November 2015 Update- All things Aviation:

If you'd like additional information, please contact Newport Beach City Manager Dave Kiff at dkiff@newportbeachca.gov.

JWA –October

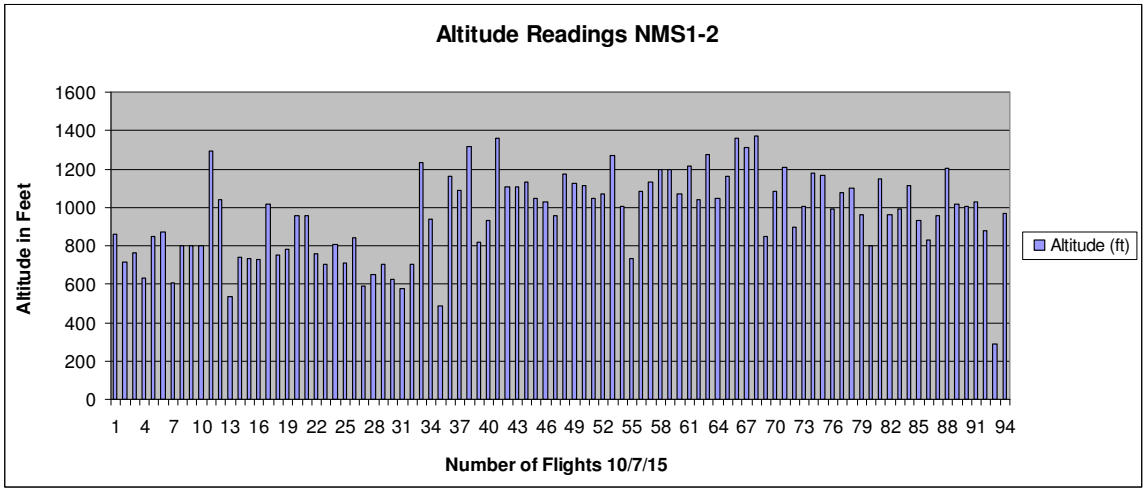
Airline passenger traffic at John Wayne Airport increased in October 2015 as compared with October 2014. In October 2015, the Airport served 913,321 passengers, an increase of +12.4% when compared with the October 2014 passenger traffic count of 812,298. Moreover with 8.4 MAP through the first ten months of the year, the airport is +7.7% ahead of the same period last year. ADDs for October were 119.76 vs. 112.37 for 2014.

