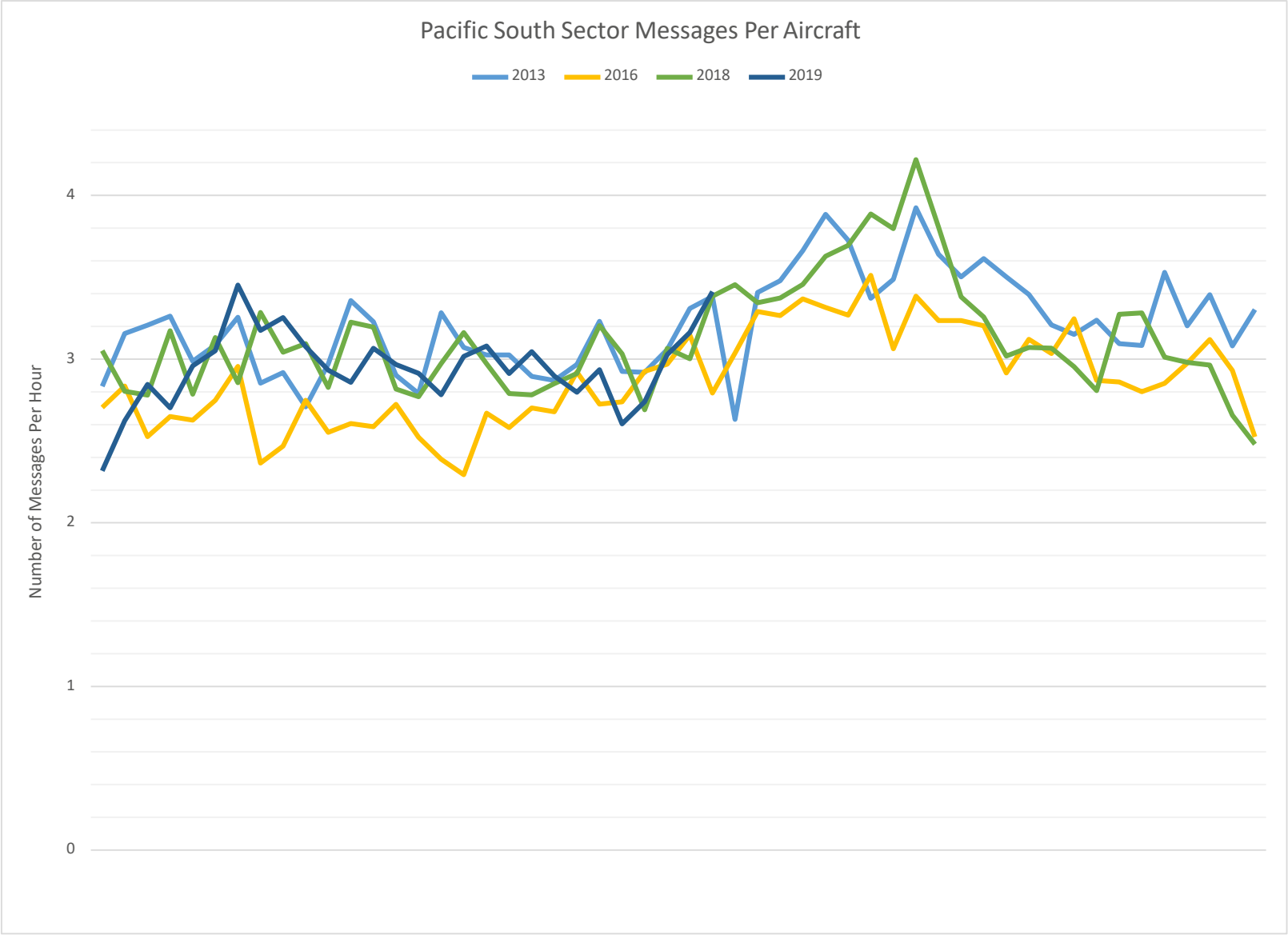

Pacific North Traffic By Hour
100
80
60
40
20
0
00
01
02
03
04
05
06
07
08
09
10
11
12
13
14
15
16
17
18
19
20
21
22
23
Pacific North 2013
Pacific North 2014
Pacific North 2015
Pacific North 2016
Pacific North 2017
Pacific North 2018
Pacific North 2019

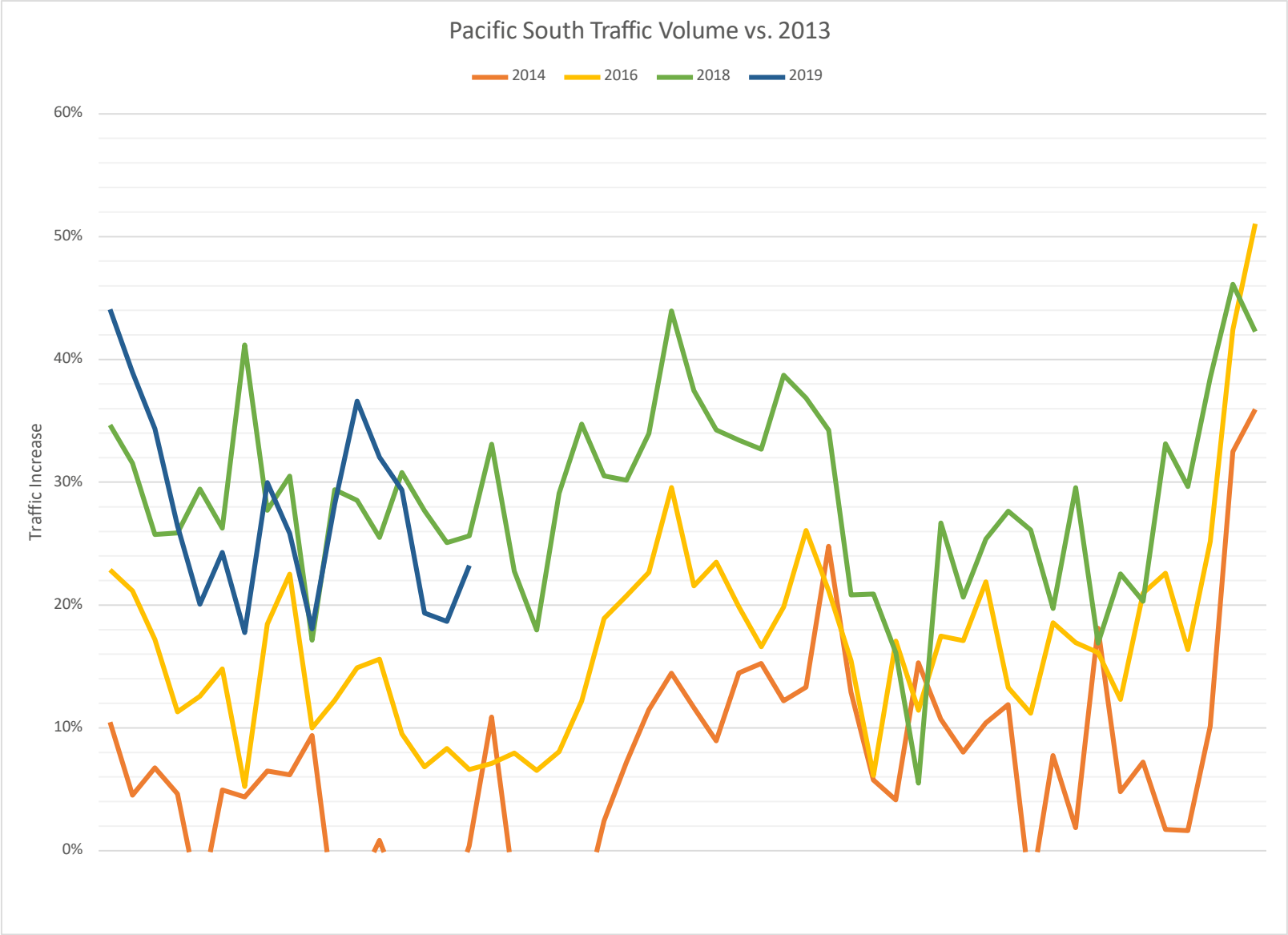

Pacific North Sector Messages Per Aircraft
2013
2016
2018
2019
Number of Messages Per Hour
4
3
2
1
0

