

CALIFORNIA COASTAL COMMISSION

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STAFF RECOMMENDATION**ON CONSISTENCY CERTIFICATION**

Consistency Certification No.	CC-058-01
Staff:	KS-SF
File Date:	6/18/2001
3 Months:	9/18/2001
6 Months:	12/18/2001
Extended to:	1/10/2002
Commission Meeting:	1/7/2002

APPLICANT:**City of Santa Barbara****PROJECT
LOCATION:**

Santa Barbara Municipal Airport, 500 Fowler Road, City of Santa Barbara, Santa Barbara County. The project is adjacent to Moffett Place to the east, Highway 101 to the north, Los Carneros Road to the west, and UC Santa Barbara and Goleta Beach County Park to the south

**PROJECT
DESCRIPTION:**

Construction of two 1,000 foot runway safety areas, extension of the runway protection zone, taxiway, a 15,000 square foot air cargo facility, service road, a 3-story parking structure, taxiway widening, 75 T-hangers, a 49,700 square foot airline terminal expansion, and the demolition of several existing terminal buildings

**SUBSTANTIVE FILE
DOCUMENTS:**

See page 49-50

EXECUTIVE SUMMARY

The City of Santa Barbara has submitted a consistency certification for improvements related to its Aviation Facilities Plan, and related runway safety projects. The project consists of the construction of two 1,000 foot long runway safety areas (RSA), a taxiway (2,600 feet), the realignment of an existing runway, a 49,700 square foot expansion of the airline terminal, a 650 space parking structure, air cargo facilities, 75 T-hangers and a service road. A portion of an existing taxiway will be widened (taxiway B) and runway protection zones (RPZ) will be lengthened. The primary issues raised are allowable use for wetland fill, the selection of the least environmentally damaging alternative, adequate mitigation ratios, the channelization of streams to protect public safety and existing development in the floodplain, water quality and sedimentation of Goleta Slough, effects on special status plant and wildlife species or their habitats, and the protection of archaeological resources and sensitive areas from disturbances.

The City has minimized wetland fill and endangered species impacts with the proposed "west creek realignment alternative" which will re-route Tecolotito Creek to avoid impacts to the Southern California Steelhead Trout, and Essential Fish Habitat which occurs in the project area. The City has further incorporated measures recommended by the National Marine Fisheries Service and U.S. Fish and Wildlife Service to: (1) reduce downstream turbidity and sedimentation in Goleta Slough through longer channels and expanded sediment basins; and (2) create new habitat areas for the Belding's savannah sparrow, a state listed endangered species and federal species of concern. Unavoidable impacts will be mitigated to the maximum extent feasible, all wetland avoidance measures have been taken, and the project represents the least environmentally damaging feasible alternative.

The project is consistent with the allowable use test of Section 30233(a)(5), which authorizes the fill of wetlands for incidental public service purposes. Because the project will be constructed by a public agency, in order to provide transportation services to the public, the fill qualifies as a public service purpose. The Commission has previously determined that the expansion of an existing road or bridge is an incidental public service purpose, when no other alternative exists and the expansion is necessary to maintain existing capacity. The proposed improvements are incidental to the primary transportation facility, a runway, and do not include a permanent expansion. While the location of the runway will be shifted to accommodate the runway safety area prescribed by the FAA, the runway length, width and capacity will not change

To compensate for the loss of wetlands the City proposes to create and restore seasonal wetlands and open water habitat similar to those affected by the project. Areas temporarily impacted will be restored to pre-construction conditions. The City has selected potential mitigation sites that involve the restoration of palustrine transitional wetlands, the creation of open water and mudflats from newly relocated creek channels, restoration of slough berms, and the removal of

non-native vegetation. Although the mitigation plan included in the City of Santa Barbara's consistency certification is still conceptual at this point, it incorporates acceptable mitigation ratio commitments and locations, which were developed in consultation with the CDFG and USFWS, and with input from the Goleta Slough Management Committee.

The City determined that realigning Tecolotito Creek would be less environmentally damaging than box culverting of the creek because it preserves open water habitat. Realigning the creek using a culvert would require the additional culverting of San Pedro Creek, pose potential airfield flooding impacts from culvert blockages and sediment loading, degrade habitat for the Belding's savannah sparrow, and may require placing Fairview Avenue in a tunnel. In addition, the west creek realignment alternative avoids potential significant impacts to the designated critical habitat for Southern California Steelhead Trout, a federally listed endangered species. The "culvert alternative" would have resulted in long-term habitat modifications that have the potential to create barriers to migration for which there is no feasible mitigation.

As an area of convergence of five major streams, the Santa Barbara Airport has historically been subject to flooding. In 1969 water completely surrounded the main terminal, and in 1995 and 1998 all three runways were flooded closing the airport for several days. Public buildings and structures are threatened with inundation during heavy rains, and the flooding of the runways presents a safety hazard that prevents planes from landing or taking off. The project is consistent with the stream alteration policy (Section 30236) of the Coastal Act, which allows for the alteration of rivers and streams if those alterations or channelizations are necessary to protect existing structures in the floodplain, and where such protection is necessary for public safety.

Continued unmanaged sedimentation could ultimately result in the destruction of salt marsh habitat and cause a significant alteration of the slough's flood carrying capacity. The proposed project would control sediment by enlarging existing basins along Tecolotito and Carneros Creeks during the process of relocating the creeks. In capturing greater amounts of sediment the basins will minimize deposits in tidal wetlands of Goleta Slough that continue to affect tidal circulation and the conversion of wetlands into non-native uplands. Therefore the project is consistent with Sections 30230 and 30231 of the Coastal Act, which protects water quality, through the restoration of these areas and the minimizing of adverse effects of run-off and surface water flow.

