

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

Work Group Meeting

October 13 2016



**Federal Aviation
Administration**



Discussion Overview

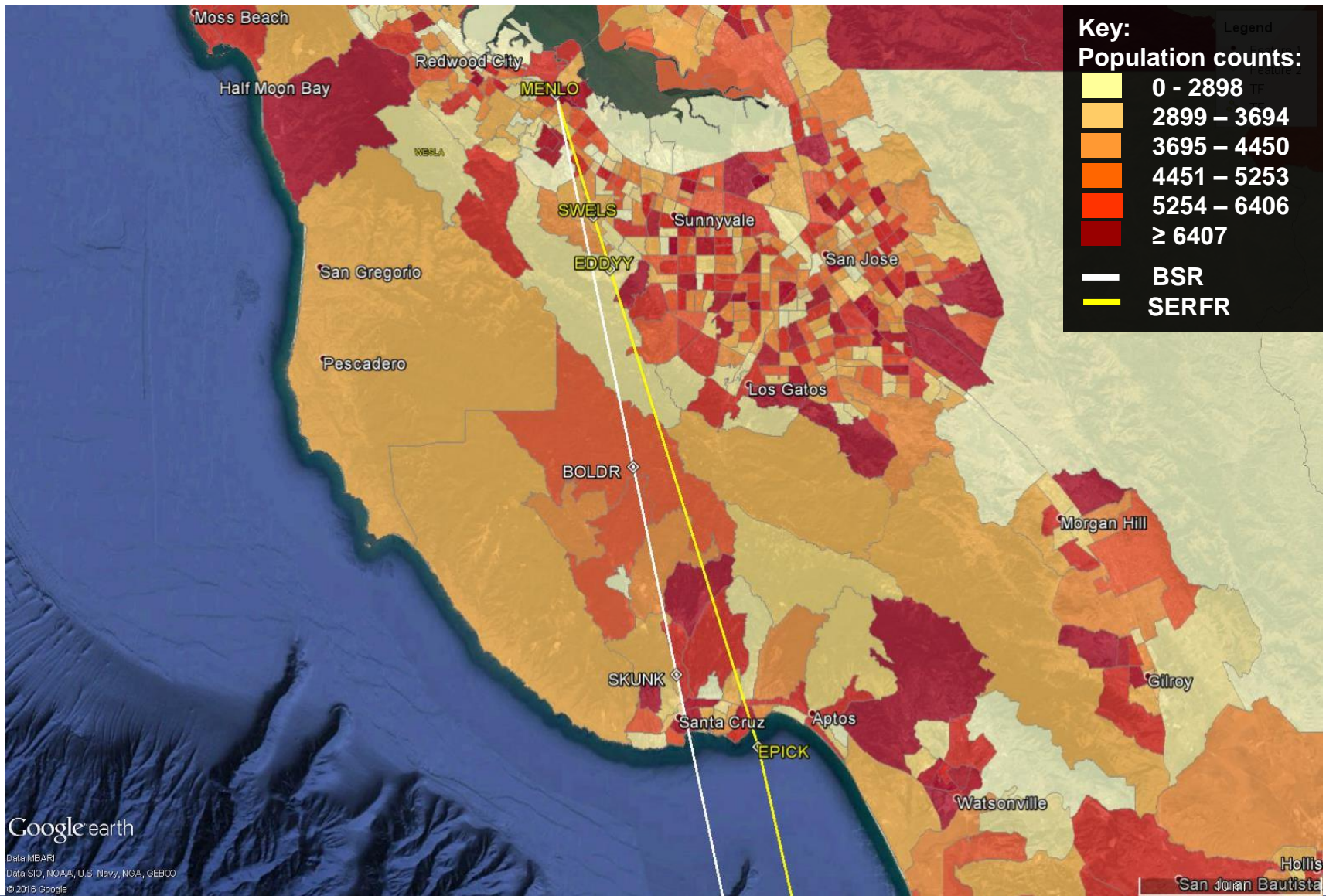
- 1. Follow-up to August 4: “Other solutions”**
- 2. Committee Member Requests**
 - a) Can aircraft be vectored at a higher altitude over the Mid-Peninsula
 - b) Was there a route 3NM west of BSR?
 - c) Hourly SFO arrivals
 - d) Use GUTTS for RNP Rwy 28R after MENLO
- 3. MENLO waypoint**
- 4. Redirect Southern Arrivals to an Eastern Approach into SFO**
- 5. Transition the SERFR STAR back to the BSR Ground Track prior to EPICK**



Follow-up to August 4: “Other solutions”



