



Williams Aviation Consultants

Williams Aviation Consultants, Inc. comments on The FAA Initiative to Address Noise Concerns of Santa Cruz/Santa Clara/San Mateo/San Francisco Counties and The Mountain SERFR proposal. January 29, 2016

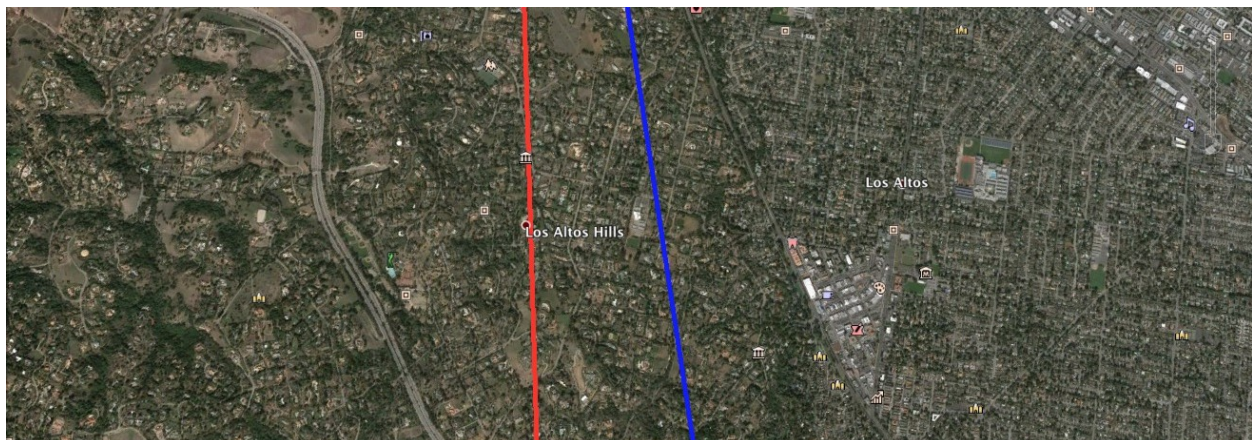
Williams Aviation Consultants, Inc. (WAC) has been retained by the Town of Los Altos Hills to analyze the FAA initiative prepared at the request of Representatives Farr, Eshoo and Speier. The document is undated and unsigned but was distributed on November 16, 2015. In addition, this document will analyze the potential impacts of the Mountain SERFR proposal submitted to the FAA by the Summit Santa Cruz Mountain Community.

The Mountain SERFR proposal.

This proposal recommends realigning the current SERFR 1/2 to the west to return to the flight profile used by the former Big Sur Arrival. In addition the proposal identifies prospective changes to the BRIXX Arrival to San Jose (SJC), the over water departure's from SFO and OAK airport and changes in the methods Air Traffic Control (ATC) uses to delay aircraft inbound to SFO.

Proposed SERFR Arrival.

The proposed SERFR Arrival moves the flight path west approximately 3.5 miles at the shoreline near Santa Cruz. The route then proceeds directly to the current MENLO intersection. The proposal also anticipates a significant increase in aircraft altitude along the route. The altitude at MENLO would be approximately 1,000 feet higher than that contained in the current procedure. As part of this proposal, it is recommended that the BRIXX Arrival to SJC be routed north of its current track and the altitude raised to remain above the proposed SERFR Arrival. The increased altitudes on the SERFR and BRIXX arrivals offer the potential of some noise relief to the residents of Los Altos Hills. Unfortunately the revised procedure moves the new flight track directly over Los Altos Hills. In the figure below, the red line shows the proposed SERFR Arrival while the blue line depicts the current procedure.



It is doubtful that the proposed change would alter or diminish the noise from SFO arriving aircraft to any significant degree. The current use of the airspace over Los Altos Hills as the preferred area to blend the various arrival flows into the required single stream of aircraft landing at SFO is the primary source of the existing noise problem. The increase in the altitude on the BRIXX Arrival to SJC offers the possibility of substantial noise reduction along that route.

