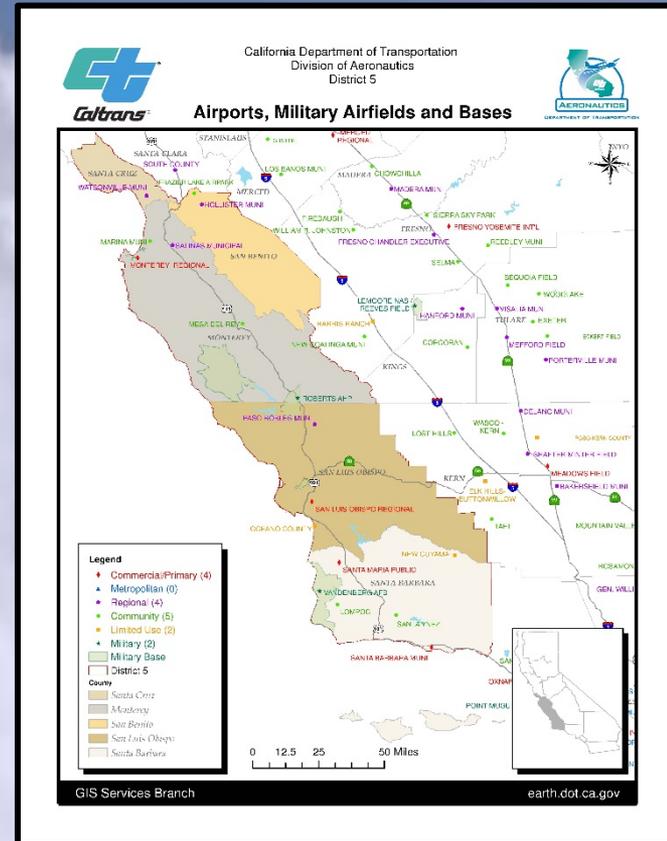


Transportation Planning Academy Caltrans, District 5

Gary Cathey, Chief
Division of Aeronautics

April 23, 2015



Aeronautics' Agenda

- What is the role of the Division of Aeronautics?
- Developing a new perception of aviation in California
- How Caltrans Transportation Planning Programs can integrate aviation
- Redefine the role of a *Multimodal* Transportation Planner

Objectives:

What: Increase awareness of aviation, beyond the airport runway and hangars

How: Define the various programs that will continuously integrate aviation

Who: Explain Your Role as a *multimodal* Transportation Planner



Changing Perceptions

Airports are regional economic engines!

- Aircraft are flown to regional community aviation commerce centers, more commonly known as airports, which come in all sizes
- Airports have become mixed use development centers, or multi-functional hubs for conducting business, commerce, and transportation...



Division Overview

Aeronautics Offices and Specialty Areas:

- Office of Aviation System Planning
- Office of Airports
- Office of Technical Services & Programs
- Other Specialty Areas:
 - Funding for Grants & Loans
 - Aviation Noise
 - Environmental Review
 - Legislative News & Information



Division of Aeronautics - Mission and Goals

- Foster development to improve the California air transportation system throughout the State
- Promote aviation safety while preserving the environment
- Introduce context-sensitive, sustainable solutions



State, Federal, and Other Aviation Partners

State:

- Department of Education (DOE)
- Department of Fish and Game (DF&G)
- California Energy Commission (CEC)
- Governor's Office of Planning and Research (OPR)

Federal:

- Federal Aviation Administration (FAA)
- U.S. Department of Defense (DOD)
- U.S. Department of Agriculture (USDA) – Wildlife Services
- U.S. Department of Transportation (USDOT), Transportation Research Board (TRB) – Airport Cooperative Research Program (ACRP)

Private Non-Government Organizations:

- National Association of State Aviation Officials (NASAO)
- National Business Aircraft Association (NBAA)
- Airplane Owners & Pilots Association (AOPA)
- Association of California Airports (ACA)
- California Airports Council (CAC)
- California Pilots Association (CPA)



Defining the Role of Aeronautics

Federal Aviation Administration (FAA):

- Certify and perform safety compliance inspections of Part 139 Commercial Service Airports
- Manage FAA Airport Improvement Program (AIP) funding grants for National Plan of Integrated Airport Systems (NPIAS)
- Regulate airspace, airport security, aircraft, pilots, and aircraft mechanics

State of California (Caltrans):

- Issue airport and heliport permits and conduct permit compliance safety inspections
- Site evaluation of proposed state buildings, public schools and community colleges
- Provide airport sponsors grants and loans in support of General Aviation airports from the California Aid to Airports Program (CAAP)
- Provide technical expertise in the areas of engineering, land use, aircraft noise, environment and compatible land use planning related to aviation

