

Green: All OAK Traffic
Red: All SJC Traffic
Dark Blue: All SFO Traffic
Light Blue: All other traffic

NOTE: Shows 24hrs of traffic

OAK

SFO

SJC

The FAA SELECT Committee on South Bay Arrivals

**Gary Waldeck
Congressional SELECT Committee Member
February 2017**

Disclaimer

- **This presentation has been prepared by Gary Waldeck, a member of the SELECT Committee on South Bay Arrivals**
- **The presentation contains what I believe to be the correct sequence and information that is available regarding the Congressional SELECT Committee on South bay Arrivals**
- **Any errors or omissions are mine alone**
- **I hope that you enjoy the show**

Gary

NextGen Flight Management Program

- Identified Objectives:
 - Enhance Safety
 - Increased Automation Reduces Crew Work Loads
 - Reduce Delays, Airport Congestion and Exhaust Emissions
 - Improve Efficiency (Fuel, Flight, Turn-Around Time and Cost)
 - Use Satellite Navigation (GPS) & Comm Systems (ADS-B)
 - Reduced Voice Communications – More Digital Info Exchange
 - Air to Ground, Airplane to Airplane and the entire Airspace System

NextGen Flight Management Program

- **NextGen's (Other) Features:**
 - Optimal Profile Descents (OPD)
 - Reduced Arrival Altitudes
 - Reduced Distance between Airplanes (3 miles – 90 Seconds)
 - Narrower Flight Corridors (~100 feet wide)
 - Concentrated Noise Impacts on the Ground
 - If not correctly implemented

Congressional SELECT Committee on South Bay Arrivals – NextGen – Short History

- The Airlines Coalition Lobbied the **NextGen** Concept to Congress in the late 1990's
- In 2003, Congress Created the Joint Planning Office
- Congress Approved the **NextGen** Program in 2012
 - **NextGen** Emphasizes Safety & Efficiency over All Other Considerations
- The **NextGen** program rollout began in August 2014
 - Introduced to the SF Bay Area in **March 2015**
- The new system was IMMEDIATELY noticed by the underlying residents and they reacted with Loud and Boisterous Complaints to:
 - Cities, State, FAA, and Federal Congressional Officials

Congressional SELECT Committee on South Bay Arrivals (Committee Creation)

- In July, 2015 - Anna Eshoo, Sam Farr and Jackie Speier convened a local area meeting with FAA officials and local Civic Leaders
- In March, 2016, they formed a SELECT Committee to examine and to report to the Congressional representatives
- The Committee was Composed of Elected County and City Officials
 - 12 each primary and alternate members, eight each from the three Congressional Districts
 - Joe Simitian was selected as the Chairman
- The Committee, was geographically balanced and charged with “representing the entire region.”

Congressional SELECT Committee on South Bay Arrivals (Committee Creation Cont'd)

- The Committee Adopted Basic Principles:
 - Minimizing aircraft noise must be an FAA priority when designing procedures and of Air Traffic Control (ATC) when vectoring flights
 - Reducing aircraft noise at night is an urgent priority
 - FAA must include affected communities as stakeholders when making changes
 - ATC should adhere to published procedures whenever possible
 - Reducing the noise impacts caused by **NextGen** should be a priority
 - Moving noise is not an accepted methodology (a de facto principle)

Congressional SELECT Committee on South Bay Arrivals (Committee Actions)

- The SELECT Committee Held 19 Meetings from 5/6 – 11/17
 - 1 Organizational Meeting @ SFO
 - 3 Community Meetings: Santa Cruz, Redwood City and Mountain View
 - ~250 Residents Addressed the Committee at Each Meeting
 - 10 Working Meetings
 - ~130 Members of the Public at Each Meeting
 - 5 Technical Briefings by the FAA
- Concurrently, the San Francisco Roundtable continued to work on local San Francisco Airport area issues.

Congressional SELECT Committee on South Bay Arrivals (Results)

- A Short Summary of the findings of the Committee might be:
 - **Fly at Highest Possible Altitudes**
 - **Fly over Locations with Fewer People**
 - **Avoid Noisy Flight Maneuvers and**
 - **Implement Noise Reduction Retrofits
Wherever Possible**

We Learned that All Airspace Design has “Standards” that Must Be Followed

- The FAA Noise Specification (1970's, not applicable – but still used!)
 - Doesn't Consider Current Aviation Technology
 - Noise Effects on Populations Below
- Only Simulations are used to Determine Compliance with the Rules
 - No Noise Tests have been Conducted to Verify Predicted Results
- DNL (Airplane Noise Measurement Scheme) – (The REAL Culprit)
 - The FAA Flight Route Designers cannot Fail!
 - Ask me about it later ... (It's a long discussion on its own)
- NextGen OPD Approaches are Required (Idle power, Glide into landing)
 - Lower Descent Entry Altitudes ... & Much More Noise if Designed Incorrectly

We Also Learned ...

- National Airspace is Incredibly Complicated and Interactive
- Or, put another way ...

What We Learned as the Study Began

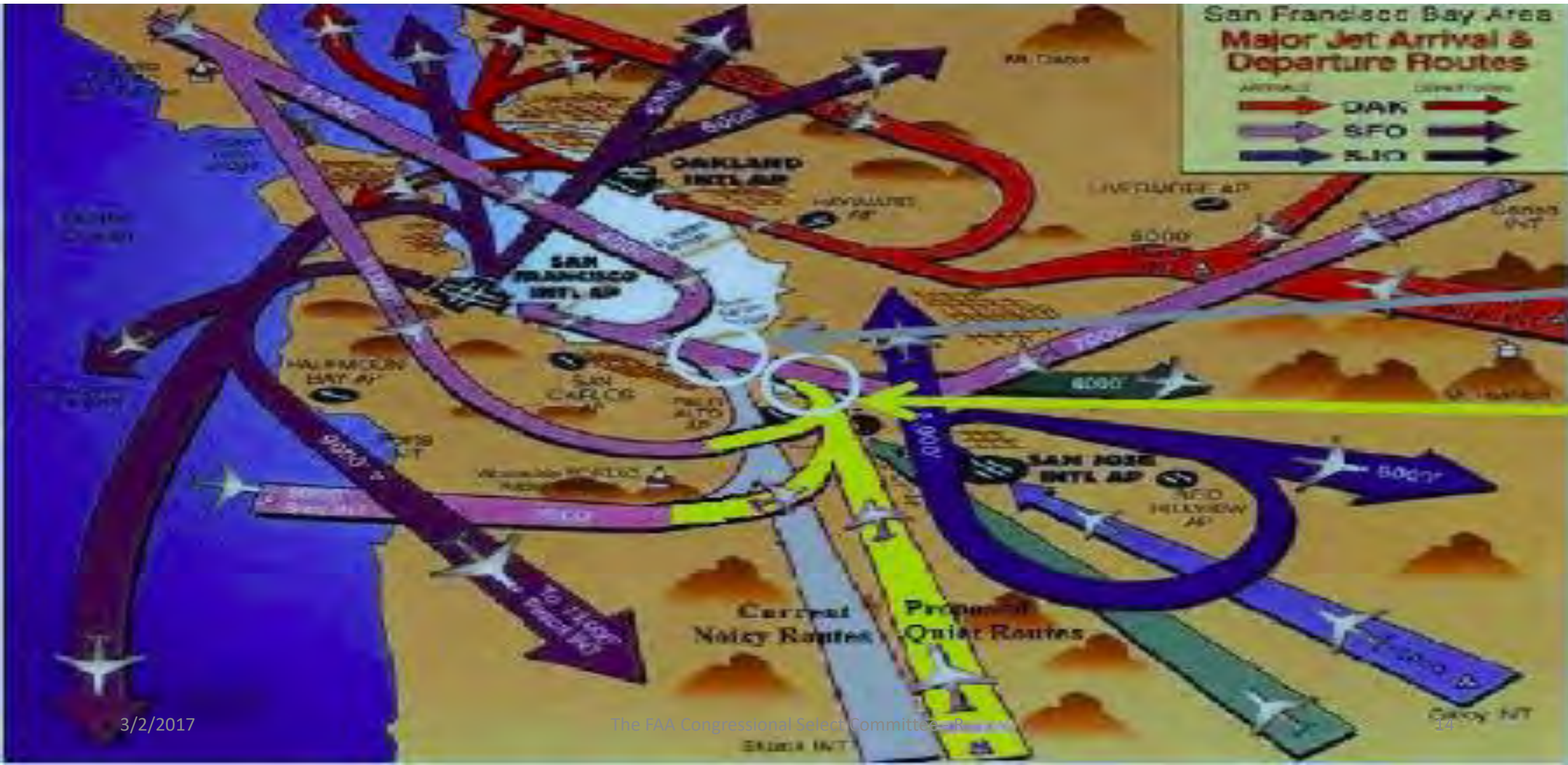
- National Airspace is Incredibly Complicated and Interactive
- Or, put another way ...

Medusa LIVES!



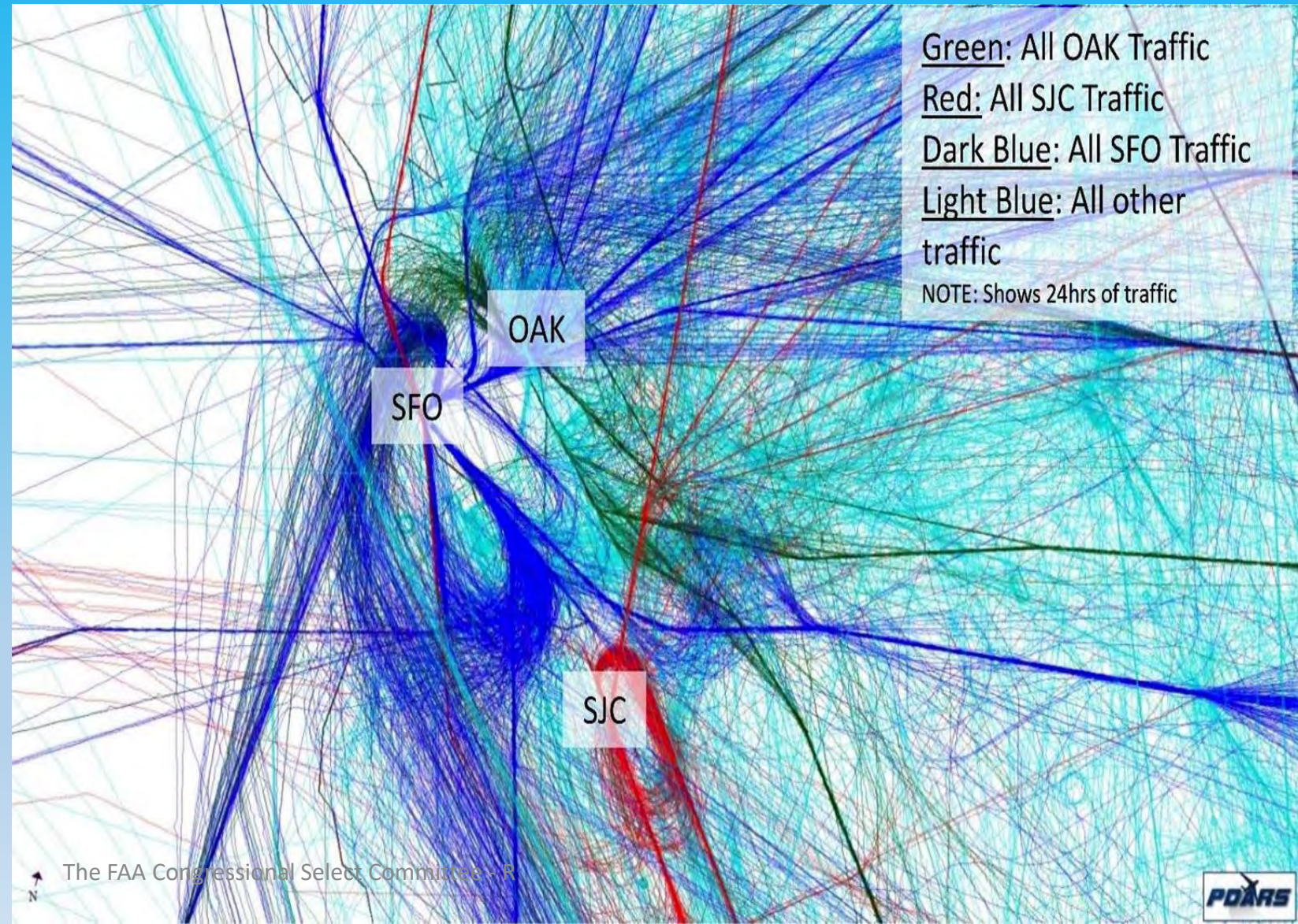
“Fixing” Anything Creates Problems Elsewhere!
(But we found methods to improve it a bit)

The SFBA Metroplex – It's Complicated!