The data provided on the current lack of Class B airspace containment for aircraft on the SERFR Arrival has identified a probable safety issue that will provide an incentive for the FAA to make some change to the current procedure. To assure the design of this revised procedure addresses the needs of all the various entities currently impacted by aircraft noise as well as the Air Traffic Control system, a candid discussion between community representatives/experts and the appropriate ATC personnel from Northern California TRACON (NCT) is imperative. It is only through a meeting such as this that a reduction in the use of the airspace over the peninsula for delay sequencing by ATC can be addressed.

Proposed Over Water Departure's from SFO and OAK Airports.

The proposal to redesign the over water departure procedures will provide significant relief to those communities currently experiencing such noise. As discussed later in this document the FAA readily admits that their primary customer or "stakeholder" is the airline industry. The routes proposed add some additional miles to those currently being flown so getting the airlines to support this change may not be possible. If these off shore routes were implemented, some noise reduction could be realized by residents of Los Altos Hills.

Proposed Changes to ATC methods and procedures.

The proposal makes several recommendations on changing the way the ATC system currently routes aircraft. Unfortunately, the FAA has refused to allow discussions to occur between the communities and the personnel directly responsible for the control of the aircraft flying over the peninsula. Without such dialog, a complete understanding of the issues faced by ATC and a viable compromise solution is impossible. In the October 9, 2015 meeting where this proposal was presented to the FAA, the meeting was chaired by the FAA Western/Pacific Regional Administrator. This individual is not in the chain of command of the Air Traffic Control system. A discussion with this individual on ATC matters is on a par with discussing assembly line issues with the building landlord.

The FAA Initiative to Address Noise Concerns of Santa Cruz/Santa Clara/San Mateo/San Francisco Counties.

The initiative purports to describe the actions that will be taken by the FAA to address the noise concerns identified by various community groups in the Bay Area. This "Noise Initiative" specifies three phases of activity, however only Phase one activities contain any detail on the content of the individual initiatives. Unfortunately, no completion dates are specified. The Initiative states: "During the first phase, the FAA will conduct a detailed analysis and a preliminary feasibility study focusing on flight procedures criteria and overall fly-ability of the new Performance Based Navigation (PBN) procedures, potential procedural modifications including speed/altitude adjustments, airspace changes and possibility of moving existing waypoints. An assessment of impacts to operations at the surrounding airports and associated

procedures will be completed.” Coordination with “local stakeholders” will also occur during this phase.

Unfortunately, the activities implemented by the FAA in this document only “analyze” the proposed changes. Any actual consideration of adopting the procedure is part of Phase Two. The coordination with “local stakeholders” will certainly involve the Air Carrier community but “may” include community groups/round tables. This document therefore doesn’t describe the procedures under consideration and only commits the FAA to determining if the proposed changes are technically feasible. It does not obligate the FAA to discuss the process with any community group or to provide for any follow up community input.

Instrument Flight Procedures:

Altitude Adjustments

The FAA will analyze raising the crossing altitude at MENLO waypoint to 5,000 feet, a 1,000 foot increase. They also mention raising the floor on the BRIXX arrival to SJC but do not mention any specific waypoint(s) or altitudes. The FAA also plans to analyze the impact of “altitude adjustments” to the SSTITK, WESLA and CNDLE departures but fail to provide specifics of the changes proposed. The proposed increase in altitude at MENLO might provide some noise reduction, albeit minor, to Los Altos Hills. It is unlikely that the small increases in altitude specified (1000 feet) will offer any relief to those impacted by the current overflight condition. To assure the design of any revised procedure addresses the needs of all the various entities currently impacted by aircraft noise as well as the Air Traffic Control system, a candid discussion between community representatives/experts and the appropriate ATC personnel from Northern California TRACON (NCT) is imperative.

