

# Regional Airport Planning Committee Meeting Notice

9:30 A.M. – Noon  
Friday, October 23, 2009  
MetroCenter Auditorium  
101 8<sup>th</sup> Street  
Oakland, CA 94607

## COMMITTEE MEMBERS

### Chair:

Rich Garbarino, ABAG

### Vice Chair:

Dean Chu, MTC

### Members:

David Chiu, City and Co. San Francisco

Alice Fredericks, Marin County

Alice Lai-Bitker, BCDC

Jake Mackenzie, MTC

Cary Greene, SJC

Elisha Novak, FAA

James Spring, MTC

Carole Groom, BAAQMD

John Gioia, Contra Costa County

John Martin, SFO

Kristi McKenney, OAK

Leander Hauri, General Aviation

Sam Salmon, ABAG

Sean Randolph, BCDC

Terry Barrie, Caltrans

Tom Bates, BCDC

Mark Luce, ABAG

Roger Dickinson, Sacramento County

Carl Miller, Monterey County

Leroy Ornellas, San Joaquin County

### Alternates:

G. Hardy Acree, Sacramento County

Susan Palmeri, San Joaquin County

Tom Greer, Monterey County

John Bergener, SFO

### Staff liaisons:

Lindy Lowe, BCDC

Joe LaClair, BCDC

Doug Kimsey, MTC

Marisa Cravens, ABAG

## Tentative Agenda

1. Call to Order
2. Approval of Minutes of September 25, 2009 Meeting
3. Public Comment Period (*Each speaker is limited to three minutes*)

A maximum of 15 minutes is available for the public to address the Committee on any matter on which the Committee either has not held a public hearing or is not scheduled for a public hearing later in the meeting. Speakers will be heard in the order of sign-up, and each speaker is generally limited to a maximum of three minutes. It is strongly recommended that public comments be submitted in writing so they can be distributed to all Committee members for review. The Committee may provide more time to each speaker and can extend the public comment period beyond the normal 15-minute maximum if the Committee believes that it is necessary to allow a reasonable opportunity to hear from all members of the public who want to testify. No Committee action can be taken on any matter raised during the public comment period other than to schedule the matter for a future agenda or refer the matter to the staff for investigation unless the matter is scheduled for action by the Committee later in the meeting.

## 4. Regional Airport System Planning Analysis

### a. Proposed Alternative Airport and Reliever Airport Scenarios

RAPC staff will present a report describing initial recommendations for defining two of the six main Scenarios being evaluated to serve long-range aviation demand. Alternative Airports could handle some of the future projected air passenger and air cargo growth, and the region's general aviation airports could help address capacity issues by serving additional business jet activity projected to use the main commercial airports. The Staff recommendations are based on a set of Screening Criteria developed with RASPA Task Force input, as well as recent air passenger demand forecasts for the specific airports prepared by SH&E, the consultants for the study. (RAPC Staff and SH&E)

**b. Revised Target Analysis Approach**

At the September RAPC meeting, staff proposed the use of performance measures and targets expressing desired planning outcomes to evaluate the six main Scenarios for serving long-range demand. Both RAPC and RASPA Task Force members indicated that additional targets were needed to effectively measure the impacts of the six Scenarios. Staff has revised the targets and added goals to provide a context for each target. Staff will discuss the revised target analysis approach and seek further input and guidance. (Chris Brittle)

**5. Announcements and New Business**

Next RAPC Meeting will be held on November 20, 2009

**6. Old Business****7. Adjournment**

All items on the agenda are subject to action by the Committee. Actions suggested by staff are subject to change by the Committee.

**Speaker Sign-Up and Time Limits.** The public is encouraged to comment on agenda items at Committee meetings by completing a request-to-speak card (available from staff) and passing it to the Committee secretary or chair. Public comment may be limited by any of the procedures set forth in Section 3.09 of MTC's Procedures Manual (Resolution No. 1058, Revised) if, in the chair's judgment, it is necessary to maintain the orderly flow of business.

**Access to Meetings.** Meeting facilities are accessible to persons with disabilities. If you require special assistance, please contact any staff member prior to the meeting. An interpreter for the deaf will also be made available upon request to the staff at least five days prior to the meeting.

**Bagley-Keene Open Meeting Act.** The Committee is governed by the Bagley-Keene Open Meeting Act which requires the Committee to: (1) publish an agenda at least ten days in advance of any meeting; (2) describe specifically in that agenda the items to be transacted or discussed; and (3) refuse to add an item subsequent to the published agenda. In addition to these general requirements, the Bagley-Keene Act includes other specific provisions about how meetings are to be announced and conducted.

**Record of Meeting.** RAPC meetings are tape-recorded. Copies of recordings are available at nominal charge, or recordings may be listened to at MTC offices by appointment. Audio casts are maintained on MTC's Web site for public review for at least one month.