The Area of Potential Effect (APE) for cultural resources within the Santa Barbara Airport Aviation Facilities Plan Boundary has been defined by the FAA as the entire airport property boundary, in accordance with 36 CFR Part 800.2. Archaeological surveys and excavation within this area have recorded four prehistoric Native American sites. These areas, including major village sites, are characterized by high artifact densities, house remains, exotic trade goods and cemeteries. Although the realignment of Tecolotito Creek may require ground disturbances within 50 feet of moderate sensitivity zones, the city has developed avoidance and mitigation measures in anticipation of any intrusion into these areas. The Office of Historic Preservation concurred with these measures, and the City's establishment of "Zones of Archaeological Sensitivity" to protect archaeological sites and sensitive areas from unauthorized excavation and disturbances.

Consultation with the California Native American Heritage Commission will take place during construction and a qualified archaeologist will be present. The project is consistent with Section 30244 of the Coastal Act in that the City will minimize disturbances to known archaeological resources, and implement planned mitigation measures should any subsurface artifacts be encountered.

The project is also consistent with the public access and recreation (Sections 30210-30214), view protection (Section 30251), public works (Section 30254), and water quality (Section 30231) policies of the Coastal Act. These findings are contingent on the mitigation and monitoring measures the City of Santa Barbara has committed to. The detailed designs for these measures will be provided during the subsequent coastal development permit application to the City of Santa Barbara.

The coastal development permit issued by the City of Santa Barbara would be appealable to the Commission. A portion of the project that involves the restoration and enhancement of transitional wetlands (approximately 25 acres) is also within original Commission permit jurisdiction. Finally, the Commission also has the ability to independently "re-open" its federal consistency review of the project if the monitoring and mitigation measures are inadequate.

STAFF SUMMARY AND RECOMMENDATION

I. Project Description.

The City of Santa Barbara has submitted a consistency certification for the construction of two 1,000 foot runway safety areas (RSA), a taxiway (2,600 feet), the realignment of an existing runway, a 49,700 square foot expansion of the airline terminal, a 650 space parking structure, air cargo facilities, 75 T-hangers and a service road. A portion of an existing taxiway will be widened (taxiway B) and runway protection zones (RPZ) will be lengthened. The project will take place in three phases, beginning in 2002 and ending in 2015.

Phase I construction (2001-2004)

1. Runway safety area extensions, relocation of the service road, taxiway extension, lighting, and navigational aid changes;
2. Runway protection zone acquisition;
3. Taxiway M;
4. Access routes and parking lot improvements for the terminal expansion;
5. Air cargo facility (15,000 square feet);
6. Service road;
7. 40 T-hangers

Phase II construction (2005-2009)

1. Completion of the terminal expansion;
2. 20 T-hangers

Phase III construction (2010-2015)

1. Terminal parking structure;
2. 15 T-hangers

Runway Safety Areas

The runway safety areas at both ends of runway 7-25 will be extended to meet current FAA design standards (14 CFR Section 139). The required dimensions for the RSA at the Santa Barbara Airport are 500 feet wide by 1,000 feet long and are based on the current design aircraft (Boeing 737, MD-80 series, Boeing 727, Lockheed P-3, and Boeing 757) that use the runway. The existing RSA at the eastern end of the runway is 215 feet in length. At this section of the runway 800 feet of existing runway will be converted to a RSA, and the western portion of the runway will be extended and relocated to maintain an overall length of 6,052 feet. The RSA at the western end of the runway is 300 feet in length and a 1,000 foot RSA will be constructed at this location.

Runway Protection Zone

The runway protection zone (RPZ) is a trapezoidal shape that is centered on an extended runway centerline. The RPZ is designed to protect people and property on the ground. It begins 200 feet beyond the landing threshold, and the dimensions of the RPZ are proportional to the type of aircraft that use the runway. Both ends of runway 7 would be shifted 800 feet to the west (Exhibit-). The completed RPZ (500 feet by 1,250 feet by 2,500 feet) would meet current FAA standards.

Taxiway M

A partial taxiway (taxiway M) will be constructed parallel to and west of runway 15R-33L. The taxiway (2,600 feet long by 35 feet wide) runs in a north to south direction, traverses runway 7-25 and parallels runway 15R-33L to the west. Taxiway M will provide a direct route for aircraft to travel from the parallel runways (15R-33L and 15L-33R) to the north west aircraft ramp. The taxiway will reduce the potential for runway incursions by aircraft crossing runway 7/25 and 15R/33L.

Access Roads

Three new access road connections are planned to serve the new parking structure and lots. The first connection, located 450 feet south of the existing loop road exit would serve a new surface lot and the planned parking garage. A second connection, 400 feet south of the first connection will serve the new air cargo building and a smaller parking lot. A third connection will be constructed, 900 feet to the south and opposite the southbound off-ramp from Route 217. This connection will serve long-term parking. The loop road (one-way-40 feet wide) that currently serves the airline terminal would be converted to a median divided one-way system. The loop would contain two roadways divided by a 12-foot median, a 16-foot curbside passenger loading/unloading area adjacent to the terminal, and two 12-foot travel lanes. One of the 12-foot lanes would be designated for taxis, shuttles and buses.