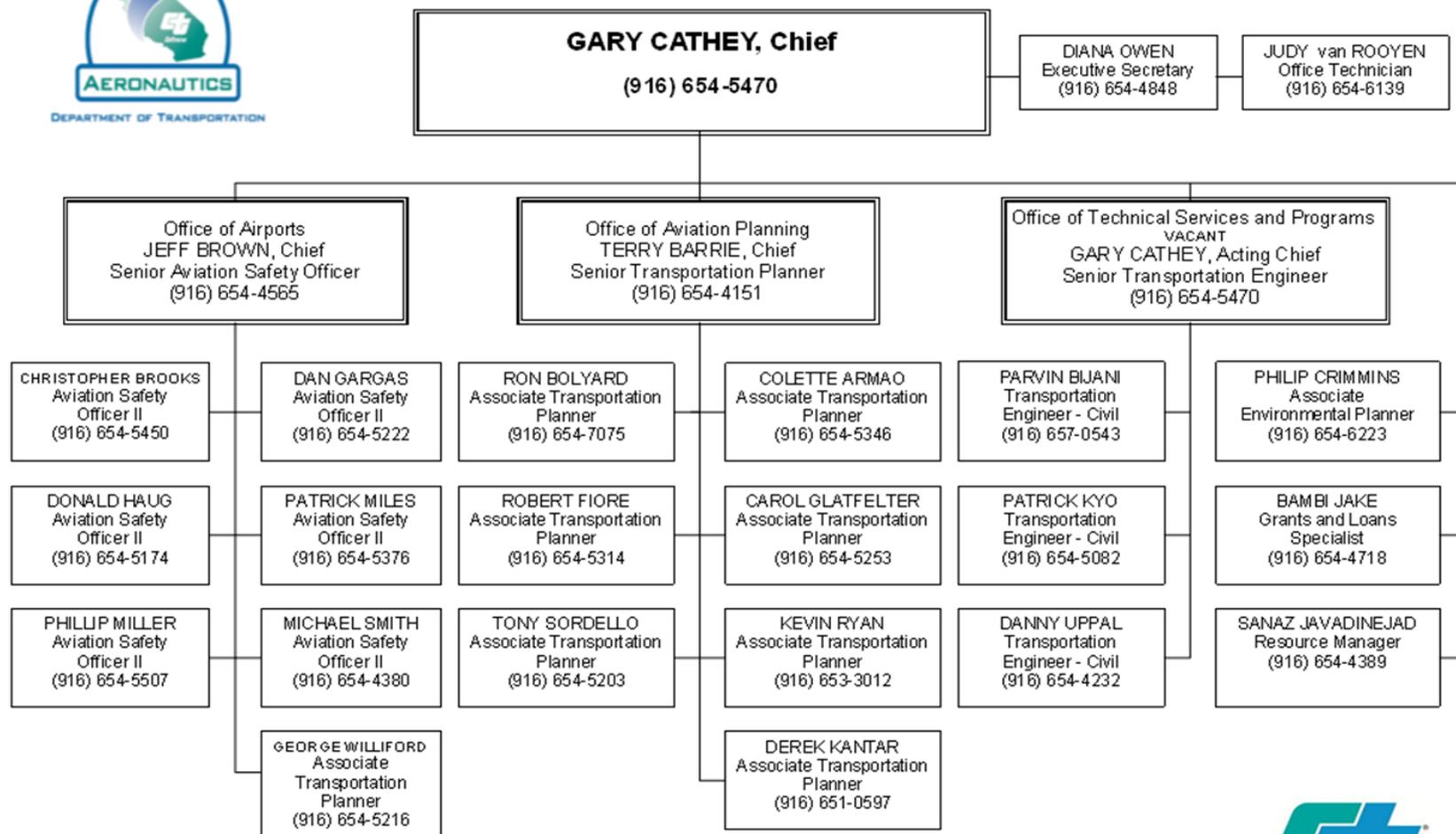
Airport Sponsor:

- Facility Owner/Operator
- Maintenance
- Provide local matching funds for FAA AIP grants
- Provide for operational airport safety





DIVISION OF AERONAUTICS



Provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability.