Population Counts Near to the BSR and SERFR



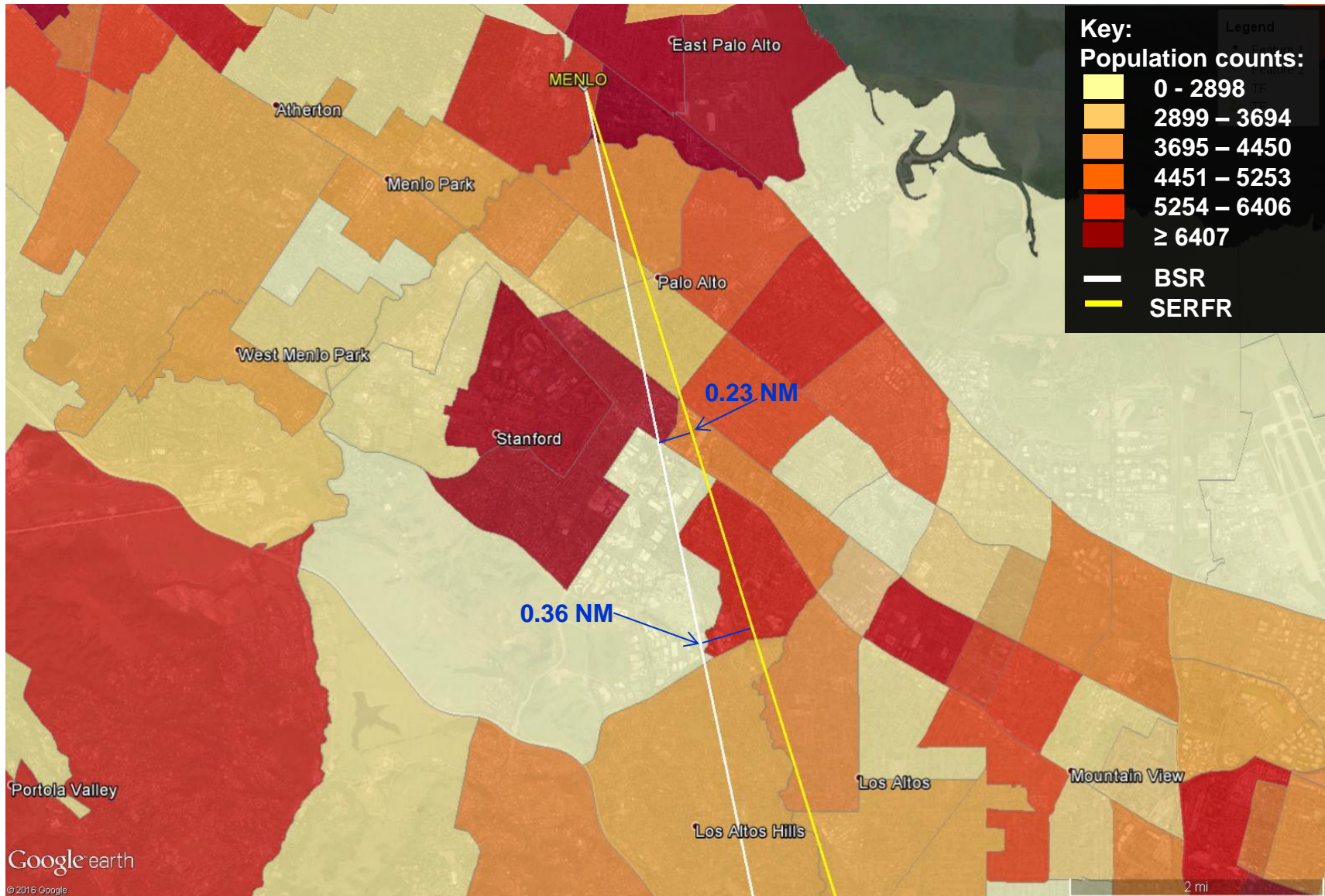
Google earth

Data MBARI
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
© 2018 Google



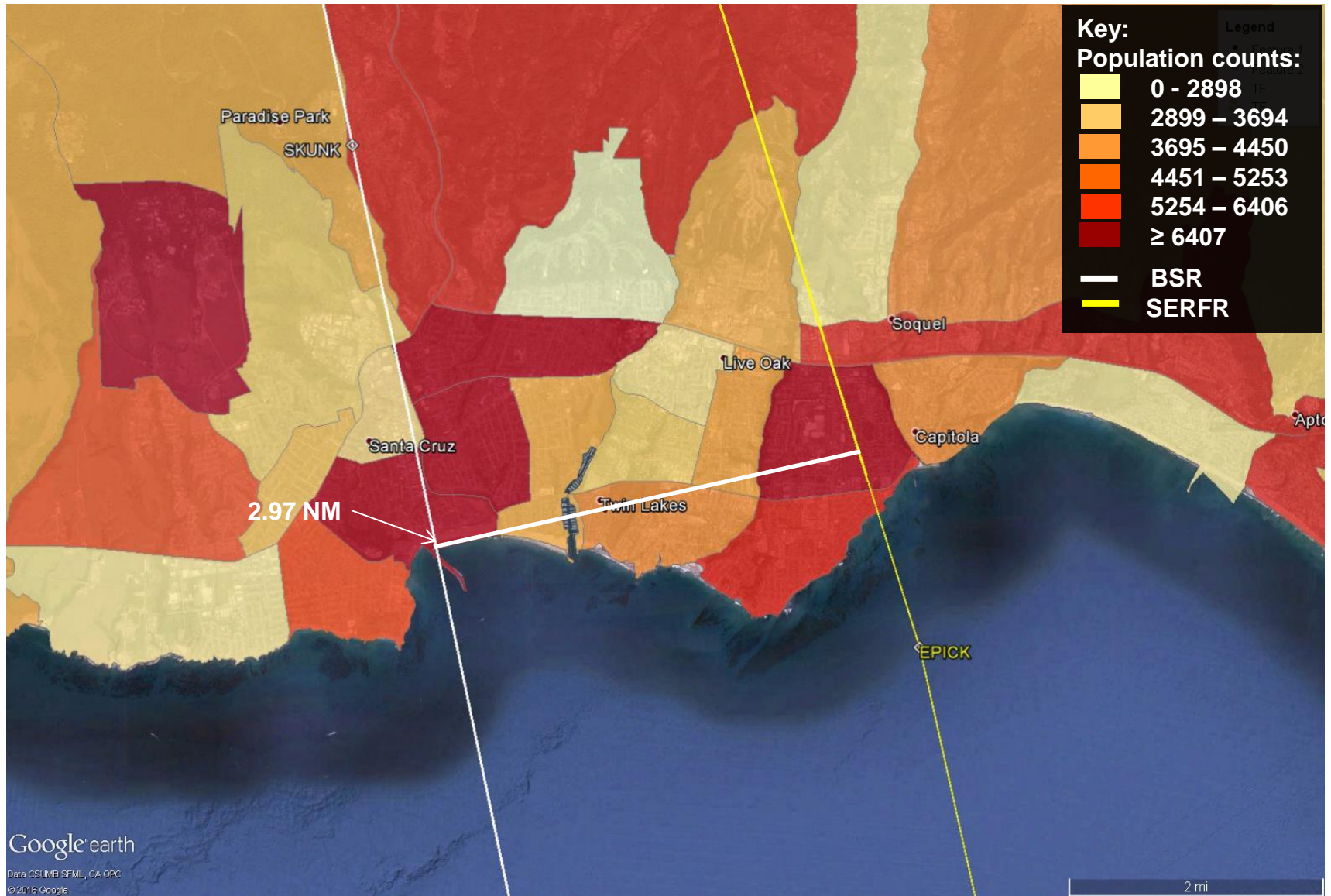
Federal Aviation
Administration

Population Counts Near to the BSR and SERFR



Federal Aviation
Administration

Population Counts Near to the BSR and SERFR



Federal Aviation
Administration

Committee Member Requests