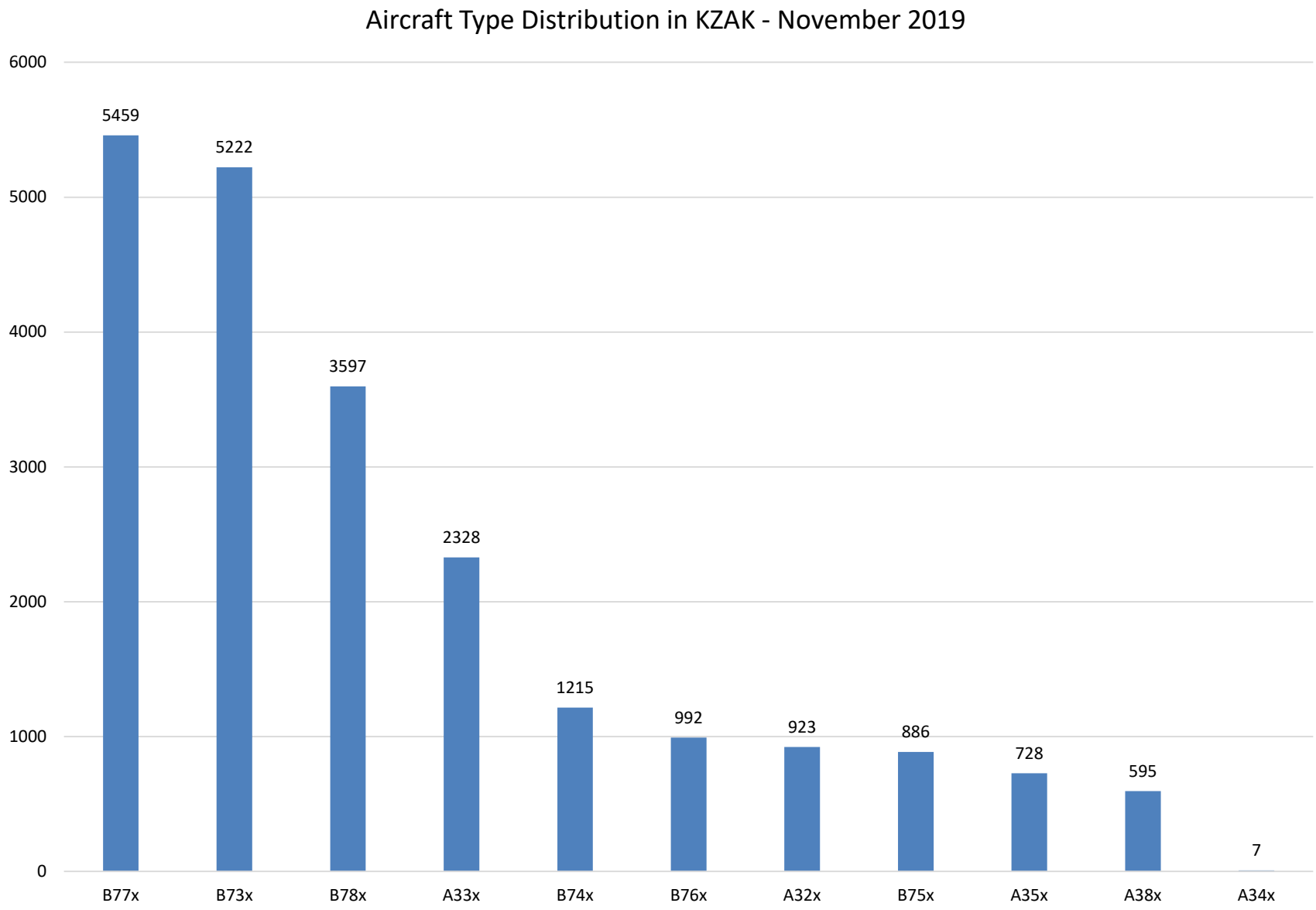

Pacific North Traffic Volume vs. 2013
2014
2016
2018
2019
60%
50%
40%
30%
20%
10%
0%
Traffic Increase

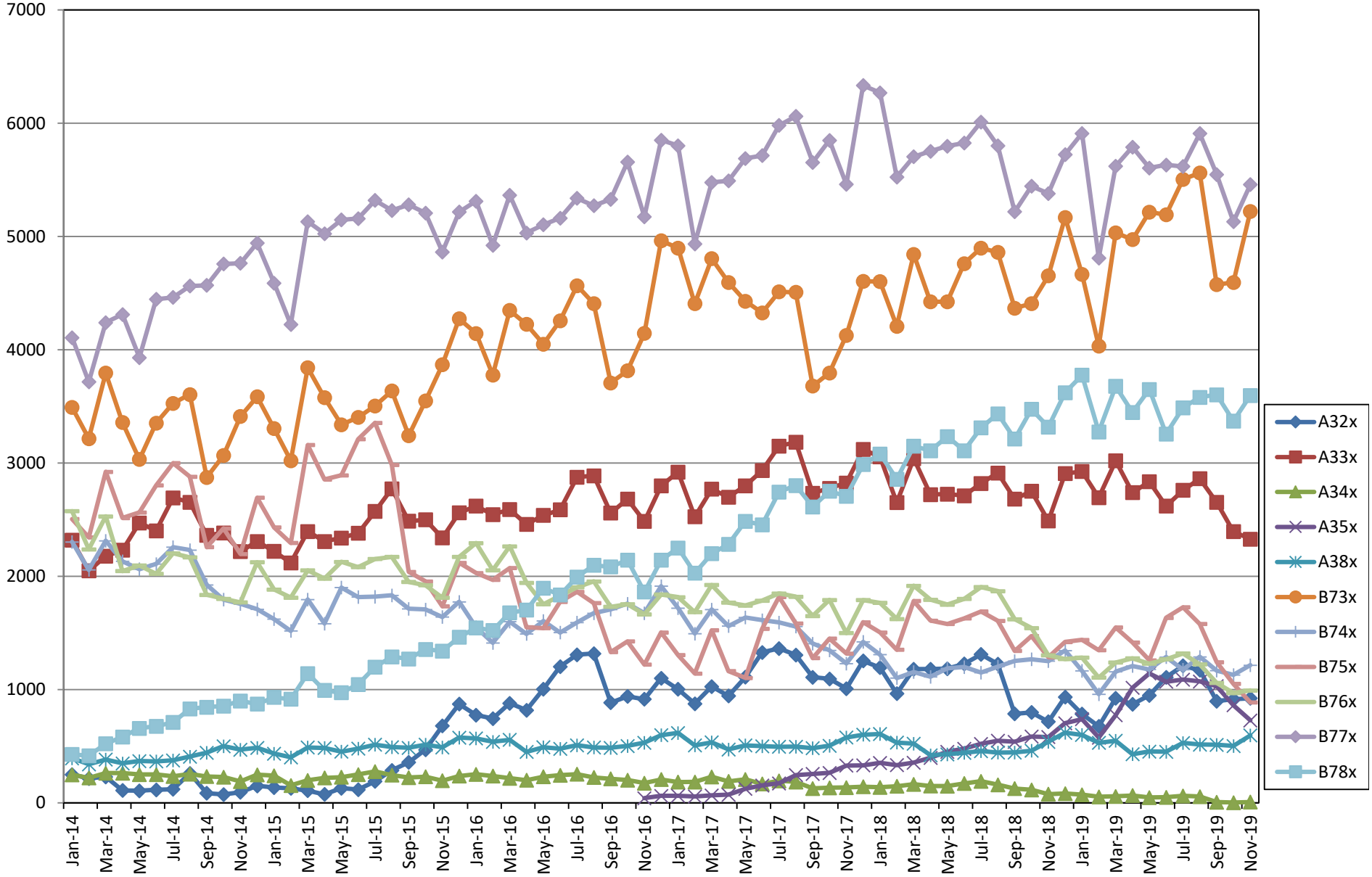

Pacific South Traffic
2013
2014
2015
2016
2017
2018
2019
Average Number Of Aircraft
80
75
70
65
60
55
50
45
40
35
30


Pacific South Traffic By Hour
100
80
60
40
20
0
00
01
02
03
04
05
06
07
08
09
10
11
12
13
14
15
16
17
18
19
20
21
22
23
Pacific South 2013
Pacific South 2014
Pacific South 2015
Pacific South 2016
Pacific South 2017
Pacific South 2018
Pacific South 2019


Pacific South Sector Messages Per Aircraft
2013
2016
2018
2019
Number of Messages Per Hour
4
3
2
1
0


Pacific South Traffic Volume vs. 2013
2014
2016
2018
2019
60%
50%
40%
30%
20%
10%
0%
Traffic Increase

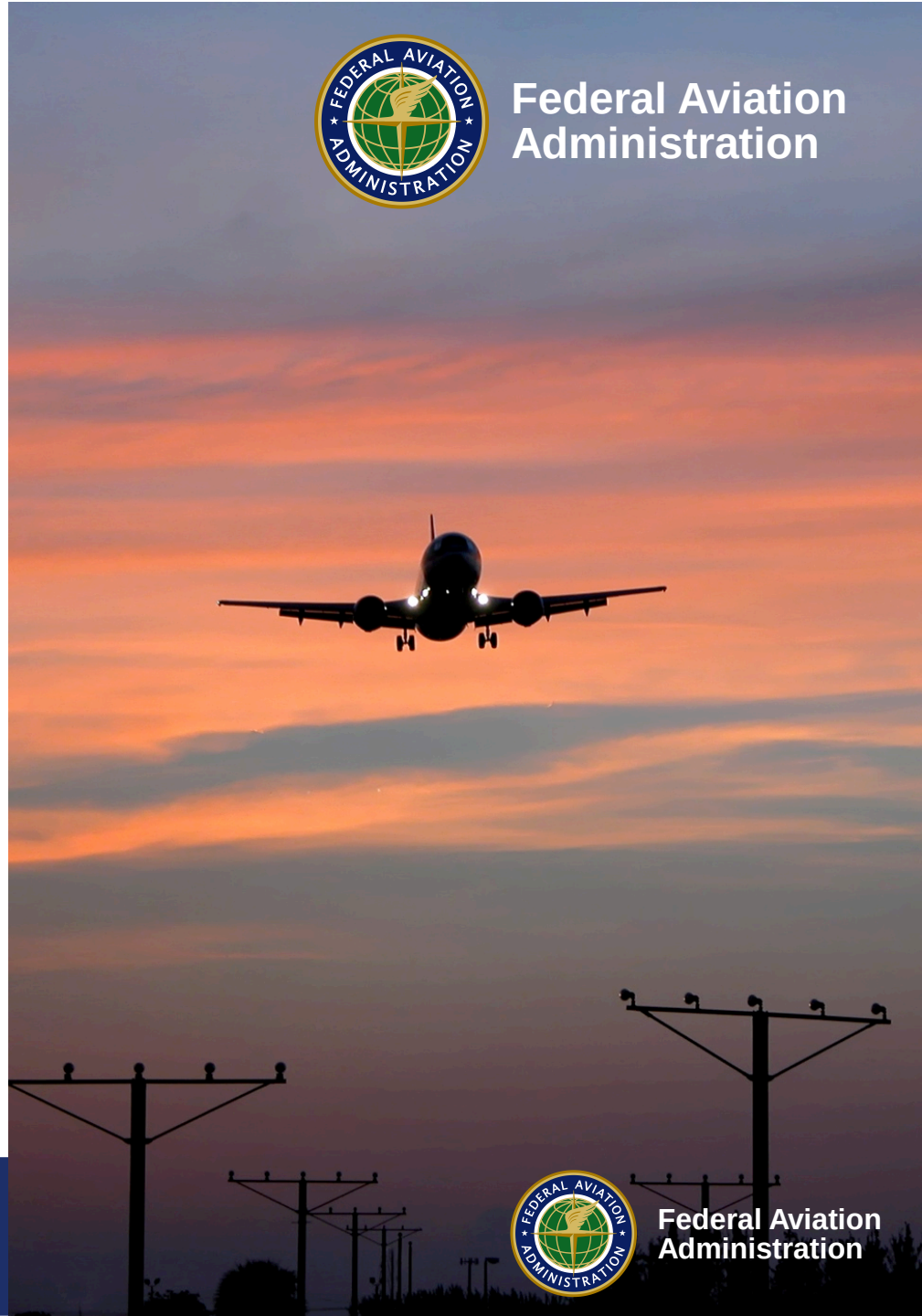

Aircraft Type Distribution in KZAK - November 2019
6000
5000
4000
3000
2000
1000
0
5459
5222
3597
2328
1215
992
923
886
728
595
7
B77x
B73x
B78x
A33x
B74x
B76x
A32x
B75x
A35x
A38x
A34x