April 2015





Division of Aeronautics

Gary Cathey, Chief
(916) 654-5470

Airport Noise Program & Environmental Review

Philip Crimmins
(916) 654-6223

- ❖ Administer California airport noise regulations
- ❖ Review and comment on environmental documents for airport related local developments

Resource Management

Sanaz Javadinejad
(916) 654-4389

- ❖ Administer operating and capital budgets
- ❖ Administrative and personnel activities support

Grants and Loans

Bambi Jake
(916) 654-4718

- ❖ Manage grants and loans to airports for capital improvement projects
- ❖ California Transportation Commission Liaison

Office of Airports

Jeff Brown, Chief
(916) 654-4565

- ❖ Conduct public-use airport/heliport and hospital heliport safety and permit compliance inspections
- ❖ Under Federal Aviation Administration contract, conduct inspections and update Airport Master Records for specified public-use airports
- ❖ Review and assess new, amended, and corrected airport/heliport permit applications, including plans check/approval, site visits, final permit inspections, and issuing of permits
- ❖ Evaluate proposed K-12 school, Community College, and State building sites within 2 nautical miles of an airport
- ❖ Manage the Helicopter Landing Authorization program for evaluation and authorization of helicopter landings within 1,000 feet of K-12 schools
- ❖ Host and maintain the hospital heliport dataplates information system
- ❖ Oversee development of and updates to the California aeronautical chart
- ❖ Work with federal, State and local agencies on facility, airspace, and other aviation matters
- ❖ Assist and guide current and prospective airport/heliport owners, managers, and consultants with permitting, regulatory, and other aviation issues
- ❖ Respond to State aeronautics-related requests and questions from the public

Office of Aviation Planning

Terry Barrie, Chief
(916) 654-4151

- ❖ Develop State aviation planning policies and participate in the development of federal planning policies
- ❖ Participate in intermodal planning and regional aviation system planning with cities, counties, MPOs, RTPAs and various Caltrans Divisions and Districts statewide
- ❖ Review, comment on, and develop guidelines for aviation-related activities in MPO's and RTPA's Regional Transportation Plans, Overall Work Programs, and cities' and counties' airport master plans
- ❖ Update California Aviation System Plan elements; develop and publish Airport Land Use Planning Handbook; review and comment on Airport Land Use Compatibility Plans (ALUCP) and city and county land use decision override letters regarding the ALUCP
- ❖ Analyze aviation's influence on the State's economy
- ❖ Aviation liaison for Caltrans Divisions including aviation-related research activities, transportation information, and goods movement
- ❖ Pursue State and federal grants to facilitate aviation system advancement
- ❖ Collect and disseminate aviation statistics
- ❖ Analyze and monitor federal and State aviation legislation

Office of Technical Services & Programs

Gary Cathey, Acting Chief
Sr. Transportation Engineer
(916) 654-5470

- ❖ Develop the statewide Capital Improvement Plan (CIP) for aviation needs and provide airport sponsor guidance
- ❖ Prepare and Manage the State Aeronautics Program
- ❖ Provide engineering assistance to local governments on airport capital improvement projects under the California Aid to Airports Program
- ❖ Review or manage State general aviation loans and Acquisition and Development grants
- ❖ Develop and manage federal grant contracts awarded from the Federal Aviation Administration Airport Improvement Program to support general aviation
- ❖ Manage the Airport IQ System Management database and provide technical assistance to airport sponsors to update airport CIP project lists
- ❖ Conduct public meetings to share information with stakeholder groups in conjunction with the Federal Aviation Administration, the Association of California Airports, and others
- ❖ Evaluate land use compatibility and proposed school sites near airports by developing site specific maps using AutoCAD
- ❖ Maintain and update the Airport Pavement Management System that identifies needs and estimates capital outlay costs

"Provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability"

April 2015



Division Core Functions

Aeronautics' General Internal Functions:

- Aviation Land Use, Environmental and System Planning, Airport Safety Compliance Inspections, Airport Project Funding & Engineering, and Aircraft Noise, manage one loan and three grant programs

Oversee safety at a variety of permitted aeronautical facilities (634)

- 243 Public-use airports (28 commercial service & 215 general aviation)
- 68 Special-use airports
- 323 heliports (160 hospital heliports, 163 police, fire, corporate, commuter or privately owned heliports)
- Exempt aviation facilities: 8 seaplane bases, 22 military airfields, and 1 joint-use MIL/CIV airport

Leverage Federal Aviation Administration Airport (FAA) Improvement Plan (AIP) Grants with State AIP Matching Grants

- FAA AIP Grants pay up to 95 percent of project cost (\$24.982 M, FY 2014/15)
- State AIP Matching Grants pay 5.0 percent of the federal AIP Grant (\$1.2M FY 2014/15)

Provide airport sponsors aeronautical expertise and technical assistance

- Planner, engineer and inspector teams are integral to addressing the State's aviation issues



Why Aviation is Important to California

Aviation is vital for California!