Track Adjustments

The FAA will analyze moving the SSTITK and PORTE departures “more” over water. In addition they will look at “reducing the impacts” of the SSTITK, WESLA and CNDLE departures. Any routing over water should reduce impacts on residents. Unfortunately the FAA has not provided the specifics of the procedures to be analyzed so a viable determination of impact cannot be made. The same lack of specific data also applies to the changes proposed for visual approach procedures. The offset visual approach and/or moving of the runway 28L visual approach offshore offer potential benefit to the residents of Los Altos Hills but the lack of detail makes quantitative analysis impossible. The existence of an unpublished visual approach procedure is problematic. A review of the procedure is not possible because it is not readily available. If the procedure is viable and environmentally friendly, the FAA should publish it. If not, it should be cancelled.

Waypoint Adjustments

The FAA will analyze waypoint changes on the SERFR arrival. As previously stated, if these resemble those contained in the Summit Santa Cruz Mountain Community proposal there is potential adverse impact to the residents of Los Alto Hills. The FAA will also analyze adjusting the PORTE departure to “maximize” off shore routing. Again, the FAA has not provided the specifics of the procedure to be analyzed so the impact of this change cannot be determined. If

the revised PORTE departure track remained offshore and west of Woodside, some noise relief might occur for residents of areas impacted by current procedures.

Speed Adjustments

The issues to be analyzed have little if any impact on Los Altos Hills. The issue of compliance with the 250 knot rule for aircraft operating below 10,000 feet is not appropriate for this analysis. This is solely an issue of pilot compliance with an existing rule (FAR).

Holding Patterns

The proposed holding pattern change on the SERFR arrival has no impact on Los Altos Hills as aircraft do not currently hold over the town.

PBN Procedures

While the FAA states it will analyze the “proposed PBN arrival procedures from local community groups” they fail to provide any data as to the specifics of those procedures. The one proposal for “new SFO RNP approaches that will serve Runways 28 L/R that follow the Big Sur ground track, curved out over the Bay crossing MENLO at 5000-6000 feet” could be good or bad for the residents of Los Altos Hills depending on the location and direction of the “curve”. The lack of detail in the plans being analyzed makes a determination of localized impact impossible.

Air Traffic Control:

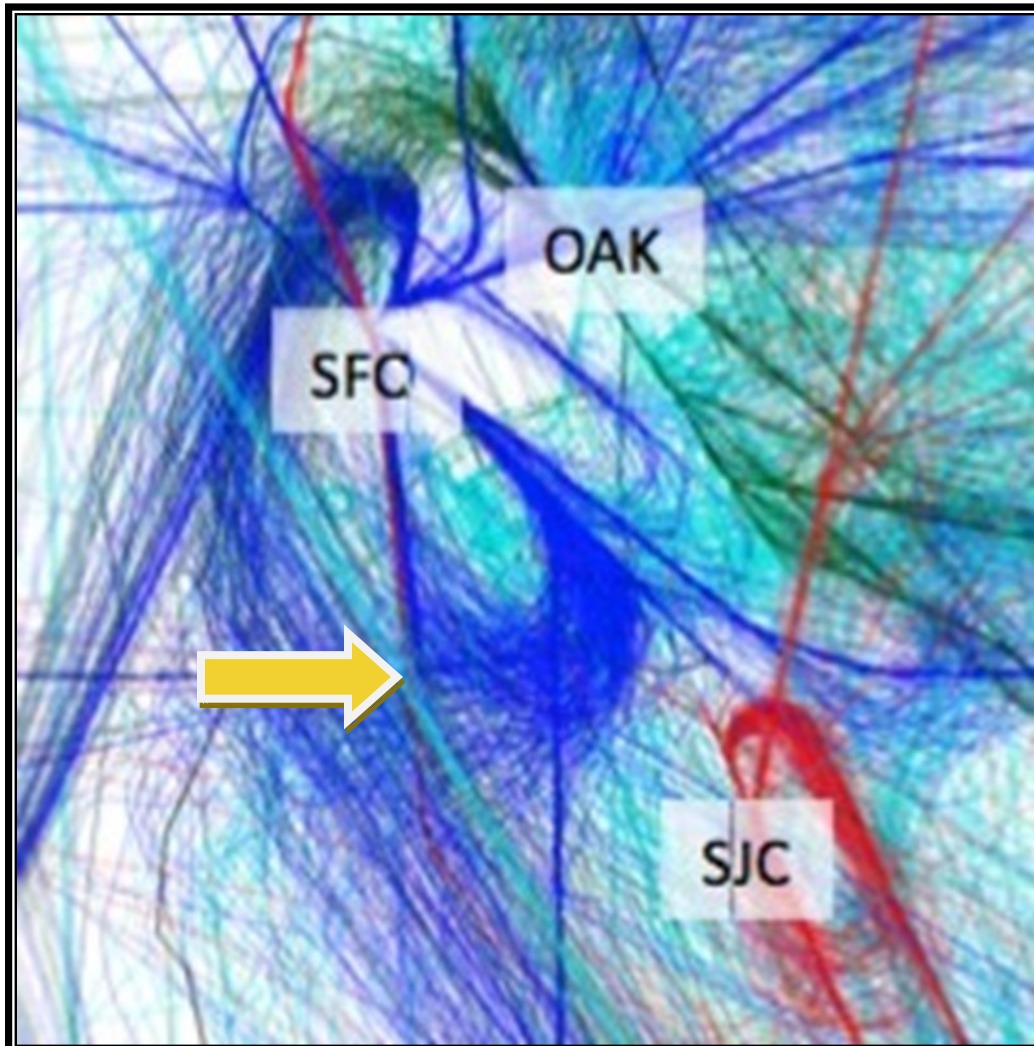
As part of this analysis the FAA will have the Western Service Center (Seattle) “work with” the local Air Traffic Control (ATC) facilities to determine if operations can be modified. During the October 9 FAA briefing of community representatives in San Jose, the FAA specifically prohibited any discussion of local procedures and stated that the local ATC folks would not be allowed to meet with us. . Unfortunately, the FAA’s refusal to allow discussions to occur between the communities and the personnel directly responsible for the control of the aircraft flying over the peninsula precludes a complete understanding of the issues faced by ATC and the development of a viable compromise solution. It now appears the agenda for these discussions will be developed and conducted in house. The FAA states that after it is determined changes can be made, “the SFO community roundtable may need to be engaged”. This is the complete opposite of an enlightened approach.

Sequencing and Vector Points

The FAA plans to “analyze adjusting air traffic activity in the vicinity of Woodside VOR including altitudes”. This activity, if done in concert with community representatives is the only viable method of mitigating the most significant noise issues currently experienced by the residents of Los Altos Hills. Unfortunately, the community representative part is not in the FAA plan.

In the following graphic the blue teardrop shape extending from SFO southeastward towards SJC are the radar tracks of aircraft landing at SFO from departure airports in the north and northwest via the west leg of the Pt Reyes route. It is these aircraft along with the aircraft inbound on other routes (SEFER, Oceanic Arrivals as well as aircraft inbound from the east during poor weather conditions) that are placed on delaying radar vectors and sequenced with those inbound from the north that cause the greatest disruption to Los Altos Hills residents. This is also where the

greatest benefit can be obtained by direct dialog between community representatives and FAA ATC personnel.



Use of Descend Via

The lack of the specific changes anticipated makes any analysis of community impact impossible.

Class B Containment

The analysis of any data to determine trends and risks associated with Class B containment have no bearing on this study. The existing procedures should be modified to assure aircraft are contained in the Class B airspace. Modification of the Class B airspace only will allow aircraft to continue to operate at relatively low altitudes. In either case, there is minimal impact anticipated on LOS Altos Hills. The data provided in the Summit Santa Cruz Mountain Community proposal on the current lack of Class B airspace containment for aircraft on the SERFR Arrival has identified a probable safety issue that will provide an incentive for the FAA to make some change to the current procedure. To assure the design of this revised procedure addresses the needs of all the various entities currently impacted by aircraft noise as well as the Air Traffic

Control system, a candid discussion between community representatives/experts and the appropriate ATC personnel from Northern California TRACON (NCT) is imperative. It is only through a meeting such as this that a reduction in the use of the airspace over the peninsula for delay sequencing by ATC can be addressed.