Can aircraft be vectored at a higher altitude over the Mid-Peninsular?



Can aircraft be vectored at a higher altitude over the Mid-Peninsula?

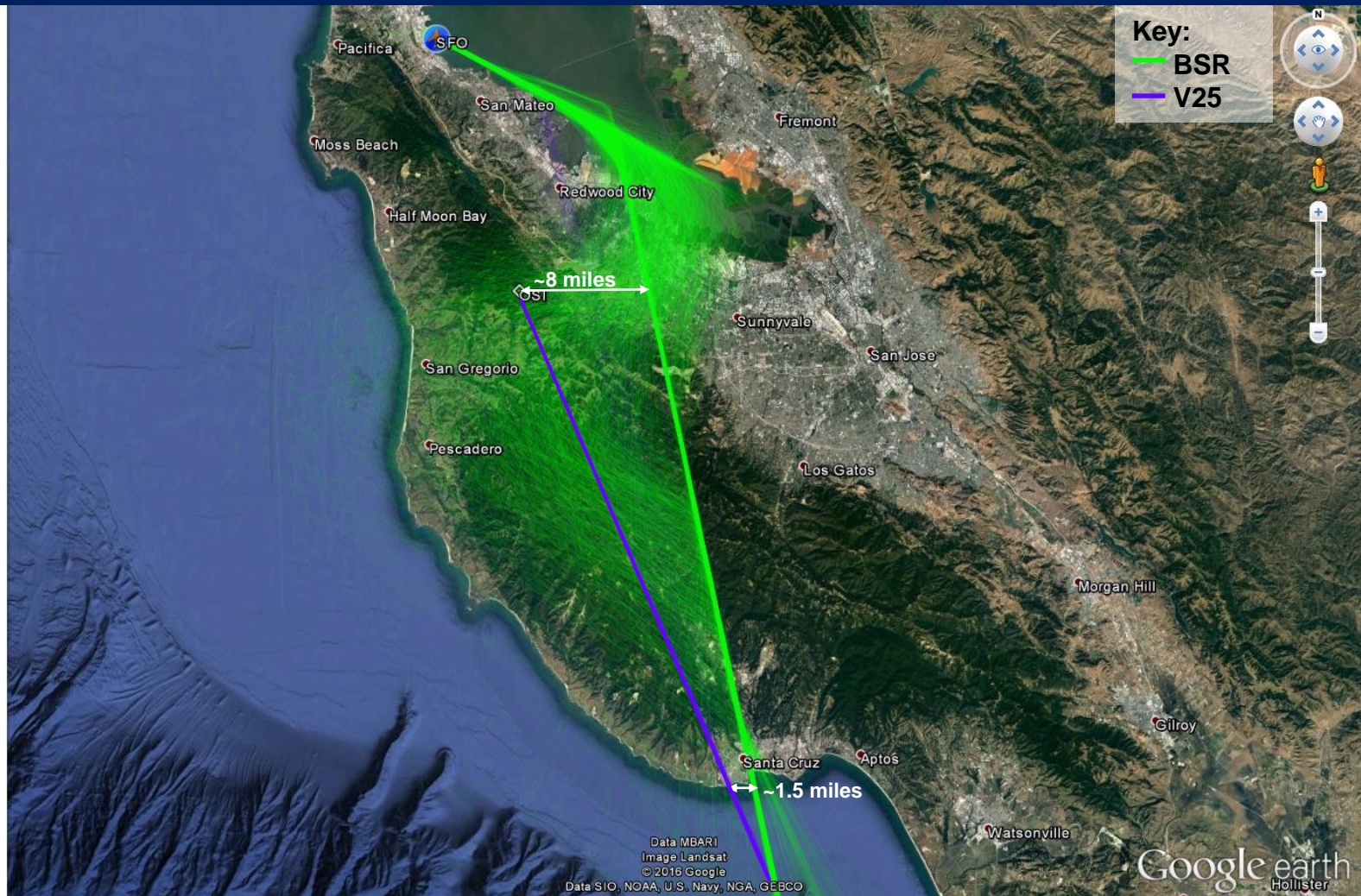
- In San Francisco Bay Area, vectoring is often used to safely sequence aircraft which can not be accommodated by the procedures alone.
- The provided vectoring speed, direction, altitude is completely at ATC's discretion in order to best respond to the immediate situation.