- Provides for commerce centers that are vital for the movement of goods and people
- Contributes nearly 9 percent of California's employment and output – direct and indirect spending:
 - Contribution to the U.S. Gross Domestic Product: \$154.7 billion (4.8 percent)
 - Contribution to the U.S. employment: 1.1 million jobs (5.5 percent)
 - 62,606 active licensed pilot community (11 percent of U.S. total)
 - 34,844 registered aircraft (10 percent of U.S. total)



Why Aviation is Important to California

(cont'd)

- Airports facilitate international and domestic trade
- They are necessary for “just-in-time” production and delivery
- Each airport is an essential component of the State’s emergency response and disaster recovery operations
- Aviation provides convenient and affordable air travel for tourists, as well as access for companies to conduct business in your local community



Office of Airports



Office of Airports

- Perform regular safety inspections for public-use airports and hospital heliports
- Implement State and federal airport design standards related to marking, lighting, signage, safety areas, and obstruction clearance criteria
- Provide technical assistance and guidance to sponsors, other aviation interests, and the public
- Coordinate with the Federal Aviation Administration and other federal, State, and local government agencies



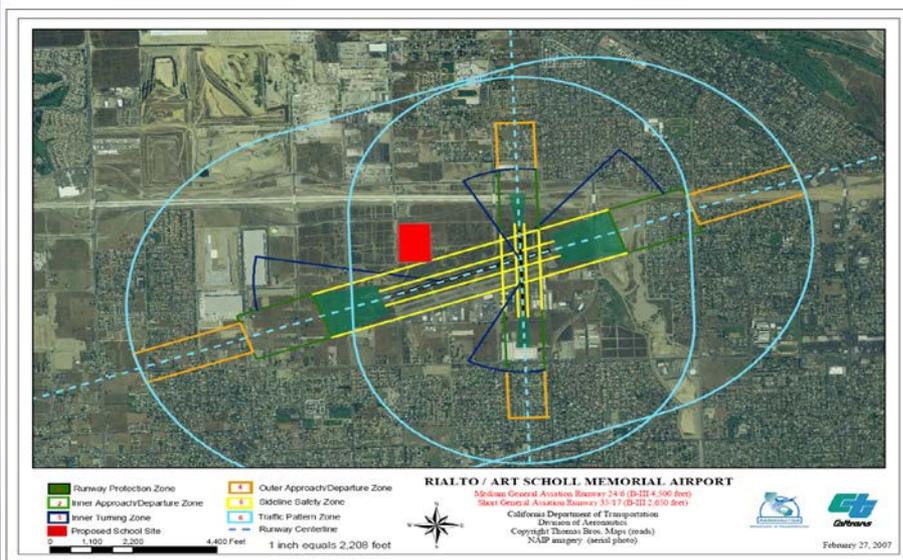
Office of Airports

- Carry out duties mandated in the PUC and other statutes, that include:
 - Permitting authority for public-use and special-use airports and heliports in the State. Evaluate & review plans, sites, CEQA, local govt approval (issue ~30 permits/yr)
 - Evaluate proposed school, community college, and State building sites within 2 miles of an airport (~25/year)
 - Evaluate and authorize helicopter landings at and within 1,000 feet of K-12 schools (~250/year)
- Conduct Airport Master Record inspections and updates under contract with the FAA
- Review FAA Airspace Obstruction Evaluation cases for potential impact on airports



State Buildings and School Site Evaluations - Airport Safety Compatibility Zones

Pursuant to State law, the Division of Aeronautics is required to evaluate proposed K–12 schools - Education Code (EC) 17215, Community Colleges - EC 81033, and State building sites - California's Public Utilities Code (PUC) 21655, within two nautical miles of an existing runway as well as any new runway that is identified in an adopted airport layout plan.



