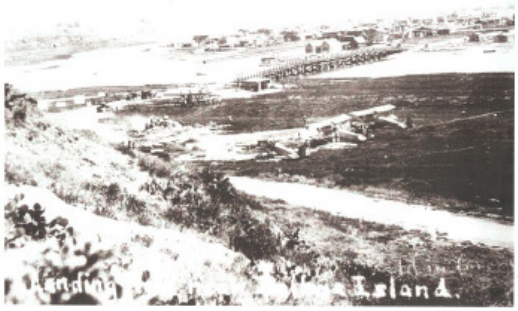
MAY- JUNE 2018
Update- All things Aviation:



[1]

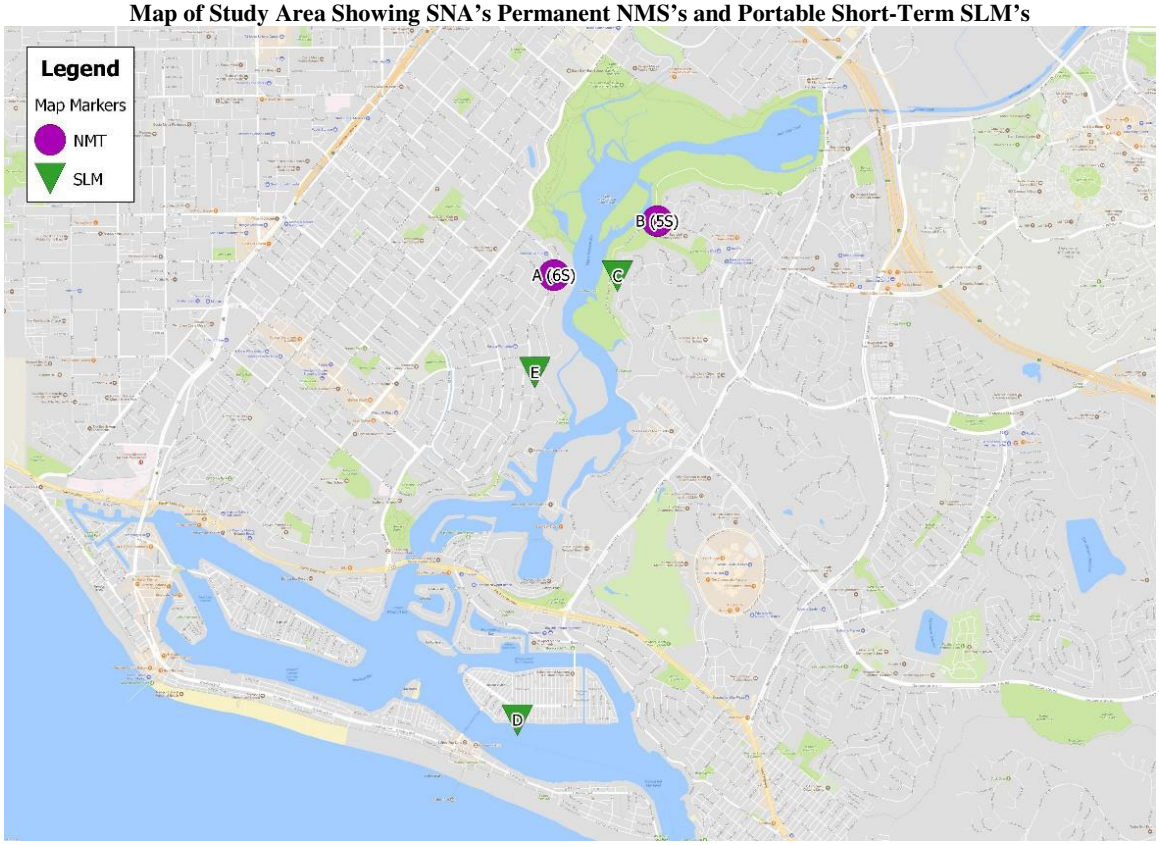
If you'd like additional information, please contact Newport Beach City Manager Dave Kiff at dkiff@newportbeachca.gov.