**Was there a route 3NM west of
BSR?**



Was there a route 3NM west of BSR?



Was there a route 3NM west of BSR?

- **6% of southern arriving flights in June 2014 were on V25 from BSR to OSI.**
- **These were all SkyWest flights, with the E120 prop aircraft.**
- **The rest of SkyWest fleet, which were jets, used BSR.**
- **The prop usage of V25 has stopped since virtually all scheduled airlines no longer operate props.**



If the vectored SERFR were put on the BSR, would the aircraft be higher?



If the vectored SERFR were put on the BSR, would the aircraft be higher?

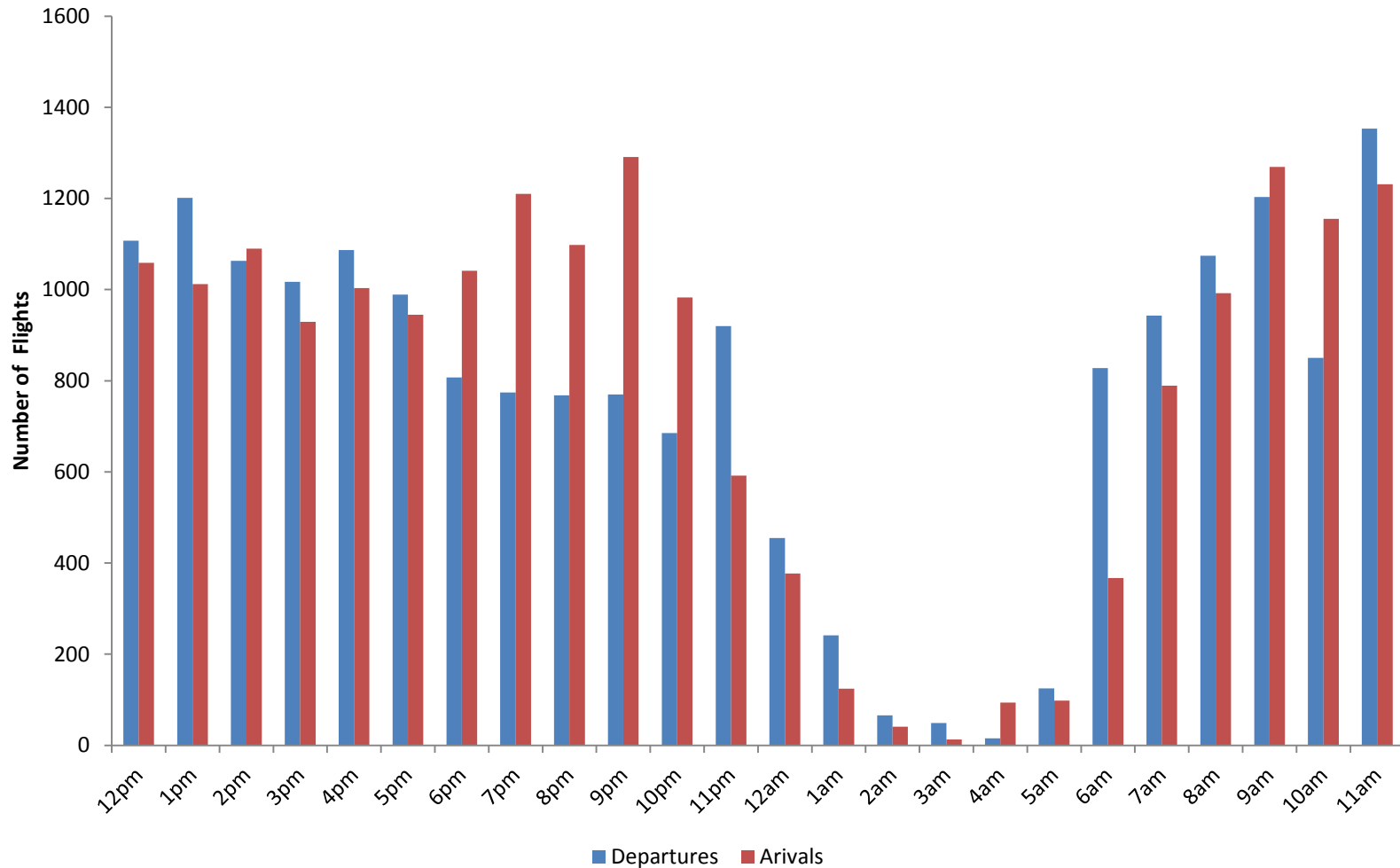
- **Aircraft are vectored off the SERFR into to sequence into SFO.**
- **These aircraft are already typically at higher altitudes than those which remain on the SERFR**
- **Putting the vectored SERFR onto BSR would not resolve the sequencing issue**



