

Metroplex- FAA NEXGEN Flight Procedures- (long version)

Most of you follow the John Wayne Airport (SNA) activities and programs fairly closely, and, hence are aware of the 2016 Metroplex announcements from the FAA. This is clearly one of the most significant aircraft operations changes to come forward in many years, and, if implemented as planned, will, not may, impact local residents, both on departures and arrivals.

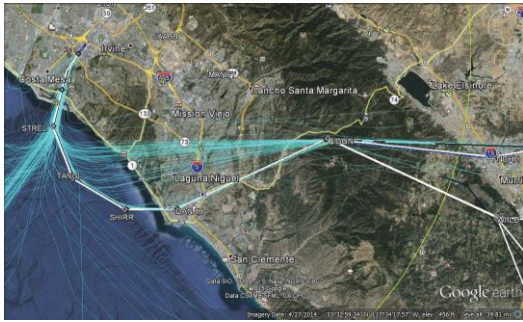
Status as of Nov.1,2016

The history of this new program is summarized in a following section, from the initial introduction of the technology decades ago, to the status of its application in the aviation industry as of the time of this writing. But, first, a brief summary of where we are (Dec '16). The FAA recently released its schedule for rolling out the **new arrival and departure procedures / routes** for approved GPS equipped avionics aircraft in so. ca., roughly under the program name Southern California "Metroplex". The stated purpose of the Metroplex program is to consolidate flights into narrower paths in arrival and departure in order to save airlines fuel, and therefore money. Metroplex is a national program for GPS assisted aviation procedures, not just those local to so. ca. The airports in scope for the Southern California Metroplex, includes Los Angeles, John Wayne, Long Beach, San Diego International, and other smaller facilities.

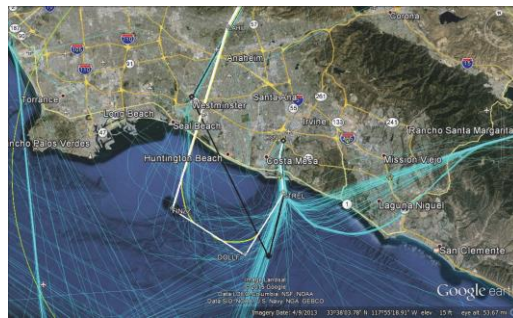
By Federal law, new procedures, i.e., Metroplex in this case, generally cannot be implemented without an environmental review to assess the potential environmental significance. If potential significant impacts are found in the environmental impact review, then a much more detailed study must be conducted and published which would delay or possibly negate use of the new procedures without adequate mitigation. The FAA contracted the required review, and, the report was completed and published for comment earlier this year. AWG, city of Newport Beach, and dozens of others filed comments with the FAA, most were critical of the depth and scope of the review, feeling that the new procedures would increase noise in some communities, and, introduce pollutants in a more concentrated amount in certain areas under the new Metroplex arrival and departure paths. The community comments were addressing citizen issues with an objective of triggering the full assessment.

Very recently, the FAA issued its conclusion, with its analysis, in a "Finding of No Significant Impact" (FONSI) on the local environment of the areas surrounding the many so ca. airports. This finding allowed the FAA to avoid the full Environmental Impact Statement ("EIS"), a time consuming and expensive step it could be assumed they preferred to avoid. The FAA then immediately proceeded with the announcement of the implementation of the new Metroplex arrival and departure procedures for all so. ca. airports, including John Wayne, which will begin in April.

Without a doubt, and, with the acknowledgement of the FAA in its statements, the consolidation of flight paths introduced by Metroplex over neighborhoods that have never before been consistently overflown, will impact some residents more than others with both noise and pollutants. There are many new procedures being proposed for John Wayne's arrival and departure paths. To give some graphical visibility to the issues, review the following 2 proposed departure plans. The solid "white" line is the very precise GPS enabled new procedures. The blue lines show current tracks as flown today.



SNA STREL3 SID RY20; Proposed PIGN SID



SNA MUSEL7 SID; Proposed FINZZ SID

Obviously, this graphically displays the crux of the issue, as you can see the white lines of departure will concentrate aviation activity over a much tighter area than previously. There is widespread belief that the FAA study conclusion, and, its lack of meaningfully addressing legitimate concerns of the cities and community organizations regarding these impacts, was hasty, and, may not be in best interest of the communities. In response there have been numerous lawsuits (Newport Beach, Laguna Beach, Culver City,...) filed in the Court of Appeals for the Ninth Circuit challenging the sufficiency of the environmental review.

AWG is in concurrence with the positions of the cities contesting the speed of implementing this FAA plan without adequate study on the impact on our local communities at the neighborhood level, and, will work to be both an active advocate and source of information for residents, through newsletter communications and on our re-designed website awgoc.com. It is important to understand the entire context of the introduction of GPS capability into aviation as it is a global issue and not just a local one, and, involves flight procedures in the US, Europe, Africa, and, Asia, and, there are valid reasons for the broad desire for use within the aviation industry. To provide this broader context AWG has created the background information below, and will begin putting more information links on our website.

Background- GPS and its use in aviation

GPS- what is it?- The global positioning satellite (GPS) system is based on a major US defense department initiative to enhance the US capability of conducting conflict missions. They funded 24 satellites to be launched in roughly high altitude, stationary orbit paths around the earth. To get precise ground positioning required a minimum of 3 satellites to be in range at all times (it took 24 to accomplish this on a global level). For many years, precise GPS capability was for military use only... think cruise missiles which can fly right down city streets. But many industries petitioned to get access to this data for civilian and commercial purposes. Hence, we now have mobile phones to locate you and the nearest seafood restaurant. And aviation's need ?.. see below.