## **Regional Airport Planning Committee**

To: Regional Airport Planning Committee  
Fr: RAPC Staff  
Re: Proposed Alternative and Reliever Airport Scenarios

October 23, 2009

### **Background**

Two of the six Scenarios RAPC will be analyzing involve providing airline service at alternate airports and using reliever airports to serve more business jet users\*\*. Alternate airports could play a potential role in supplementing regional capacity by providing air service to some of the major air travel markets, providing air cargo service, or serving corporate general aviation (business jets) that would otherwise use the airport runways at the major air carrier airports. Alternate airports essentially represent “upland” alternatives to adding runway capacity at the existing air carrier airports through new/reconstructed runways requiring Bay fill, and are of interest from BCDC’s regulatory perspective. The study will evaluate potential use of alternate airports both inside the region as well as airports outside the region, such as Sacramento, Stockton, and Monterey that could add flights and serve passengers currently using Bay Area airports. This memo presents staff’s preliminary recommendations for defining the alternative airport scenarios.

In the regional airport survey that was conducted in February 2009, 33% of resident voters said they would support adding commercial airline service at the smaller regional airports (compared to High Speed Rail at 56% and Expanding Runways at San Francisco and Oakland Airports at 41% ); 20% opposed the strategy (the highest opposition of the four strategies tested). The greatest level of support for using the smaller airports was by residents in the North Bay. When voters opposed this strategy, the main reasons given were more people and congestion, noise, and air pollution.

\*\*The four other scenarios are demand management, new air traffic control technology, High Speed Rail, and redistribution of traffic among SFO, SJC and OAK.

### **Approach to Identifying Potential Alternative Airports**

A five step approach has been used to develop define these Scenarios:

1. Identify potential roles each airport might play in the future (RAPC staff)  
-see Attachment A and Figure
2. Identify evaluation measures for screening (RAPC staff/Task Force)  
-see Attachment B
3. Analyze potential air passenger demand (Consultant task)
4. Apply Screening Criteria

-see Attachment C/D

## 5. Review results with Task Force and RAPC

Clearly, the number of air passengers who might use an alternate airport in the future will be a key determining factor. Alternate airports might serve some of the most popular air travel markets with turboprops or regional jets, similar to the services offered at Sonoma and Monterey County airports today. Reliever airports (generally the most active general aviation airports with longer runways) could be developed to attract more business jet operations away from the air carrier airports. Depending on the need, alternate airports might also serve some air cargo demand that would otherwise be handled at OAK, SFO, and SJC.

In addition, staff will continue to formulate an approach that combines the technical analysis with a strategy for discussing alternative airports with local communities. Both the Task Force and RAPC have expressed concern about how RAPC frames the discussion of alternative airports with the communities in which the airports are located.

### **Proposed Alternate Airport Scenarios for Air Passenger Service**

The evaluation criteria and Consultant's air passenger market analysis provide the framework for defining the alternate airport scenarios, as discussed below.

*Internal Alternate Airports.* This scenario would include limited airline service at Sonoma County, Travis, and Buchanan (Concord) airports.

- A few airports (Gross, South County, Half Moon Bay) could be eliminated using the evaluation criteria and low air passenger demand estimates.
- Sonoma County currently has air service (Los Angeles, Las Vegas, Seattle, and Portland) and will be evaluated for expanded service in 2035.
- While Napa County Airport and Travis AFB have similar sized passenger markets, Travis AFB would be preferred because of the facilities, better ground access, and the fact that commercial airline operations would probably not result in significant increases above today's level of military operations (assuming Joint Use). Should Travis AFB not be available in the future, the potential for air service at Napa could be re-examined.
- Buchanan Airport shows air passenger potential and is a logical choice given its location close to demand, prior history of air service, and the fact that the recent Master Plan has discussed the possibility of air service.
- Byron Airport is currently fairly remote, but could be considered if Buchanan is not used. Byron could serve the growing eastern part of Contra Costa County and could attract Livermore air passengers (via a short trip up Vasco Rd). There is support in the Contra Costa County for expanded use of Byron Airport, and the County has plans to improve the transportation infrastructure that would serve the airport.
- Livermore Airport demonstrated reasonable future passenger demand, but is probably too close to OAK for airlines to consider serving. Livermore's General Plan and the community do not support airline service.
- South County has physical limits for runway and facility expansion; in addition, SJC has excess runway capacity in our forecasts, and therefore the diversion of passengers would not be necessary from a capacity standpoint.

- Moffett Federal Airfield would not be needed for airline service, again because of SJC having adequate capacity, and because airline service is problematic given its close proximity to SJC and SFO.

*External Airports (Sacramento, Stockton, Monterey).* Our air passenger surveys show a significant number of out-of-region passengers using Bay Area airports. This is likely due to the airline services offered which do not exist at their local airports. The Consultant's analysis will determine how many of these passengers might switch to their local airport, based on the types of new services that airlines might consider providing at these airports in the future. The Consultants are still working on this analysis, and results may be available for the RAPC meeting.

### **Possible Alternate Airport Air Cargo Scenarios-None**

At the beginning of this study, it was not assumed that air cargo would constitute a major planning focus for several reasons. First, air cargo aircraft operations are not a major factor in terms of runway capacity due to the comparatively small number of flights and the fact that cargo aircraft operate outside the peak schedule times for passenger aircraft flights. And secondly, use of remote airports is not consistent with the business models of today's major air cargo companies need to have close proximity to their customers for ground delivery. International air cargo generally moves in the belly of passenger aircraft, and SFO has and will continue to have most of the international flights. An alternate air cargo airport would not have these international flights. In addition,

- The updated air cargo forecasts are lower than previous regional forecasts, and the projected number of air cargo operations at the individual airports is not large compared to the total number of operations.
- Byron and Travis AFB are possible alternate cargo airports, but the need for these facilities is beyond RAPC's current planning horizon.
- Moffett Federal Airfield has been studied for air cargo in the past, and there has been some discussion of using Moffett to reduce air cargo operations at OAK (due to community noise issues) or to provide for growth at SJC (which is constrained by land for new facilities). However, neither role seems likely at the moment from a demand or industry perspective.
- As mentioned above, while a detailed analysis of alternate air cargo airports has not been performed, this topic was discussed with the Forecast Working Group of technical experts, and they concur with this assessment.