Our Real Airspace – It's Even More Complicated

It's like a spaghetti bowl that exists above our heads

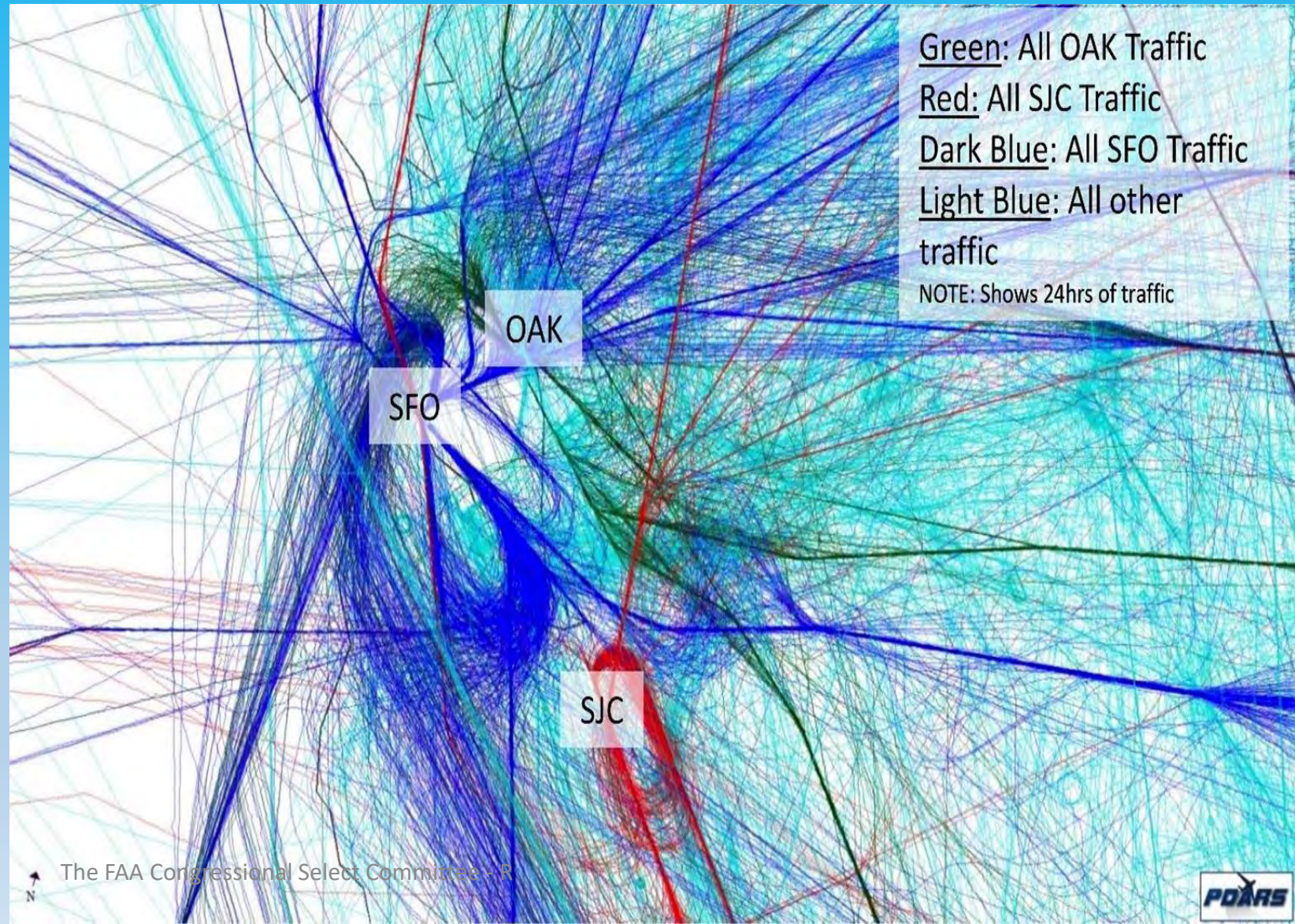


Our Real Airspace – It's Even More Complicated

It's like a spaghetti bowl that exists above our heads

- Bodega from North
- Oceanic from West
- Dyamd from the East
- SERFR/BSR from the South
- Dedicated Military corridors

Any shift in flight patterns ripples through the skies



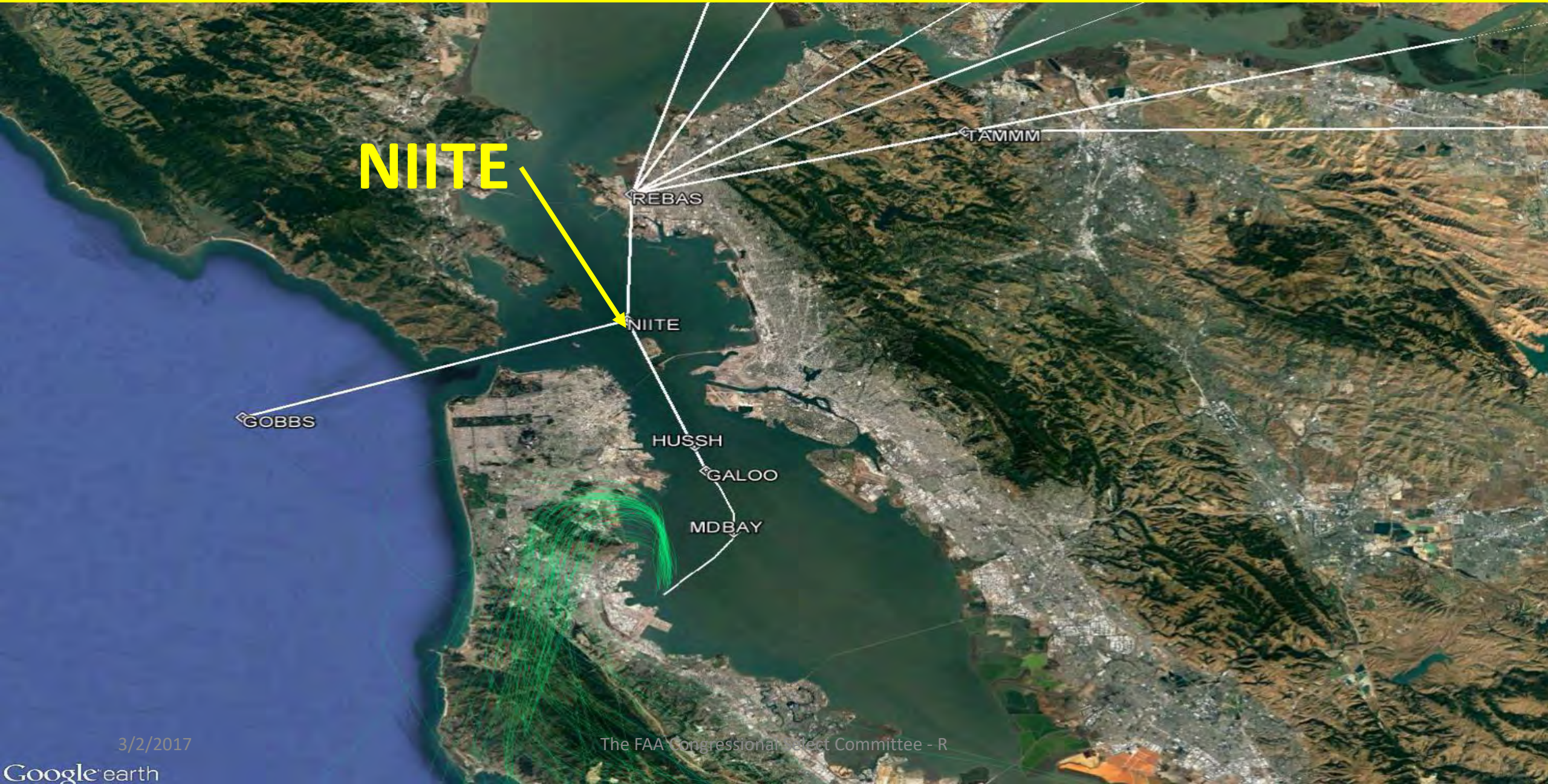
Congressional SELECT Committee on South Bay Arrivals (Beginning of the Trek)

- FAA requested Proposals for Change from the Public, Cities, etc.
 - They Considered 34 of the (?) Proposals Received
 - FAA Determined that 19 of the Ideas were NOT FEASIBLE
- Remaining 15 Ideas were allocated to 6 General Groups
- Committee was asked to Provide their Recommendations
 - All Recommendations had to be Approved with a 2/3 Majority
 - And required at least One Vote from each Congressional District
- Final Report
 - Addressed each Focus Area and Offered many Committee Recommendations for the FAA to Address in the Future

Issues for Select Committee to Examine and Make Recommendations

| | FAA Study Areas that were considered Feasible |
|---|--|
| 1 | Create a new south transition for the NIITE SID |
| 2 | Increase percentage of NIITE flights which remain on NIITE until at least the NIITE waypoint |
| 3 | Increase percentage of CNDEL flights which remain on CNDEL until at least the CNDEL waypoint |
| 4 | SFO Class B Adjustment |
| 5 | Transition the SERFR STAR back to the BIGSUR ground track |
| 6 | Improve aircraft set-up and sequencing between facilities |