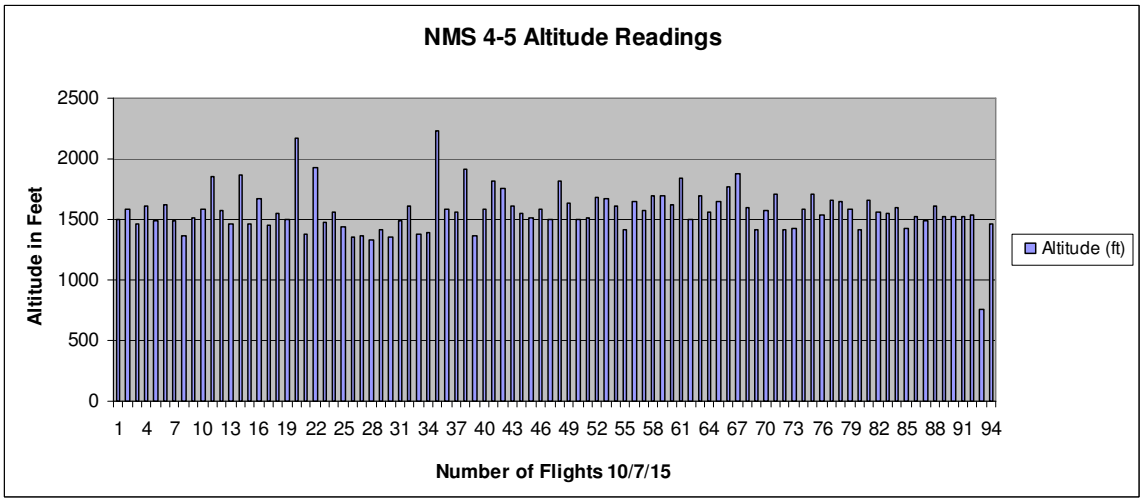
Altitude

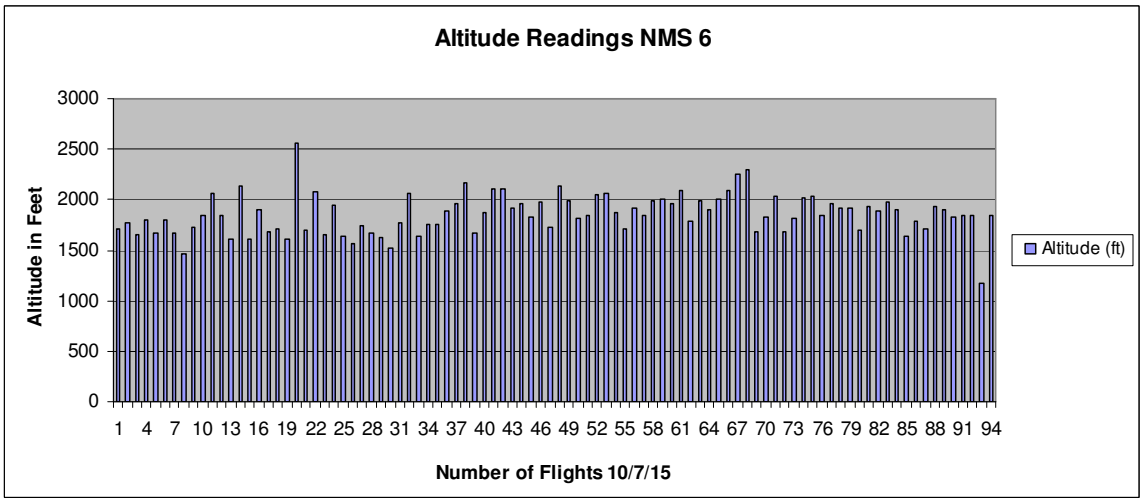
A number of questions have been raised concerning the altitude of commercial carriers departing JWA as part of the City's ongoing analysis, with the cooperation of JWA, of departure paths being too far to the west upon departure from the airport. Accordingly, it is appropriate to provide not only a breakdown of altitudes but also the noise monitors and other factors which affect noise. What follows is a response to the repeated questions from the community:

The Following are the readings of Altitude

For one day of departures at NMS 1-6

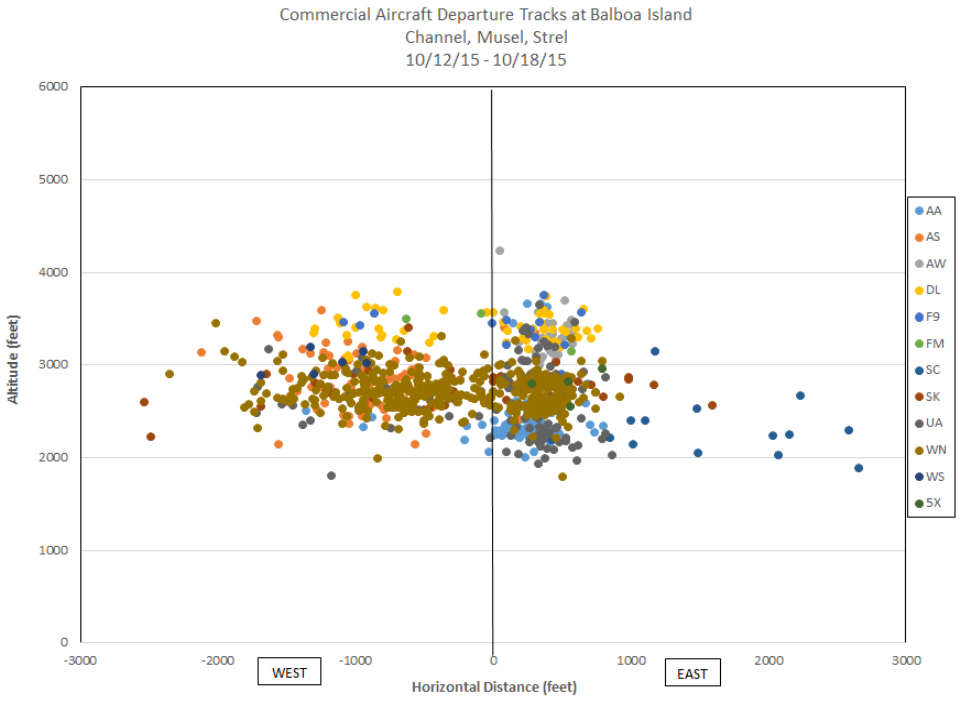






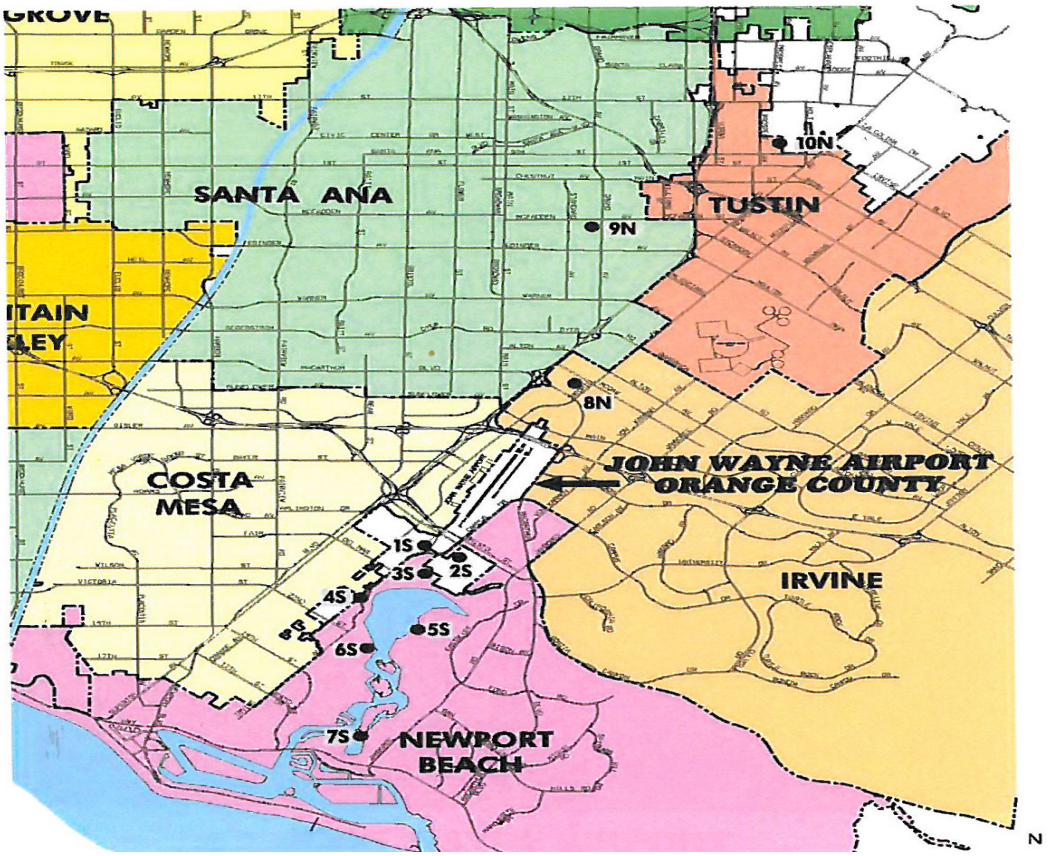
The average altitudes were: 950.22 feet at NMS1-2; 1555.01 feet at NMS 4-5 and 1836.17 feet at NMS 6. On the next page you will also find the respective distances of the monitors from the airport as well as their locations.