### **Proposed Reliever Airport Scenario**

Business jets use the three air carrier airports to various extents. In 2007, there were approximately 28,000 business jet operations at SFO, 29,000 at SJC, and 19,000 at OAK (using both the North and South Fields).

Small aircraft (business jets and small piston general aviation aircraft) that fly into and out of the air carrier airports require additional distance separation by Air Traffic Control for safety reasons, resulting in a disproportionate impact on runway capacity compared to the number of passengers carried. At SFO and SJC business jets routinely use the same runways as the airlines.

In the case of OAK, business jets typically land on the North Field runways, and then takeoff on the South Field for noise abatement. The main considerations in defining this scenario are:

- General Aviation Reliever Airports\* could attract business jet operations by improving their facilities and services, providing improved navigational aids for landing in poor weather, lengthening runways, etc. Some demand management approaches at the Primary airports could also encourage use of these airports.
- At the September RAPC meeting, several Committee members commented that it may not be feasible or practical to eliminate all business jet operations at the air carrier airports. For example, SFO's business jet operations are a small proportion (about 7%) of total flights and these aircraft are used by some of San Francisco's major businesses.
- With this in mind, RAPC staff is proposing that the reliever airport scenario be defined as allowing for current levels of business jet operations at all air carrier airports and having the Reliever Airports in the region absorb the projected growth in business jet operations between 2007 and 2035.
- The runway capacity analysis for SJC does not indicate a need to reduce the levels of business jet operations, so the focus would be on SFO and OAK. The projected growth in business operations for these two airports would be an additional 32 flights a day in 2035 at SFO and an additional 40 flights a day at OAK.
- The projected growth in GA business jet operations would then be distributed among the region's "reliever" airports depending on convenience and available facilities.
- The FAA has commented that, prior to this study, their national aviation forecasts included a large increase in a new type of aircraft called Very Light Jets. While the country's financial problems have delayed the introduction of this type of aircraft, it may be necessary to monitor this topic in the future as a large increase in business/air taxi operations using this new economical type of aircraft could have significant implications for both reliever and air carrier airports.

\* FAA identified "Reliever" airports include Hayward, Livermore, Buchanan Field, Byron, Napa County, Sonoma County, Gness Field, San Carlos, Half Moon Bay, Palo Alto, Reid-Hillview, and South County.

#### **Another Role for Moffett Federal Airfield to Explore?**

- As noted above, Moffett Federal Airfield may not be needed as an air carrier, air cargo or GA reliever airport as the forecasts and runway capacity analyses indicate that SJC has more than adequate long-term runway capacity for both air carrier and GA business jet operations.
- At the last RAPC meeting, SJC's RAPC representative asked whether we will be looking at relocating smaller general aviation piston aircraft from the air carrier airports as this could have both capacity and safety benefits. This leads to another question about whether Moffett ought to be considered for smaller general aviation aircraft, since rising sea levels will threaten low-lying Palo Alto and San Carlos Airports, and it may be necessary to relocate these aircraft to another airport. Moffett could be a logical location since federal agencies will probably need to invest in better dikes to protect runways used by NASA, Lockheed, and for emergency earthquake response. Also, the long term availability of Reid-Hillview is not guaranteed, given past discussions about closing this airport. If this were to occur it would be necessary to find alternate locations for these

displaced aircraft (some would go to South County, but others may desire a closer location).

- Staff seeks RAPC's advice as to whether this concept ought to be considered in future discussions about Moffett's role in the regional aviation system.

**Attachment A**  
**Potential Alternative Airport Roles**

AP=potential air passenger service

AC=potential air cargo service

R=potential expanded reliever role for general aviation business jets

**Alameda County**

- Livermore Municipal (AP, R)
- Hayward Airport (R)

**Contra Costa County**

- Buchanan Field, Concord (AP, R)
- Byron (AP, AC, R)

**Napa County**

- Napa County Airport (AP,R)

**Marin County**

- Gness Field (AP, R)

**San Mateo County**

- Half Moon Bay (AP,R)

**Santa Clara County**

- Moffett Federal Airfield, if available for joint use (AP, AC, R); also potential relief role after a major Bay Area earthquake
- South County (AP, R)

**Solano County**

- Travis AFB, if available for joint use (AP, AC); also potential relief role after a major Bay Area earthquake

**Sonoma County**

- Sonoma County Airport (AP, R)

**Out-of-Region Airports**

- Sacramento (expand existing air passenger services to new destinations)
- Stockton (expand existing air passenger services to new destinations; also AC)
- Monterey (expand existing air passenger service to new destinations)

## **Attachment B**

### **Alternate Airport Evaluation Measures**

#### History of Air Service

-Has airport had air service in the past?