Create a New South Transition for SFO's NIITE SID

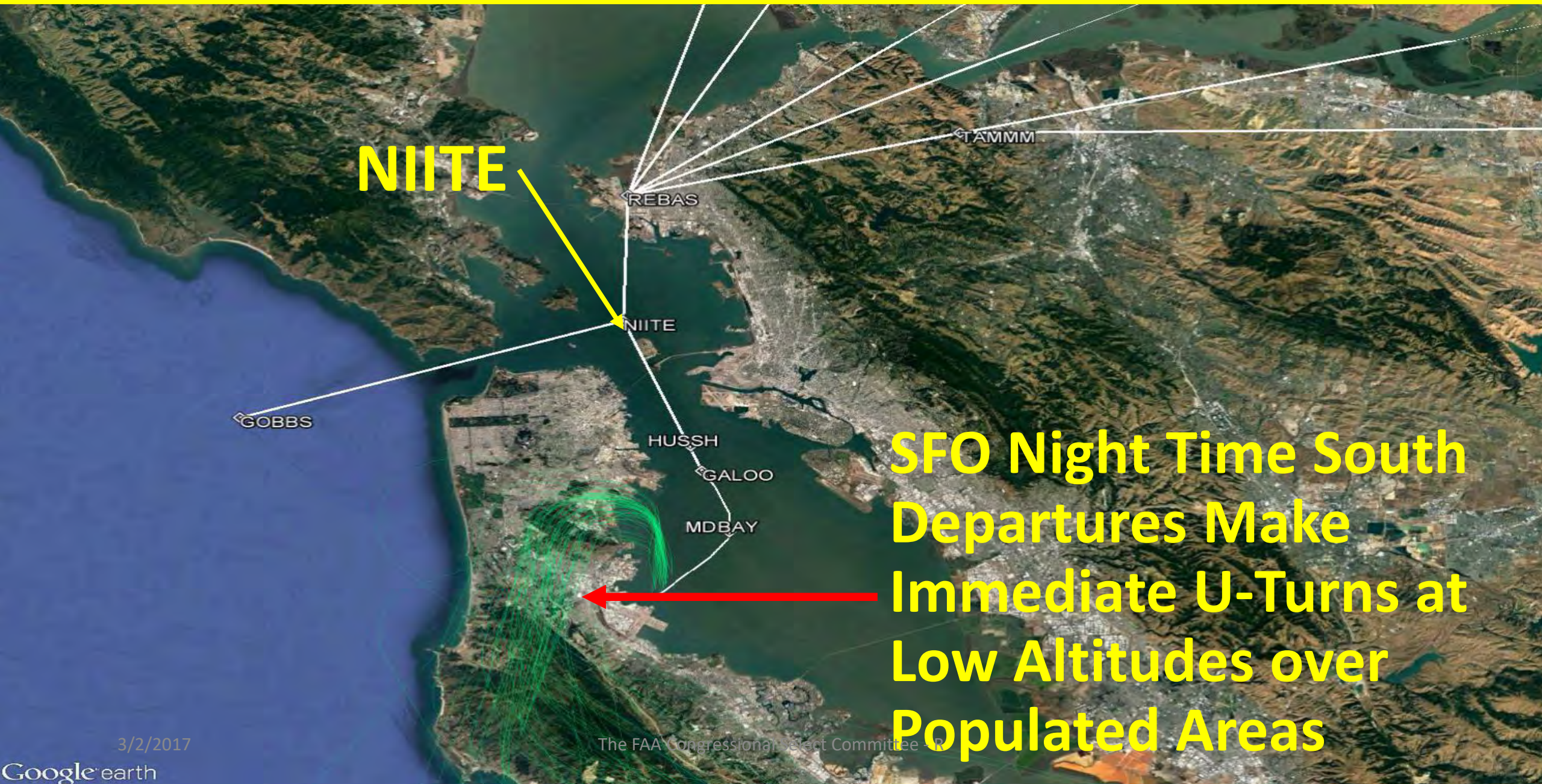


3/2/2017

Google earth

The FAA Congressional Select Committee - R

Create a New South Transition for SFO's NIITE SID



NIITE

**SFO Night Time South
Departures Make
Immediate U-Turns at
Low Altitudes over
Populated Areas**

3/2/2017

Google earth

The FAA Congressional Select Committee - R

Create a New South Transition for SFO's NIITE SID

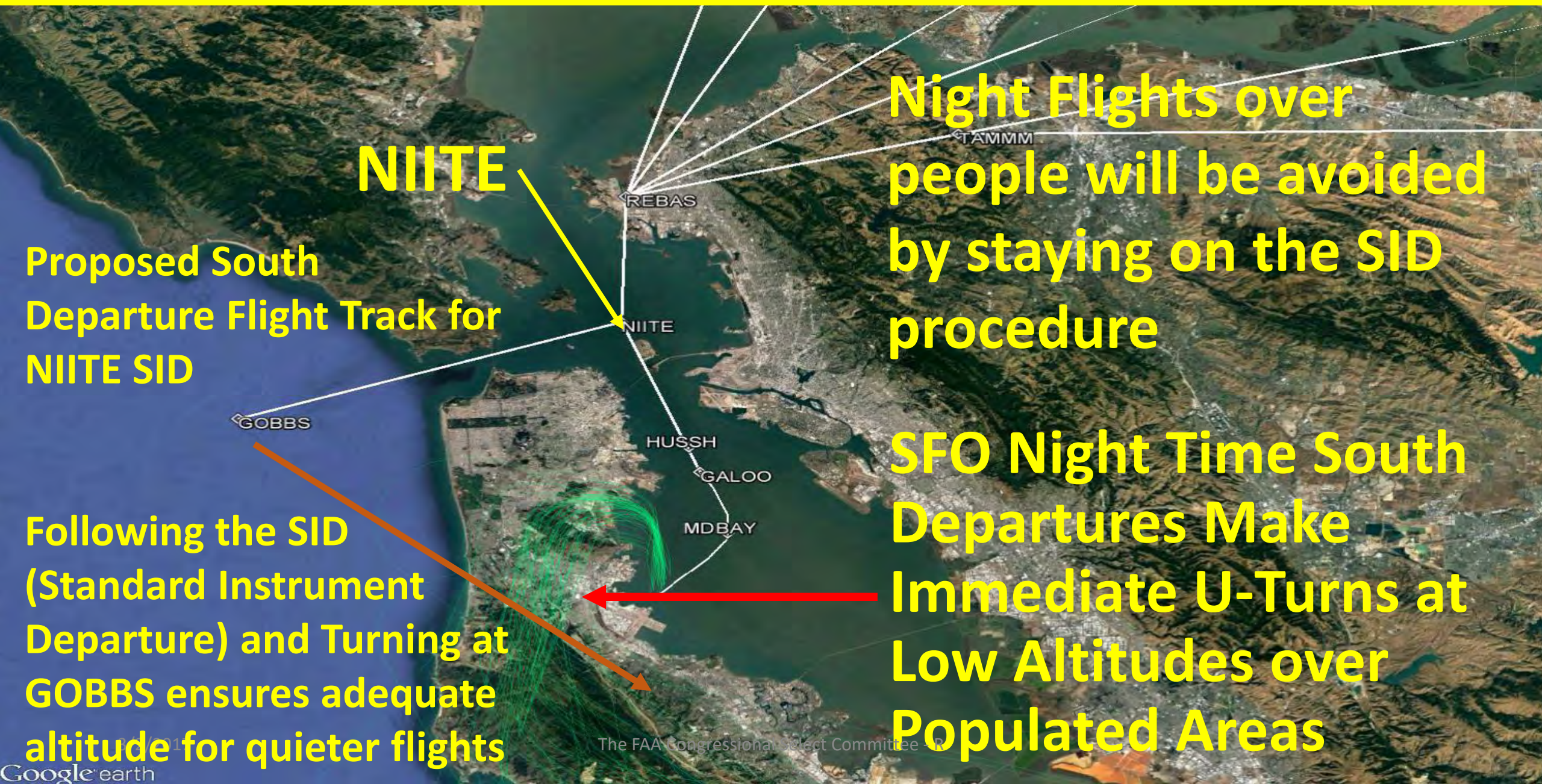


NIITE

Night Flights over people will be avoided by staying on the SID procedure

SFO Night Time South Departures Make Immediate U-Turns at Low Altitudes over Populated Areas

Create a New South Transition for SFO's NIITE SID



NIITE

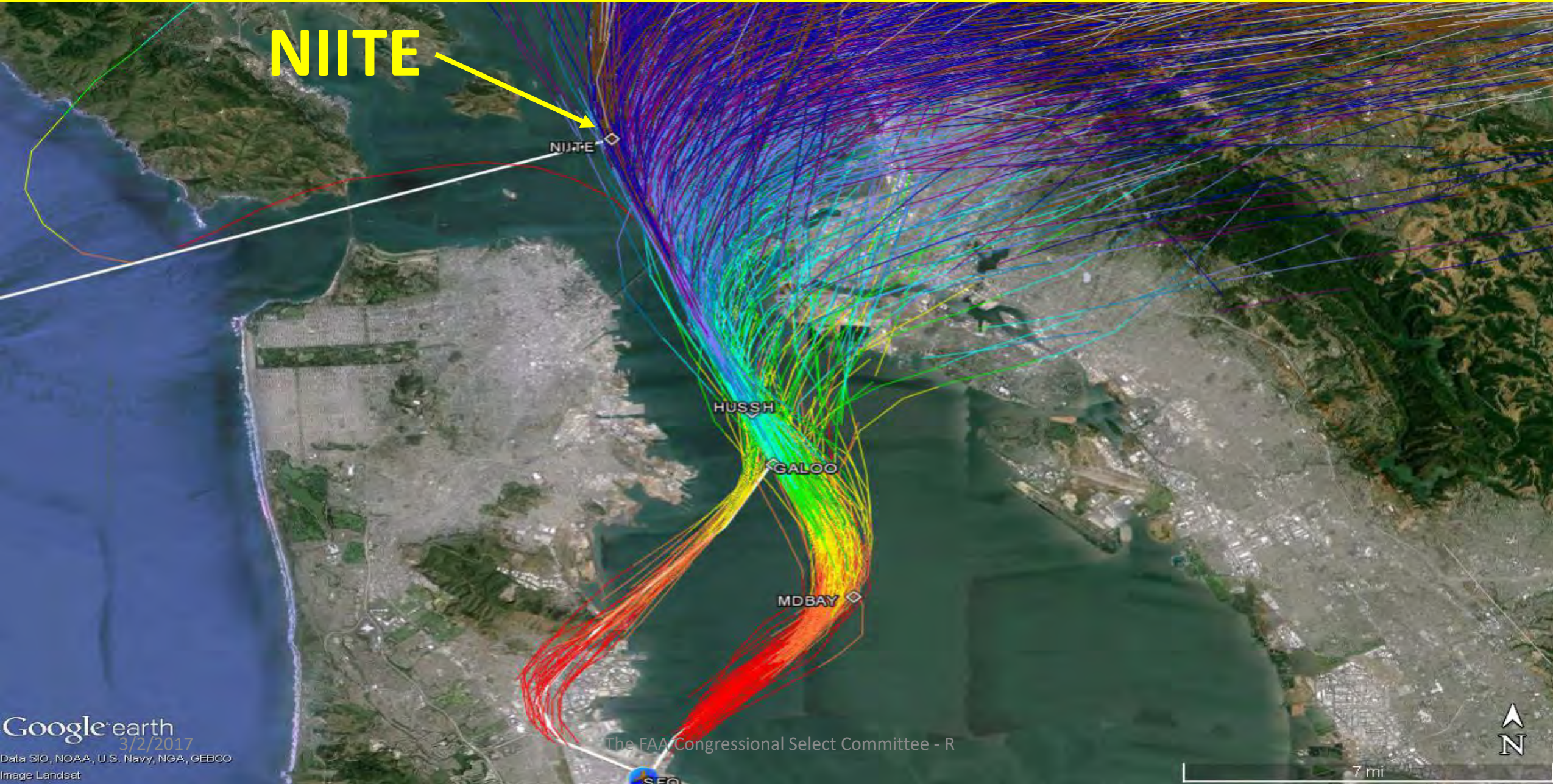
**Proposed South
Departure Flight Track for
NIITE SID**

**Following the SID
(Standard Instrument
Departure) and Turning at
GOBBS ensures adequate
altitude for quieter flights**

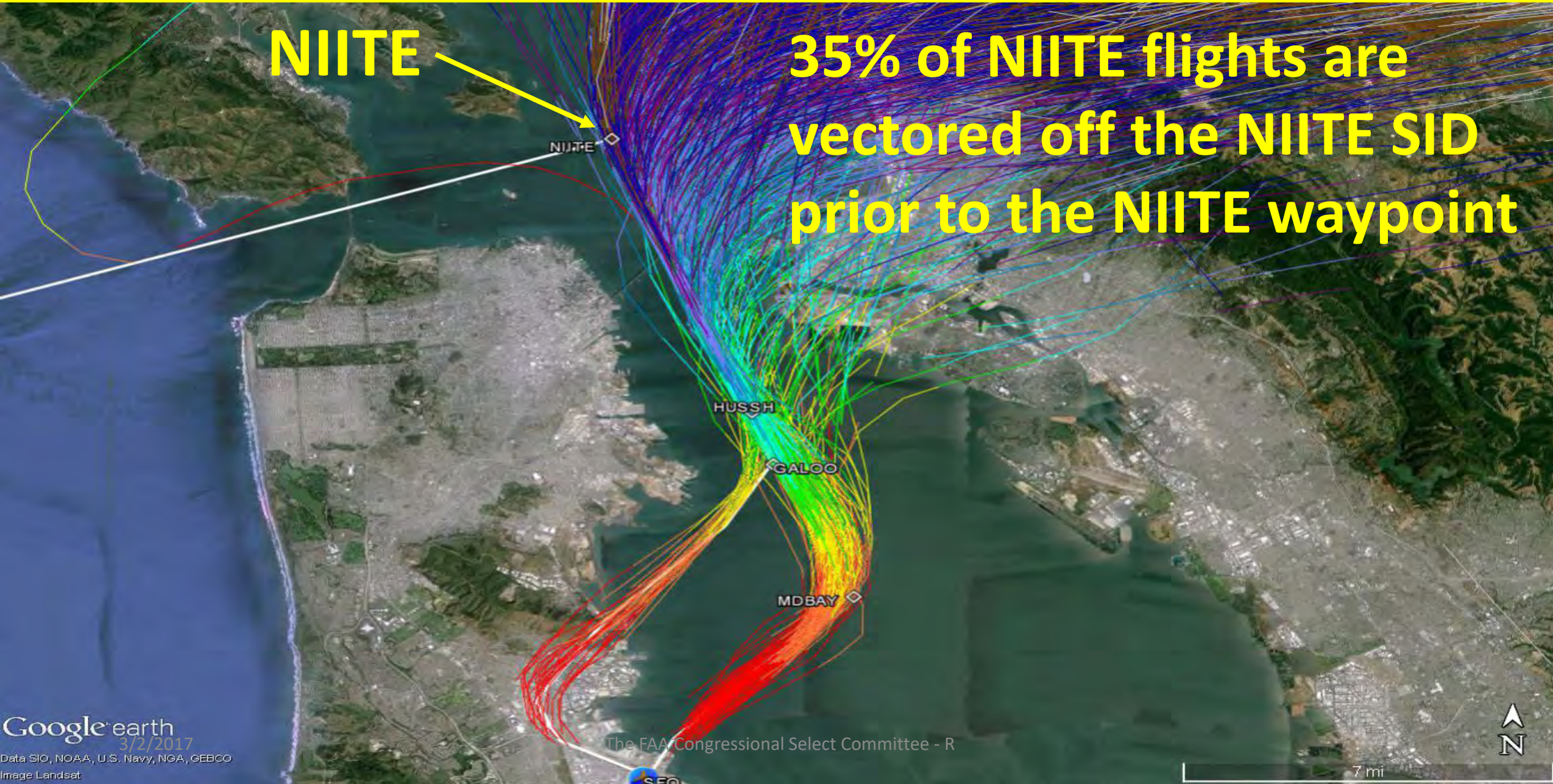
**Night Flights over
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**SFO Night Time South
Departures Make
Immediate U-Turns at
Low Altitudes over
Populated Areas**