Air Traffic Management Need- The entire global aviation community has been working on how to incorporate global positioning satellite (GPS) technology into the management of aircraft "flying" operations for over almost three decades, dating back to the early '90's. There was a real safety imperative to do this, as many areas of the world were far less developed than North America or Europe. An example was Africa, where aviation infrastructure, such as ground installed Nav aids (think radio beacons that pilots use for directionally flying the plane using the flight plan vectors) were very sparse on the continent, and, further, radar coverage was grossly inadequate for safety. With a GPS equipped avionics system in the cockpit, this issue virtually disappears, making flights, theoretically at least, much safer anywhere on earth.

Getting the use of this technology faced several barriers, the first being the US Dept. of Defense had to allow use of the system commercially, and, secondly, had to promise, not to interrupt that service (ex., in times of conflict). The other major barrier was financial in that GPS enabled avionics are expensive.... Can be ordered on new aircraft, but, re-equipping the thousands of existing aircraft in airline fleets would cost hundreds of \$millions in capital expense which in the cyclical airline industry was not an easy investment to make.

Industry solution- The airlines recognized that using the full capability of GPS in all flight operations, versus the relatively safe, but inefficient published, and fixed, flight tracks (routings) would save many millions of dollars due to less air miles point to point, and, less time enroute. These savings could arguably be the needed ROI to pay for the safer GPS navigation required equipment.

Savings analysis- Airlines are correct- these projected savings are almost across the board in all operations expense areas- in fuel burn due to less flight time, lower crew payroll costs (crew are typically paid "block to block"... from the time they push away from the departing gate, to the time they stop the aircraft at the arrival gate), and, even, less aircraft maintenance as many repairs and replacements are based on accumulated flight time. Airline savings estimates are huge, and, this explains why airlines and airline industry associations are lobbying very hard to get GPS fully incorporated.

Further background- A single aircraft flight is essentially comprised of 3 parts- takeoff and climb (departure), enroute (that flight time at cruise altitude), and, descent and landing (arrival). For longer flights, airline flight costs are predominantly the enroute portion as most costs are time based. For shorter flights, those less than 90 minutes, the departure and descent costs are relatively more significant due to fuel burn at high engine thrust in climb, and reverse thrust on landing.

FAA response- GPS enabled *enroute* flight paths have been introduced incrementally over the last decade, giving airlines much more flexibility and cost savings. Regarding the other 2 flight phases, the most recent response from the FAA has been in the defining of GPS airport departure and landing procedures at the 25 most congested airspace areas in the US based on GPS tracking versus the traditional navaid waypoints as shown on printed charts. Because these new programs are defined as "area" based versus airport based, each specific area, termed Metroplex, covers all the airports in that defined airspace boundary. Hence the Southern California Metroplex covers all operations at the more than a dozen local airports.

Current legal / regulatory status and FAA operational plans-

- 1- As stated in the introduction, any significant change in operations by a Federal government entity that has *significant* potential impact on the environment must complete an EIS.
- 2- In the case of SoCal Metroplex, the FAA performed the required 1st review (some say a minimal evaluation), and, determined that there was no measurable environmental impact in the surrounding areas of the airports based on proposed GPS arrival and departure procedures, and, hence, did not complete an EIS. AWG, the City of Newport beach, and many others throughout So Ca. disagreed, and responded with letters to the FAA requesting that a full EIR be launched before any new procedures were approved.
- 3- Unfortunately for those of us impacted in so. ca., the FAA published a "final" determination affirming that they were moving forward, essentially ignoring the strong negative input from communities impacted.
- 4- In a counter response-
 - a. City of Newport Beach filed suit in court requesting the court to reverse the FAA's decision and mandate a full EIS for the Metroplex impact on the surrounding areas of SNA.
 - b. Laguna Beach (city) likewise filed a similar suit on Oct 28.

- c. Other cities, Culver City in LA County being one, have also filed a suit on similar grounds.
- 5- FAA conducted community meetings to “answer” questions from civic leaders and local citizens and homeowners, initially just on the new arrival procedures. The most recent, reviewing John Wayne changes, was in Orange on Nov. 3rd.
 - 6- The new arrival procedures were to be operational in November.
 - 7- FAA community meetings for revised departure procedures are tentatively planned for March/April, with operations shortly after.

What does this mean and what will AWG do going forward regarding Metroplex

With your participation and financial support, AWG is able to:

- 1- Leverage our expertise to help impact the program more favorably to our interests- In our membership, we have a vast amount of 2 things- 1-broad aviation experience and knowledge, and, 2- commitment to the communities impacted by air operations regarding the JWA arrivals and departures. We will use these assets to the best of our abilities to be involved in appropriate actions and local activities, to comprehensively gather information and resources to build cases for change where there is negative impact.
- 2- Provide a platform and source for information for our community.
- 3- Evaluate the power of interested party participation among key stakeholders with an objective of finding a reasonable solution for local communities.
- 4- Support for our local city leaders in their actions.
- 5- Educate local neighborhoods on the complex issues and timelines going forward by attending neighborhood meetings, etc.

AWG is committed to supporting the communities we serve and to keep you informed of developments and our actions through updates in newsletters and on our web page. Your continued support is solicited.