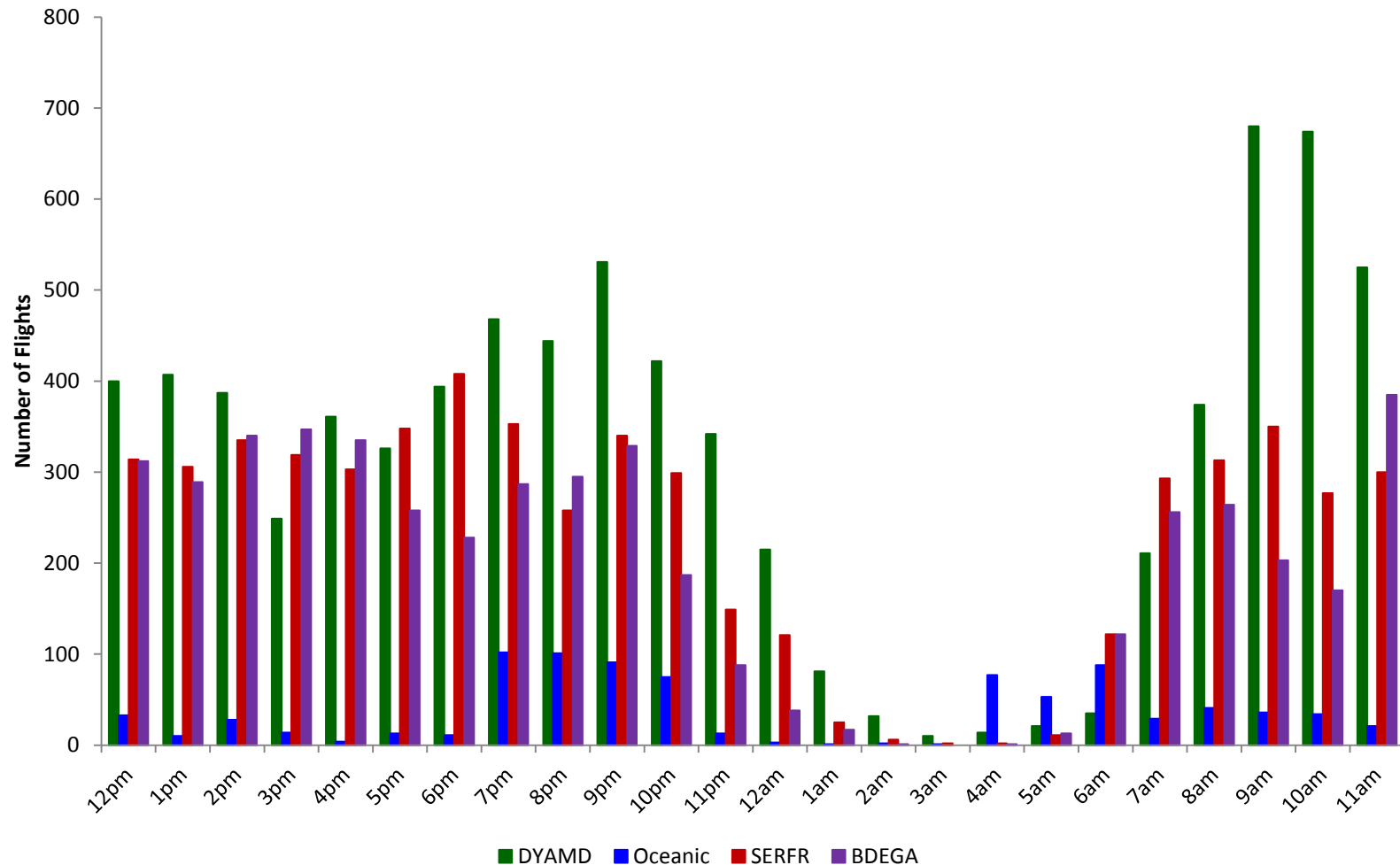
Hourly SFO arrivals



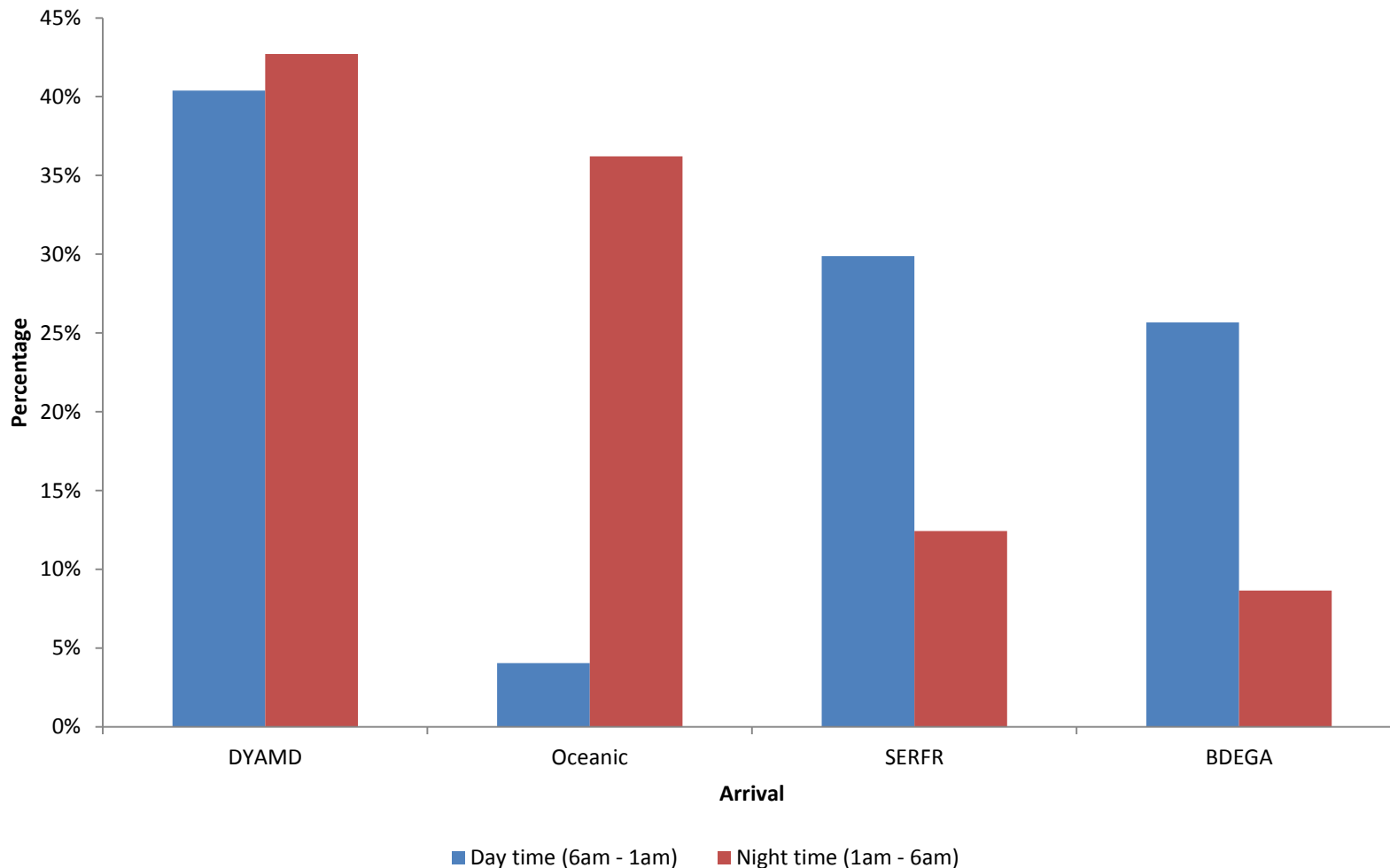
Hourly distribution of SFO Flights in June 2016



Hourly distribution of SFO Arrivals in June 2016



Night and daytime distribution of SFO Arrivals in June 2016



Hourly distribution of SFO Flights in June 2016

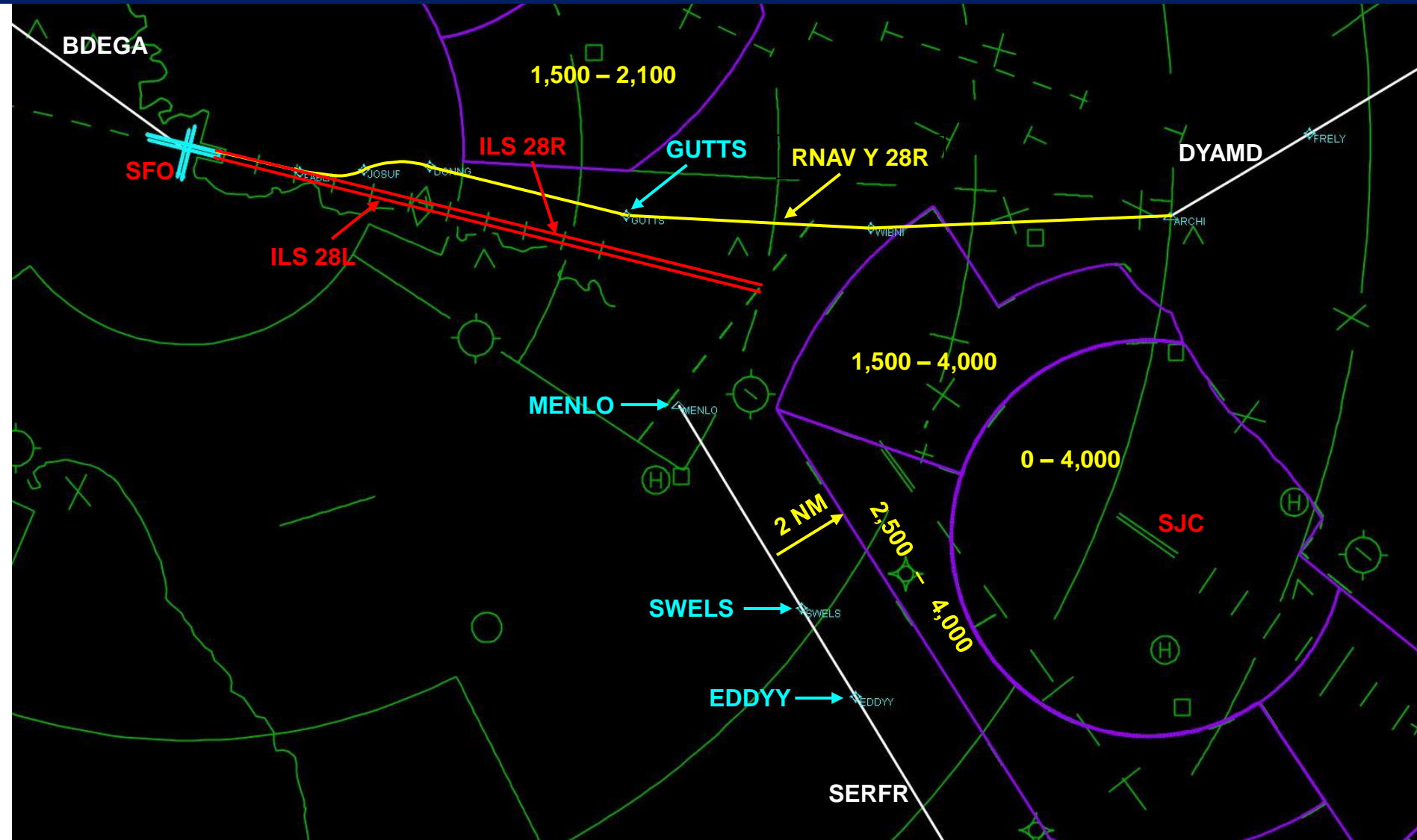
- **There is a departure push at 11pm, once the arrivals start to slow down.**
- **SFO operations fall to about 50% of peak values around 12pm**
- **SFO operations fall beneath 50% from 1am until 6am.**
- **Between 1 am – 6am is when night time procedures are normally operationally feasible.**
- **Oceanic arrivals account for 4% of all daytime arrivals, and 36% of nighttime arrivals.**