Finally here is a week of data on Balboa Island:



NOISE Monitor Locations

Because of repeated questions below is the layout of the locations of the Noise Monitors as well as their specific address:



Here are the locations of the various noise monitors shown above. NMS 1-7 measure noise upon departure. NMS 8-10 are for arrivals.

Noise Monitoring Station Locations:

- NMS-1S Golf Course, 3100 Irvine Avenue, Newport Beach
- NMS-2S 20152 Birch Street, Newport Beach
- NMS-3S 2139 Anniversary Lane, Newport Beach
- NMS-4S 2338 Tustin Avenue, Newport Beach
- NMS-5S 324 ½ Vista Madera, Newport Beach
- NMS-6S 1912 Santiago, Newport Beach
- NMS-7S 1311 Back Bay Drive, Newport Beach
- NMS-8N 17372 Eastman Street, Irvine
- NMS-9N 1300 S Grand Avenue, Santa Ana
- NMS-10N 17952 Beneta Way, Tustin.

It is the Noise Monitor Stations which measure the single event noise level requirements for the specific class of aircraft and which follow:

- **Maximum Single Event Noise Equivalent Level (SENEL) Values – Commercial Airline Operations:**

Noise Monitoring Station	SENEL - Class **A**	SENEL - Class **E**	**Distance****
■ NMS 1S	102.5 dB	94.1 dB	.4 NM
■ NMS 2S	101.8 dB	93.5 dB	.4 NM
■ NMS 3S	101.1 dB	90.3 dB	.7 NM
■ NMS 4S	94.8 dB	86.6 dB	1.3 NM
■ NMS 5S	95.3 dB	87.2 dB	1.3 NM
■ NMS 6S	96.8 dB	87.2 dB	1.8 NM
■ NMS 7S	93.7 dB	86.6 dB	2.9 NM

*Generally speaking so long as the Carrier meets the above described noise levels at the particular Noise Monitoring Station they can depart from JWA.

***Approximate DME distance measured from ISNA localizer, located south of Runway 20R.*

Human Response to Noise

Questions have also been raised recently about the different noise levels from aircraft departing the airport. The human response to single-event jet aircraft noise is best represented in terms of Effective Perceived Noise Level, expressed in units of EPNdB. This unit of perceived noise takes into account the actual sound energy received by a listener, the ear's response to that sound energy, the added annoyance of any pure tones or "screeches" in the noise, and the duration of the noise. In any discussion of aircraft noise abatement, a key consideration is the difference in noise level which a listener is able to perceive and find meaningful, in terms of both the single event and the cumulative exposure. Few humans can detect differences between single events of aircraft noise of less than about 5 EPNdB. However, an increase of 10 EPNDS is usually perceived as a doubling in loudness. The fact that people's perception of noise varies logarithmically with sound intensity results in some interesting relations. Note that as intensity is reduced

by 50% the SPL changes by 10 log I_1/I_2 = -3db. This is why noise reduction is a challenge. To make something seem about half as noisy requires a reduction in the Sound Intensity Level (SPL) by about 10 db. This is a reduction in intensity of about 90%. You will occasionally see representations that a certain event creates 50% less noise. Technically the party is correct, however, the human can not detect that change, i.e. 3db unless the actual reduction is closer to 10db.