City Completes One Phase of the Noise Testing
And Proceeds to the Next Phase

One of the tasks that the City of Newport Beach has undertaken recently is the retaining of noted noise experts HMMH. As part of their tasks, they recently completed the Side-by-Side and Other Noise Monitoring near JWA – December 2017 and January 2018. For those of you who do not recall, the community wanted to determine what noise was in their particular part of the community irrespective of whether or not there was a noise monitor near by. HMMH conducted their study and placed some mobile noise monitors on the east side of the bay [East Bluff], the west side of the bay [Dover Shores] as well as on Balboa Island. HMMH conducted portable short-term noise monitoring during a period of four (4) days at five (5) separate locations around John Wayne Airport (SNA) on December 12-13, 2017 and January 11-12, 2018. The noise monitoring was attended, which means that HMMH staff was physically at each location and were logging aircraft noise events. Below is a depiction of where the monitors were placed and their relationship to the permanent noise monitors NMS 5 and 6:

[1] While perhaps difficult to see, the photo is of actual planes at rest on Balboa Island.

Map of Study Area Showing SNA's Permanent NMS's and Portable Short-Term SLM's



For the side by side testing, the noise levels measured by HMMH were generally quite close to the noise levels measured by SNA's ANOMS system. At the additional portable short-term noise monitoring locations, noise levels recorded were below the Class A SENEL noise limits at nearby NMS's (5S, 6S, and 7S). At Location D (700 South Bay Front), noise appears to have been lower in all noise categories (min, median, max, average for SEL, Leq, and Lmax) than at either Locations C or E.[2]

For those of you who would like to view the complete report you may do so on the City's website under Aviation" then "Special Reports" – you will also see HMMH's initial Calibration Review up there (it's been there a while).

HMMH is currently also working on an analysis of the departure procedures at John Wayne Airport, taking into account, the weight of aircraft; type of aircraft and

[2] Microphones were placed at a height of five (5) feet and were not located near any obstructions. It is important to note that the microphones were not able to be placed in accordance with California Noise Standards – Title 21 (Register 90, No. 10-3-10-90), California Division of Aeronautics, Subchapter 6, Paragraph 5072 Field Measurement Requirements – which states the microphones "shall be placed 20 feet above the ground level, or at least 10 feet above neighboring roof tops, whichever is higher and has a clear line of sight to the path of aircraft in flight."

particular departure procedure of the aircraft, i.e. Noise Abatement Departure Procedure 1 or 2. The initial work of HMMH will establish a baseline of information about the departure procedure at JWA. When that phase of the information is completed it will be released by the City.

Altitudes Upon Departure

Recently the airport completed some additional analysis of altitudes upon departure. Weight of aircraft and altitudes were compared for pre and post MetroPlex [the period of 2016; 2017;2018]. As many of you are aware there have been many in the community who have complained that altitudes are lower after the introduction of the MetoPlex by the FAA. Accordingly five carriers were selected, along with aircraft type and destination:

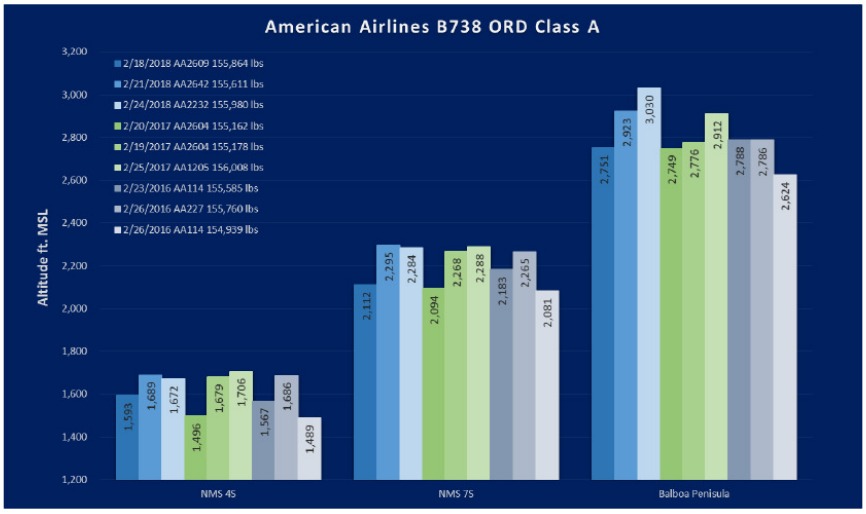
1. American, B738, ORD, Class A
2. Alaska, B738, SEA, Class A
3. Delta, A319, MSP, Class A
4. United A320, IAH, Class A
5. Southwest[3]
   B737, HOU, Class A
   B737, SFO, Class E