#### Prior Studies

-Has the airport been evaluated in prior studies for air passenger, air cargo, or expanded reliever service or included in current regional plans?

#### Size of Local Air Passenger Markets

-Size of local air passenger market; potential to reduce operations at Primary commercial airports

#### Proximity to Air Cargo Markets

-How centrally located relative to air cargo markets served by all cargo airlines; indication of potential interest by air cargo airlines

#### General Aviation Reliever Airports

-Is the airport close to business activity, such that it would provide a reasonable alternative to using OAK, SFO, or SJC for corporate general aviation aircraft?

#### Runways

-Does the airport currently have adequate runway length/strength for potential role?

#### Land

-Does the airport have sufficient land for new facilities to serve a new/expanded role (e.g., airfield and terminal facilities, runway safety areas, etc.)

#### Airspace

-Would expanded use create any airspace conflicts, or require new procedures that would make existing operations more difficult to manage?

#### Ground Access Infrastructure

-Does the airport have adequate ground access infrastructure (roads/transit) to support expanded use?

#### Noise/Air Quality Impacts

-How many people live within close proximity to the airport and would be affected by expanded use?

#### Physical Environment

-Are there major environmental constraints if airport facilities were to be expanded and/or aviation use increased (wetlands, biological, water quality, air quality, etc.)?

#### Land Use Compatibility

- Are existing and planned land uses around the airport compatible with a change in airport role (i.e., for safety and noise)?

Safety of Operations

-Are there any existing safety concerns with a change in airport role/increased operations (airspace obstructions, landfill/bird activity, etc)?

Sea Level Rise

-To what extent would projected sea level rise from global warming affect airport runways?

Policy or Other Governmental Limitations

-Are there any limits on airline activity expressed through General Plans, Board or Council Resolutions, past lease agreements, other?

Induced Growth

-Would the airport accommodate additional growth that is not anticipated in current plans?

Sprawl

-Would the airport contribute to increased population and job growth on the perimeter of the region?

Community Acceptance

-Is there public support for an expanded role, as indicated by comments on recent master plans, as part of other public planning processes, or public votes?

Impact on Alternative Energy Sources

-Would expanded aircraft operations at an airport adversely impact any planned alternative energy projects, such as development of new wind farms?

**Attachment C**  
**Alternative Airport Characteristics**

<b>Airport</b>	<b>History of Air Service</b>	<b>Prior Study or Plan</b>	<b>Air Pass. Market</b>	<b>Air Cargo Market</b>	<b>Reliever Convenience</b>
Livermore AP	No	No	Medium		
Livermore R					Medium
Hayward R					High
Buchanan AP	Yes		High		
Buchanan R					High
Byron AP	No	No	<b>Low</b>		
Byron AC	No	Yes		<b>Low</b>	
Napa AP	<b>Yes</b>		Medium		
Napa R					<b>Medium</b>
Gross AP	No	No	Medium		
Gross R					Medium
HMB AP	<b>Yes</b>	No	Low		
HMB R					<b>Low</b>
Moffett AP	No	<b>Yes</b>	<b>Low</b>		
Moffett AC		<b>Yes</b>		<b>Low</b>	
Moffett R					<b>High</b>
South Co AP	No	No	<b>Low</b>		
South Co R					<b>Low</b>
Travis AP	Yes	Yes	Medium		
Travis AC		No		<b>Low</b>	
Sonoma AP	Yes	Yes	<b>High</b>		
Sonoma R					Low
Sacramento AP	Yes	Yes	? for new service		
Stockton AP	Yes	Yes	? for new service		
Stockton AC	Yes				
Monterey AP	Yes	Yes	? for new service		

<b>Airport</b>	<b>Runway Capability</b>	<b>Land for Facilities</b>	<b>Airspace Operations</b>	<b>Ground Access</b>	<b>Policy/ other Limits</b>
Livermore AP	Yes 5,253 ft	Yes	Good	Good	<b>Yes</b>
Livermore R					
Hayward R	Yes 5,694 ft		<b>Complex</b>	Good	
Buchanan AP	Yes 5,001 ft.	Yes	Good	Good	No
Buchanan R					
Byron AP	No 4,500 ft	Yes	Good	<b>Poor</b>	No
Byron AC	No	Yes	Good	<b>Poor</b>	
Napa AP	Yes 5,931 ft.	Yes	Good	<b>Poor</b>	<b>No</b>
Napa R	<b>Good</b>				
Gnoss AP	<b>No</b> 4,400 ft (Future Ext)	<b>No</b>	<b>Complex</b>	Good	
Gnoss R	<b>Good</b>				
HMB R	Yes 5,000 ft.			<b>Poor</b>	No
Moffett AP	Yes	Yes	<b>Complex</b>	Good	?
Moffett AC	Yes	Yes	<b>Complex</b>	Good	?
Moffett R	<b>Good</b>	Yes	<b>Complex</b>	Good	?
South Co AP	<b>Yes</b> 5,000 ft (Future Ext)	<b>No</b>	<b>Good</b>	Good	
South Co R	<b>Poor</b>		<b>Complex</b>		
Travis AP	Yes	Yes	Good	Good	?
Travis AC	Yes	Yes	Good	Good	?
Sonoma AP	<b>Yes</b> 6,000 ft (Future Ext)	Yes	Good	Good	<b>Yes</b>
Sonoma R	Good				
Sacramento AP	Yes	Yes	Good	Good	No
Stockton AP	Yes	Yes	Good	Good	No
Stockton AC	Yes	Yes	Good	Good	No
Monterey AP	Yes	Yes	Good	Good	No