Parking

An additional 596 spaces would be added to the terminal during the first phase of the planned parking improvements. All of the phase one spaces would be at grade. Phase two would add an additional 350 spaces with the construction of a 650 space 3-story parking structure in an area south of the terminal. The new parking structure (240 feet by 325 feet) has not yet been designed, and no visual rendering of the building is included in the EIS/EIR for the Airport Facilities Plan.

Air Cargo Facility

There are currently three air cargo companies operating at the airport as well as airlines that accept freight shipments. Based on the increased demand for this service, a new 15,000 square foot facility is planned for construction at the south terminal. Independent air cargo facilities will also be located at the site. The new building will decrease the overall square footage currently used by cargo activities and enhance customer service.

T-Hangers and Service Road

There are presently 55 T-hangers available at the airport. T-hangers are used by general aviation aircraft in which the aircraft are parked alternately tail to tail. To meet current demand, and accommodate the projected number of additional general aviation aircraft that will need T-hangers by the year 2015, a total of 185 T-hangers are needed. An additional 130 hangers would be constructed beginning in 2002. A new service road is proposed to allow firefighting/maintenance vehicles to access the northeast quadrant of the airfield to eliminate potential conflicts/crossing situations with the large jet aircraft that are serviced on the Ampersand ramp. The service road will be located just west of the ramp.

Airline Terminal Expansion

The existing 43,500 square foot terminal will be expanded to 95,000 square feet. The terminal itself will be raised two feet above the 100 year flood level, electrical, mechanical, and plumbing facilities will be upgraded, a main lobby will be constructed, and safety and administrative offices will be consolidated. These improvements involve the demolition of all but the historic 1942 portion of the terminal. The 1967 and 1976 additions will be removed and the 1942 portion of the terminal will be renovated. Planning and design of the terminal expansion would take place during phase I of the project, although architectural renderings of the design concepts are included the EIS/EIR.

The four existing ground loading passenger gates will increase to five, and four new passenger loading bridge gates will be constructed at the south concourse which serves regional jets and larger aircraft. The two-story concourse addition will include central power and pre-conditioned air for aircraft parked at those gates. The improvements will increase the square floor area of passenger holding and ticket counter areas, baggage claim and makeup, rental car facilities, airline offices, food and beverage concessions, retail services, sky cap offices, and employee facilities.

II. Background/Project Purpose & History

The Santa Barbara Airport has been owned and operated by the City of Santa Barbara since 1941. The airport consists of 950 acres, and is the busiest commercial service airport on the California coast between San Jose and Los Angeles. Aviation support facilities and the airport consist of approximately 600 acres, and another 300 acres encompass the Goleta Slough and its associated wetlands and tidal channels. The airport is included in the FAA's National Plan of Integrated Airport Systems (NPIAS), which defines the role and future development of public-use airports throughout the United States. Santa Barbara Airport is classified as a Commercial Service Primary Airport, which serves short-haul air carrier routes of less than 1,500 miles. The terminal served approximately 793,000 passengers in 1999.

The original passenger terminal, constructed in 1942, is considered to be eligible for listing on the National Register of Historic Places on the basis of both its historical and architectural significance. It is associated with the earliest period of aviation in Santa Barbara (1918-1942), and is an example of the distinctive Santa Barbara Spanish Colonial Revival architectural style. It was remodeled and expanded in 1967, and further expanded in 1976 to its current size of 20,000 square feet. In 1976 the facility served approximately 398,000 passengers. The FAA recently completed a formal review of the Santa Barbara Airport's aviation forecast, and concluded that by the year 2015, an estimated 1,300,000 passengers would use the facility on an annual basis.

Previous Projects:

In 1997, the Commission granted a permit to the City (4-97-134) to re-grade portions of the Airport runway infield and taxiway safety areas, including the implementation of a wetland restoration and enhancement program that would create some 25.38 acres of transitional marsh habitat at Goleta Slough. The project was initiated in response to Federal Aviation Administration requirements to maintain airport runway and taxiway safety areas.

Aircraft Operations:

Aircraft operations by definition consist of the total number of take-offs and landings at an airport. The City states that in recent years the trend in operations has shifted away from the use of small 19 to 30 passenger commuter jets and turboprops to larger capacity regional jets that seat 60 or more passengers. Given this information, the number of enplanements is expected to rise, while the number of aircraft operations is expected to slow to a total of about 215,000 in the year 2015. Enplanements are defined as the number of passengers boarding or departing aircraft. Historical operations data are divided into four categories consisting of air carriers, air taxi, general aviation and military. Air carriers use aircraft with 60 or more seats, air taxis include commuter aircraft having a maximum passenger-seat configuration of 9 seats or less, and general aviation covers a diverse range of aviation activities except commercial air carriers and commuter airlines.

In 1999 aircraft operations at the Santa Barbara Airport consisted of the following:

8,196	Air carrier
36,647	Air taxi/commuter
122,810	General Aviation
804	Military
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168,457	Total Operations

Proposed Terminal Expansion:

The objective of the restoration and expansion of the terminal building is to extend the useful life of the facility, and allow it to function as an efficient, modern airline terminal while preserving its architectural character. The "Santa Barbara Airline Terminal Expansion Program Report" found that many of the terminal's electrical, mechanical and plumbing facilities, some now 50 years old, need to be upgraded. The report cites circulation difficulties in the terminal main lobby, inefficient operations, lack of support facilities, inadequate lobby and baggage claim space, and increased demand for air cargo and general aviation facilities as the primary reasons for the terminal expansion. The expansion of the terminal that took place 24 years ago in 1976 can not realistically meet the current and future passenger demand projected to use the facility by the year 2015.