Three flights were selected in February 2016, 2017, and 2018 for each of the categories listed above. In order to select the flights, the GTOWs[fancy name for weight of the aircraft and a determiner of noise and altitude] for each category listed above to find the closest in weight. In addition, the same time of year and time of departure was chosen to try and minimize the effect of weather on the departures. While the sampling size is small it appears that but for Alaska B738, SEA, Class A, for each airline the altitudes are greater in 2018 than in 2017 or 2016 based upon the average for each grouping.

· Three gates were created (a map of gates is also part of the analysis)
  NMS 4S
  NMS 7S
  Balboa Peninsula
  What follows is the analysis itself:

[3] Because Southwest has both Class A and Class E departures and the Class E departure have lower noise restrictions the flights were divided along those lines.

JWA Commercial Departures
Pre & Post Metroplex Altitude Comparison
Newport Beach



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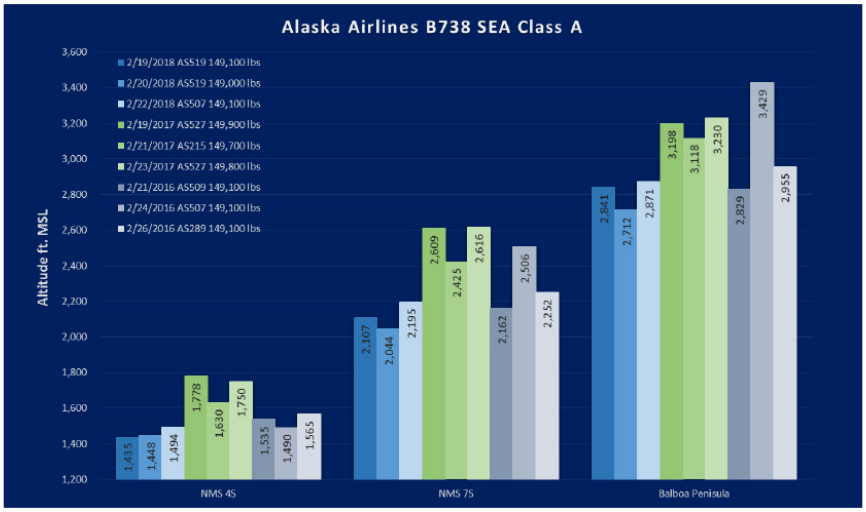

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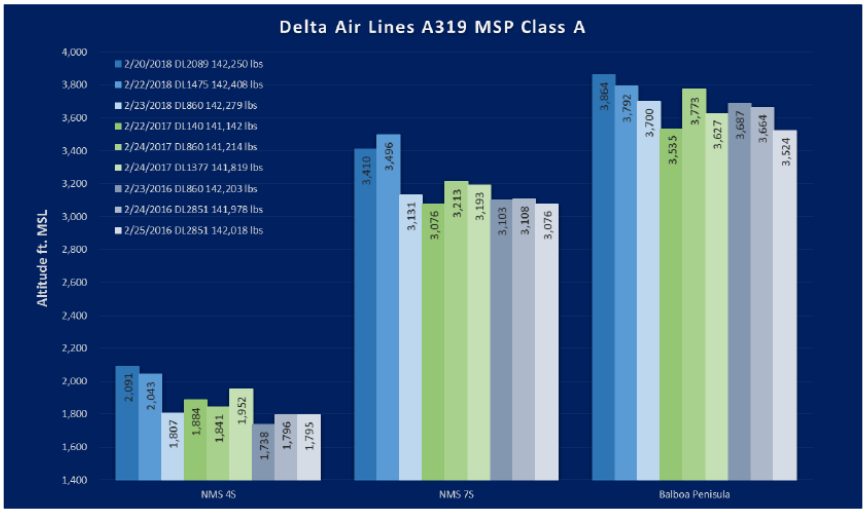