Planning:

California Airport Land Use Planning Handbook Consideration and evaluation to overall Community Planning Consistency with adopted airport land use plans
Communication with the planning commission

Flight Paths:

Minimize disruptive noise and provide for adequate safety evaluations

Office of Technical Services & Programs



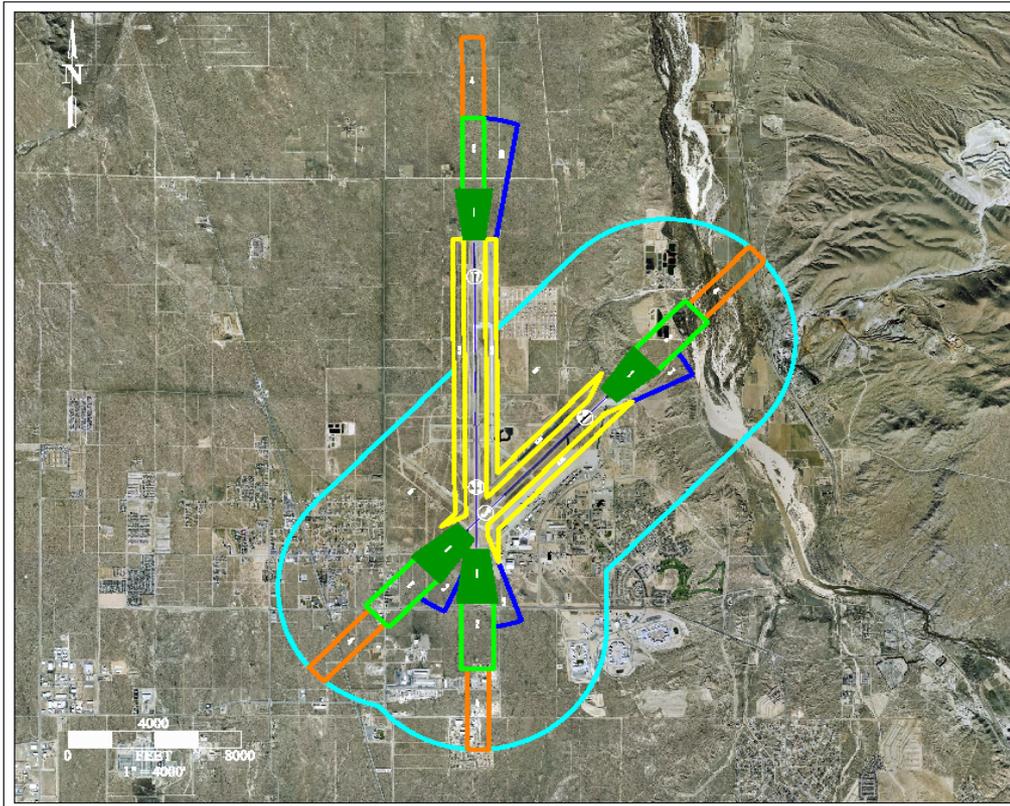
Office of Technical Services & Programs

- Provide engineering assistance (internal and external)
- Review and manage State Acquisition & Development (A&D) grants
- Develop the Capital Improvement Plan (CIP) & 3-year Aeronautics Program based on the CIP
- Prepare School Site Evaluation Maps, Land Use Incompatibility Maps and AutoCAD drawings for Airports
- FAA Contract Administration and Management (e.g. Asphalt Pavement Management System)
- Manage Caltrans Airport Projects from Programming to Construction Close-out



Proposed School Site Evaluations

Airport Safety Zones Map



Southern California Logistics Airport (VCV)

Large Air Carrier Runway (17)
 Length: 15,050'
 RWY 17: Approach Visibility - 3/4 Mile
 Runway Protection Zone: 1000' x 1750' x 2500'

Long General Aviation Runway (35)
 Length: 15,050'
 RWY 35: Approach Visibility - Visual
 Runway Protection Zone: 1000' x 1750' x 2500'

Long General Aviation Runway (3/21)
 Length: 9,138'
 RWY 3: Approach Visibility - Visual
 Runway Protection Zone: 1000' x 1750' x 2500'
 RWY 21: Approach Visibility - Visual
 Runway Protection Zone: 1000' x 1750' x 2500'

- 1 Runway Protection Zone
- 2 Inner Approach/Departure Zone
- 3 Inner Turning Zone
- 4 Outer Approach/Departure Zone
- 5 Sideline Safety Zone
- 6 Traffic Pattern Zone
- Runway

Notes:
 San Bernardino County
 34-35-50.835N 117-22-58.789W
 Drawing based on:
 California Airport Land Use Planning Handbook
 Google Earth Pro Imagery
 AutoCad Map 3D 2009
 September 2009

Depicts runway safety zones & air traffic pattern



Operational Safety Discrepancy Resolution

Pavement Condition Index: Very Poor (18)



California Pines Airport, Modoc County



Result:

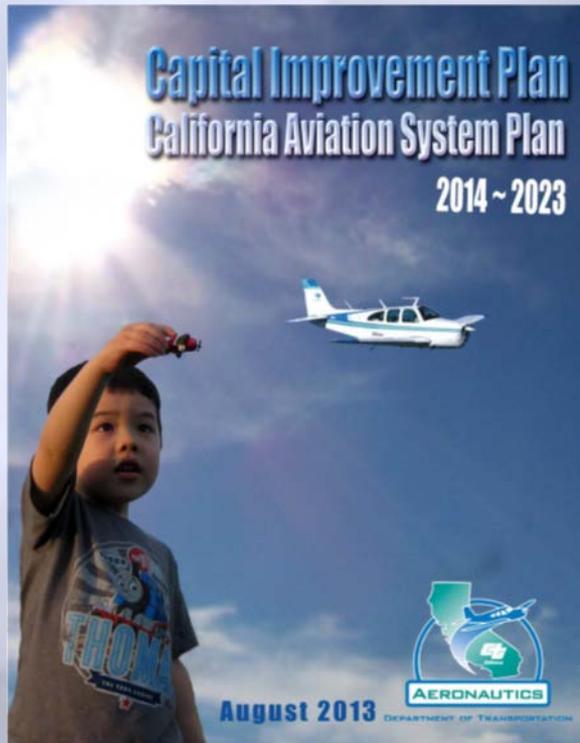
Safer and Smoother landings and take-offs!



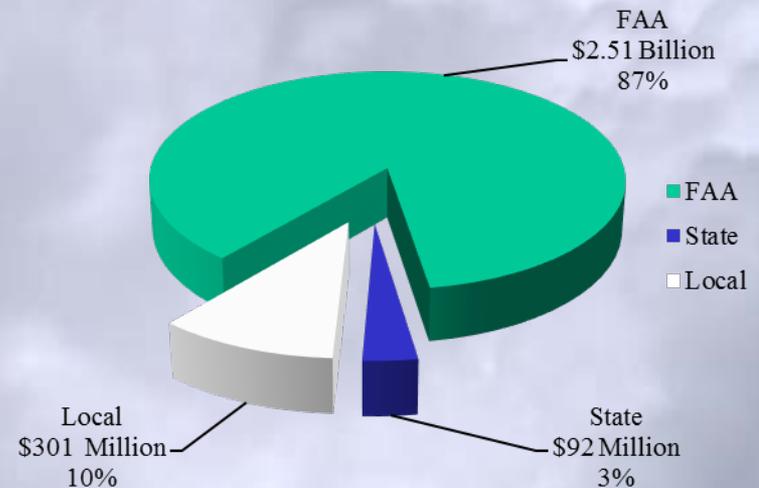
Runway Rehabilitation Project Description:

- Pulverized, reshaped, graded, and compacted into sub-base
- Widened 4,250' runway to 60 feet, including a 2.5" hot-mix asphalt overlay and new runway markings

California Aviation System Plan 2012-2021 Capital Improvement Plan



Federal, State, Local Split For Requested Funds Total: \$2.91 Billion



Airport Funding

- State Aeronautics Account
 - Annual revenue approximately \$5.3 million from aviation fuel excise taxes (Avgas 18¢/gal. and Jet fuel 2¢/gal., excludes commercial jet fuel sales)
- Division Support (\$3.7 million)
- Annual Credit Grant: \$10,000/year to 149 GA airports (\$1.49 million)
- Airport Improvement Program (AIP) Matching Grants (\$1.65 million)
- Acquisition and Development (A&D) Grants (\$1.00 million)
 - 90 percent State funded Airport Land Use Compatibility Plans (ALUCP), safety, and pavement preservation projects, require a 10 percent local match
- Airport Loan Program (low interest loans, current rate = 3.288 percent)
 - For revenue generating projects (e.g. hangar construction and aviation fuel facilities)
- *State Dollars for Your Airport*
 - Available from the Aeronautics web site:
http://www.dot.ca.gov/hq/planning/aeronaut/documents/grants_and_loans/StateDollarsForAirport.pdf



Aviation & Environmental Review

Review projects submitted from State Clearinghouse (IGR/CEQA)

- Analyze project from an aviation perspective and comment on potential environmental impacts, such as effects relating to aircraft flight, aircraft noise, and public safety

How you can help Aeronautics identify potential impacts to aviation?

Contact us with your concerns whenever you think there might be an environmental issue within 2-nautical miles of an airport!