<b>Airport</b>	<b>Noise/AQ Impacts</b>	<b>Physical Environ</b>	<b>Land Use Compatibility.</b>	<b>Safety of Operations</b>	<b>Sea Level Rise</b>
Livermore AP	<b>Low/High</b>	Good	<b>Good</b>	Good	
Livermore R	<b>Low/High</b>				
Hayward R					None
Buchanan AP	<b>Low/Medium</b>	Good	<b>Good</b>	<b>Medium</b>	
Buchanan R					
Byron AP	Low/Low	<b>Medium</b>	Good	Good	
Byron AC	Low/Low	<b>Medium</b>	Good	Good	
Napa AP	Low/Low	<b>Poor</b>	Good	Good	10 percent
Napa R					10 percent
Gnoss AP	Low	<b>Poor</b>	Good	Good	<b>Significant</b>
Gnoss R					<b>Significant</b>
HMB R	<b>Low/Medium</b>		Medium		None
Moffett AP	<b>Low/Medium</b>	?	Good	<b>Medium</b>	<b>30 percent</b>
Moffett AC	<b>Low/Medium</b>	?	Good	<b>Medium</b>	<b>30 percent</b>
Moffett R	<b>Low/Low</b>	?	Good		<b>30 percent</b>
South Co AP	Low/Low	Good	Good	Good	
South Co R					
Travis AP	Low/Low	Good	Good	Good	
Travis AC	Low/Low	Good	Good	Good	
Sonoma AP	Low/Medium	Good	Good	Good	
Sonoma R					
Sacramento AP	Good	Good	Good	Good	
Stockton AP	Medium	Good	Good	Good	
Stockton AC	Medium	Good	Good	Good	
Monterey AP	Medium	Good	Medium	Good	

<b>Airport</b>	<b>Induced Growth</b>	<b>Sprawl</b>	<b>Community Acceptance</b>	<b>Alternate Energy</b>	
Livermore AP	No	No	Low		
Livermore R	No	No	Low		
Hayward R	No	No	Low		
Buchanan AP	No	No	Medium		
Buchanan R	No	No	High		
Byron AP	Yes	Yes	High		
Byron AC	Maybe	Yes	High		
Napa AP	Yes	Yes	Low		
Napa R	No	No	High		
Gnoss AP	Maybe	Maybe	Low		
Gnoss R	No	No	Medium		
HMB R	No	No	Low		
Moffett AP	No	No	Low		
Moffett AC	No	No	Low		
Moffett R	No	No	Low		
South Co AP	Yes	Yes	Unknown		
South Co R	No	Yes	Medium		
Travis AP	No	No	Unknown	Wind farms	
Travis AC	No	No	High	Wind farms	
Sonoma AP	No	No	High		
Sonoma R	No	No	High		
Sacramento AP	No	No	High		
Stockton AP	No	No	Unknown		
Stockton AC	No	No	High		
Monterey AP	No	No	Medium		

## **Attachment D**

### **Notes on Alternative Airport Characteristics**

#### Livermore-AP

- *Policy Limit*-Yes: City General Plan states that “Livermore Municipal Airport is a general aviation airport. Scheduled passenger service flights shall be prohibited”
- *Noise/AQ*- Low/High: Although noise contours do not indicate a noise problem, there is a high sensitivity to aircraft noise in surrounding communities as evidenced by Master Plan process and input at community meetings (applies to expanded Reliever Airport role as well)
- *Land Use Compatibility*-Good: ALUC and County have been proactive in maintaining compatible land uses near airport

#### Buchanan-AP

- *Noise-AQ Impacts*-Low/Medium: Although noise contours do not indicate a noise problem, the area around the airport is heavily populated, and communities around airport have historically voiced noise concerns. This led airport to prepare a FAR Part 150 Noise Exposure and Land Use Compatibility Study as part of recent Master Plan process
- *Land Use Compatibility*-Medium: Mostly commercial development near most heavily used runways; also freeways, open space wetland off other runways.

#### Hayward –R

- *Airspace Operations*-Complex: Interactions with OAK during instrument weather conditions

#### Byron-AP

- *Air Passenger Market*-Low: Due to remote location
- *Ground Access*-Poor: Due to lack of roadway infrastructure
- *Physical Environment*-Medium: vernal pools surround airport

#### Byron-AC

- *Air Cargo Market*-Low: Due to remote location, lack of identifiable demand
- See above for other areas

#### Napa-AP

- *History of Air Service*-Yes: Had service for one year in 1952 (provided by Southwest Airlines)
- *Ground Access*-Poor: Lack of good road infrastructure (Routes 12 and 29)
- *Physical Environment*-Poor: Critical habitats identified by USFWS (vernal pools, fairy shrimp); nearby Napa River and wetlands
- *Policy Limits*-No: Although County has been very concerned about growth and Airport Master Plan does not include any improvements that would facilitate future air service.