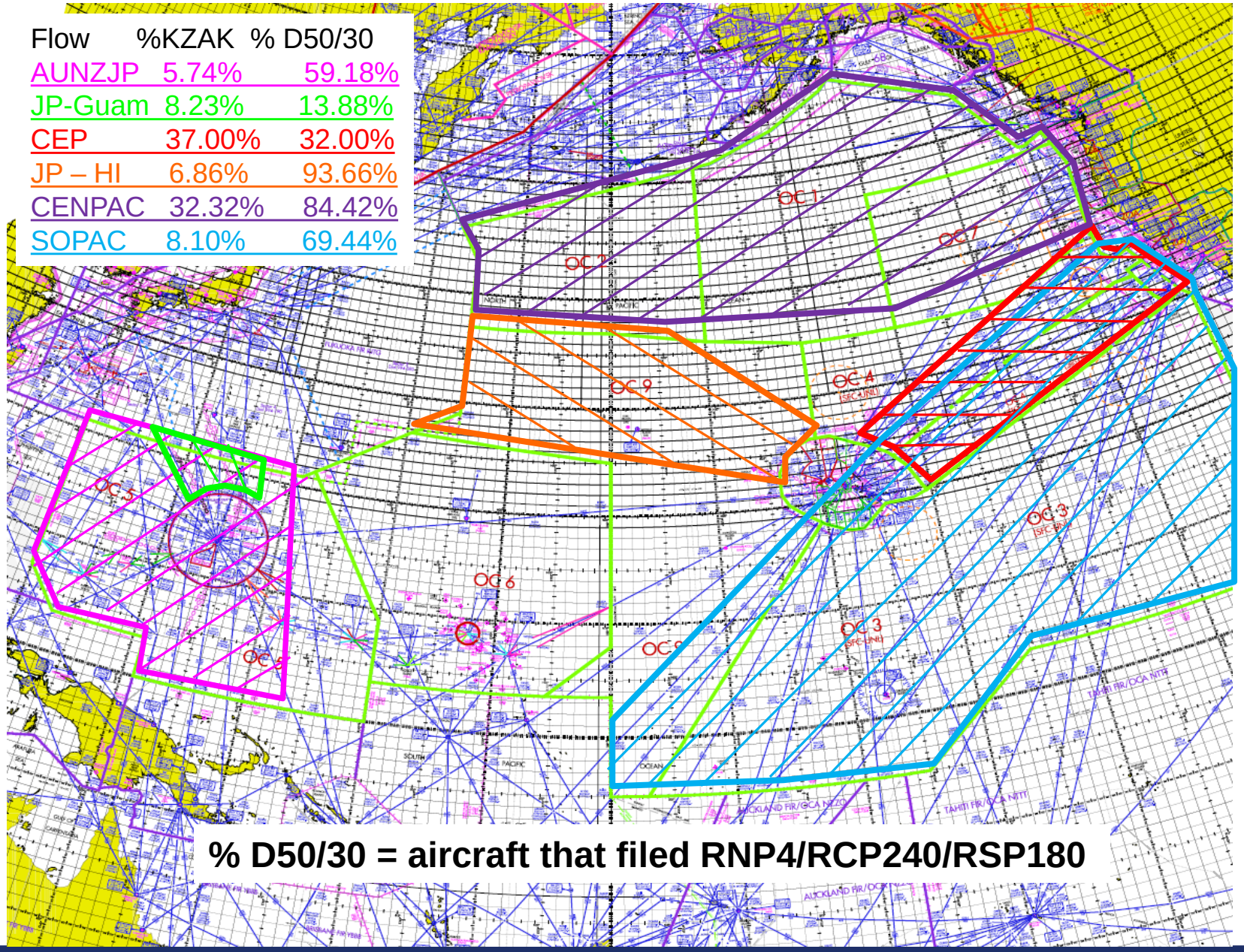
Federal Aviation Administration

Oceanic Equipage

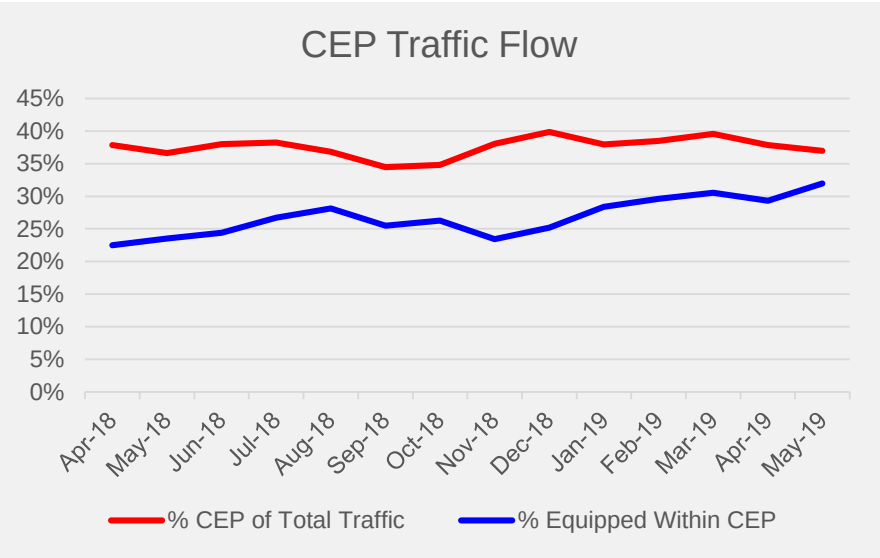
Aircraft
Traffic Flows
Volume

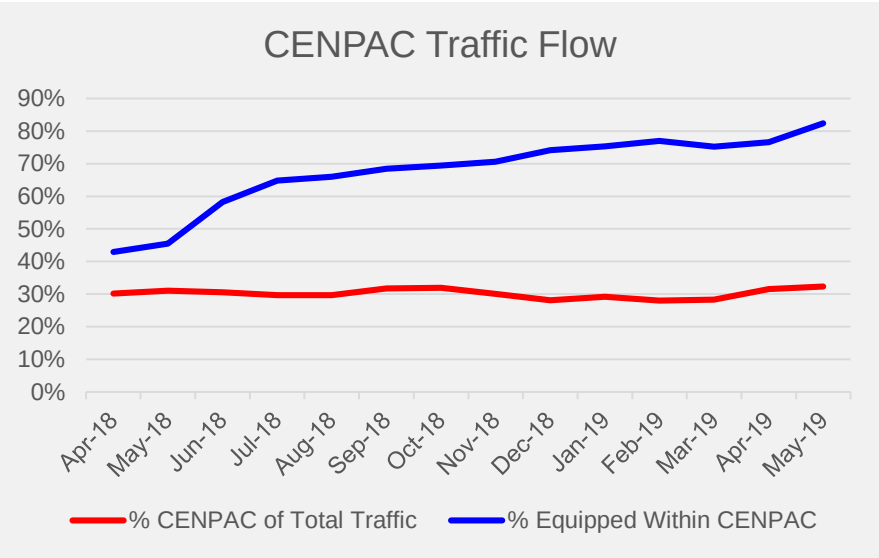


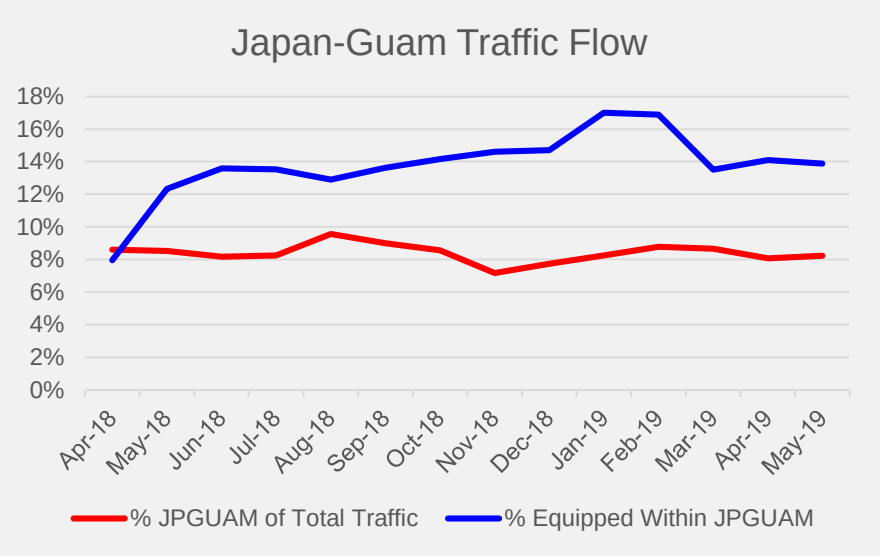
Flow	%KZAK	% D50/30
AUNZJP	5.74%	59.18%
JP-Guam	8.23%	13.88%
CEP	37.00%	32.00%
JP – HI	6.86%	93.66%
CENPAC	32.32%	84.42%
SOPAC	8.10%	69.44%

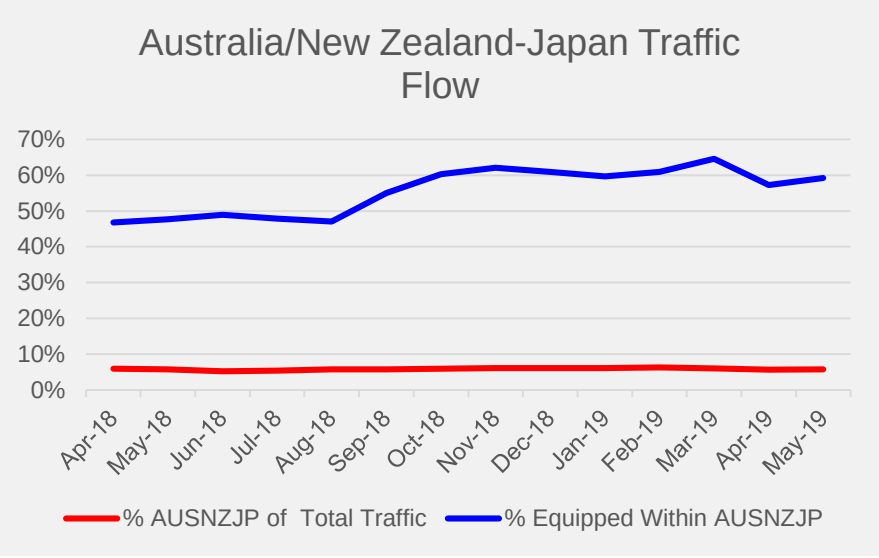


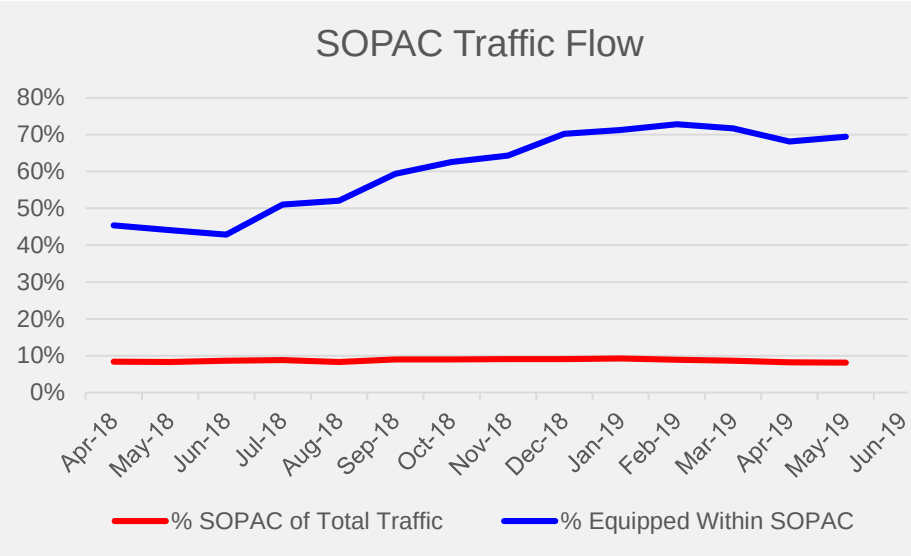
% D50/30 = aircraft that filed RNP4/RCP240/RSP180