Reduce Eastern Departures Leaving SFO's NIITE SID



Reduce Eastern Departures Leaving SFO's NIITE SID



Reduce Eastern Departures Leaving SFO's NIITE SID

NIITE

NIITE

35% of NIITE flights are vectored off the NIITE SID prior to the NIITE waypoint

These flights fly over the coastline between 1,000 feet & 5,000 feet lower than written procedure –

All were vectored off the written SID by flight controllers

HUSSH

GALOO

MDBAY

SFO

The FAA Congressional Select Committee - R

Reduce Eastern Departures Leaving SFO's NIITE SID

NIITE

NIITE

35% of NIITE flights are vectored off the NIITE SID prior to the NIITE waypoint

Have Departing Flights remain on SID until the NIITE waypoint

Enables planes to increase altitude and reduce ground noise

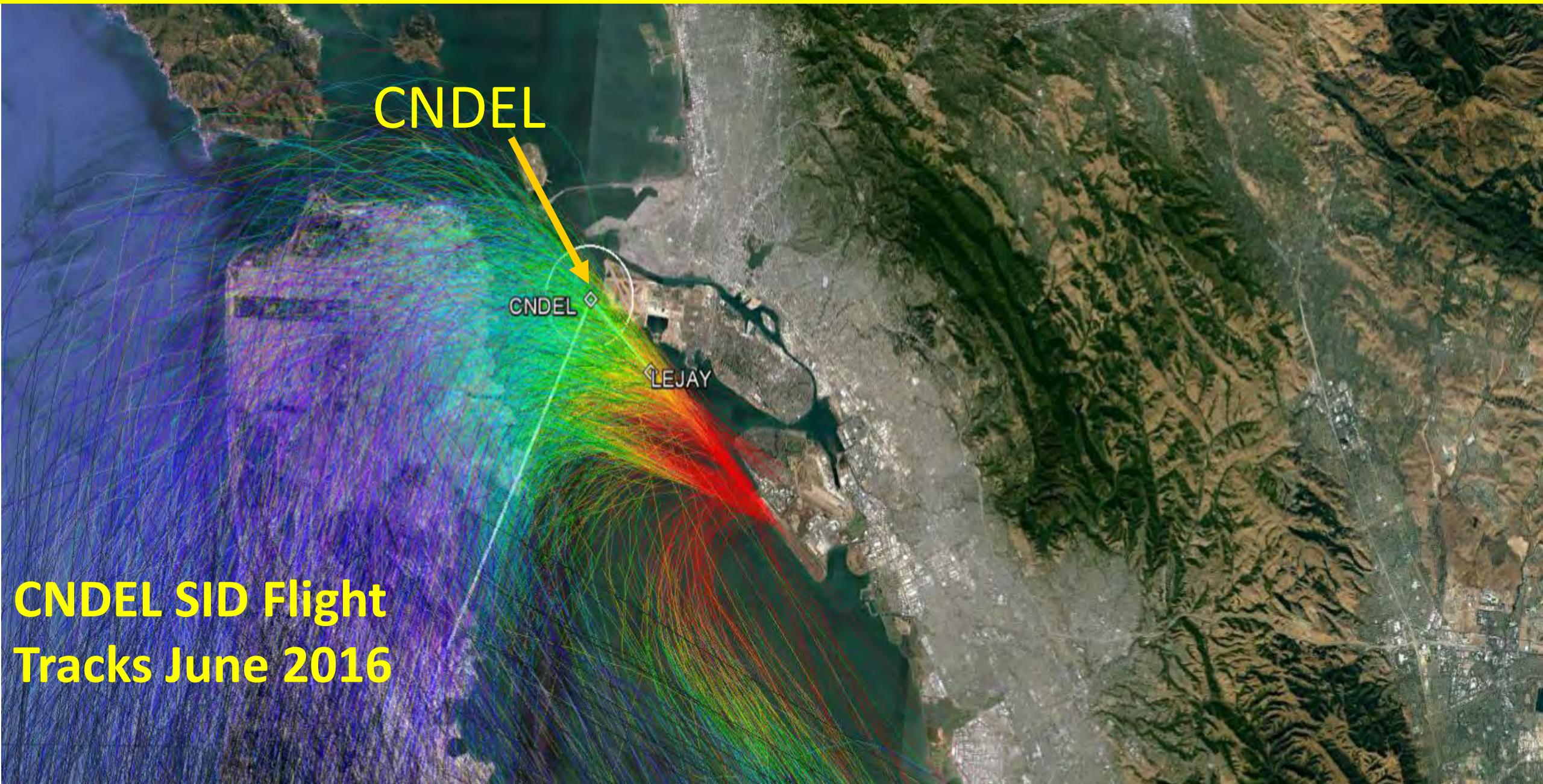
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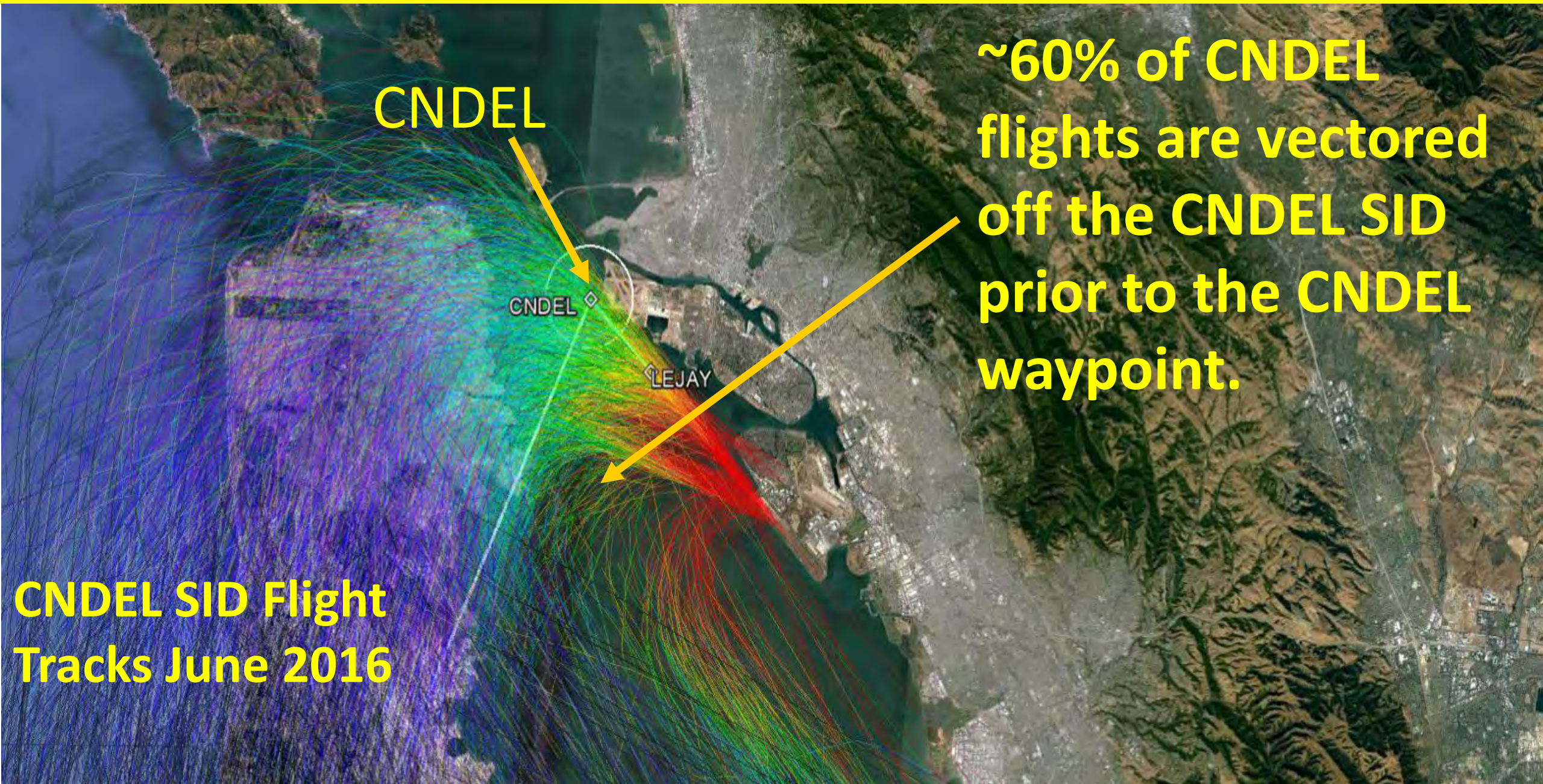
MDBAY

The FAA Congressional Select Committee - R

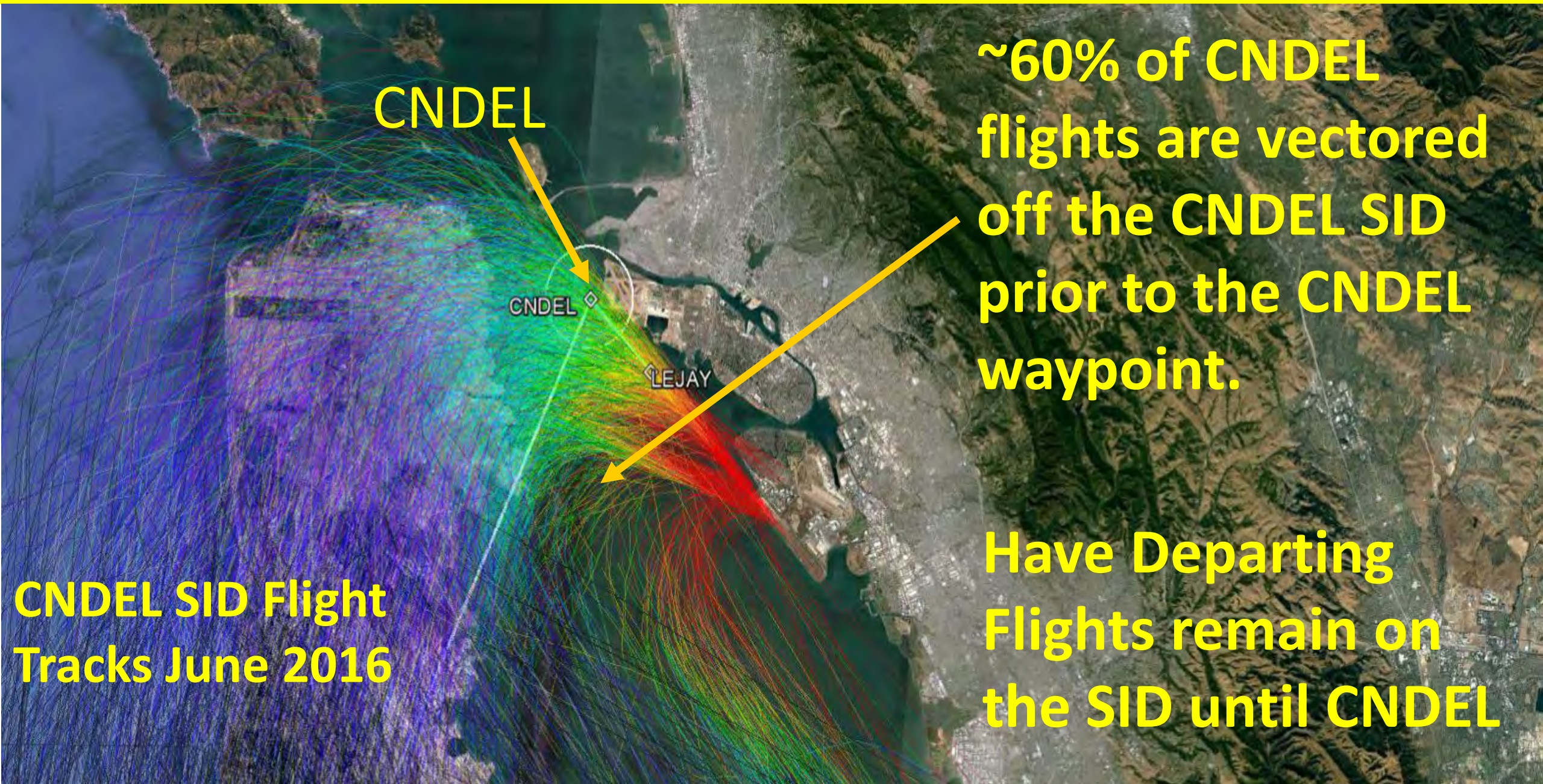
Maintain Oakland's CNDEL SID until CNDEL



Maintain Oakland's CNDEL SID until CNDEL



Maintain Oakland's CNDEL SID until CNDEL



Feasibility Groups 1, 2 & 3

Night Time Departures Recommendations

- **Create a New South Transition for the NIITE SID**
- **Increase Percentage of Flights that Remain on NIITE until at Least the NIITE Waypoint**
- **Increase Percentage of CNDEL Flights that Remain on CNDEL until at Least the CNDEL Waypoint**