Napa-Reliever

- *Convenience*-Medium: Medium rating combines remote location relative to main regional business centers, but good access to Napa Valley as a tourist destination
- *Runway Capability*-Good: airport pursuing upgraded navigational aids for improved all weather operations

Gross-AP

- *Runway Capability*-No: Would not have adequate runway length even with proposed extension from 3,300 ft. to 4,400 ft.
- *Land for Facilities*-No: Airport has no extra land for expansion
- *Airspace Operations*-Complex: Based on 2000 RASP; flights to/from LA would present challenges for FAA traffic control but may not be a significant problem at low volumes of operations
- *Sea Level Rise*-Yes: Would be significantly affected.

Gross-R

- *Runway Capability*-Good: Refers to runway with proposed extension and upgraded navigational aids

Half Moon Bay-AP

- *Prior Air Service*-Yes, was used many years ago as an alternate for airlines when SFO was fogged in
- *Passenger Market*-Low. Too remote from population

Half Moon Bay-R

- *Convenience*-Low: Distance from airport to main business centers
- *Noise/Air Quality*-Low/Medium-proximity of homes to runway

Moffett-AP

- *Prior Plans*-Yes: 2000 RASP policy and BCDC San Francisco Bay Plan designation
- *Air Passenger Market*-Low: Reflects position of airport between SJC and SFO market areas; possible market for limited charter type service
- *Airspace Operations*-Complex: Based on 2000 RASP; interactions with SJC, and to a more limited extent, OAK
- *Noise/AQ*-Low/Medium: Noise contours based on future passenger/cargo operations may not show significant impacts; however, large population near airport and lack of major aviation activity at present would likely result in significant noise sensitivity to new types of aviation activity
- *Safety of Operations*-Medium due to nearby bird populations on golf courses, migratory birds in area, and proximity to National Wildlife Reserve; for increased aviation activity FAA would require a Wildlife Hazard Mitigation plan
- *Physical environment*-?. Possible biological/wetland issue with increased aviation activity
- *Policy Limits*-?: Depends on receptivity of NASA to a civilian joint use arrangement
- *Sea Level Rise*-30 percent: Likely to require improved dikes to protect runways

Moffett-AC

- *Prior Study or Plan-Yes*: Study and environmental report completed by NASA (1996) when NASA was considering allowing commercial cargo operations as part of the Civil Reserve Air Fleet (CRAF) program
- *Air Cargo Market-Low*: Current air cargo forecasts do not indicate significant need
- See above for other areas.

Moffett-R

- *Convenience-High*: Close proximity to Silicon Valley and San Francisco business centers
- *Runway Capability-Good*: has navigational aids for poor weather operations
- See above for other areas

South County-AP

- *Runway Capability-Good*: Runway could be extended to 5,000 ft in future (further extension is limited by freeway interchanges on either end)
- *Land for Facilities-Poor*: Airport doesn't have expansion potential according to Airport Manager
- *Airspace Operations-Good*: Based on 2000 RASP; would not have any major interactions with SJC due to distance from this airport

Travis AFB-AP

- *Policy Limits-?*: Depends on receptivity of Air Force to a civilian joint use arrangement; Air Force and County had a joint use agreement in the past, which provided for feeder airline flights to SFO.

Travis AFB-AC

- *Air Cargo Market-Low*: Reflects remote location of Travis for integrated carriers (FedEx/UPS) and lack of identifiable local/regional markets for freight.

Sonoma County-AP

- *Air Passenger Market-High*: Based on existing service and projected growth in local air passenger demand
- *Runway Capability-Yes*: Proposed extension to 6,000 ft would better accommodate Regional Jet operations
- *Policy Limits-Yes*: Air Transportation Element of County General Plan states airport would be planned to handle no more than 21 average daily departures



## **Regional Airport Planning Committee**

To: Regional Airport Planning Committee  
Fr: RAPC Staff  
Re: Revised Target Analysis Approach

October 23, 2009

### **Background**

At your September meeting, staff outlined an approach for evaluating strategies to help the region address long-term aviation demand by using a set of performance measures and targets, which would represent desired planning outcomes. This is similar to the approach developed for MTC's latest long-range Regional Transportation Plan, of which RAPC's regional aviation analysis is a part. There was considerable discussion about this approach, and based on comments to date, this memo offers additional thoughts and suggestions. As you recall, the evaluation will be focusing on six scenarios (listed again in Attachment A), and how these scenarios are projected to perform in 2035 in relation to the performance measure targets.

Specific comments from the last RAPC meeting were:

A target is needed that addresses the economy and the connection between being able to serve passenger demand and a healthy economy.

Ground access emissions from vehicle trips to/from the airports needs to be added to the estimation of Greenhouse Gases and criteria pollutants (NOx and HC).

Estimating average aircraft delay does not capture all the aspects of how well the scenarios are serving air passengers. Another target is necessary to ensure that the airport system can provide adequate travel opportunities and choices for future air passengers (frequency, destinations, costs, etc.).

Based on this input, staff is proposing a revised set of measures and targets, as well as a set of goals that provide context for the targets and help to identify more clearly desired outcomes.

- Attachment B compares the first draft and proposed new measures and targets.
- Attachment C provides some comments on the measures to provide additional context.
- The Powerpoint presentation on the target approach from the September 25 RAPC meeting is also included in this memo to provide continuity for RAPC members.