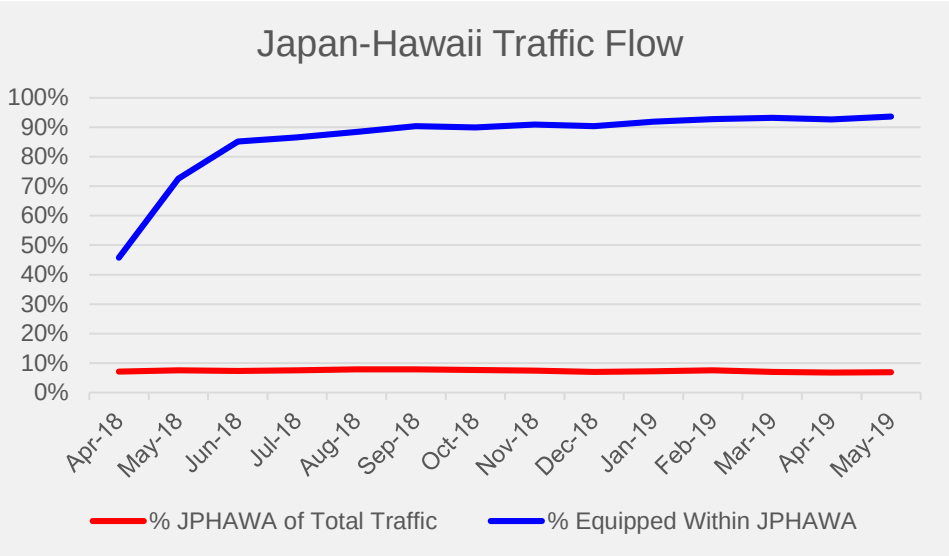

CEP Traffic Flow
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Jan-19
Feb-19
Mar-19
Apr-19
May-19
% CEP of Total Traffic
% Equipped Within CEP


CENPAC Traffic Flow
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Jan-19
Feb-19
Mar-19
Apr-19
May-19
% CENPAC of Total Traffic
% Equipped Within CENPAC

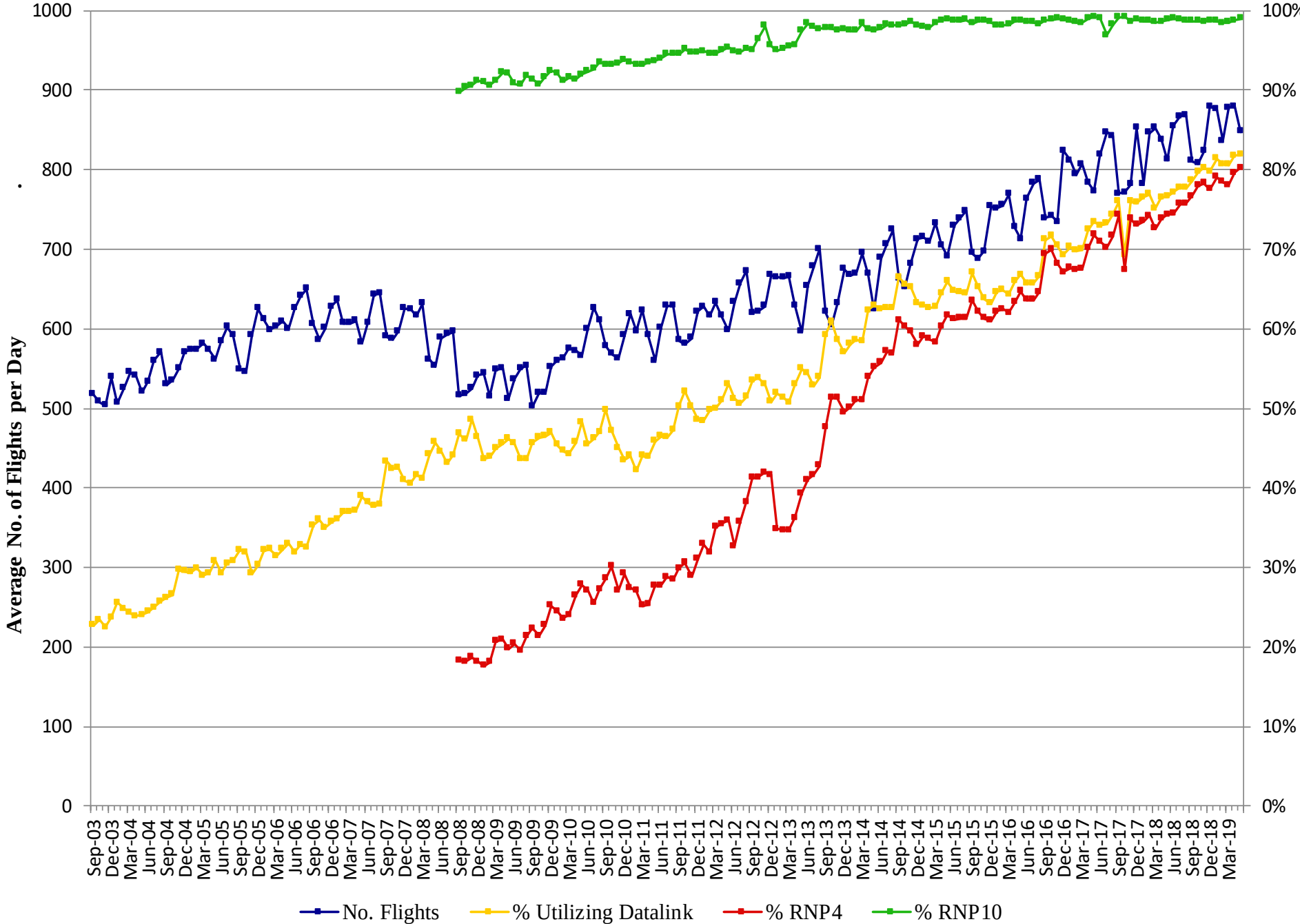

Japan-Guam Traffic Flow
18%
16%
14%
12%
10%
8%
6%
4%
2%
0%
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Jan-19
Feb-19
Mar-19
Apr-19
May-19
% JPGUAM of Total Traffic
% Equipped Within JPGUAM

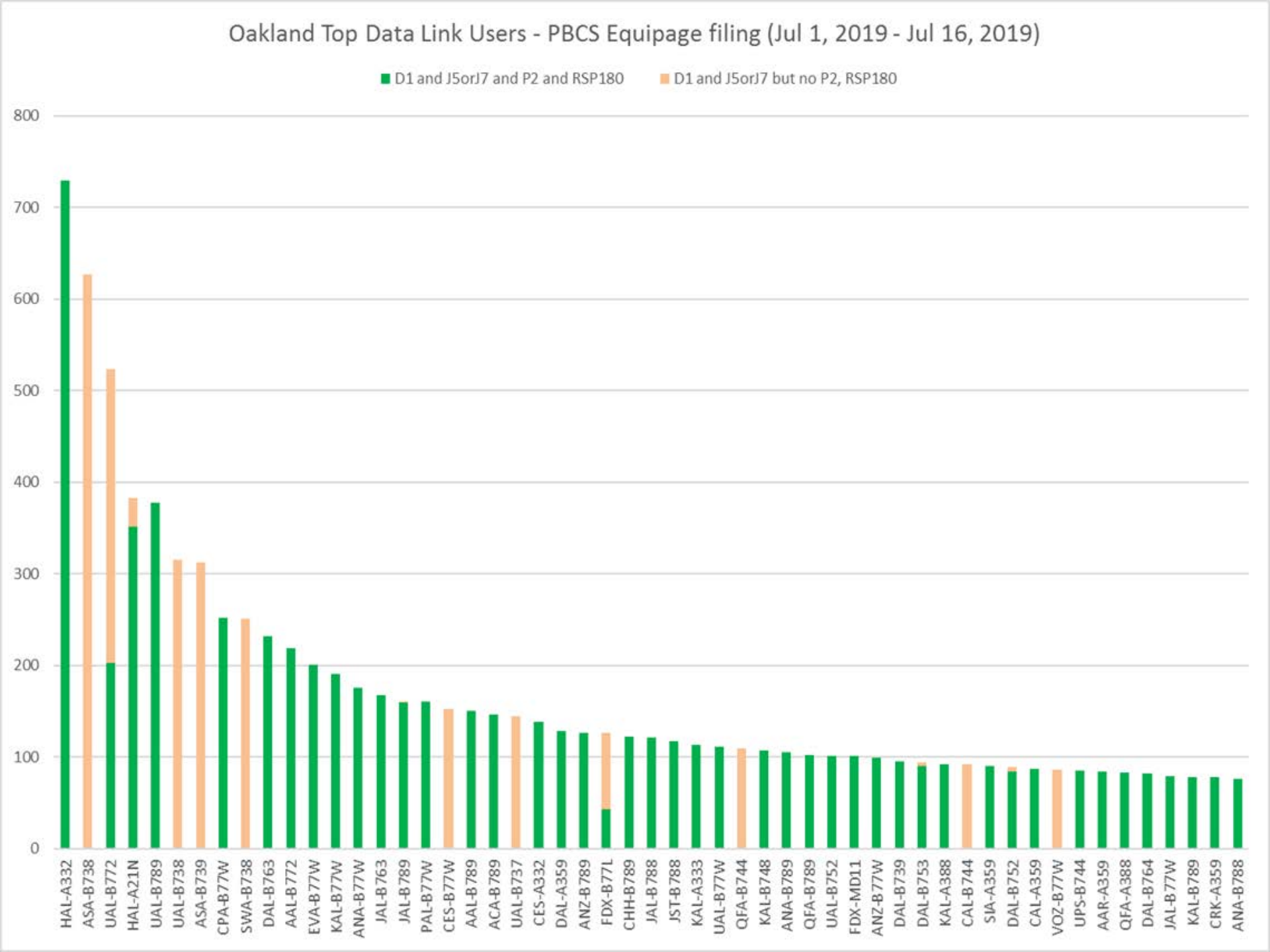

Australia/New Zealand-Japan Traffic Flow
70%
60%
50%
40%
30%
20%
10%
0%
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Jan-19
Feb-19
Mar-19
Apr-19
May-19
% AUSNZJP of Total Traffic
% Equipped Within AUSNZJP