Factors which affect Noise

There are a number of factors which affect noise from departing aircraft, much of which is as a result of factors well beyond the control of the person on the ground. Such factors are: *Departure Climb*[1] *Profiles***:** Each airline has devised a departure procedure consistent with the aircraft departing the airport. As long as an airline can meet the Single Event Noise Limits at the Noise Monitors at departure, they can depart as such; *Aircraft Performance/Climb Rates*- The climb rate and flight profile of departing aircraft will vary considerably based on aircraft type; *Meteorological Conditions*-The propagation of aircraft noise is dependent on meteorological conditions including temperature, humidity, and wind.

Will Technology Improve the Situation?

And for those of you who may be interested in potential changes in the future, see the video at[2] : https://www.youtube.com/user/purepowerengine

[1] It would appear that the Flight Management System on board of each aircraft is also becoming most important.
[2] Forwarded by Mr. Bob Pastore.

JWA Carrier Shares for August 2014 - July 2015

Carrier	*Passengers	Share
Southwest	3,970	43.16%
American	1,316	14.31%
United	1,295	14.08%
Alaska	881	9.58%
Delta	752	8.17%
Other	984	10.70%

*Based on enplaned passengers (000) both arriving and departing.

Meanwhile as most recently reported by the Department of Transportation through July 2015, load factors at JWA are reported to be at near record highs of 87.76%, with the predominant carrier at the airport- Southwest reporting a load factor of 86.74% and American at 86.31%.

Alaska Airlines Offers New Service to Sonoma County and Reno/Tahoe

Alaska Airlines will add new service from Orange County, California to Santa Rosa/Sonoma County, California and Reno/Tahoe, Nevada starting March 16, 2016. "These new routes will bring low fares and an elevated flight experience to our valued Los Angeles area customers," said John Kirby, Alaska Airlines' vice president of capacity planning. "With the addition of Santa Rosa and Reno, Alaska will offer 13 peak daily departures to six destinations, including Los Cabos and Puerto Vallarta, from Orange County's John Wayne Airport."

Airports in the Region

LAX- October 2015

LAX again saw an increase in October of +8.67% in overall passengers versus the same period last year. Year to date, through October the airport passenger levels are up +5.35% for the year, with total passenger volume of 62.5 MAP.

ONT- October 2015

Passenger traffic at Ontario International Airport continues to improve. Traffic rose +5.64% in October over the same period last year. Both domestic and international flights show improved numbers. For the year the airport passenger levels are +2.26% for the first ten months of the year with a total MAP of 3.5+.

Long Beach

Long Beach continues its struggles. October again showed a decline in total passengers served. In October the decline was -7.3%. _For the year, Long Beach has served 2.13 MAP an overall decrease of -12.0% in total passenger traffic versus the same ten month period in 2014.

Bob Hope

Passenger numbers at Bob Hope Airport Show Slight Improvement

For the second month in a row, the number of passengers traveling through Bob Hope Airport was flat in September compared to the same month a year ago. There were 318,769 passengers in September, compared to 317,060 in September 2014, missing airport projections for the month by more than 5,500 passengers. However, for the first nine months of the year, there were more than 2.92 million passengers, compared to roughly 2.87 million passengers during the first nine months of last year, about a 2%

increase.

WSJ Weighs In On MetroPlex/NextGen

A recent article in the Wall Street Journal reported on the benefits and burdens of the FAA's NextGen and specifically the MetroPlex projects, similar to the current SoCal MetroPlex which seeks to redesign airspace in Southern California. The article reports what many of you already understand, and has been repeatedly reported by the City that: "Part of the problem is the precision of satellite-based navigation. Planes used to tune in radio frequencies and flew toward beacons or simply were assigned directional headings by controllers. Flight paths ran across a range of airspace. Many houses got some noise each day; now fewer houses get more noise. Today planes can follow prescribed routes with exacting precision. *They are getting out of urban areas faster, which reduces overall noise."(emphasis added)*

Meanwhile the airlines have a different view as also noted in the article: '"The objectives are the right ones: significant track-mile cost savings, lower fuel burn and greenhouse gases," says Southwest Airlines chief executive Gary Kelly. "There's no easy answer. We have to continue to work with local communities and the FAA."'