Feasibility Groups 4 & 5

Santa Cruz to Point Menlo in Palo Alto

- The original BIGSUR STAR was located North of Santa Cruz and Routed Airplane Traffic over HiWay 17 to MENLO (HiWay 101 and Willow Road)
 - Noise complaints → ~16 per year
- The **NextGen** Arrival Path, SERFR1, Shifted the Flight Path ~3 miles East
 - Lower, Louder and over Densely Populated Areas
- Was Exacerbated by Design Errors that caused Even More Noise due to a Class B Airspace Interference Oversight
- Required Optimum Profile Descents

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- Required Optimum Profile Descents
- With **NextGen**, Noise Complaints Eventually Reached ~300,000 in a single month! (Using an iPhone APP)
- Prompted the creation of the SELECT Committee

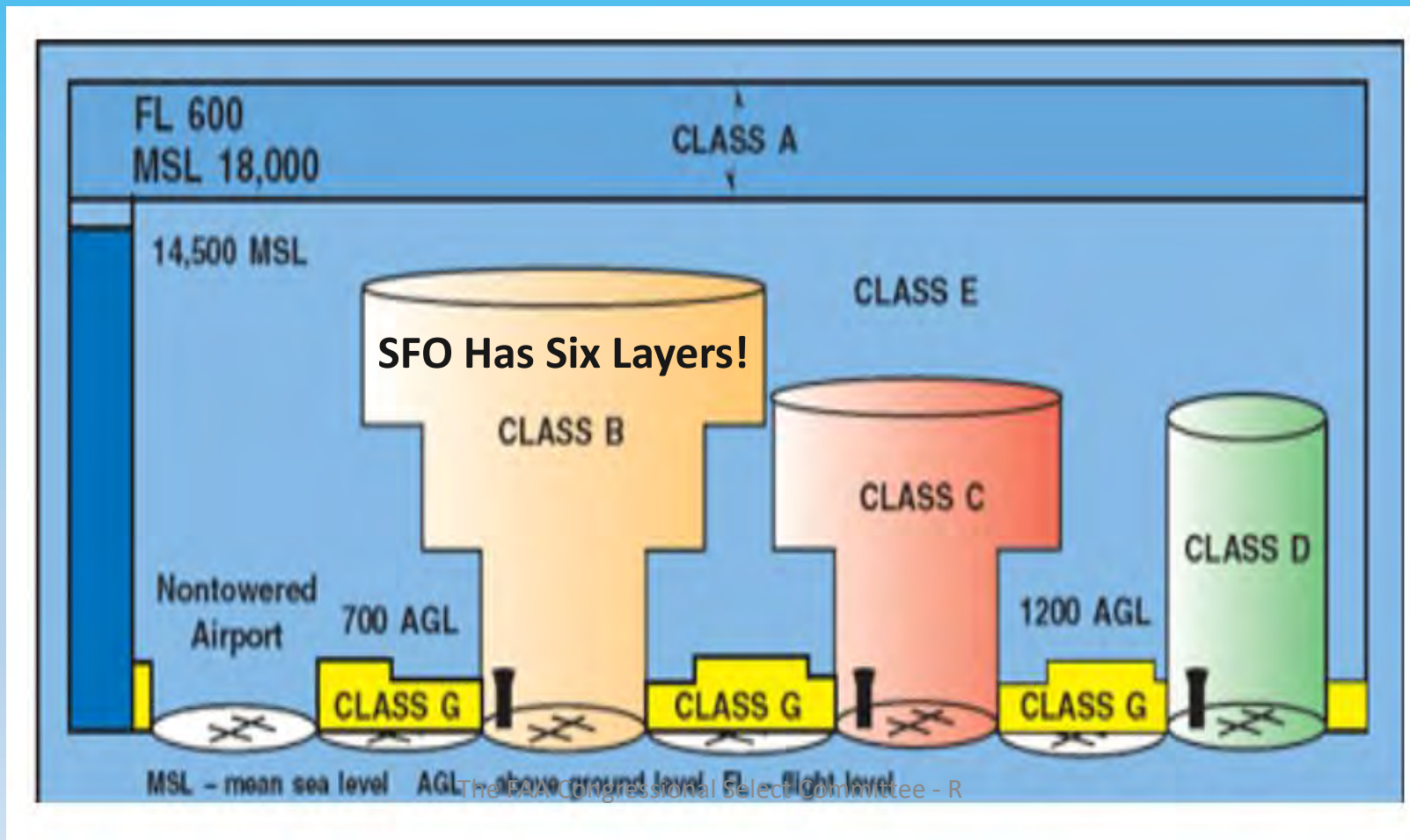


What is an Optimum Profile Descent (OPD)?

- An OPD Profile assumes a Gliding Airplane at Idle Power once it enters the Descent to Landing Procedure (STAR)
- Initial Procedure Entry Airspeed of ~280 Kts/Hr
- The Airplanes Enter Class B Airspace @ ~250 Kts/Hr
- Eventually Slows to Final Approach Speeds of ~140 Kts/Hr
- Requires a ~3 Degree Glide Slope from Entry to Touchdown
 - Altitude at the Procedure Entry is determined by the Glide Slope and the Distance from the Airport
 - For the Santa Cruz Entry, the Altitude is similar to the Previous Entry Protocol Using BIGSUR, but the flight path changed

US Airspace Classes

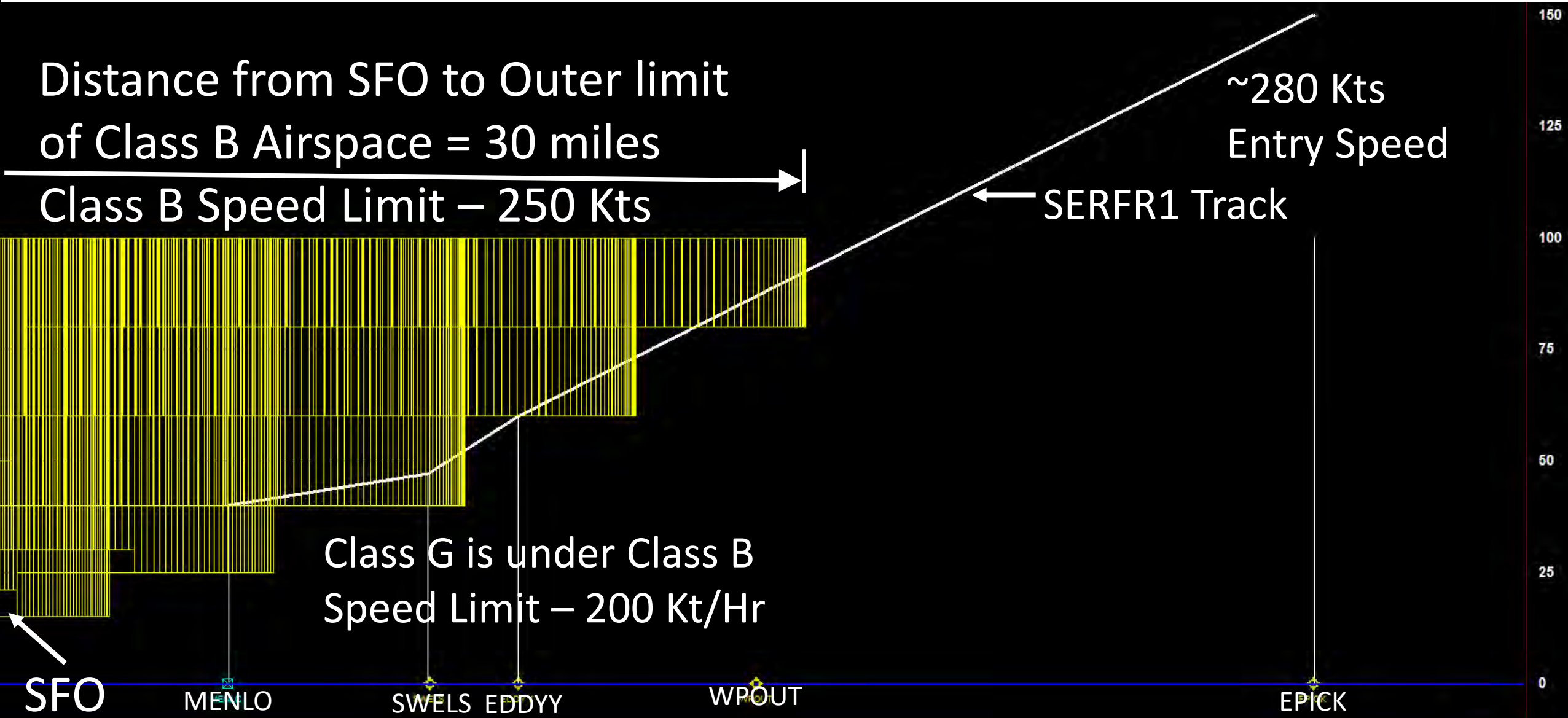
- Class B, C & D Airspaces are found at Towered Airports
 - Permission must be obtained to fly into these areas
 - Class B & C Airspaces are much like an Upside Down Wedding Cake