SOPAC Traffic Flow
80%
70%
60%
50%
40%
30%
20%
10%
0%
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Jan-19
Feb-19
Mar-19
Apr-19
May-19
Jun-19
% SOPAC of Total Traffic
% Equipped Within SOPAC


Japan-Hawaii Traffic Flow
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Jan-19
Feb-19
Mar-19
Apr-19
May-19
% JPHAWA of Total Traffic
% Equipped Within JPHAWA

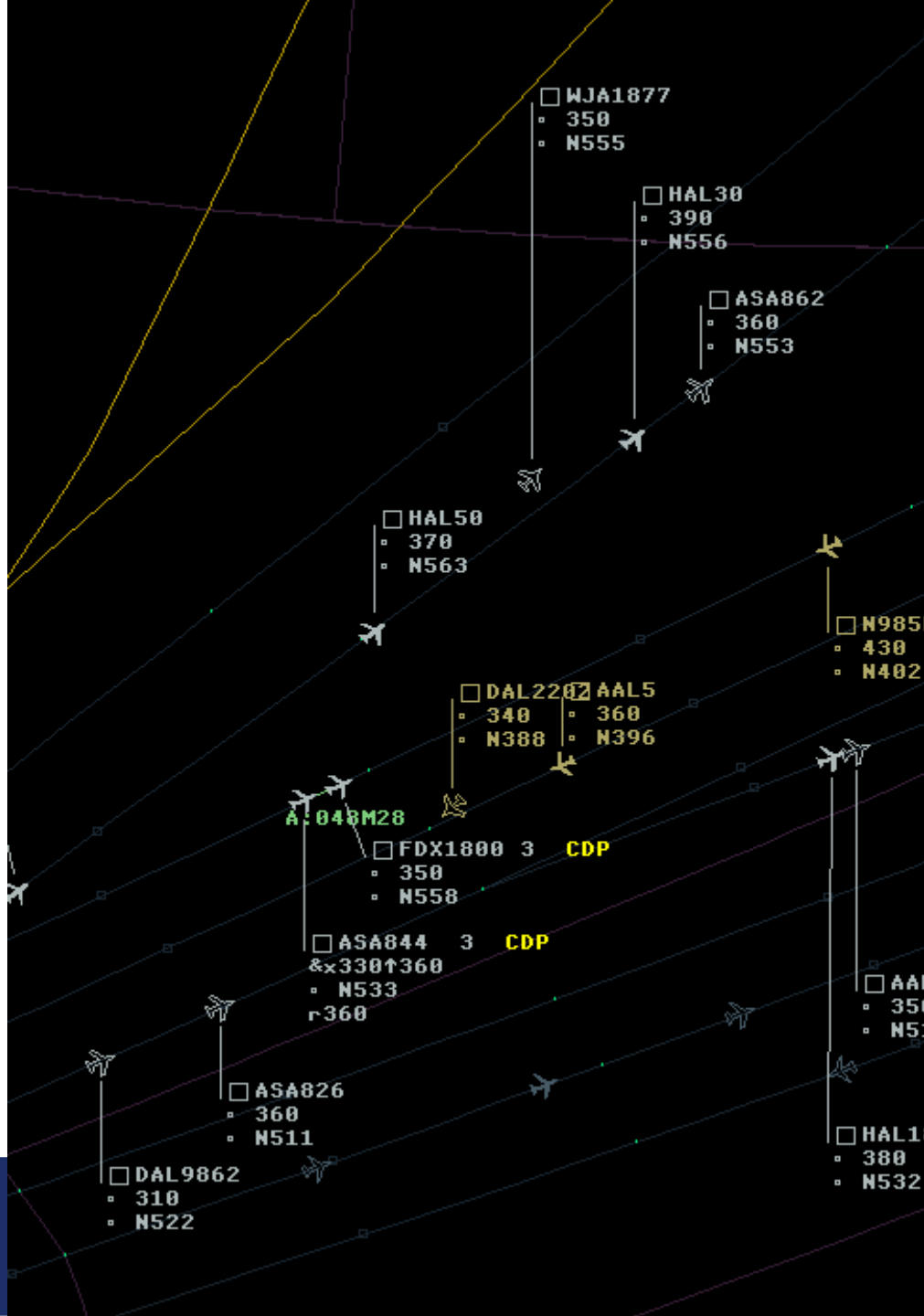
ZOA Flights & Equipment Utilization



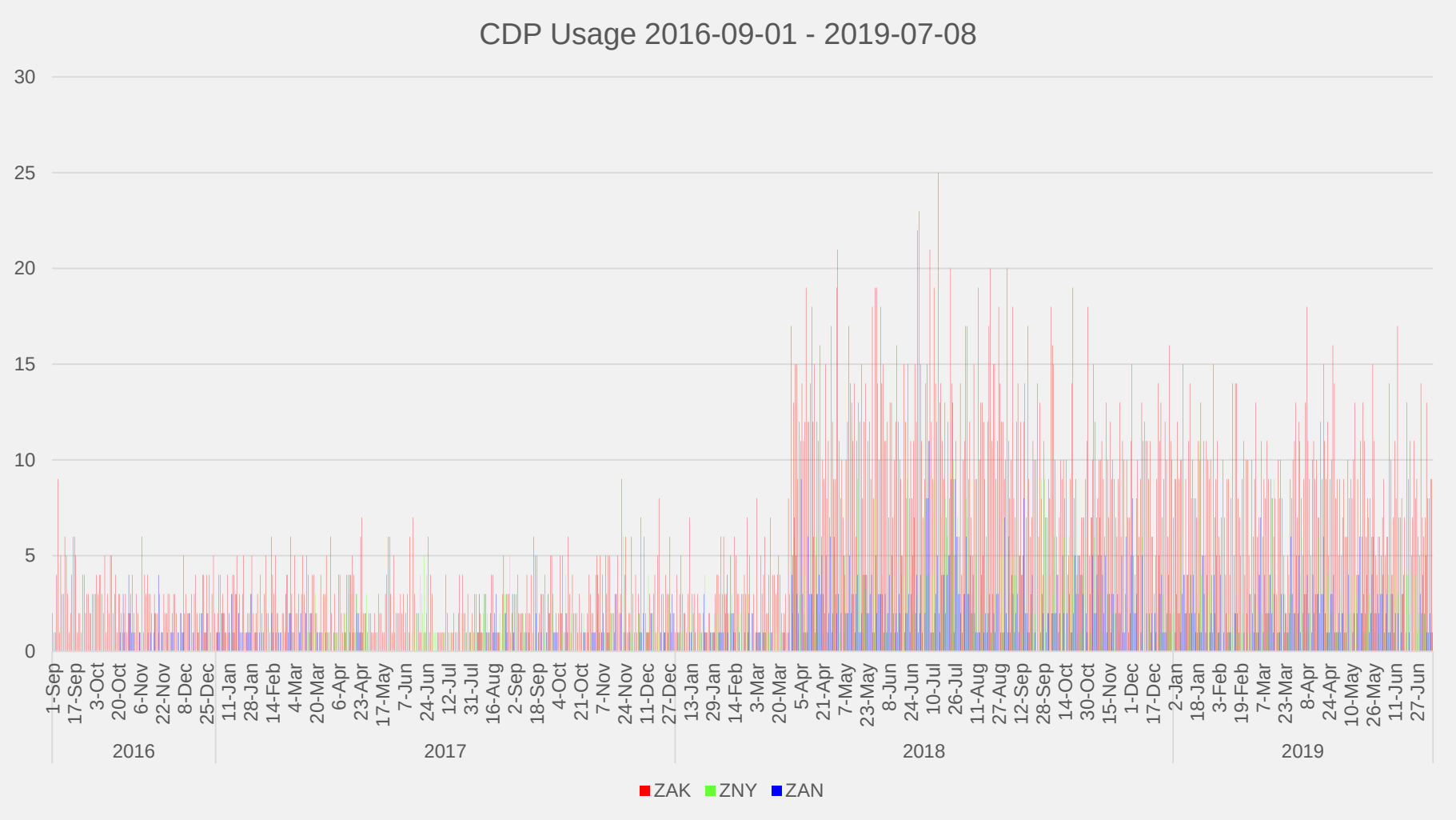

Oakland Top Data Link Users - PBCS Equipage filing (Jul 1, 2019 - Jul 16, 2019)
D1 and J5orJ7 and P2 and RSP180
D1 and J5orJ7 but no P2, RSP180
800
700
600
500
400
300
200
100
0
HAL-A332
ASA-B738
UAL-B772
HAL-A21N
UAL-B789
UAL-B738
ASA-B739
CPA-B77W
SWA-B738
DAL-B763
AAL-B772
EVA-B77W
KAL-B77W
ANA-B77W
JAL-B763
JAL-B789
PAL-B77W
CES-B77W
AAL-B789
ACA-B789
UAL-B737
CES-A332
DAL-A359
ANZ-B789
FDX-B77L
CHH-B789
JAL-B788
JST-B788
KAL-A333
UAL-B77W
QFA-B744
KAL-B748
ANA-B789
QFA-B789
UAL-B752
FDX-MD11
ANZ-B77W
DAL-B739
DAL-B753
KAL-A388
CAL-B744
SIA-A359
DAL-B752
CAL-A359
VOZ-B77W
UPS-B744
AAR-A359
QFA-A388
DAL-B764
JAL-B77W
KAL-B789
CRK-A359
ANA-B788