**Use GUTTS instead of MENLO for
RNP Rwy 28R**



MENLO to GUTTS Proposal



Federal Aviation
Administration

MENLO to GUTTS Proposal

Select Committee proposal to add GUTTS beyond MENLO on the SERFR (or Notional DAVYJ) STAR.

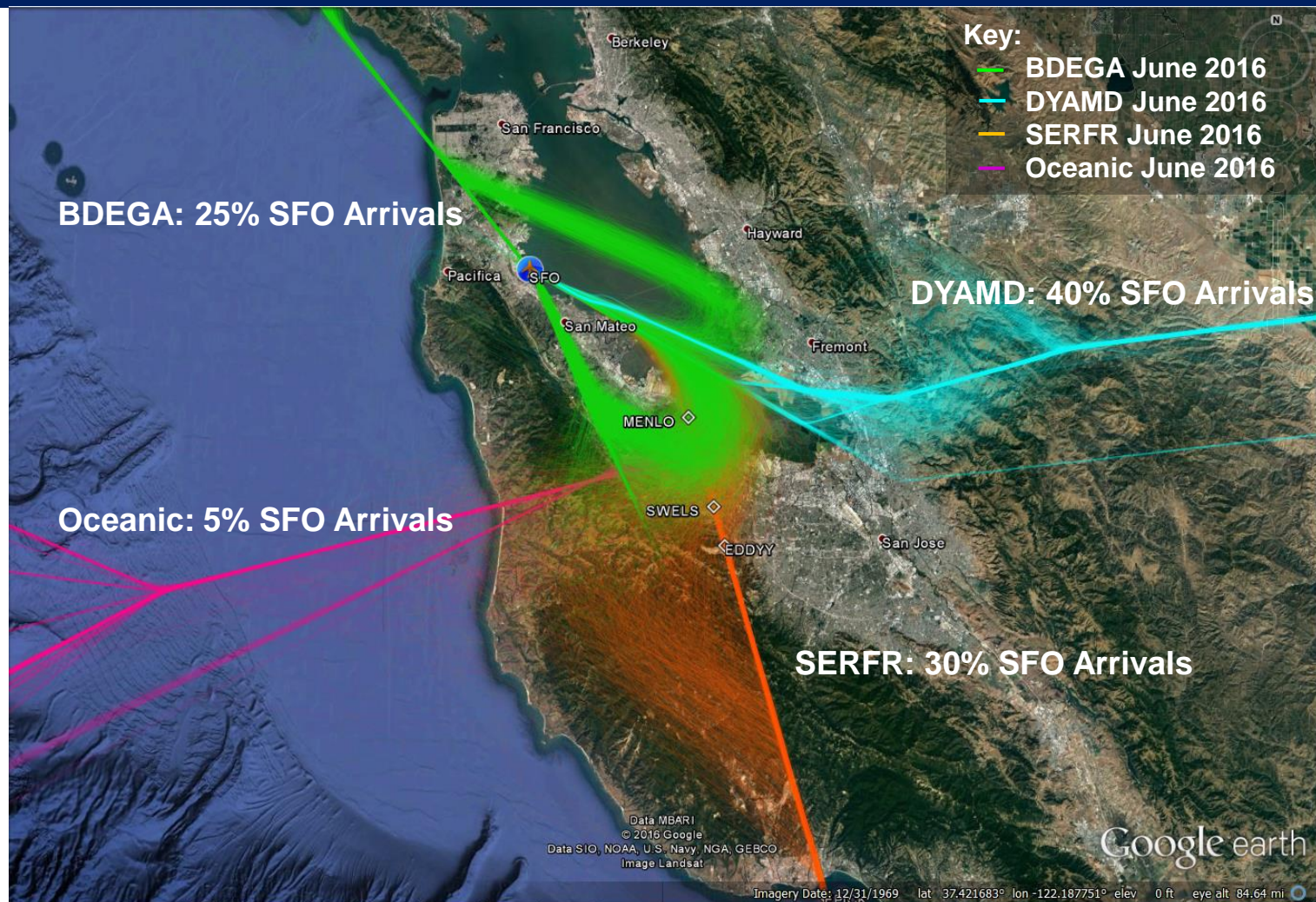
- This procedure already exists in the RNAV Y 28R Approach.
- This is the only approach which utilizes GUTTS.
- This procedure could only be used when there is no conflicting traffic on RWY 28R.