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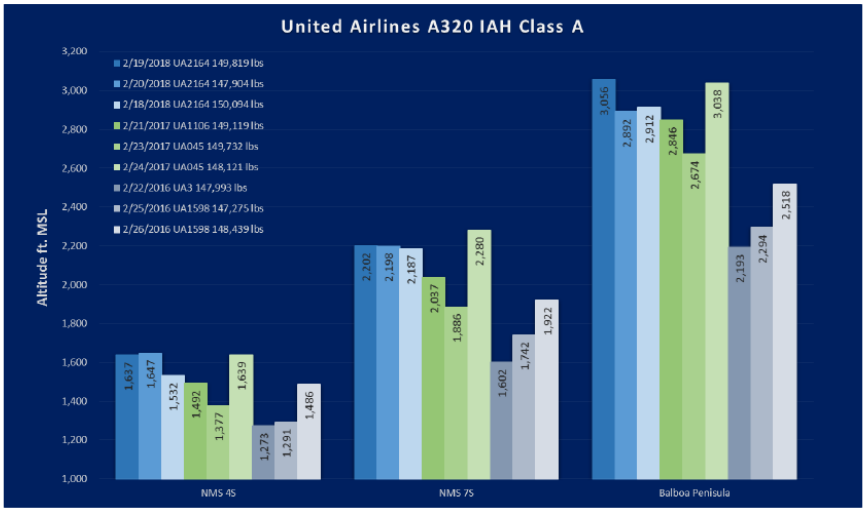

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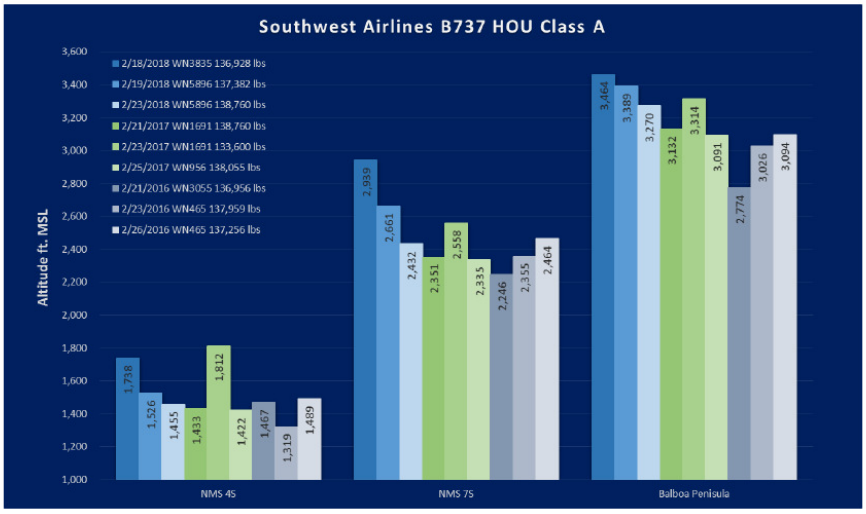