Planning and design for the proposed terminal expansion would occur during the first phase of the project (2001 thru 2004). The terminal will double in size from the existing 45,300 square feet to 95,360 square feet.

FAA:

The FAA requires that all airports be operated under the provisions of 14 CFR Part 139 (Certification and Operations), which establish certification criteria for airports serving scheduled air carrier operations for aircraft with 30 seats or more. The FAA requires that the airport maintain runway safety areas, and defines the runway safety area as: "a defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway." The Santa Barbara Airport currently does not provide the requisite safety area overrun for runway 7-25.

The FAA Office of Safety Oversight completed a recent study entitled "Location of Commercial Aircraft Accidents/Incidents Relative to Runways" which analyzed the causes of such accidents. The study determined that improving the existing non-complying runway safety areas to meet minimum FAA design standards is necessary to ensure the overall safety of existing aircraft operations at the Santa Barbara Airport. Regardless of future passenger demand for commercial airline services, the improvements are required in order to meet current FAA safety standards.

The FAA further stipulates that the safety areas shall be:

1. Cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations;

2. Drained by grading or storm sewers to prevent water accumulation;
3. Capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and firefighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft;
4. Free of objects, except for objects that need to be located in the safety area because of their function. Objects higher than three inches above grade should be constructed of low impact resistant supports of the lowest practicable height with the frangible point no higher than 3 inches above grade. Other objects, such as manholes, should be constructed at grade. In no case should their height exceed 3 inches above grade; and
5. Safety areas must be compacted to 90 percent of their relative maximum level of compaction.

Bird Strike Hazards:

Bird use of wetlands in the area surrounding Goleta Slough is a concern to the FAA, and to the City of Santa Barbara, due the hazards birds pose to aircraft. The FAA is generally opposed to increases in wetland acreage in the vicinity of airfields regardless of the type of wetland and habitat. There are conflicting policies on the subject, and a current study (*Tidal Circulation and Bird Strike Study*) on tidal circulation and bird use of the airport property will provide guidance in determining a long-term wetland restoration strategy for Goleta Slough. To assess the feasibility of restoring historic tidal habitats in the Slough, the pilot study will examine the effects of tidally influenced bodies of water in Goleta Slough on bird activity and bird strike hazards at the airport, conduct a field study, and evaluate the potential effect on future modifications of the slough.

Safety:

The present runway safety area (RSA) at Runway 7-25 is 320 feet long and 500 feet wide at the west end, and 215 feet long and 500 feet wide at the eastern end. Minimum FAA design standards for C-IV runways require a 500 foot wide by 1,000 foot long RSA. These undersized safety areas have not been enlarged in the past as they were constrained by Tecolotito Creek to the west, and San Pedro Creek and Fairview Avenue to the east. Extending the RSA at Runway 7-25 would require crossing over or re-routing Tecolotito Creek, which could have potential impacts to wetlands and biological resources.

The FAA considers the types of aircraft that use the runway in assessing runway length requirements. At the Santa Barbara Airport, jets operating in scheduled service are most affected by runway length and are considered the critical aircraft group. Of all the variables considered in aircraft takeoffs (payload/elevation/wind speed/runway gradient/air temperature/obstacles) the payload, or maximum gross take-off weight of the aircraft and air temperature are the most critical. When air is less dense due to higher temperatures the climbing capabilities of aircraft are reduced. When runway length limitations are a factor, cargo may be limited or the number of passengers and their luggage may be reduced.

The proposed Taxiway M will allow aircraft landing on Runways 15R33L and 15L33L to access aircraft facilities on the northwest side of the airfield without crossing the runway several times. Under current taxiway conditions, aircraft landing on these runways must cross up to four active runways to access the northwest aircraft ramp area, and this greatly increases the probability of runway incursions, or unauthorized runway crossings.

In the year 2000, the Santa Barbara Airport had the third highest rate of incursions in California and the tenth highest in the nation, according to FAA data from 450 towered airports nationwide and summarized in the FAA Runway Safety Report 2000. Twice in the past four years, there were serious "near collision" incidents involving airplanes either taking off or landing across the path of another aircraft, according to FAA. Of California's nearly 40 towered airports that reported statistics, only LAX, with five near misses on the runway, has had more near collisions over the same period. The Santa Barbara Airport ranks ahead of such major airports such as SFO, as well as airports in Oakland and Seattle.

Goleta Slough:

The City of Santa Barbara Airport and Goleta Slough Local Coastal Program (LCP) (1982) describes Goleta Slough as an area of approximately 400 acres, of which 189 acres are classified as tidal marsh subject to tidal inundation through natural channels or culverts. Goleta Slough is designated "Recreational Open Space" in the LCP. The Goleta Slough Reserve Zone, which coincides with the Goleta Slough Ecological Reserve, is located 50 feet from the westerly end of Runway 7-25. The wetland communities within the slough include open water, coastal salt marsh, salt flats, seasonal wetland meadows, riparian woodland, shrub-scrub thicket and transitional wetlands. Upland areas include 25 acres south of the main slough channel adjacent to the University of California Santa Barbara (UCSB) campus.

Goleta Slough once occupied an area of over 1,200 acres. The natural harbor extended north of Hollister Avenue and east of the airport property for several miles, until sedimentation from upstream slopes filled most of the harbor with silt and a shallow lagoon was formed. The slough provides habitat to support a large resident bird population and serves as a resting and feeding site for migrating birds using the Pacific Coast flyway. In the 1940's, salmon runs throughout the slough and its feeder creeks were a common occurrence, and the slough has supported a recreational fishery for flounder.