ADS-C CDP & ADS-B ITP

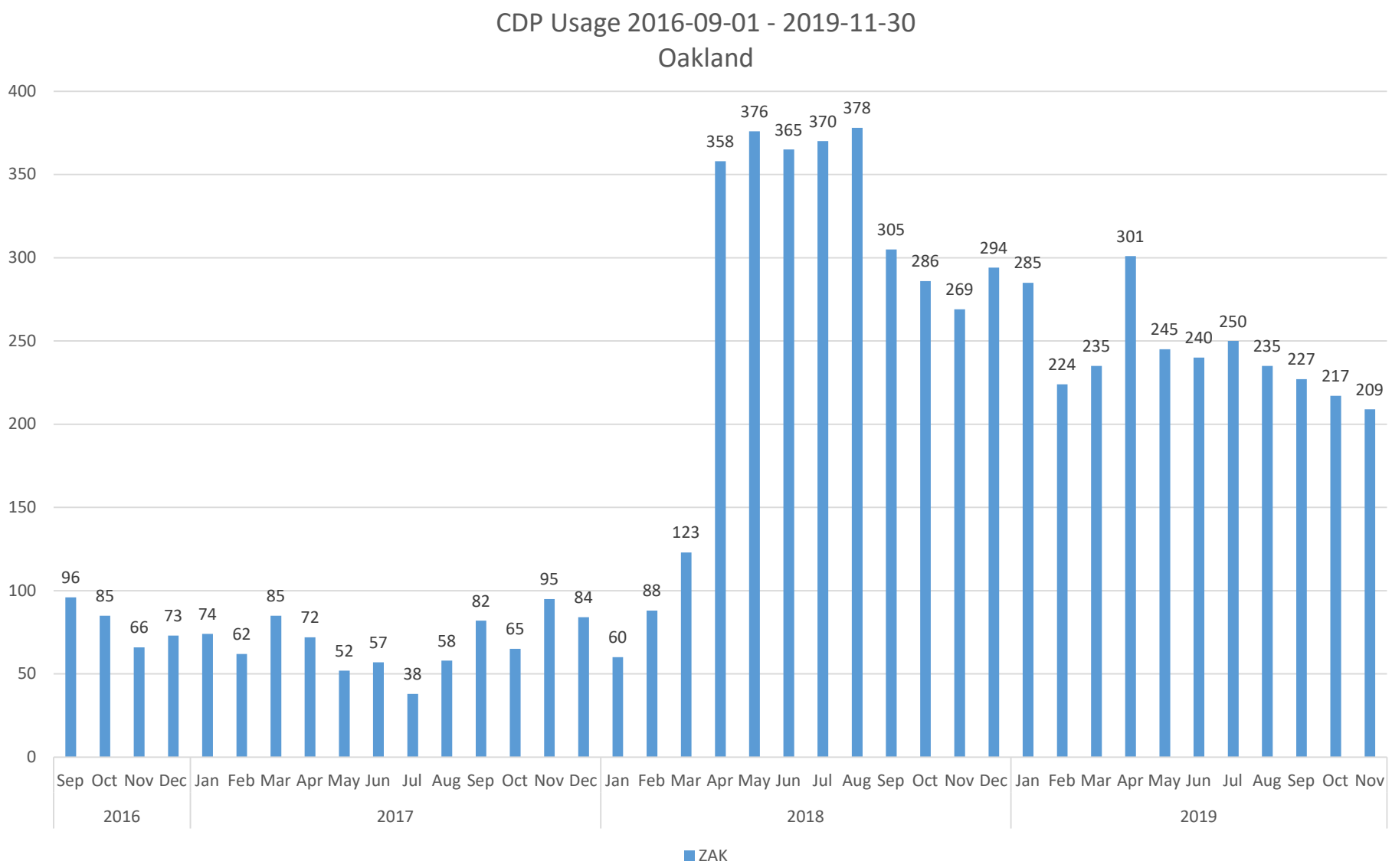
STATS

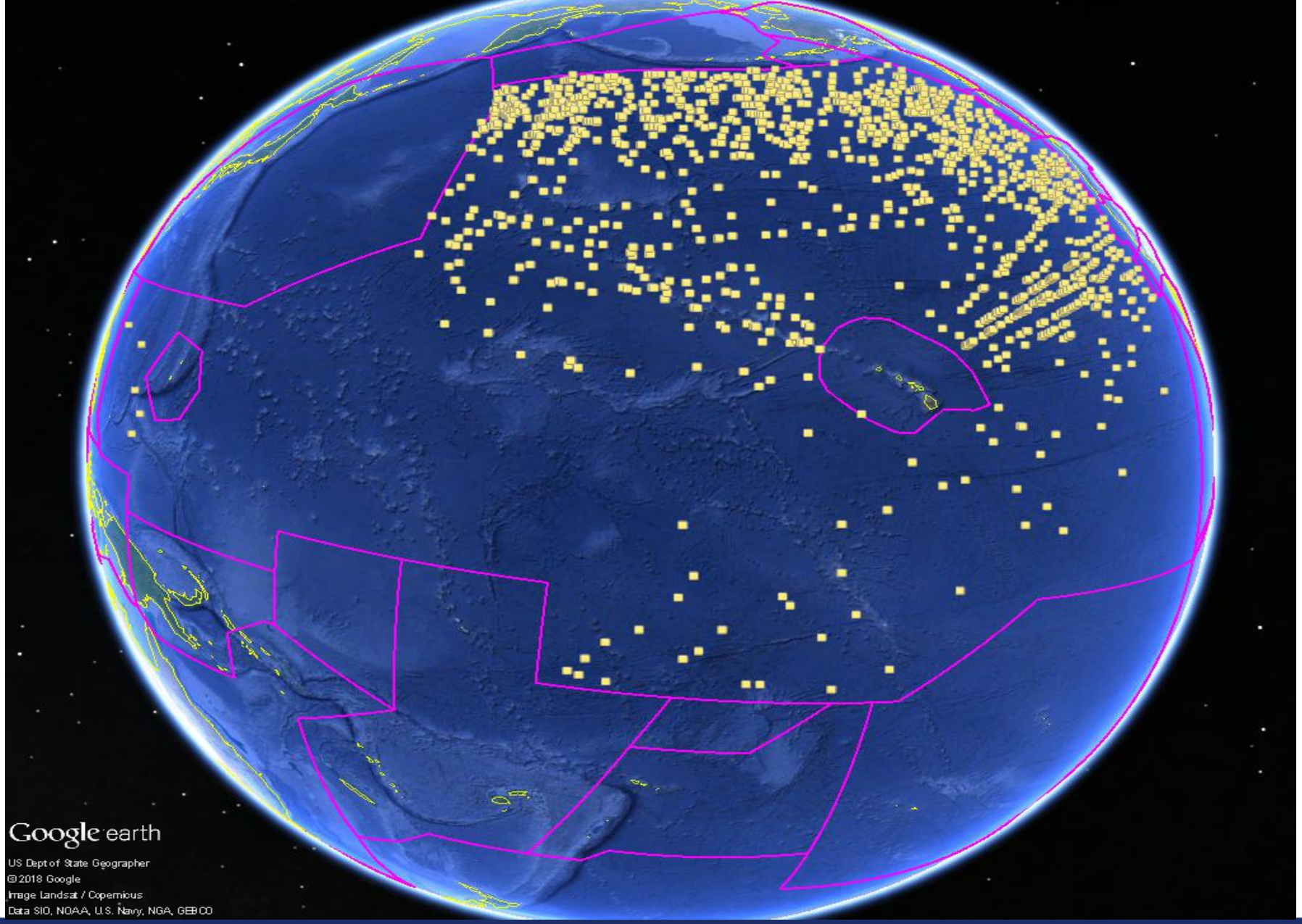


ADS-C CDP ZAN/ZOA/ZNY



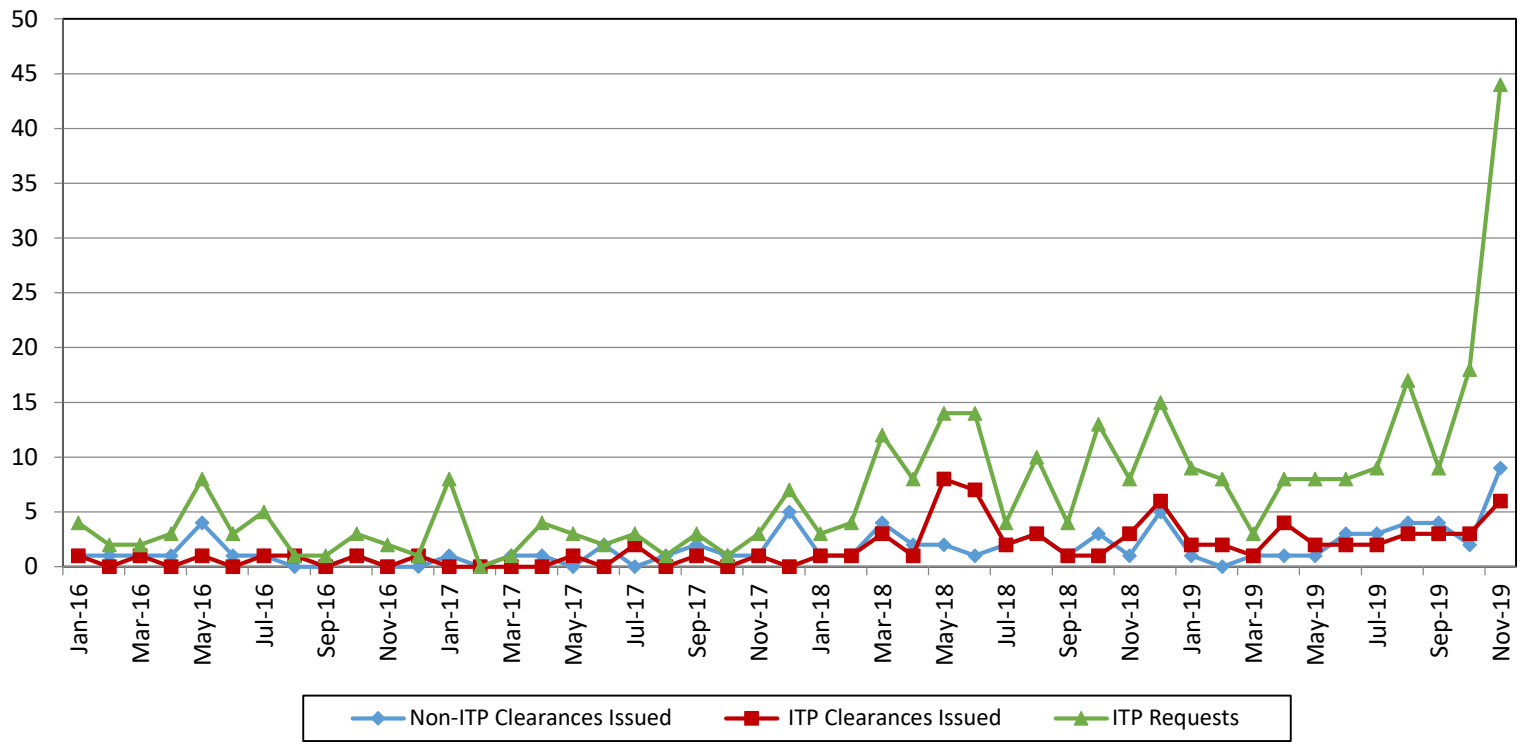
ADS-C CDP ZOA


CDP Usage 2016-09-01 - 2019-11-30
Oakland
400
350
300
250
200
150
100
50
0
96
85
66
73
74
62
85
72
52
57
38
58
82
65
95
84
60
88
123
358
376
365
370
378
305
286
269
294
285
224
235
301
245
240
250
235
227
217
209
Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov
2016
2017
2018
2019
ZAK