**POC: Philip Crimmins, Environmental Review
(916) 654-6223**



Aircraft Noise

- Legislation passed in 1969 that is part of the California's Public Utilities Code (PUC) mandates regulation of aircraft noise at airports to resolve existing noise problems and prevent the development of new problems
- County government determines which airports must meet noise standards
 - 10 airports statewide (9 air carrier and 1 general aviation)
 - District 5: No commercial service or general aviation airports have been determined to have a noise problem by their respective local County Board of Supervisors.
- Department noise activities include:
 - Review and approval of aircraft monitoring plans
 - Assess airports' progress toward achieving standards
 - Consider applications for a variance from standards

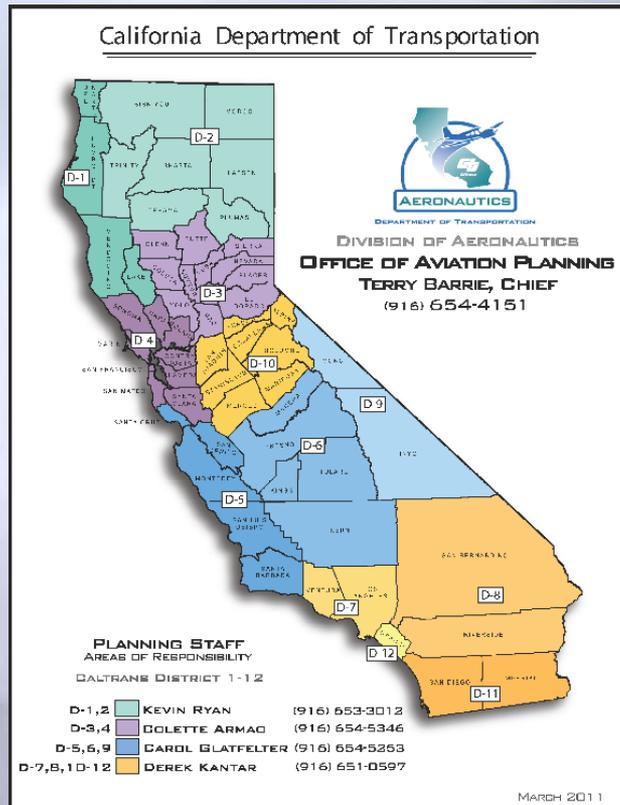
For more information, please visit the Aviation Noise Program website:

<http://www.dot.ca.gov/hq/planning/aeronaut/avnoise.htm>



Office of Aviation Planning

Systems Planners



Land Use Planners



Compatible Land Use Development

Fresno Yosemite International Airport (FAT)

Fresno County



Incompatible Land Use Development

Santa Monica Airport (SMO)

Los Angeles County



Aviation Planning Work Products

- CASP General Aviation System Needs Assessment 2010
- CASP Policy Element 2011
- California Airport Land Use Planning Handbook 2011
- California General Aviation Airports: Links to Vitality (video)
- Public Use Airports and Military Airfields Map (2015)



Aviation Planning Update

- **Wildlife Hazard Assessments Underway**
 - 10 airports in Los Angeles basin; 5 in S.F. Bay Area
 - 100% FAA funded. Goal is to understand then minimize wildlife strike hazards with aircraft.
- **Airport Economic Study Underway**
 - Exploring the value of the 5-types of public-use airports in the State and how to connect them to their communities via Smart Growth principles. Study will support CIB concepts.
- **Emergency Management**
 - Working with Cal EMA to create an Air Operations Branch consistent with FEMA's Incident Command System protocols.



Where Aviation should be considered: Advance Planning Programs

- California Transportation Plan
- California Interregional Blueprint
- Climate Action and Adaptation Program
- Smart Mobility Framework
- Complete Streets
- Regional Blueprint Plan / Sustainable Communities Strategies
- Project Initiation Documents (PIDs)



Where Aviation should be considered: Advance Planning Programs (cont'd)

- Highway Planning and Design!
- Regional Transportation Plans and Overall Work Programs
- Transit Connectivity
- Local Development – Intergovernmental review (LD-IGR)
- Public Participation
- Goods Movement
- Public Private Partnerships Program

General Reminder:

No Aeronautics representatives are in any Caltrans districts, so please forward all aviation/airport issues to HQ



Role of Transportation Planners

Caltrans has no Aviation Planners in the Districts

- Airport Land Use Commissions serve as the State's primary aviation land use planners, whose actions protect pilots, airports, and the surrounding communities
- You are the “first responders” for protecting and promoting aviation statewide, through Caltrans planning!

Know Your Role as a Caltrans Planner

- Know when a new community development might impact an airport, such as a wind farm or a major transportation project (Reference: Highway Design Manual p. 207)
- If a project lies within 2 nautical miles of an airport, Alert the Division of Aeronautics
- Do not assume the role of an Airport Land Use Commission (ALUC)
- Airport Land Use Compatibility Plans (ALUCP) out rank General Plans or Regional Transportation Plans, and GP and RTP must be consistent with the ALUCP



Aeronautics' Resources

Your aviation planning resources are only a click away!