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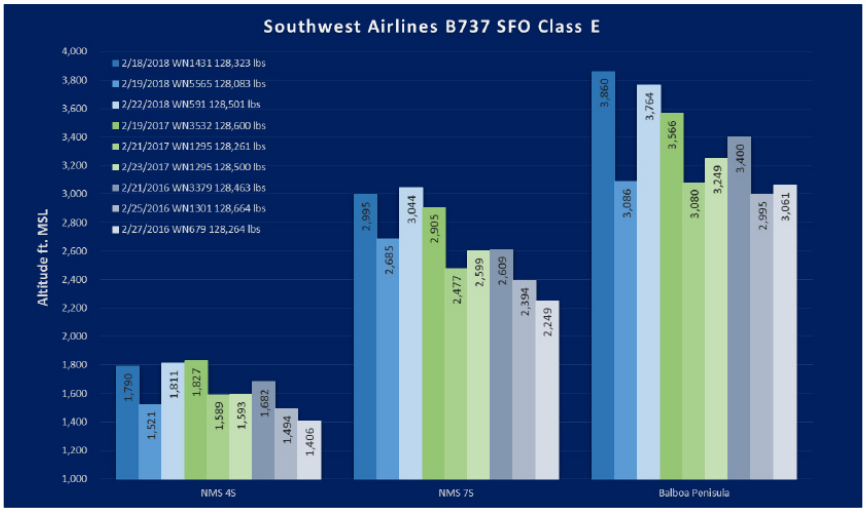

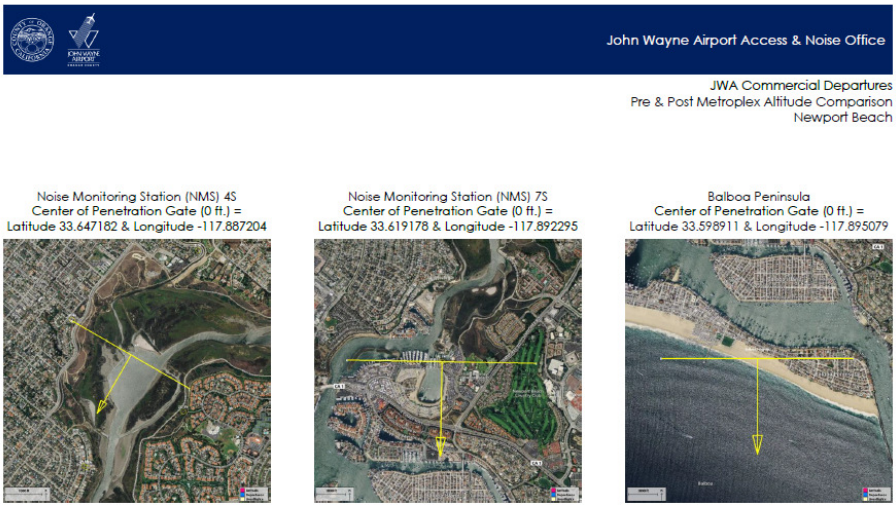

Should you have any questions regarding the information, do not hesitate to contact the City.

Describing noise

There has been a significant discussion in the community about noise, so it is very important to fully understand how noise is actually measured. Noise is described as Sound Pressure Level (SPL), in units called decibels (dB). Decibels are normally weighted to reflect reaction of the human ear to the 'loudness' of different frequencies, or pitch. This is the 'A'-weighted scale, hence dB(A). Noise is expressed logarithmically, such that doubling of noise energy results in an increase of 3dB, e.g. 80dB + 80dB = 83dB. An increase of 3dB is barely perceptible to the human ear and an increase of 10dB approximates to a perceived doubling of noise level. This means that a large amount of acoustic energy reduction is required to produce a significant perceptible difference in noise. The above makes for an interesting discussion. As an example some people have stated that they can cut the noise in half if a certain procedure is accomplished. That sounds very good. But again, based upon the fact that noise is expressed on a logarithmic scale, what they are saying is that noise can be reduced by 3dB, yet 3dB is not distinguishable to the human ear. So the statement is correct as to being able to reduce

noise by one-half but the actual noise reduction is indistinguishable. Let's state it in a different manner. Sound level is measured with a sound level meter and is expressed in terms of decibels. The decibel, abbreviated dBA, is the unit of measurement used to measure noise. It is important to understand that the decibel scale is not an arithmetic scale. Rather, it is a logarithmic scale. Most noise standards recognize a three decibel "exchange rate". The exchange rate is the decibel level that equals a doubling of energy and is also called a doubling rate. This means that an increase of 3 dBA is equal to doubling the sound pressure. At the same time, by reducing the sound pressure level by 3 dBA, the noise "dose" would be cut in half. Therefore, an increase or decrease of three decibels is significant based upon the formula for determining sound levels.