Federal Aviation Administration

ADS-B ITP


ITP Requests/Clearances KZAK 2014-01-01 - 2019-11-24
50
45
40
35
30
25
20
15
10
5
0
Jan-16
Mar-16
May-16
Jul-16
Sep-16
Nov-16
Jan-17
Mar-17
May-17
Jul-17
Sep-17
Nov-17
Jan-18
Mar-18
May-18
Jul-18
Sep-18
Nov-18
Jan-19
Mar-19
May-19
Jul-19
Sep-19
Nov-19
Non-ITP Clearances Issued
ITP Clearances Issued
ITP Requests

ADS-B ITP Equipped Aircraft

- B787 obtained their certification for their ITP system.
- 10 airlines have purchased the capability

- Airbus offers ITP equipment in their aircraft as an option

Un-Announced Speed Changes

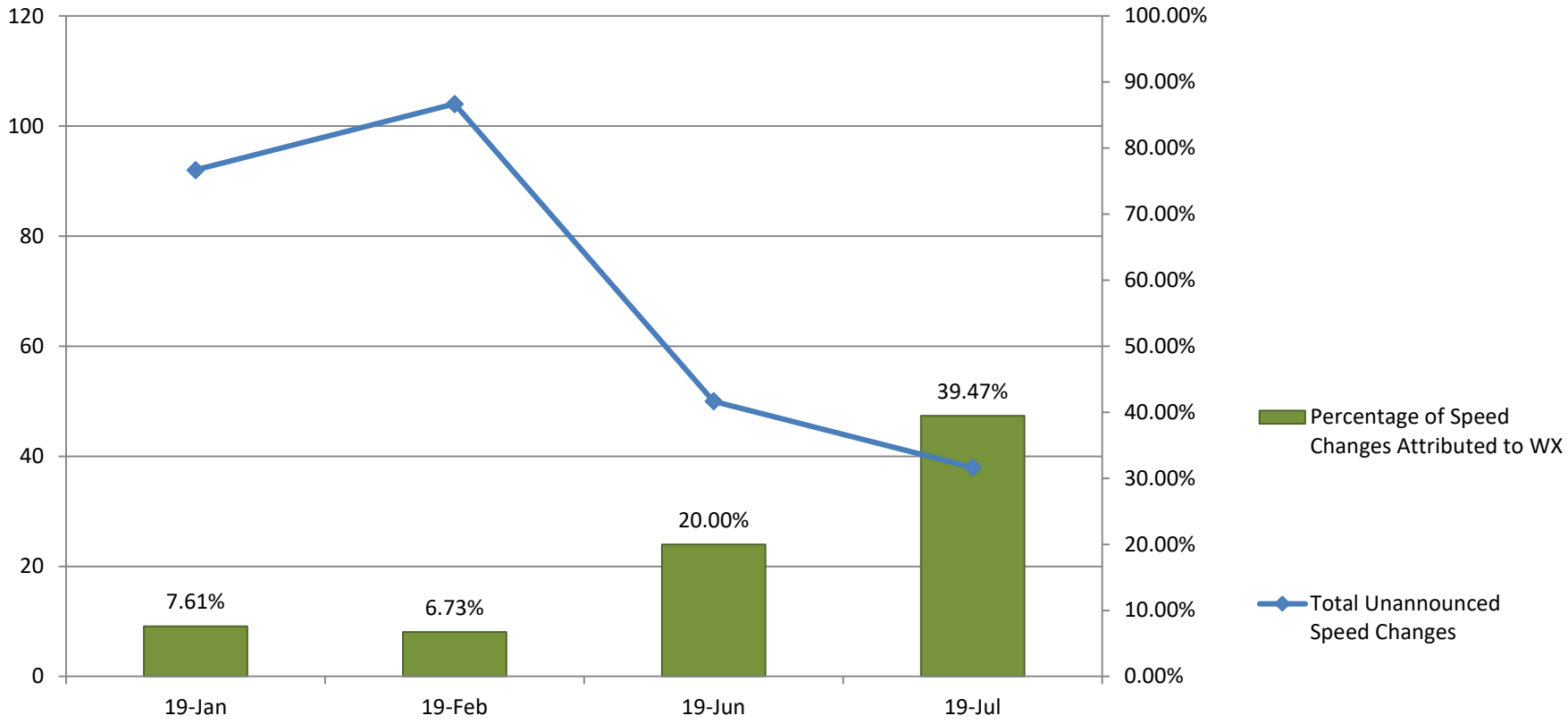
Mach Speed Variation

- **The previous data was collected for the first 10 days of the month and now we conduct spot checks.**
- **De-identifying the data has caused airlines to request their speed data for review.**
- **A change in the welcome message seems to have triggered more compliance with speed change updates/requests.**

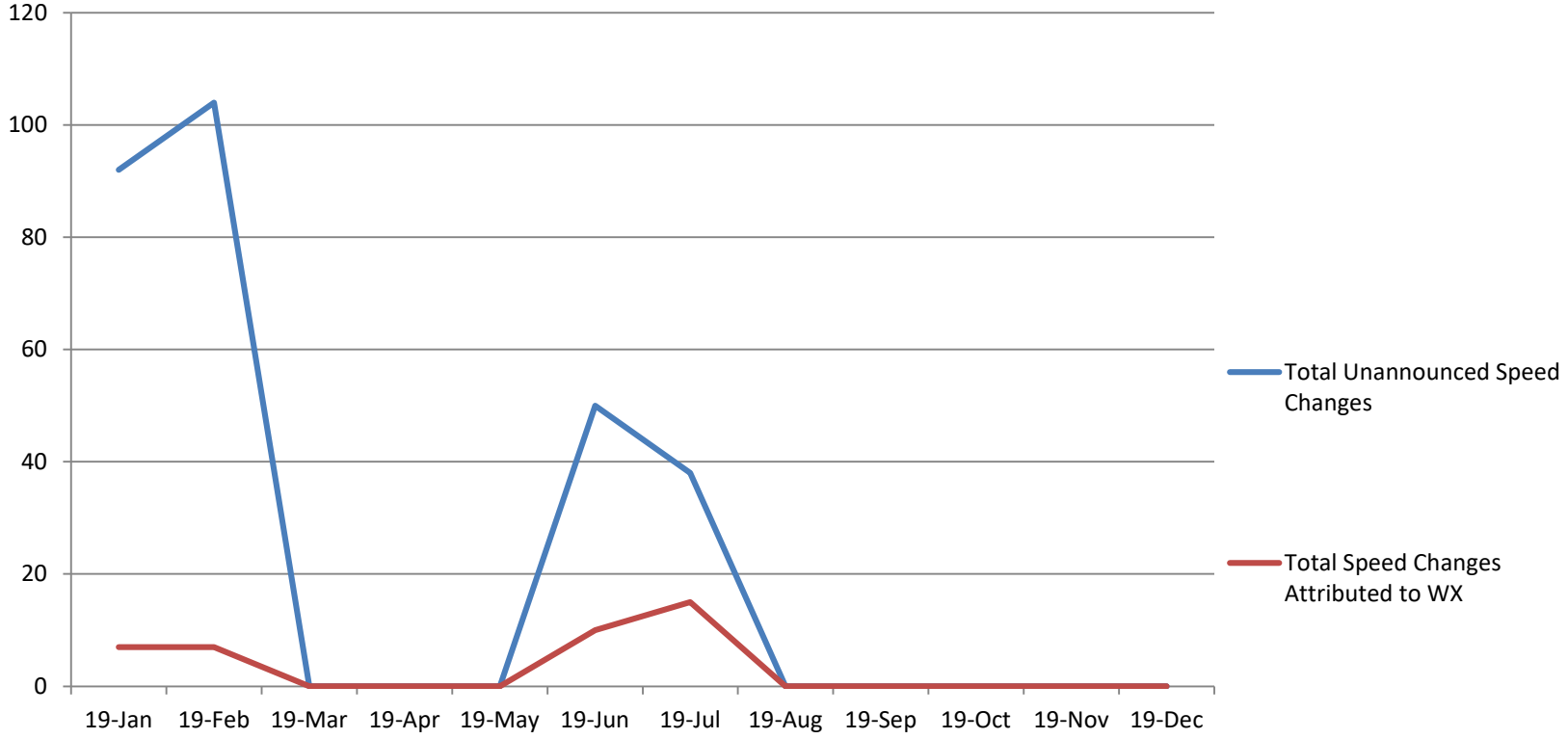
Speed Change NOTAM

- A1445/15 - ATTN ALL AIRCREWS-NEW PROCEDURAL REQUIREMENT FOR FLIGHTS OPERATING IN OAKLAND OCEANIC CONTROL AREA (KZAK). IN ORDER TO SUPPORT COST INDEX OR ECON SPEEDS AND MAINTAIN ATC SEPARATION SPACING AIRCREWS ARE REQUIRED TO USE THE FOLLOWING PROCEDURES IN THE KZAK FIR. A PILOT MUST INFORM ATC VIA VOICE OR CPDLC EACH TIME THE CRUISING MACH NUMBER VARIES OR IS EXPECTED TO VARY BY A VALUE EQUAL TO OR GREATER THAN 0.02 MACH FROM:
- (1) THE MACH NUMBER AT FIR ENTRY; OR
- (2) ANY SUBSEQUENT SPEED CHANGE NOTIFIED TO ATC IN FLIGHT
- IF YOU HAVE ANY QUESTIONS CONTACT DUSTIN BYERLY(510)745-3543