Speed Brakes

The use of Speed Brakes and other surface controls is outside the purview of the Air Traffic Control system. These devices are used by air crews to adjust speed and descent rates. While ATC can impact their use, they have no control over the air crew's actions.

Runway Usage

The FAA plan to study runway usage is simply put, confusing. They plan on studying the increased use of runway 10 but fail to mention if they are talking about arriving or departing aircraft. Runway 10 is, because of high approach minimums, virtually unusable for air carrier arrivals. If the plan anticipates an ability to use Runway 10 for departures more than is done currently, the normal Runway 28 L & R arrival situation would need to be altered. Runways 1L and 1R are the primary departure runways during normal wind conditions. These runways also place aircraft over open water after takeoff. Any change to existing runway usage is likely to cause far more disruption than will be considered acceptable. These changes would have minimal impact on Los Altos Hills.

Instrument Flight Procedures

The changes in departure procedures/usage proposed offer no detail as to the actual difference with current operations. The offset visual approach offers potential benefit to the residents of Los Altos Hills but, again, no detailed data is provided. This lack of detail makes quantitative analysis of these proposals impossible. The discussion of ATC handling of international flights is not an IFP issue, rather it is an issue of how these flights are handled by ATC. This issue requires the participation of the local ATC personnel.

Opposite Direction Operations

This activity only proposes to "review" recent changes to and "assess" potential options for opposite direction operations. No specific information is provided and any resultant impact is therefore impossible to determine.

Traffic Management:

The use of effective Traffic Management tools could, if properly utilized, provide some over flight relief to Los Alto Hills. The most significant noise impacts currently experienced by the majority of peninsula residents appears to occur during periods when the offset (LDA or Visual) approach to runway 28R is not available. During these periods, ATC appears to utilize the airspace over large areas of the peninsula south of Menlo Park to sequence via Radar vectors aircraft into the compressed runway 28L&R flow. An effective Traffic Management program during these times could eliminate or reduce the need for these vectors. The FAA states "the focus will be on the use of traffic management tools and initiative to ensure current practices are as effective and efficient as possible for the potential reduction of noise concerns". A full evaluation of the specific concerns identified by the various communities should be a point of emphasis in this analysis.

Equitability

The FAA plans to review/evaluate current nighttime operations and the effect of multiple parallel RNAV procedures. They provide no specifics as to what will be actually analyzed; therefore a determination of potential impact on any given geographic area cannot be made.

Interactions and agreements

A review of agreements between different ATC facilities is unlikely to provide any change to the current over flight condition in any peninsula town/city. A review of procedures internal to the handling of aircraft within Northern California TRACON (NCT) could possibly identify some potential for alleviating the traffic congestion over Los Altos Hills.

Time Based Flow Management

TBFM has the potential to significantly reduce the need for the sequencing/delay vectoring which currently occurs over Los Altos Hills. Unfortunately, this technology is in the early stages of implementation. At best this may be identified as a long term aid to the reduction in over flights. A less technology-driven solution needs to be developed in concert with the personnel at NCT.

Nighttime Offloads/Routes

None of the procedures/operations under review have an impact on the residents of Los Altos Hills.

Operators:

The FAA plans to discuss various aircraft operations issues which potentially impact noise with various airline based entities. It appears however that the impacted communities will not be part of this process. The FAA states: Operator involvement needs to be discussed, especially if the FAA does not utilize the roundtable concept to work issues with stakeholders. These discussions, if fruitful might offer a very small amount of noise relief under very limited circumstance to the residents of the peninsula.