Several current and former rare or endangered species have been identified in the slough including the Light-footed clapper rail, California least tern, American peregrine falcon, California brown pelican, Belding's savannah sparrow, California Red-legged frog, Tidewater goby and Southern California steelhead trout. Portions of Tecolotito Creek that flow into the Goleta Slough ecosystem are considered Essential Fish Habitat (EFS) for the rex sole and starry flounder, which spend part of their life cycle in the tidally influenced portions of the creek.

Goleta Slough Management Committee:

The Goleta Slough Management Committee includes federal, state and local agency staff; public and private property owners; public utilities; and public interest groups and land trusts. The GSMC's role is advisory and offers a forum for the review of the proposed plans and projects that directly or indirectly impact the Goleta Slough Ecosystem. The Committee has also pursued grants and made recommendation relating to wetland restoration and mitigation projects.¹ The committee has worked to develop the Goleta Slough Ecosystem Management Plan (GSEMP). The plan focuses on the protection and maintenance of the natural diversity of species, habitats and ecosystem functions of the slough, and the restoration and enhancement of those resources.

The objective of the GSEMP is to compile all existing plans and data related to the Goleta Slough Ecosystem Management Area, and provide a comprehensive approach to ecosystem management and project mitigation in the slough. The policies are advisory and are designed to complement those policies of regulatory agencies that retain control over the slough.

Consistency with Local and Regional Plans:

The City of Santa Barbara states that the proposed project is "potentially consistent" with the Santa Barbara County Airport Land Use Plan (ALUP). The plan establishes spheres of influence around the airport, and prescribes land use policies, building height restrictions, and soundproofing standards. The Santa Barbara Airport Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the Aviation Facilities Plan (AFP) states that the proposed project is potentially consistent with the following plans and policies:

- Santa Barbara Airport-Community/Industrial specific Plan (1998)
- Draft Goleta Slough Ecosystem Management Plan (1997)
- Santa Barbara City General Plan
- City of Santa Barbara Local Coastal Plan
- Santa Barbara Airport Aviation Facilities Plan
- City of Santa Barbara Local Coastal Plan-Airport and Goleta Slough (1982)
- Goleta Community Plan

Local Coastal Program:

The Santa Barbara Airport and Goleta Slough LCP was certified by the Commission on May 20th 1982. In 1998 the Commission approved an LCP Amendment, which incorporated the Airport Industrial Area Specific Plan into the City's certified Local Coastal Program. In the LCP, the City describes development that includes the lengthening of runway 7-25 an additional 400 feet, and an extension of runway 7-25's safety area. Other projects described include a taxiway ramp widening parallel to runway 15L-33R, additional aircraft parking and the re-routing of Los Carneros and Tecolotito Creeks as they drain into Goleta Slough. The LCP states that no additional development can take place within Goleta Slough, and the only area open for expansion at the Airport is to the north and east of the slough.

¹ Santa Barbara Airport Draft EIS/EIR for the Aviation Facilities Plan: pp. 3-152 (2001)

The Santa Barbara Airport Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the Aviation Facilities Plan states: "that to construct the airfield safety area projects, realign Tecolotito Creek, and expand the airline terminal, it will be necessary to amend the Local Coastal Program to remove the affected area from the Goleta Slough Ecological Reserve, and rezone the property to Airport Approach and Operations (AAO) and Airport Facilities (AF)". Additional areas south of Hollister Avenue near Carneros Creek which are designated "Major Public and Institution" would also need to be changed to "Goleta Slough Reserve" (GSR) and "Open Space." An LCP amendment is currently being prepared by the City of Santa Barbara for submittal to the Commission.

III. Phased Review

The Federal Aviation Administration (FAA) procedures require Commission concurrence in a consistency certification prior to finalization of an Environmental Impact Statement (EIS) and issuance of a record of decision (ROD). Consistency review is also necessitated by the fact that the project requires a permit from the U.S. Army Corps of Engineers. In these situations, the Commission performs its federal consistency review in a "phased" manner. The "phase" of the Commission's review that is before it at the present time is for the limited purpose of assuring that the fundamental concept, goals and objectives of the project are consistent with the applicable California Coastal Management Program (CCMP)/Coastal Act policies. (The standard of review for the subsequent coastal development permit will be the policies of the City of Santa Barbara-Airport and Goleta Slough LCP.) More detailed review at this time is precluded by the fact that final mitigation measures and monitoring plans have not been fully developed.

At this stage in the review process, the information submitted to date does not include final plans or detailed mitigation and monitoring plans. The City has not made final design decisions, and several project elements have not been finalized, including: (1) final detailed habitat configurations; and (2) the biological, water quality, and other monitoring plans. Thus, the consistency certification submitted contains only a conceptual plan and conceptual mitigation measures. To the extent mitigation measures have been committed to and described, as discussed in the findings below, the Commission is able to find the project consistent with the applicable Coastal Act policies. Detailed design will follow and be the subject of a subsequent coastal development permit application submitted by The City of Santa Barbara.

Any changes to the project design or mitigation commitments raising Coastal Act policy concerns not previously identified could independently trigger additional federal consistency review under the provisions of Section 930.66(b) and/or Section 930.100(b) of the federal consistency regulations (15 CFR Part 930), which provide for re-review based on "changed circumstances" of federally permitted and federally funded activities in which the Commission has previously concurred (i.e., based on a determination that the project is having coastal zone effects that are substantially different than originally proposed and, as a result, the project is no longer consistent with the applicable coastal management program policies).