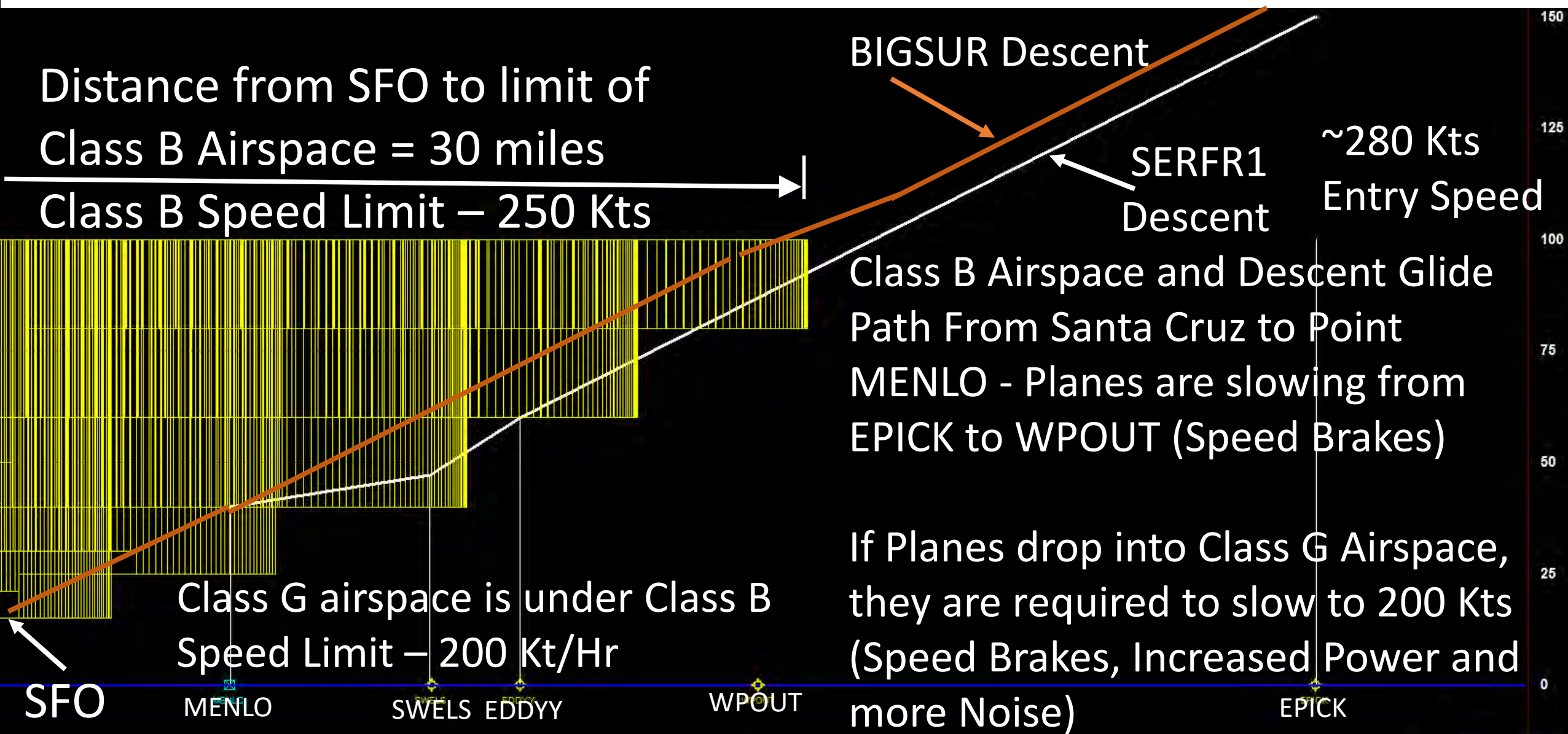
SFO Class B Airspace – Overhead View



SFO Class B Airspace – Edge View

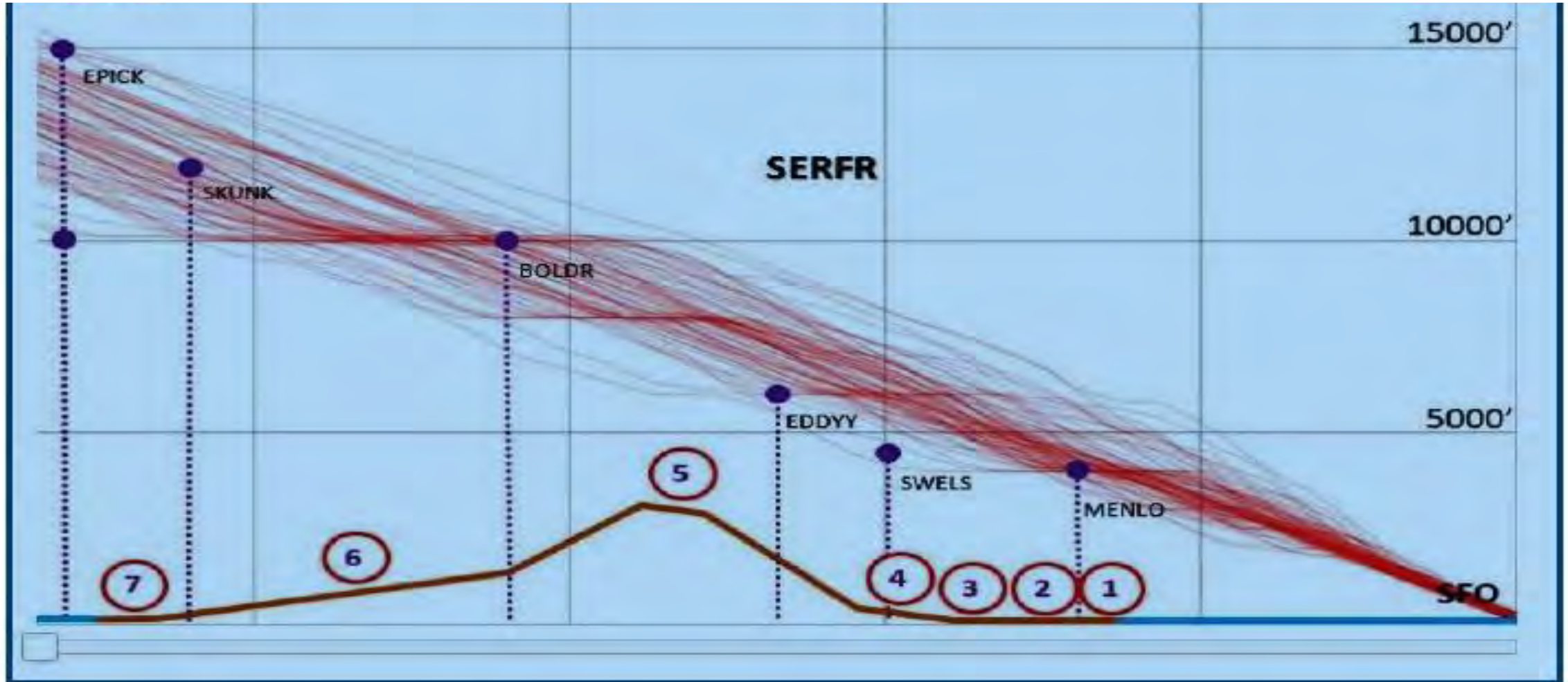


SFO Class B Airspace – Edge View

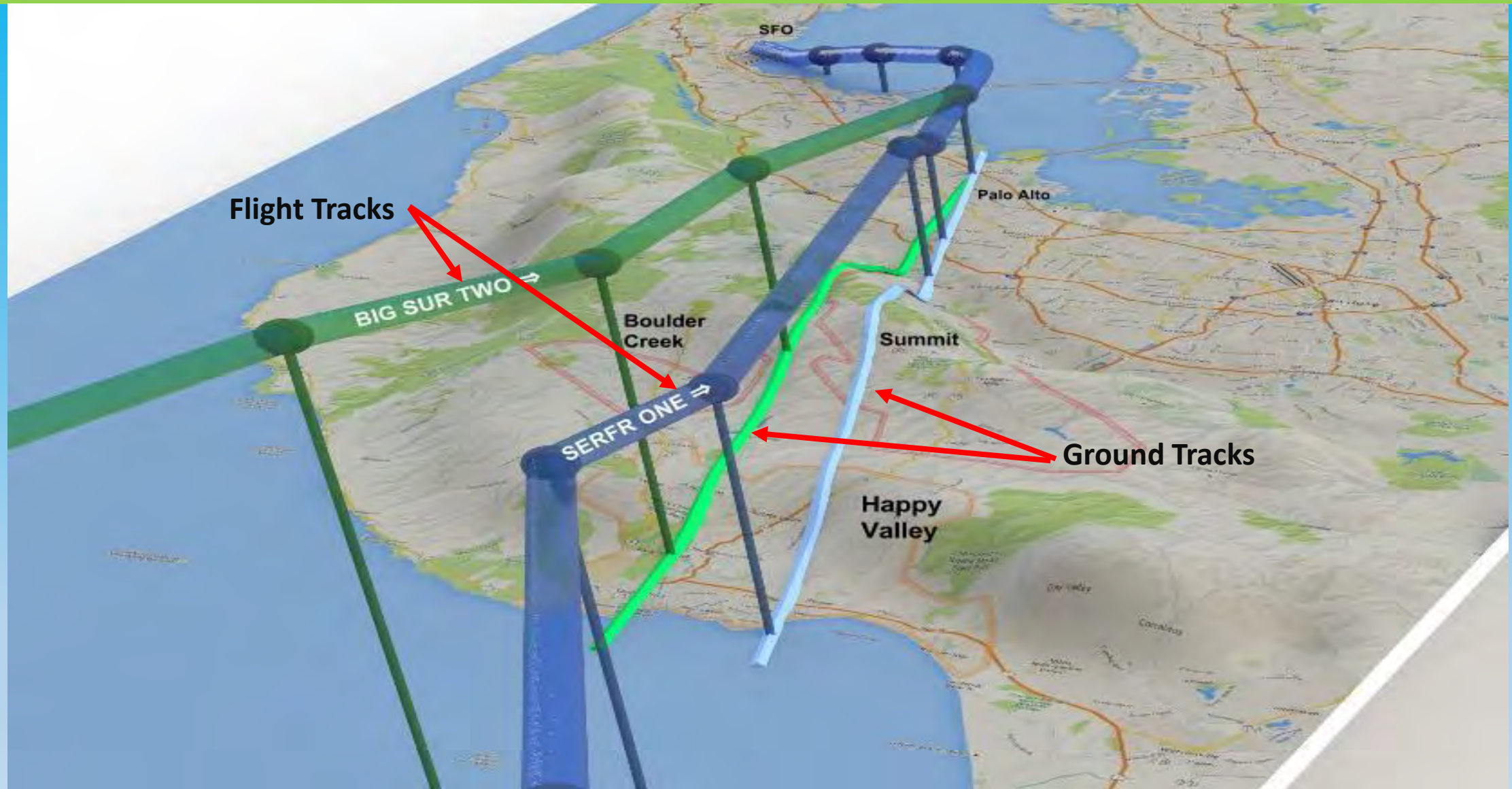


OPD with Class B Interference

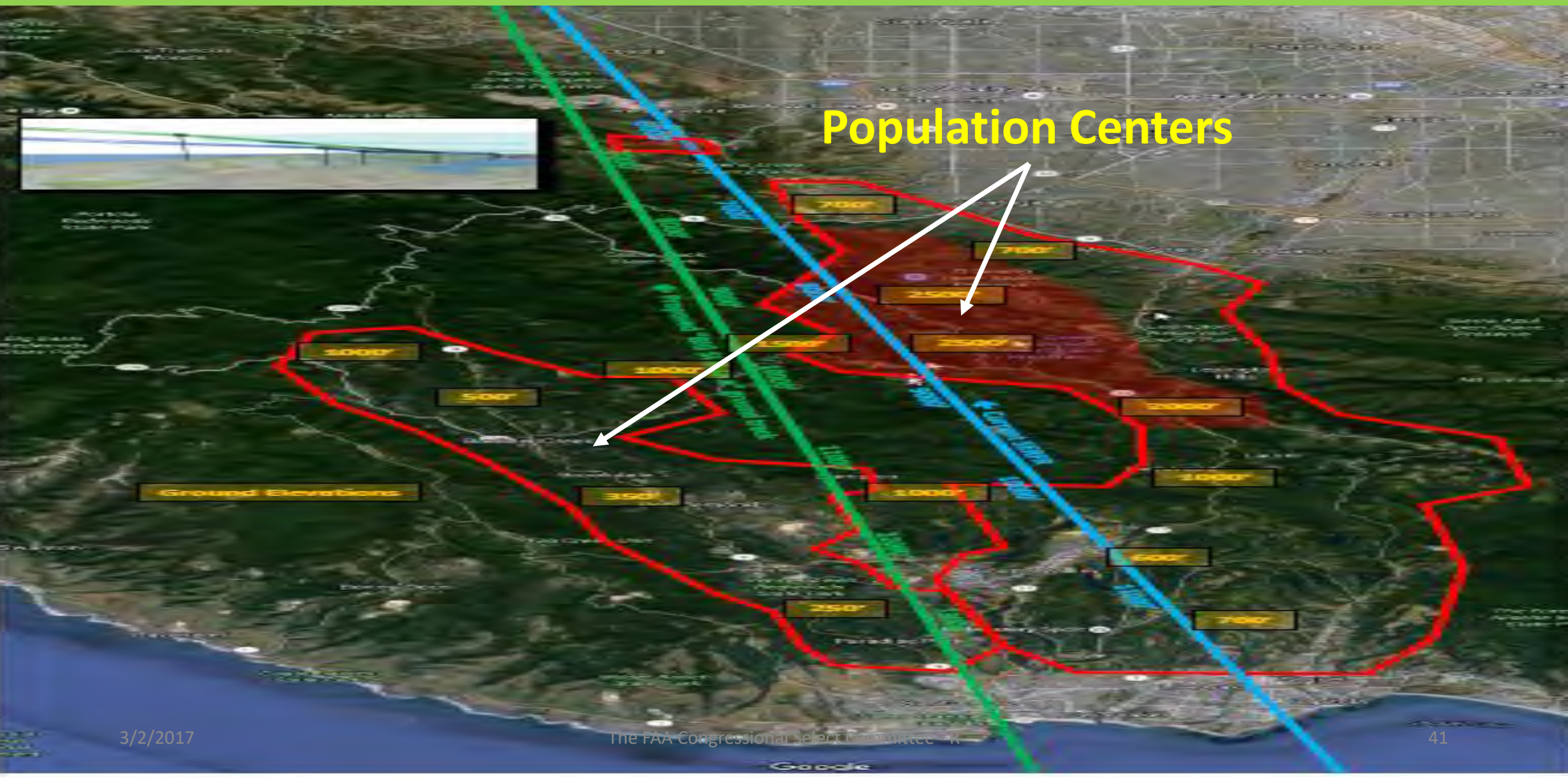
Airplanes Use a Dive and Drive Process



Comparison of BIGSUR and SERFR1 Routes



Ground Tracks for BIGSUR & SERFR1



Optimum Profile Descents – Desired vs Actual

- Minimum Ground Noise Impact
- Glide to Landing (Quietest Flight Configuration)
- Computer Flight Management Systems, Narrow Flight Paths
- Lower Approach to Descent Altitudes
- Flight and Fuel Efficient

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- **BUT ... It Was Too Much & Too Soon**

Optimum Profile Descents – Desired vs Actual

- Minimum Ground Noise Impact
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- Computer Flight Management Systems, Narrow Flight Paths
- Lower Approach to Descent Altitudes
- Flight and Fuel Efficient
- BUT ... It Was Too Much & Too Soon
- Class B Airspace was Not Ready for OPD
- The effects of conforming with Class B & G Rules created a conundrum for Pilots and Controllers! (Dive and Drive)
- Air Brakes, High Engine Power, High Turbulence ==> Noise !!!

Other SERFR1 Surprises ...

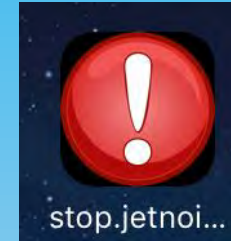
- Prior to **NextGen**, Airplanes stayed within a 4-mile wide window on their way to Point MENLO
 - Gave a Natural Dispersion of Flight Paths so that Fewer Planes Actually Flew over the Exact Same Points
- The **NextGen** System uses GPS Navigation Performance
 - The Horizontal Flight Path Variance is now only ~100 feet!
 - And, airplanes are in-train separated by 3 miles!

NextGen Results ...