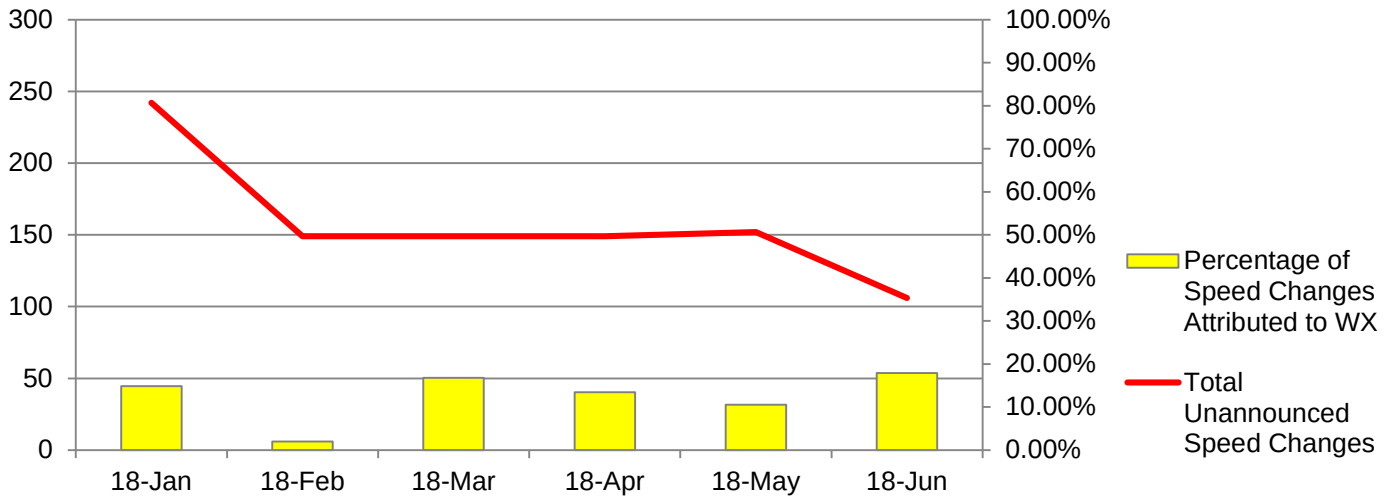
Un-announced Speed Changes



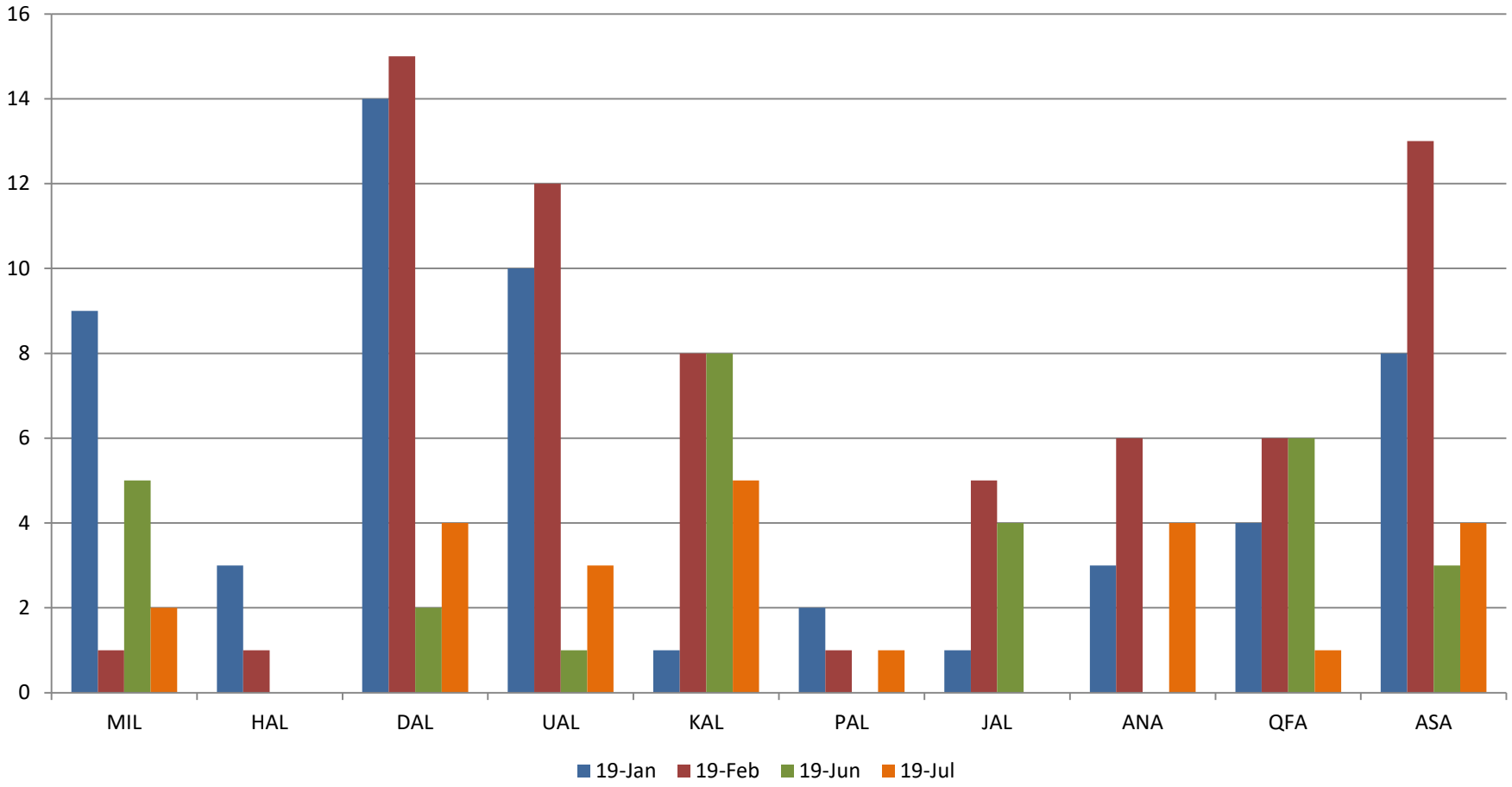
Un-announced Speed Changes



Un-announced Speed Changes



Un-announced Speed Changes



Conclusion

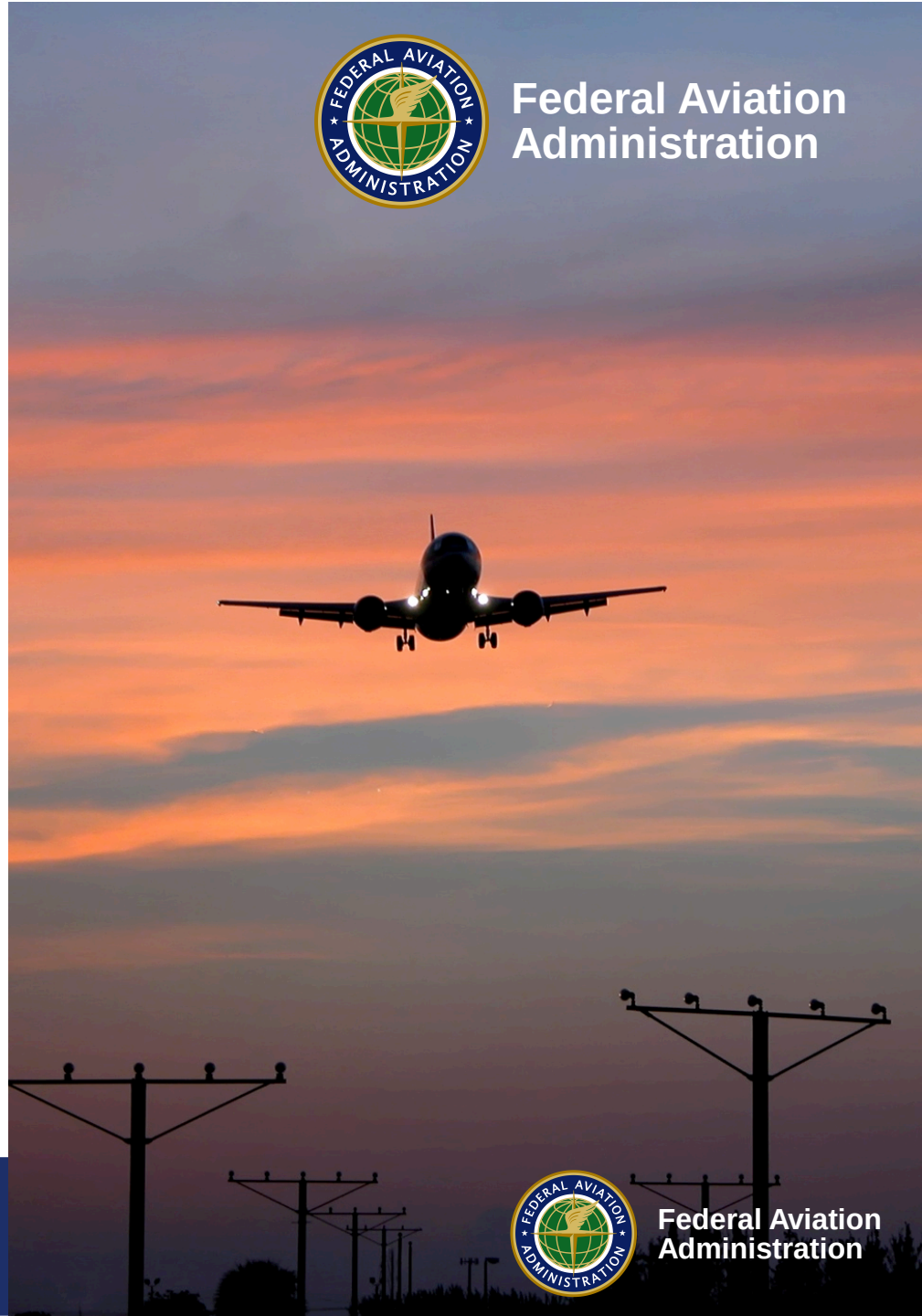
- **The data indicates that aircrews are not fully complying with the procedure, however there has been significant improvement.**

- **Oakland will continue to work to raise pilots' awareness and compliance with the procedure.**

- **The information is presented at local meetings and shared with airlines as requested.**

- **Hopefully by continuing this effort we will gain compliance and KZAK can continue to support Cost Index or Econ Speeds.**

Tailored Arrivals



Tailored Arrivals

- **The Tailored arrival has been permanently turn off and replaced with the PIRAT TWO arrival.**
- **PIRAT TWO is now being modified with a crossing restriction at PIRAT approximately 1 year out.**

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