IV. Status of Local Coastal Program

The standard of review for federal consistency determinations is the policies of Chapter 3 of the Coastal Act, and not the Local Coastal Program (LCP) of the affected area. If the LCP has been certified by the Commission and incorporated into the California Coastal Management Program (CCMP), it can provide guidance in applying Chapter 3 policies in light of local circumstances. If the LCP has not been incorporated into the CCMP, it cannot be used to guide the Commission's decision, but it can be used as background information. The City of Santa Barbara's Goleta Slough/Airport LCP has been incorporated into the CCMP.

V. Applicant's Consistency Certification

The City of Santa Barbara has certified that the project is consistent with the California Coastal Management Program.

VI. Staff Recommendation

The staff recommends that the Commission adopt the following motion:

MOTION: I move that the Commission concur with consistency certification CC-058-01 that the project described therein is consistent with the enforceable policies of the California Coastal Management Program (CCMP).

STAFF RECOMMENDATION:

Staff recommends a YES vote on the motion. Passage of this motion will result in a concurrence with the certification and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

RESOLUTION TO AGREE WITH CONSISTENCY CERTIFICATION:

The Commission hereby concurs with the consistency certification by the City of Santa Barbara, on the grounds that the project described therein is consistent with the enforceable policies of the CCMP.

VII. Findings and Declarations:

The Commission finds and declares as follows:

A. Wetlands and Environmentally Sensitive Habitat.

1. Coastal Act Policies. The Coastal Act provides that:

30233(a): The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where

feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

- (1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*
- (2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels*
- (3) In wetland areas only, entrance channels for new or expanded boating facilities*
- (4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.*
- (5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*
- (6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.*
- (7) Restoration purposes.*
- (8) Nature study, aquaculture, or similar resource dependent activities.*

(c) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary...

30240. (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

(a.) Wetland Impacts

Wetland impacts occur in ten separate locations of the Santa Barbara Airport property. The information below provides a description of the biological and physical attributes of Goleta Slough and its upstream creeks and channels, permanent and temporary wetland and habitat impacts, the Airport's *Tidal Circulation and Bird Strike Study*, and input from other regulatory agencies.

Goleta Slough

Goleta Slough is an estuary which is dominated by marine influences and supports an extensive salt marsh. Seven creeks (Tecolotito, Carneros, San Pedro, Las Vegas, San Jose, Atascadero and Maria Ignacio) drain southward from the Santa Ynez Mountains, discharging into the slough. The present condition of the slough reflects the interaction of changing sea levels with processes of erosion and deposition at the mouths of these streams over thousands of years. Tidal circulation extends up each of the tributaries with the exception of La Vegas and Maria Ygnacio Creeks. The Goleta Slough ecosystem encompasses diverse wetland and habitat types. It supports species which are both resident and migrant that are regionally rare in coastal California, or locally rare in Santa Barbara County.

An estimated 279 bird species have been reported within the Slough, and of these, 121 species are water associated, and 158 species occur primarily in upland areas. The salt marsh vegetation and mudflats offer roosting and nesting areas and foraging habitat for several avian species. Sora and Virginia rail, several species of herons, and the state listed endangered Belding's savannah sparrow all feed in the dense pickleweed (*Salicornia virginica*) vegetation. Open mudflats provide roosting and resting areas for shorebirds and other migratory species.

Vegetation and habitat types in the slough include extensive wetland and upland areas. Wetlands include: estuarine, riverine, palustrine, intertidal estuarine and low intertidal mudflats. Upland vegetation classified as ruderal has colonized most of the upper surfaces of the artificial dikes and berms that line the slough's basins and creek channels. Scrub vegetation is scattered over many parts of the area. Coastal bluff scrub is common at the project area, and Coastal sage scrub vegetation occurs along the southern margin of Goleta Slough.

Within the airport property and elsewhere in the Goleta Slough Ecosystem, the extent of estuarine wetlands has been reduced by diking and filling. What remains is primarily in the tidal floodplain of lower Tecolotito Creek, south of the airfield. Most of this area experiences limited tidal circulation because of inadequacies in the system of channels and culverts that connect the creek to the surrounding marsh. In the lower portions of Goleta Slough the mouth of the slough is tidally influenced and large mudflats are exposed at the lowest tides.

A sand bar develops across the mouth as winter runoff declines, which is periodically breached by the flood control district to allow tidal flushing. Vegetation in the lower part of the slough is dominated by pickleweed (*Salicornia virginica*); with dodder (*Cuscuta salina*), alkali heath (*Frankenia salina*) and fleshy jaumea. Subtidal and intertidal mudflats are frequently vegetated with algae. Shrub/scrub wetlands and upland scrub habitats contain big saltbush (*Atriplex lentiformis* ssp. *lentiformis*), coyote bush (*Baccharis pilularis*), and woolly sea-blite (*Suaeda taxifolia*). The stream and slough channels have little to no vegetation, and prairie bulrush (*Scripus maritimus*) occurs in patches along the channel margins.

Tecolotito Creek

Tecolotito Creek is the second largest creek on the airport property. It enters the airport through a concrete culvert under Hollister Avenue, and has a 100 year storm discharge of 4,600 cubic

feet per second. The creek traverses Goleta Slough through man-made channels for the first two thirds of its length, and then through a natural channel. It leaves the airport at the bike path footbridge at the end of Moffet Place, continues under Ward Memorial Drive, and then joins San Pedro, San Jose and Atascadero creeks before discharging to the ocean at Goleta Slough. The width of the creek ranges from 75-150 feet, with a depth of 10 to 20 feet.