- Flights are a Repetitive, 100' Wide GPS path to SFO
 - It's like a freight train going overhead every 90 seconds

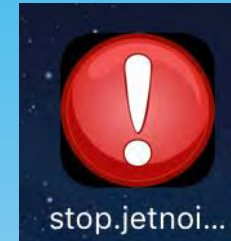
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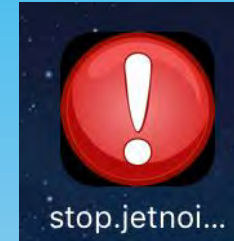
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- **They Could Have Avoided the Issue by:**



NextGen Results ...

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- **They Could Have Avoided the Issue by:**
 - Slowing Aircraft over Monterey Bay Prior to Entering the Procedure
 - Amending Class B Airspace to Accommodate the Procedure before Implementing it

The LAST SERFR1 Surprise?

- The Final Surprise was Accidentally Discovered by talented citizens who were studying the new **NextGen** Approach behaviors

The LAST SW Approach Surprise?

- The Final Surprise was Accidentally Discovered by talented citizens who were studying the new **NextGen** Approach behaviors
- It turned out that the new SERFR1 route conflicted with the San Jose Airport's BRIXX arrival procedure

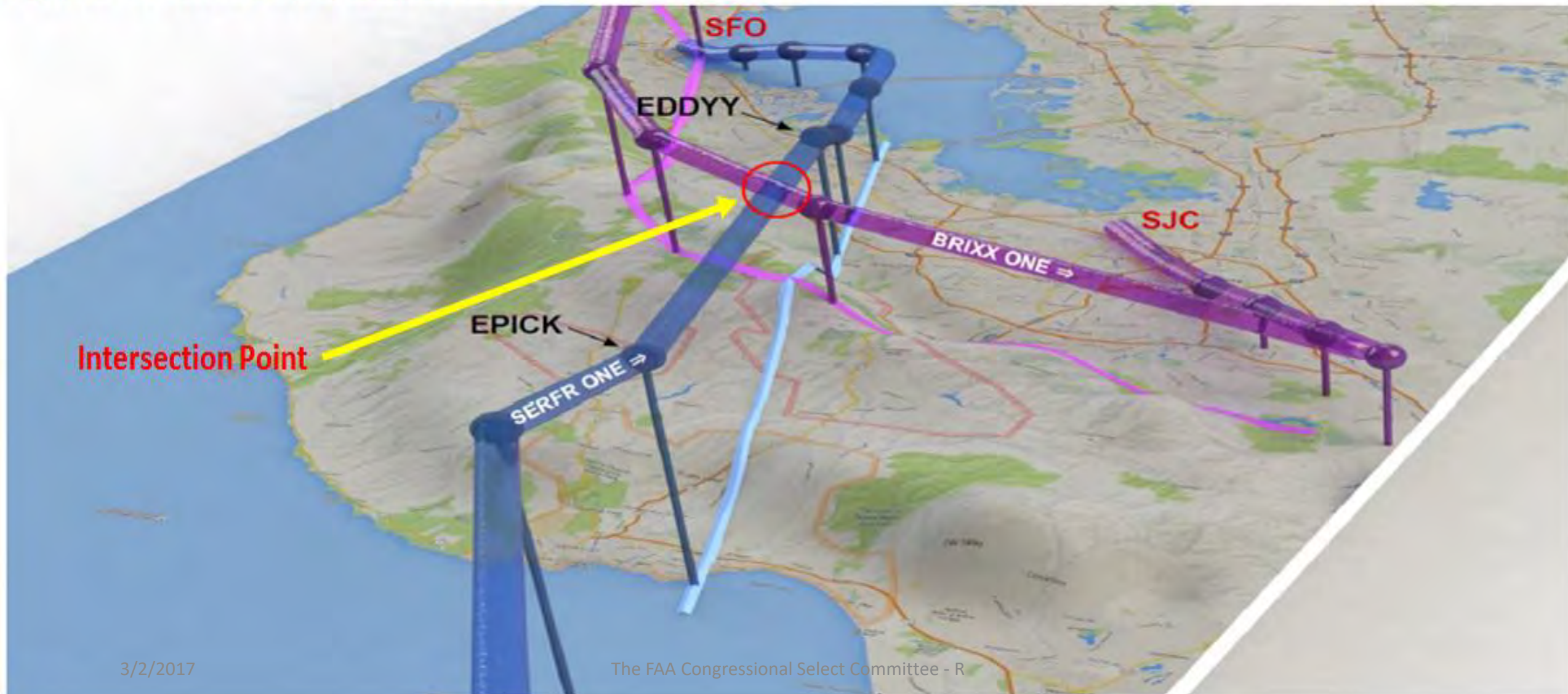
The LAST SW Approach Surprise?

- The Final Surprise was Accidentally Discovered by talented citizens who were studying the new **NextGen** Approach behaviors
- It turned out that the new SERFR1 route conflicted with the San Jose Airport's BRIXX arrival procedure
- The Flight Paths of **the Two Approaches Intersected!**

(But the old BIGSUR approach was not affected)

The LAST SW Approach Surprise?

Figure 4: The SERFR-BRIXX conflict



Feasibility Groups 4 & 5 Recommendations

- **Adjust the SFO Class B Airspace – by increasing each circle to accommodate the OPD descents**
- **Transition the SERFR1 Route back to the BIGSUR ground track**

- The biggest issue was that the citizens under the SERFR1 Route wanted it moved back to the old BIGSUR path ...
- But the citizens under the original path didn't want it back either!
- A close vote; it was approved by an 8-4 margin

Feasibility Group 6 - Improve Aircraft Setup and Sequencing Between Facilities (Vectored Flights)

- Vectored Flights are Caused by the Difficulty in Aligning all Air Traffic at Precise Distances Between Airplanes
- If too many Planes arrive at the same time, some are Vectored Out of the Standard Arrival Corridors for Delay until they can be Reinserted Back into the Landing Flow
- Its really a Capacity Issue
 - But was Not Recognized as such until after the Committee's work was done

Flights are Vectored to Achieve Correct Aircraft Spacing on the Path to a Landing



**Planned
Flight
Path**

Flights are Vectored to Achieve Correct Aircraft Spacing on the Path to a Landing



**Planned
Flight
Path**

**Vectored
Flight
Begins**

Flights are Vectored to Achieve Correct Aircraft Spacing on the Path to a Landing

What percentage of flights are Vectored?



Planned Flight Path

Vectored Flight Begins

BIGSUR and SERFR1 Traffic

**Vectored
Flight
Paths**

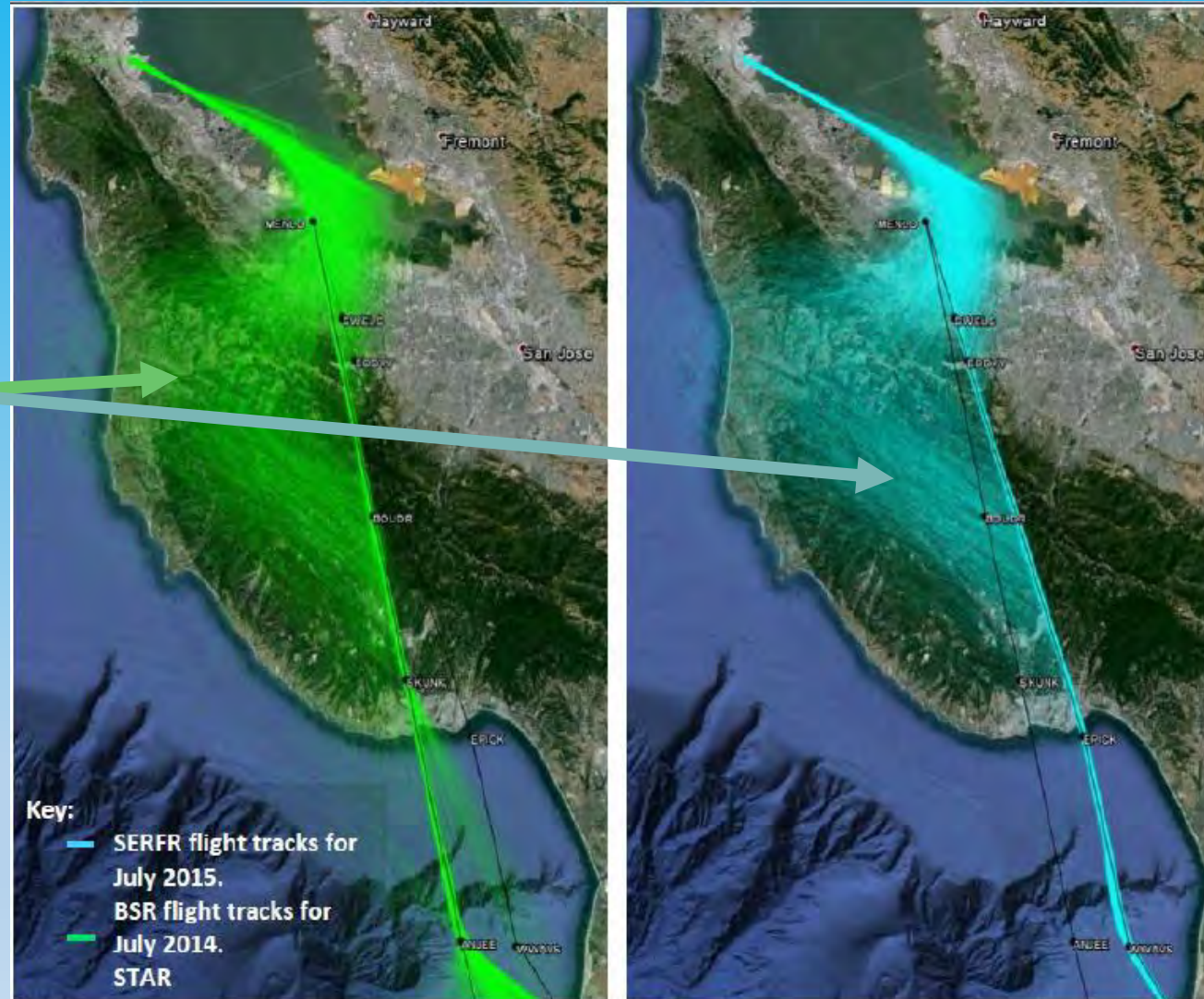
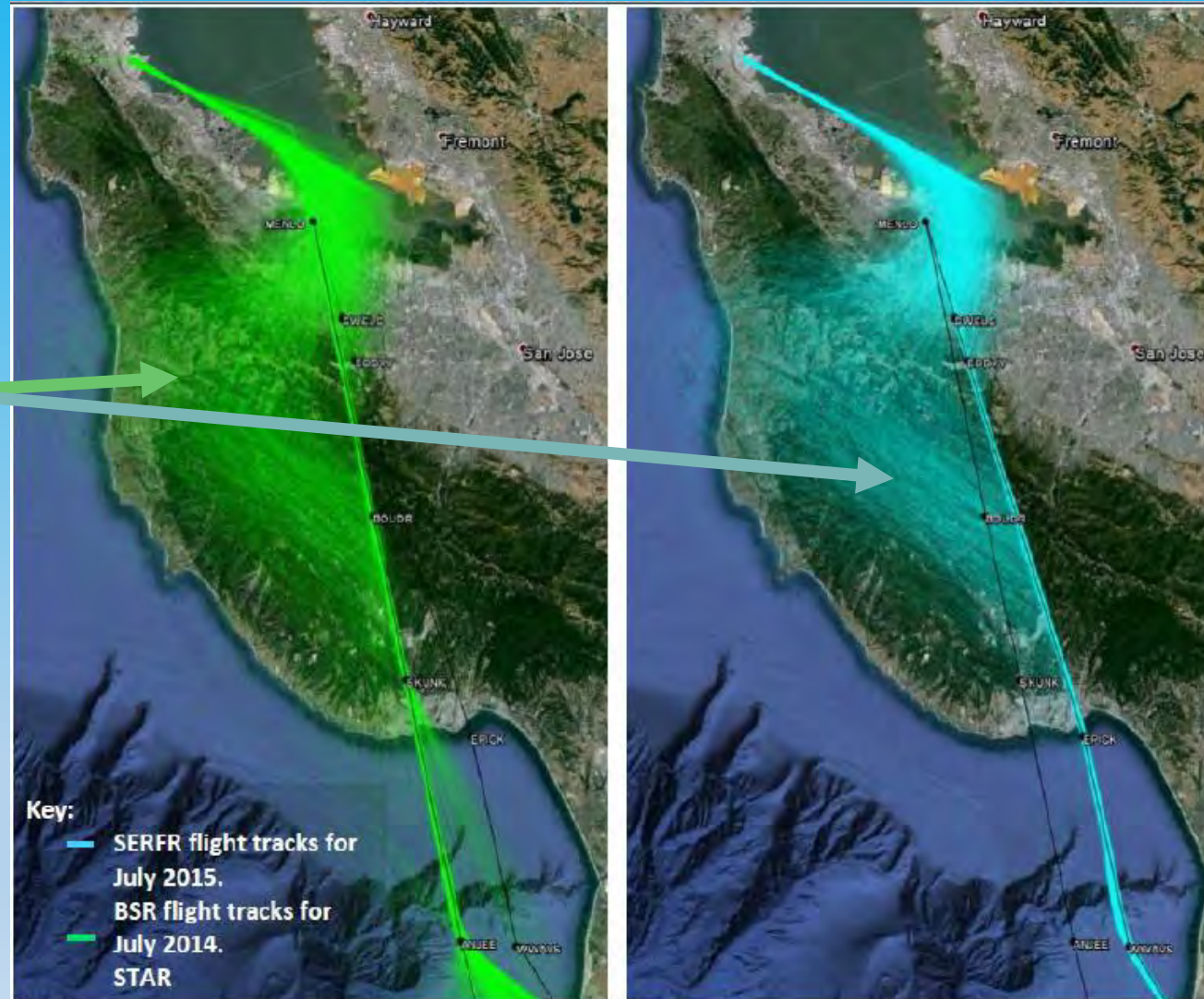


Figure E.1: Comparison of how the BSR and the SERFR were flown

BIGSUR and SERFR1 Traffic

**Vectored
Flight
Paths**



**On Average,
51%
of Flights are
Vectored –
for Either
Route!**

Feasibility Group 6 – Improve Aircraft Setup and Sequencing Between Facilities

Recommendation:

- The Committee Adopted the Improvement Recco
- Committee also Advised Vectoring Flights over the Ocean
- Increased Flight Path Usage (Capacity) causes routine vectoring
 - Flights over Off-Route Areas and Increased Noise
 - Enroute Aircraft Delays and Unnecessary Costs

Then What Happened?