Staff has sent the revised target analysis approach out to the Task Force for review and will advise the Committee of comments that are received prior to the October RAPC meeting.

### **Next Steps**

Based on further input from RAPC, staff will continue to make revisions to the measures prior to applying them to the scenarios.

**Attachment A**  
**-Phase 2 Study Scenarios-**

As outlined in the adopted Work Scope for the study, potential approaches for addressing the region's long-range airport capacity problems are identified as six different scenarios. Each scenario will be analyzed relative to the trend line, which is how we expect the airport system to perform in 2035 using the Base Case forecasts of airport activity. The six scenarios that will be analyzed are:

Scenario 1. This scenario is based on a redistribution of airline service among the three major airports to take advantage of unused runway capacity at less congested airports.

Scenario 2. This scenario assumes some air passenger and air cargo demand will be served at alternate airports (e.g ., Travis AFB, Moffett Federal Airfield, smaller general aviation airports, and out-of-region airports such as Sacramento International, Stockton, and Monterey).

Scenario 3. This scenario shifts some business jet operations from the air carrier runways to reliever general aviation airports around the region.

Scenario 4. This scenario assumes construction of a new California High Speed Rail (HSR) system which diverts some air passengers to rail.

Scenario 5. This scenario assumes implementation of new air traffic control (ATC) technologies to improve runway and airspace capacity in good and bad weather.

Scenario 6. This scenario assumes airports adopt demand management strategies to better balance airline flights with available runway capacity.

While these distinct scenarios are being analyzed separately during the initial analysis and public outreach (scheduled for February/March 2010), elements of the various scenarios will be combined later following Mid-Point Screening. This will enable staff and the Consultant to focus the remainder of the work on 2-3 main scenarios which best address the region's capacity problems and have demonstrated the potential to provide an approach that reaches a regional consensus.

**Attachment B**  
**-Old and New Measures/Targets-**

<b>Old Measure/Target</b>	<b>New Measure/Target</b>
<p><u>Goal: A Healthy Economy</u> None</p>	<p><u>Goal: A Healthy Economy</u>  <i>New Measure:</i> Economy-Whether a Scenario can serve projected demand (based on delay analysis)  <i>Target:</i> Meets demand-rating is “Good”  Doesn’t meet demand: rating is “Poor”</p>
<p><u>Goal: Reliable Runways</u>  <i>Measure:</i> Average Annual Aircraft Delay  <i>Target:</i> Less than 12 minutes per airport</p>	<p><u>Goal: Reliable Runways</u>  Old measure/target, plus:  <i>New Measure:</i> <u>Average aircraft delay during busiest three hours</u> at each airport  <i>Target:</i> TBD from capacity/delay models</p>
<p><u>Goal: Good Airline Service</u> None</p>	<p><u>Goal: Good Airline Service</u>  <i>New Measure:</i> Quality of Airline Service-  <u>Flights per Capita in Top 15 Markets</u>  <i>Target:</i> As good or better than today</p>
<p><u>Goal: Convenient Airports</u> None</p>	<p><u>Goal: Convenient Airports</u>  <i>Measure:</i> Airport Accessibility-<u>Average Ground Access Time and Costs to Airports</u>  <i>Target:</i> reduce ground access time/cost by x% (TBD)</p>
<p><u>Goal: Climate Protection</u>  <i>Measure:</i> Greenhouse Gases-Daily Tons of CO2 from aircraft  <i>Target:</i> AB32-40% reduction from 1990 levels needed to stabilize climate</p>	<p><u>Goal: Climate Protection</u>  Old measure/target plus- include CO2 from airport ground access trips</p>
<p><u>Goal: Clean Air</u>  <i>Measure:</i> Daily Tons of NO x and HC from aircraft  <i>Target:</i> Same as or lower than today</p>	<p><u>Goal: Clean Air</u>  Old measure/target plus- include emissions from airport ground access trips</p>
<p><u>Goal: Livable Communities</u>  <i>Measure:</i> Regional population inside 65 CNEL contour  <i>Target:</i> No increase from today</p>	<p><u>Goal: Livable Communities</u>  Old measure/target plus- perform same population analysis for 55 CNEL contour</p>
<p><u>Other Measures</u> None</p>	<p><u>Other Measures</u> -still seeking input</p>

## **Attachment C**

### **-Comments on Revised Target Analysis-**

#### **Goal: A Healthy Economy**

##### Economy (New):

RAPC requested a measure that looks at the economic benefits of airports.

Visitors coming to the Bay Area for tourism, conventions, and regular business meetings support the regional economy through money spent on goods and services. They also generate local tax revenue and help sustain and increase local jobs (see SF Convention and Visitor Bureau and other sources).

Residents traveling by air support the economy through business developed through air travel, expenditures on airport access, hotels, parking and other goods and services.

Air cargo is a source of jobs and expenditures in the local economy.

The forecasts assume growth in air travel and air cargo and the associated economic benefits that would accrue from this activity. The measure for this target will be whether or not a scenario could accommodate the projected number of flights. In this context, lost flights equate to lost economic activity.

If a scenario can accommodate projected demand (based on estimates of aircraft delay), it would support economic growth and receive a “Good” rating; if not, a “Poor” rating.