MENLO Waypoint



MENLO waypoint



MENLO waypoint

- **60% of SFO arrivals pass in the vicinity of MENLO**
- **Only non-vectored SERFR flights use MENLO. This equates to 15% of all SFO arrivals**
- **Adjusting MENLO will not affect the remaining 45% of SFO arrivals in the vicinity of MENLO**



Redirect Southern Flights to Arrive into SFO from the East



Redirect Southern Flights to arrive from East

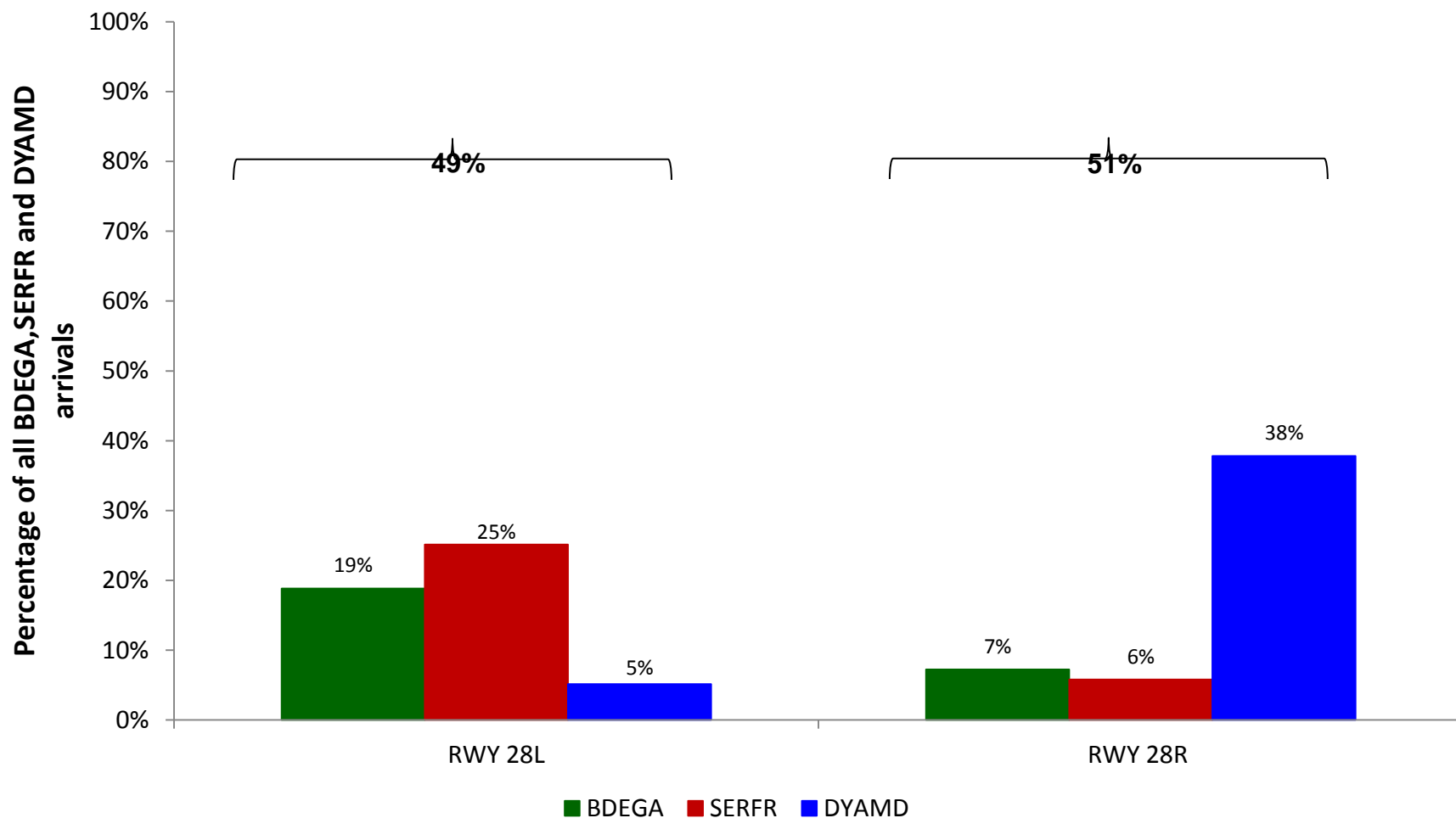


Redirect Southern Flights to arrive from East

- **An increase in DYAMD usage would decrease the usage of the BDEGA east leg.**



Distribution of Procedural Usage of RWY 28R/L



Transition the SERFR STAR back to the BSR Ground Track prior to EPICK