Q and A re: Sound

How many decibels increased if doubling sound source power? Is it 3 or 10 decibel?

3dB. Remember, we're dealing with a logarithmic scale.

Doubling the intensity of sound we find that:
IL = 10 log (2/1)
10 x (.301) = 3.01dB

As a side note, doubling distance from the source results in a decrease in 6dB. Doubling the mass of an object also reduces transmitted intensity by 6dB. For a rough linear estimate, sound in decibels (dB) from a point source changes about 6 dB for each doubling of distance[4].

It is also worth repeating that the manner by which the particular carrier departs the airport is dependent upon the carrier and their ability to not exceed the appropriate noise thresholds at the departure monitors. There are many different factors which dictate how and where planes depart and therefore how much noise they may create. It is not a simple equation but here are the different factors which affect noise: 1. The procedure that the plane flies, which is dictated by the FAA. 2. The take off weight of the aircraft,

[4] This assumes the exact same object; weight etc. of the object.

i.e. the weight of aircraft upon departure. This is subject to the type of aircraft as well as the load of the aircraft, this is determined by the airline; 3. Aircraft performance is another factor pertaining to noise. The climb rate and flight profile of departing aircraft will vary considerably based on aircraft type, this is again determined by the airline; 4. The noise abatement departure profile that the airline chooses, as an example the so called "close in" or "distant" departure procedure. Again this is the choice of the airline. It can not be emphasized enough that all planes departing JWA need only meet the appropriate noise thresholds at the noise monitors; 5. Aircraft noise is also dependent on meteorological conditions including temperature, humidity, and wind. During warm temperatures, the air density (air molecules per cubic foot) decreases significantly, thereby reducing aircraft performance and lift. One report suggests that on an 80° day at JWA an aircraft could have close to a 25% increase in takeoff roll, and up to a 20% decrease in climb performance due to a higher density altitude. Therefore the aircraft can be at lower altitudes over various areas of the departure tracks than on a cooler day. However, aircraft noise is also more noticeable on cloudy days. Low ceiling cloud cover tends to refract aircraft noise downward off the clouds, thus confining it[5].

Long Beach Curfew

On May 8, 2018, the Long Beach City Council upheld the decision of the City Manager to deny the appeal of JetBlue Airways for an exemption for certain late night (curfew) violations at the Long Beach Airport during the second quarter of 2017, and adopt findings related thereto. (Citywide). The curfew and its enforcement had been under attack from JetBlue.

"Long Beach currently has the protection of a 'grandfathering' provision in the federal Airport Noise Capacity Act (ANCA) that lets LB Airport (one of only a handful Airports nationally) maintain some local flight limits/neighborhood protections. If Long Beach were to lose its ANCA 'grandfathering' protection -- if a federal court challenge were successful or an adverse FAA decision were upheld -- LB could lose virtually all of its current protections under its Airport ordinance. That would expose the City of Long

[5] As noted previously, HMMH is looking at departures from JWA and taking into account some of the above in determining so called optimal departure profiles.

Beach, likely permanently, to unlimited numbers of flights at its Airport at unlimited noise levels at all hours on all runways."

JetBlue Retreats from Long Beach- Expands to Ontario

As noted in last month's update, the competition for Southern California air travelers was heating up, with JetBlue Airways trying to draw new passengers by returning to Ontario International Airport after a 10-year absence and increasing its flights out of Burbank and Palm Springs. It is now apparent that the move to expand service at ONT was in part due to the decision[6] by the Long Beach City Council to refuse international flights. The Long Beach City Council voted by an 8-to-1 margin in January 2017 to cease activities that could have led to the construction of a federal inspection facility, a necessity for any airport welcoming international travelers, at LGB. As noted by a JetBlue spokesperson, "The majority of the change in Long Beach is being driven by the rejection of the Customs facility." JetBlue will reduce its take of daily flight slots at LGB to 23 from 35. It remains to be seen how vigorously JetBlue will contest the potential changes in the airport's curfew.