Since the 1970's, beginning with construction of the airport, Tecolotito Creek has been excavated and channelized to convey floodwaters around the airfield. Most of this activity has taken place from Hollister Avenue, to approximately one mile upstream from the creek's confluence with Atascadero, San Jose, and San Pedro Creeks near the mouth of Goleta Slough. The effects of the constricted channel, and the relatively broad, level area of adjacent tidal marsh make this area extremely vulnerable to sedimentation during winter flooding. Flood waters laden with sediment may spill over creek banks at the point of constriction, resulting in natural berm formation along the creek, and an elevation of the surrounding marsh plain.

The elevated creek banks and marsh plain tend to impound floodwaters and cause further sedimentation in lower areas. The process has raised elevations enough to eliminate tidal circulation from several locations, and the vegetation in the area is undergoing a transition from tidal marsh to transitional brackish wetland and upland habitat. The area downstream of Hollister Avenue has been excavated and desilted with a dragline to form a sedimentation basin. Streamflow at this location is intermittent in the summer months.

Vegetation on the upper portions of the banks near the sedimentation basin are weedy with tree tobacco, thistle, mustard, castor bean, jimsonweed (*Datura* sp.), coyote brush (*Baccharis pilularis* (ssp. *consanguinea*), poison hemlock (*Conium maculatum*), escape sage (*Salvia* sp.) and rice grass (*Oryzopsis miliacea*) being the common species. The lower portions of the bank adjacent to the channel support patches of pickleweed, saltgrass, and river bulrush. A sand bar at the upper end of the basin is covered with willow shoots, cocklebur, curly dock (*Rumex salicifolius* var. *transitorius*), and cattail.

Areas of the streambed contain cattail/broad leafed cattail, a variety of bullrush, willow dock, willow weed (*Polygonum lapathifolium*), iris-leaved rush (*Juncus xiphioides*), creeping bentgrass (*Agrostis stolonifera*), watercress (*Rorippa nasturtium aquaticum*), water speedwell, canary grass and beard grass (*Phalaris paradoxa*). South of Hollister Avenue the slopes of the channel banks are covered with thick upland vegetation that offers cover and nesting habitat for mammal, bird, reptile, and amphibian species.

Carneros Creek

The creek enters the airport property just east of Aero Camino Road at Hollister Avenue. As it crosses Hollister Avenue, it turns west and parallels Hollister Avenue until it intersects with Tecolotito Creek. The Carneros Creek channel is surrounded by heavily disturbed upland habitat providing easy access for animals. A dirt road borders the creek, and a row of willows on the west bank of the channel offers limited cover for wildlife. The stream channel in the sedimentation basin area is primarily sand with gravel and small cobbles in the low flow channel

at the north end of the basin. The stream channel in the sedimentation basin area (located on the south side of Hollister Avenue) has been dredged with a dragline to control sediment.

The bank on the east side of the sedimentation basin has been disturbed in the past and is dominated by weedy species such as introduced grasses and hottentot fig. Mugwort is also interspersed along the bank. The west bank is similar, but with several patches of arroyo willow along the edge of the channel. Understory plants in the willow patches include coyote bush, California blackberry (*Rubus ursinus*), sandbar willow, and branching phacelia (*Phacelia ramosissima*). The sand bars within the channel support cocklebur and dock as well as patches of pickleweed and California bullrush.

(b.) Allowable Use Test

The project entails both temporary and permanent fill in wetlands as defined under the Coastal Act, and therefore triggers the 3-part test under Section 30233(a) for projects involving wetland fill: (a) the allowable use test; (b) the alternatives test; and (c) the mitigation test. Under the first of these tests, a project must qualify as one of the eight stated uses allowed under Section 30233(a). Since the other allowable uses clearly do not apply, the Commission must determine whether the proposed project can be permitted under Section 30233(a)(5), which authorizes fill for: "*Incidental public service purposes, including but not limited to, burying cables, pipes or inspection of piers and maintenance of existing intake and outfall lines.*"

In order to be for an "incidental public service purpose" a proposed fill project must satisfy two tests: 1) the project must have a "public service purpose," and 2) the purpose must be "incidental" within the meaning of that term as it is used in section 30233(a)(5).

Because the project will be constructed by a public agency for the purpose of providing transportation services to the public, the fill is for a public service purpose. Thus, the project satisfies the first test under section 30233(a)(5).

With respect to the second test, in 1981, the Commission adopted the "Statewide Interpretive Guidelines for Wetlands and Other Wet Environmentally Sensitive Habitat Areas" (hereinafter, the "Guidelines"). The guidelines analyze the allowable uses in wetlands under Section 30233 including the provision regarding "incidental public service purposes." The Guidelines state that fill is allowed for:

Incidental public service purposes which temporarily impact the resources of the area, which include, but are not limited to, burying cables and pipes, inspection of piers, and maintenance of existing intake and outfall lines (roads do not qualify).

A footnote (no. 3) to the above-quoted passage further states:

When no other alternative exists, and when consistent with the other provision of this section, limited expansion of roadbeds and bridges necessary to maintain existing traffic capacity may be permitted.

The Court of Appeal has recognized the Commission's interpretation in the Guidelines' of the term "incidental public service purposes" as a permissible one. In the case of *Bolsa Chica Land Trust et al., v. The Superior Court of San Diego County* (1999) 71 Cal.App.4th 493, 517, the court found that:

... we accept Commission's interpretation of sections 30233 and 30240... In particular we note that under Commission's interpretation, incidental public services are limited to temporary disruptions and do not usually include permanent roadway expansions. Roadway expansions are permitted only when no other alternative exists and the expansion is necessary to maintain existing traffic capacity.