- **The Committee Finished its Work on November 17th 2016, Wrote their Report and Disbanded**
- **The Report Recommended that a Follow-On Oversight Organization be Created and Funded**
- **Their Report was Accepted by the Congressional Representatives ... and**
- **They Endorsed all of the Committee's Findings and Forwarded them to the FAA Administrator for Action**

Closing Notes:

- Return to the BIGSUR route is expected in mid 2017
- Class B Amendment planned by early summer of 2018
- A Noise Tracking System has been installed at SFO
- FAA was amazed that the SELECT Cmte was so successful
- FAA Advisors indicated that our efforts radically changed how the FAA addresses issues throughout the country
 - They have become far more proactive in their public outreach efforts
- The SFBA was the Nation-Wide leader in dealing with the issues
 - Many Highly Technical Citizens jumped in and offered new ideas
 - They figured out an easy way to complain about noise (The Noise App)
 - They offered many new ideas of routing airplanes into/out of the SFBA
 - They kept the FAA jumping and thinking

Questions?

Summary Recommendations

Summary Recommendations - 1

1. **Airbus 320 Series – Install Turbulence Generators below the Wings**
2. **Pre-NextGen Procedures – Why can't we go back? – FAA said that they have been prevented from using older technology**
3. **MENLO Waypoint –**
 - a) **Minimum Overflight Altitude to be 5,000 MSL**
 - b) **Create New Waypoint North & East of MENLO**
 - c) **Design a new Arrival**
 - d) **Raise Glideslope on Runway 28L**
4. **SFO Raise Descent Glideslopes – For Both Runways 28L & 28R**
5. **SFO Northern Arrivals – 50-50 Split – Bay & Peninsula**
6. **SFO Profile Descents – Increase all altitudes in and around SFO**

Summary Recommendations - 2

- 7. SFO Runway Usage –**
 - **Use Most Distant Runway from Populated Areas**
- 8. SFO Overnight Arrivals**
 - a) Reduce Flights Between Midnight & 6AM**
 - b) Use Runway 28R**
 - c) Develop and Use New Night Approach Procedures**
- 9. Woodside VOR Altitude –**
 - **Limit Altitude over VOR to 8,000 MSL or above**
- 10. Examine SFO Dispersed Ingress Techniques for Western Arrivals**
 - **Examine and/or implement multiple arrival points on West Coast to Reduce Repetitive Noise as planes cross the Peninsula**

Summary Recommendations - 3

- 11. Airplane Speed – Slow SW Planes over Monterey Bay**
- 12. SERFR1 Altitude – Raise the Altitude Floor at Entry to the Procedure**
- 13. Eastern Arrivals - Redirect Eastern Arrivals to Eastern SFO Approach (Instead of using SERFR1 (BIGSUR))**
- 14. San Jose Reverse Flow Arrivals – Use Eastern Arrival to SJC in periods of Reverse Flow at SJC**
- 15. Modify BRIXX Approach – Consider a New BRIXX arrival while keeping altitude as high as possible**
- 16. NRRLI Waypoint – Relocate Waypoint to Minimize Carmel Noise**

Summary Recommendations - 4

14. Who Should Make Recommendations to Whom?

The FAA asked the public for change recommendations

- Shouldn't it be the other way around?

15. Establish a New Committee –

- a) Create an Ad-Hoc Cmte and THEN, Establish a Permanent Cmte to continue the SELECT Cmte's work with a focus on:
 - i. **Noise Measurements – Adopt New Metrics to Measure Noise that will evaluate the True Effects of Plane Noise on the Ground and on People**
 - ii. **Aircraft Speed – Direct the Successor Committee to Examine the Effects of Aircraft Speed and its Noise Effects on the Ground**
 - iii. **Capacity Limits – Examine route Capacity Limits to prevent/reduce vectoring and repetitive noise on the ground**

Detail Recommendation Slides Follow

Additional Cmte FAA Recommendations

Airbus 320 Series

- The Airbus 320 series of airplanes have a unique characteristic
 - They Whistle ... Loudly!
 - It is caused by two vents in each wing that equalize fuel tank pressures as the plane descends
 - A simple, low cost (\$3-5k/plane) repair solves the problem but some airlines are reluctant to spend the money
- **Recco** – Have the FAA issue directives to install this simple adjustment to all such airplanes

Additional Cmte FAA Recommendations

Northern Arrivals to SFO

- Northern Arrivals into SFO used to fly Southward and upon entering SFO airspace, would either fly down the bay and make a right U-Turn back to SFO to land ... or they would fly down the Peninsula and make a left U-Turn to join the MENLO approach to landing
- Over time, the ratio of these flights changed from 50-50 to 75-25 with the predominant choice being to fly over the Peninsula.

➤ **Recco** – Balance the flight paths between the Bay and the Peninsula

Additional Cmte FAA Recommendations

- Woodside VOR Altitude

- In 1998, Anna Eshoo and the FAA negotiated an agreement for all incoming Oceanic flights using the Woodside VOR waypoint to be a minimum of 8,000 MSL over the VOR.
- With the introduction of NextGen, the Woodside VOR overflight levels have measured at 6,000 MSL or less
- **Recco** – Have the FAA comply with an earlier agreement with a minimum altitude of 8,000 MSL over the Woodside VOR

Additional Cmte FAA Recommendations - Overnight Flights

- Residents are complaining about Overnight Flights arriving between Midnight & 6AM
- **Recco** #1 – Reduce the number of incoming flights between 12 and 6AM
- **Recco** #2 – Use Runway 28R(ight) as the preferred runway for such flights. The use of 28R would keep such flights higher and quieter until the final descent paths
- **Recco** #3 – Encourage additional night time noise abatement procedures

Additional Cmte FAA Recommendations - Menlo Waypoint

- The MENLO waypoint altitude is now set at 4,000 MSL
- **Recco** #1 – Establish a minimum overflight altitude of 5,000 MSL over MENLO
- **Recco** #2 – prepare a new arrival procedure with a minimum of 6,000 MSL altitude at the EDDYY waypoint and to cross MENLO at idle power at 5,000 MSL
- **Recco** #3 – Have all traffic near MENLO be held at >5,000 feet
- **Recco** #4 – Raise the glide slope angle on Runway 28 to further increase approach altitudes
- **Recco** #5 – Directs the FAA to assess the feasibility of creating a different waypoint into SFO that would be North and East of the current MENLO point

Additional Cmte FAA Recommendations

- Raise Floor of SERFR1's Altitude

- **Recco #1** – Reduce the vertical size of the altitude window on the SERFR approach so that entry altitudes occur at a higher altitude.
- **Recco #2** – Aircraft are routinely slowed once they enter the SERFR (or BIGSUR) STAR approaches.

Instead it is recommended that the airplanes reduce speed over Monterey Bay before entering the STAR approach routes

- Would significantly reduce aircraft slowing noise

Additional Cmte FAA Recommendations

- Increase Altitude and Profile Descents into SFO

- **Recco #1** – The Committee recommended raising the glide slopes of both Runways 28L & 28R to cause initial approach altitudes into SFO to be higher and quieter
- **Recco #2** – The Committee recommended that all altitudes be increased in and around the SFO ... both entering and departing the area

Additional Cmte FAA Recommendations

- Aircraft Vectoring & Runway Usage

- **Recco** – Have the FAA identify locations over the Pacific Ocean to accommodate vectoring needs
- **Suggestion** – that whenever possible, that the runways farthest away from populated areas be employed for all possible flight operations

Additional Cmte FAA Recommendations

- Modify the BRIXX Approach and NRRLI Waypoint

- **Recco** #1 – The FAA shall consider a new BRIXX procedure that maintains the highest possible altitude at the point where it intersects the new arrival route from the South
- **Recco** #2 – Relocate the NRRLI waypoint to a point where minimum noise effects would be felt in the Carmel areas on the ground (if it does not move noise to other populated areas)

Additional Cmte FAA Recommendations:

San Jose Reverse Flow Arrivals and Redirect Southern Arrivals to an Eastern Approach into SFO

- **Recco** – Have the FAA/SJC employ an Eastern Arrival to SJC under conditions of Reverse Air Flow when SJC would not normally be using those corridors.
Note that shifting noise would not be endorsed if it occurred
- **Suggestion** – Examine the reduction of SERFR (BIGSUR) arrivals by shifting them to an Eastern Approach to SFO as was previously used.

Additional Cmte FAA Suggestions: Fan-In Overseas Arrivals and Herringbone Fan-in Approach Paths to SFO

- **Comment:** The practice of using a single waypoint (Woodside VOR) as an aiming point unnecessarily concentrates Oceanic flights in one place
- **Suggestion** – the committee asked that the FAA explore dispersive ideas for implementation
 - Aiming points be fanned out along the coast line to further reduce the impact to a single point on the ground, the use of a Herringbone approach system would reduce the flight over a single path

Additional Cmte FAA Recommendations: Return to Pre-NextGen Procedures

- **Comment:** A continuous thread of public input received by the committee was ... “why don’t we just go back to what worked previously?”
- The FAA responded by saying that the most recent federal legislation has required them to adopt only the most advanced technology to modernize the air transport system.
- For this reason, the committee HAS NOT endorsed this recommendation

Longer Term Issues – Continuing Oversight

- Need a longer term venue to address airplane noise issues:
 - **Recco #1** – Empanel an Ad-Hoc committee by the same Congressional members who created the Select Committee to continue the Work of the Committee
 - **Recco #2** – Create a permanent entity to continue to address the issues of aircraft noise in the three county area
- **Suggestion** – Have the FAA review the Special Use Area with an eye to better balancing the special military use restrictions with the expanding civilian aviation population's needs

Longer Term Considerations – Noise Measurements, Capacity Limits and Aircraft Speed

- **Recco #1** – Require the FAA to adopt supplemental metrics for aircraft noise that characterize the true impact experienced by citizens on the ground
- **Suggestion** – The Committee believes that the aircraft route capacity issues should be considered by any successor committee as previously recommended
- **Suggestion** – Have a successor committee examine the issue of aircraft speed and its effect on the noise generated.

Process Issues – Who should make recommendations to Whom?

- Comment: The FAA had asked the committee for change proposals. That process seems to be a backward approach – The FAA is the Expert, not the Committee.
- **Recco** – If a similar committee is used in the future, to the greatest degree possible, **the FAA should be charged with the responsibility for identifying and proposing solutions to mitigate noise concerns, and that community groups and elected officials be consulted for review and comment, and to offer additional suggestions.**

Process Issues – Need for Before/After Noise Monitoring and to Ensure Compliance

- **Recco #1** – Have the FAA/SFO monitor and document noise exposure of any feasible solutions before and after FAA implementation to ensure effects are verified, and to determine whether results are of a discernible benefit
- **Recco #2** – Implement a set of regional noise monitoring stations that will adequately monitor aircraft noise levels at carefully selected points in the San Francisco Bay Area and within the three Congressional Districts represented on the Select Committee
 - Collected data shall be made available to citizens upon request.
- **Recco #3** – Implement careful documentation and ongoing compliance monitoring for any set of solutions accepted and implemented by the FAA