Beginning September 5, 2018, JetBlue will begin its service from Ontario, with a daily roundtrip to New York's John F. Kennedy International Airport (JFK). Flight 355 will depart JFK at 7:12 p.m. local time, arriving ONT at 10:39 p.m. Red-eye service back to JFK will depart ONT at 11:59 p.m. with arrival in New York at 8:24 a.m. JetBlue will serve the non-stop route with 160-seat Airbus A320 aircraft.

JWA COMMERCIAL CURFEW OPERATIONS

The County's General Aviation Noise Ordinance ("GANO") prohibits commercial departures between 22:00 and 07:00 (08:00 on Sundays) and commercial arrivals between 23:00 and 07:00 (08:00 on Sundays). The Airport Director or his designee may authorize a departure or arrival outside of the commercial operations hours for an emergency, mechanical, air traffic control or weather delay, which is substantially beyond the control of the air carrier. All curfew exemption requests are reviewed by JWA and must receive express approval in advance of the specific arrival or departure. For

[6] The battle over the curfew probably didn't help.

those who do not have an exemption, a fine may be imposed. Here is a record of three (3) recent fines imposed:

Carrier	Date	Fine
WN 2123	2/12/18	$3,500.00
WN 3749	3/18/18	$4,000.00
WN 5981	4/6/18	$5,000.00

JWA- Passenger Statistics

Airline passenger traffic at John Wayne Airport increased in April 2018 as compared with April 2017. In April 2018, the Airport served 893,668 passengers, an increase of 5.0% when compared with the April 2017 passenger traffic count of 851,169. Commercial aircraft operations increased 4.4% and commuter aircraft operations increased 12.0% when compared with April 2017 levels.

The Average Daily Departures (ADDs) for April 2018 were 126.8 ADDs vs. 121.36 ADDs for April of 2017. If one were to include all departures, including but not limited to general aviation, non-jets the ADDs for the month were 416.65 ADDs.

Southwest accounted for 36.8% of the passenger count of commercial operations; American 15.6%; United 15.5%.

Long Beach-April 2018

In the month of April 2018, Long Beach Airport saw an increase of +9% in passenger traffic as compared to 2017. The airport served 348,337[7] passengers for April of 2018. Year to date the airport is +10% over the same period last year.

[7] This is about 39% of the JWA traffic at an airport which is more than twice the size of JWA (LGB: 1,166 acres; JWA: 504 acres, of which less than four hundred (400) acres are available for airfield operations]. Yet JWA is the second largest airport in the Southern California Region based upon passengers served and currently serves approximately 10 Million Air Passengers (MAP) per year, despite its diminutive size, approximately 1/7 the size of LAX, less than half the size of Long Beach and 1/3 the size of Ontario and only one run way which is approximately half the length of any of the other airports, who each have numerous runways and of much greater length.

Ontario

Ontario Airport continues to post robust gains in 2018 as April 2018 was +12.67% over April 2017 and is +10.69% for year to date versus 2017. Once JetBlue increases service at Ontario, these numbers should get even better for Ontario.

ONT is 1700 acres with runways of 12,200 ft. and 10,200 ft. with a current capacity of 10 MAP and ultimate capacity of 31 MAP.

LAX

LAX passenger figures for March 2018 reached a new level while showing an increase of +6.59% for the month over 2017. Already for the first three months of 2018, LAX shows an increase of +5.99% in passengers vs. the same period in 2017.

The Golf Course

Some in the community noticing work on the local Newport Beach Golf Course on Irvine Avenue, having noticed work on the back nine, at or about the 10th hole. Contrary to what you may have heard, it is work on a County filtration system along the flood channel, not a runway extension.

Questions about the Airport or Operations

This is a friendly reminder that if you have any questions about John Wayne Airport and its departures and/or operations do not hesitate to contact the City. In addition, the City is willing to go to various locations in the City to observe airport operations. Regarding any questions, the City will try and get you an answer or response as quickly as possible. If you wish to lodge a complaint about noise with the FAA, the City's link on its website is:
http://www.newportbeachca.gov/trending/nextgen-departure-concerns