State of California
Department of Transportation
Division of Aeronautics

June 6, 2011

Aviation in California: Fact Sheet

Statewide Facilities (934)
Source: California Airport Management System and the 2011 Federal Aviation Administration's 2010 State of Airport System

- 242 Public Use Airports
 - 215 General Aviation (GA) Airports
 - 20 Commercial Service Airports (Commercial) providing scheduled passenger service
- 61 Special Use Airports
- 550 Private Bases
- 493 Permitted Heliports
 - 155 Hospital heliports
 - 121 Corporate heliports
 - 49 Police heliports
 - 33 Fire heliports
 - 2 Consumer heliports
 - 57 Private heliports
- 22 Military/NASA & 2 Joint Use Facilities

Scheduled Passenger Service and Air Cargo
Source: California Department of Transportation, Division of Aeronautics, FAA, ARA, CA, ACP, Boarding & All-Cargo Data Reports, FAA Final Year 2010 Airport System Report (October 2011)

- In 2010, 167.9 million passengers traveled through California's Commercial airports, and the FAA AIP Primary and Non-primary Entitlement Programs awarded a total of \$79.6 million in 2011.
 - California's share of national entitlement total: \$1.7 million entitlements, or 2.12 Percent
 - Eleven Commercial airports in California ranked 8th to 19th in 100 aircraft movements:
 - LAG: 9th, 504,000, 140,000, 646,000, 108,000, 504,447, 50,470,000, 100,000, 1,000,000, 1,000,000, 1,000,000
 - ONT: 10th, 1,000,000, 1,000,000, 1,000,000, 1,000,000, 1,000,000, 1,000,000, 1,000,000, 1,000,000, 1,000,000
- In 2010, 3.7 million tons of air cargo moved through 25 Commercial and GA airports, and the FAA AIP Cargo Airport Entitlement Program awarded \$1.7 million in 2010.
 - Nine California airports' share of U.S. Loaded Weight: 12.6 Million U.S. Tons, or 8.8 percent (LAG: 7th, 546,000, 1,000,000, 1,000,000, 1,000,000, 1,000,000, 1,000,000, 1,000,000, 1,000,000, 1,000,000)
- The top four California airports accounted for 89.2 percent of the states reported landing weight.

Aviation's Economic Impact
Source: California Department of Transportation, Division of Aeronautics, Project Aviation Partnership, November 2009; and the California Technology, Trade and Commerce Agency

- Contribution to the state Gross Domestic Product: \$11.1 billion (9 percent)
- Contribution to the State employment: 1.7 million jobs (9 percent)
- Tax revenue generated annually: \$225 million (2007)
- California share of the U.S. travel market: 12 percent
- Contribution to State tourism: \$14.5 billion (2001)
- CA air cargo value: \$17.5 billion (2009)
- CA aerospace manufacturers' global contribution: \$23 billion
 - 1,020 Companies
 - 120,000 Employees

Air Cargo (Source: Air Cargo Trade Show and Demand Study, Sep 2010 2009) (Source: The Role of Air Cargo at the Nation's Airports, California State Board of Airports and Airway, 2007)

- With nearly 14,000 truck trips, 13 airports handled 3.5 million short tons of air cargo, 1 million less than the peak year (2006), which is expected to recover completely by 2015
- More than 50 percent of California's total export trade by value traveled by air (2006)
- Two international airports (LAG and SFO) handled 97.5 percent of all California international air cargo trade by value (2006)
- Airborne agricultural exports from California totaled \$579 million (2006)

Office of Aviation Planning, Division of Aeronautics

JANUARY 2012

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Division of Aeronautics

"On behalf of the California Department of Transportation's Division of Aeronautics, allow me to welcome you to our web site. We hope you enjoy your visit and look forward to hearing from you."

Gary Cathey, Division Chief
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SPECIALTY AREAS

- Airport Funding Status
- Airport Noise Program
- Environmental Review
- Legislative News and Information
- Publications and Forms
- Job Opportunities
- Federal and State Aviation Roles
- Airport Land Use Planning Handbook
- ACIP Information and Links
- California Aviation System Plan
- CDP2011 [pdf]
- CASP Policy Element
- GASNA Semi-Annual Updates
- Investigating Safety Impacts of Energy Technologies on Airports and Aviation

EXTERNAL RESOURCES

Visit the Division of Aeronautics web site to learn more.

www.dot.ca.gov/aeronautics