Note: this measure will look at the ability of each airport to serve demand at acceptable levels of delay in 2035. The rating for each Scenario will largely be based on SFO’s performance, since this airport is “over capacity” in the 2035 Base Case forecasts.

#### **Goal: Reliable Runways**

##### Average Aircraft Delay

The original proposed measure was average annual aircraft delay, and this would be retained.

Average aircraft delay is calculated directly from the Consultant’s runway capacity models, and is independent from how the FAA collects and reports delays for the national airport system.

The Task Force and RAPC proposed a measure that would look at average aircraft delays during peak periods, as poor schedule reliability would have a disproportionately large effect on passengers traveling at this time and on the airline schedules. The analysis reflects delays due to Bay Airport capacity, not delays that are generated at other airports (i.e., propagated delays where delays at another airport cause delays at the Bay Area airports).

Proposed additional measure: Average aircraft delay during busiest three hours at each airport (an output of capacity and delay model).

The peak period in terms of scheduled airline arrivals and departures may not be the same as the period with the most delays, as delays accumulate over time if aircraft cannot arrive or depart at their scheduled time. The Consultants are reviewing this issue.

Target for 2035: TBD

#### **Goal: Good Airline Service**

##### Quality of Service (New)

RAPC and the Task Force have suggested a metric that addresses the quality of future airline service for the passenger, as aircraft delay does not fully capture this (i.e., ensuring airline competition, interest in keeping fares low, desire for frequent service, desire for non-stop service to new destinations, etc.); a related concern by some is that some scenarios, like demand management, may reduce the quality of service.

This is a core regional airport planning concern; how to address both growing demand, with possible capacity limitations at airports, while also meeting passenger expectations for good airline service.

Proposed new measure: Number of flights per capita in top 15 markets (15 markets constitute 70% of all Domestic passengers and include all Southern California destinations). These are the markets most likely to be affected by the scenarios under review.

Proposed target: Number of flights per capita equal to or better than today (summed up for all Bay Area airports). Changes between scenarios would reflect the types of aircraft serving each airport and load factors (the HSR scenario would include adjustments for trains serving diverted air passengers).

Finally, it has been suggested that there should be a measure for future air fares (with the target being to keep air fares low). However, this measure would be similar to average aircraft delay as air fares would tend to increase with higher delays as airlines attempt to recover the cost of delays (fuel, extra crew time, etc.) through higher fares.

### **Goal: Convenient Airports**

#### Airport Accessibility (New)

Airport access is a traditional regional planning focus, but was not included in the original set of performance measures.

Airport access is one of the few elements of regional airport plans that can be controlled locally.

Proposed target: Average ground access time and cost for air passengers using Bay Area airports.

Metric would be average ground access time and cost for air passengers, which would reflect both the choice of airports as well as choice of ground access mode (weighted for auto and transit access times).

Target for 2035 would be to reduce average ground access time/cost by x% (TBD).

Scenarios that redistribute traffic among the primary and alternate airports would likely show the most variation.

### **Goal: Climate Protection**

#### Greenhouse Gases

Current proposal only addresses emissions from aircraft operations.

RAPC suggested adding CO<sub>2</sub> from vehicle ground access trips to airports.

Proposed additional measure: Daily tons of CO<sub>2</sub> from air passenger vehicle trips to/from airports.

Report CO<sub>2</sub> separately for aircraft and ground access emissions as well as combined to show magnitude of each and trends for each.

No change in Target (40% below 1990 levels in 2035)

### **Goal: Clean Air**

#### Aircraft Emissions (NO<sub>x</sub>, HC)

Current proposal only addresses emissions from aircraft operations.

RAPC suggested adding emissions from vehicle ground access trips to airports.

Proposed additional measure: Daily tons of NO<sub>x</sub>/HC from air passenger vehicle trips to/from airports.

Report emissions separately for aircraft and ground access emissions as well as combined to show magnitude for each and trends for each.

No change in Target (2035 emissions no greater than in 2007)

**Goal: Livable Communities**Aircraft Noise

Current proposal: estimate regional population within 65 CNEL Contour.

Task Force has proposed an additional measure: population within 55 CNEL contour. The rationale for evaluating population inside 55 CNEL is that community noise issues often extend beyond the 65 CNEL noise standard adopted by the State to guide compatible land use planning.

Consultants are checking to see if 55 CNEL data is available for each airport.

Target for 55 CNEL contour would be same as for 65 CNEL, i.e., no change in regional population within contours for 2007 and 2035.

Task Force also suggested other metrics (number of aircraft events louder than a certain noise threshold, time noise levels are above a certain threshold), but these would not be practical at the regional level as they would require new airport noise modeling for individual airports, which is beyond the scope and budget.

Others have suggested looking at the noise footprint for the loudest aircraft using each airport, and the population within this contour. Again, this would be problematic given the work scope and budget.

Other Possible Measures to Compare Scenarios

In discussions about the Target Analysis, various other measures have been mentioned, such as whether new land beyond the airport boundaries would be needed, whether air service at some alternate airports might be considered growth inducing or contribute to sprawl, or whether there are other significant environmental impacts that might not be captured in the proposed performance measures.

In general, these issues are largely associated with the alternative airport and reliever airport scenarios and can be addressed after public input and the final airports are identified for further analysis.

Staff can still evaluate other suggestions, as time and budget allow.