Community Engagement:

The FAA states: “Addressing noise concerns in a densely populated and operationally complex area like Northern California is best done in a forum (such as existing and/or new roundtables) that includes community leaders and is supported by the FAA and Bay Area Airports.” Unfortunately, the FAA fails to commit to any public involvement during phase one. They have, in fact, indicated that they have no intention of allowing such participation.

Phase Two and Phase Three

These phases are dependent on the outcome of Phase one. The FAA States “During the second phase, FAA will consider any amendments and/or new procedures that are determined to be initially feasible, flyable, and operationally acceptable from a safety point of view.” It's important to note that the phase one analysis result is based almost solely on fly ability and ATC acceptance. It is likely that only a handful of relatively minor changes will meet that criterion. Since the radar vector situation over the major portion of the peninsula is not a specific item in the Phase one effort, it most certainly will not be part of any Phase two activities.

The FAA also states that as part of Phase two the: “FAA will conduct the formal environmental and safety reviews, coordinate and seek feedback from existing and/or new community roundtables, members of affected industry, and the National Air Traffic Controllers Association (NATCA) before moving forward with the formal amendment process.” This is the first point in this “Noise Initiative” that the FAA indicates it will allow public (Community) input.

Summary:

At the October 9, 2015 FAA Technical Exchange Meeting, extensive data was presented, particularly by Santa Cruz and Palo Alto, which showed significant shifts in SFO arrival traffic. Specifically, the data showed a dramatic increase in air traffic over the Peninsula in the past few years. This appears to be the result of (1) routing Pt Reyes aircraft over the peninsula instead of using the Approach over the Bay and (2) aircraft being assigned routes by Air Traffic Controllers (Vectors) that place them over the Peninsula at low altitudes while executing maneuvering turns.

The following items in the FAA initiative are potentially beneficial, but no details are provided in the FAA document to assess the potential impact on Los Altos Hills:

- Sequencing and Vector Points- analyze adjusting air traffic in the vicinity of Woodside VOR. The most significant noise impacts currently experienced by the majority of peninsula residents appears to occur during periods when the offset (LDA or Visual) approach to runway 28R is not available. During these periods, ATC appears to utilize the airspace over large areas of the peninsula south of Menlo Park to sequence via Radar vectors aircraft into the compressed runway 28L&R flow. An effective Traffic Management program during these times could eliminate or reduce the need for these vectors.
- Track Adjustments and Traffic Management- the offset visual approach and/or moving the runway 28L visual approach offshore offer the possibility of some noise relief. Unfortunately, no specifics as to the procedures under consideration are provided. It is unlikely that these changes will be determined to be “operationally feasible”.
- Instrument Flight Procedures/ Altitude Adjustments- specifically raising the crossing altitude at MENLO waypoint by 1000 feet to 5000 feet.
- Equitability

Reviewing the published navigation procedures is in our opinion lip service which may result in a minimal if any change. The bottom line is that if the FAA continues to allow controllers to take aircraft off published arrival and departure routes and utilize the airspace over densely populated portions of the peninsula as the preferred location to vector/sequence these aircraft into SFO, the situation will not get any better. Until the FAA is willing to allow discussions with those knowledgeable of the day-to-day operational situation, the reasons for the increased/changed traffic flows will remain unknown. Consequently, our ability to offer viable suggestions on possible ways to mitigate these issues is severely compromised.

The FAA has indicated that they will work with existing and new community roundtables. We recommend that the cities/towns that are impacted by the disproportionate increases in traffic and resultant noise from SFO arriving flights form a new group to address their specific concerns.

We also recommend that the FAA expand the definition “local Stakeholders” to include these community groups so their input can be considered in Phase 1. Direct discussions between these community groups and ATC personnel is crucial to obtaining answers as to why a shift in traffic to locations over the Peninsula has occurred and to develop short- and long-term solutions acceptable to all entities. Until there is complete and honest communications between the FAA (local and regional), local community leaders and elected representatives, this will continue to be an attempt to make the noise issue “disappear” without requiring any significant change in the way the FAA currently provides ATC services.