In past cases the Commission has considered the circumstances under which fill associated with the expansion of an existing "roadbed or bridge" might be allowed under Section 30233(a)(5). In such cases the Commission has determined that, consistent with the analysis in the Guidelines, the expansion of an existing road or bridge may constitute an "incidental public service purpose" when no other alternative exists and the expansion is necessary to maintain existing traffic capacity.

The Commission recently granted to the Cities of Seal Beach and Long Beach a coastal development permit (5-00-321), for the construction of bridge abutments and concrete piles for the Marina Drive Bridge located on the San Gabriel River. The Commission found that the project involved the fill of open coastal waters for an incidental public service purpose because the fill was being undertaken by a public agency in pursuit of its public mission, and because it maintained existing road capacity.

The Commission has also determined in connection with a project proposed by the U.S. Air Force (USAF) that permanent impacts to wetlands are allowable under Section 30233(a)(5) of the Coastal Act as an incidental public service because the USAF was undertaking the fill in the pursuit of a public service mission and because the "permanent fill [was] associated with a bridge replacement project [that] would not result in an increase in traffic capacity of the road." (CD-70-92).

Thus, based on past interpretations, fill for the expansion of existing roadways and bridges may be considered to be an "incidental public service purpose" if: (1) there is no less damaging feasible alternative; (2) the fill is undertaken by a public agency in pursuit of its public mission; and (3) the expansion is necessary to maintain existing traffic capacity. An important question raised in this case is the applicability of this interpretation to transportation infrastructure other than roads and bridges, such as the construction of a "safety area" at the end of an airport runway.

One such case was a light rail train mass transit proposal in San Diego (CC-64-99), where a bridge support piling was located in a wetland. The Commission determined that the proposal was not an allowable use under Section 30233 because the purpose of the project was not to

maintain existing capacity but rather to expand the capacity of the light rail service by extending it to a new area.

The Commission's analysis in CC-64-99 supports the proposition that the above identified interpretation of section 30233(a)(5) may be applied to forms of public transportation other than roads. The proposed airfield safety projects and taxiways will increase the size of a safety area of an existing runway and thus are a public transportation project very similar in nature to road or bridge construction projects. The question thus becomes whether the improvements are necessary to maintain the existing capacity of the runway.

It is necessary to construct Taxiway M to operate this airport safely. Under current conditions planes landing on this runway must cross up to four active runways to access the ramp area, and this has greatly increased the probability of runway incursions (contact between aircraft, or near misses) and unauthorized runway crossings. Taxiway "M" (2,600 feet long by 35 feet wide) will provide a direct route for aircraft that land on runway 15R33L and 15L33L to reach the terminal and northwest side of the airfield.

The construction of Taxiway "M" triggers the application of FAA regulations, (CFR Section 139.309) effective January 1988, that link construction or reconstruction projects to conformance with current runway safety area requirements. These requirements mandate the increase in the runway safety area to ensure adequate safety for the current uses of the runway. Specifically, The FAA requires a 1,000 foot long by 500 foot wide safety area at either end of runway 7/25 in accordance with FAA Circular 150/5300-13 which defines the runway safety area as...

A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway.

While the location of the primary runway will be shifted to accommodate the larger safety area (RSA) as prescribed by the FAA, the runway length and width (6,052 feet by 150 feet), as well as the functional capacity of the runway, will not change.

Runway capacity is functionally limited by the design parameters that the FAA uses to classify an airport. Those criteria include pavement strength and width, approach speed categories, the airplane design group (determined by wingspan), and the weight class of the aircraft. The Santa Barbara Municipal Airport is classified as a category C-IV runway with the following configuration:

Approach Category "C"	approach speed of \geq 121 knots and $<$ 141 knots
Design group IV	wingspan \geq 118 feet and $<$ 171 feet
Weight Class	max certified takeoff weight $<$ 300,000 lbs
Typical Aircraft	Boeing 737, 757, P-3 and MD-80
Runway Safety Area	1,000 feet long by 500 feet wide

This project will not result in increases in the size of the type of aircraft at the Santa Barbara Airport because larger, wide body aircraft such as the DC-10 and Boeing 747 require substantially longer runway length and greater pavement strength.

The operational capacity of the airport, as well as market driven demand for flights, also play an important role in characterizing potential capacity of the airport. The FAA defines capacity as:

Capacity (throughput capacity) is a measure of the maximum number of aircraft operation which can be accommodated on the airport or airport component in an hour. Since the capacity of an airport component is independent of the capacity of the other airport components, it can be calculated separately.[Exhibit 30]

The service volume capacity estimates for the Santa Barbara Airport indicate that with a capacity of 475,000 annual operations², the airport is well below that threshold with 168,457 annual operations in 1999. Accordingly, there is no unmet demand for increased operations (see page 7 for the FAA definition of operations and enplanements). In reviewing historical data for operations at the airport from 1977 through 1999, total operations peaked in 1984 at 240,819.

Total passenger activity (enplaned passenger activity) described in the City's *Aviation Facilities Plan* shows an average annual increase from 1970 to 2000 of four percent, although extreme fluctuations occurred throughout this period. As a result of the Airline Deregulation Act in 1978 there was some growth in the number of regional airlines serving markets in California and in Santa Barbara. In 1980 there were an estimated 216,407 passengers, growing to 341,427 in 1987, a 57% increase in 7 years. By 1990 this total had dropped to 314,205 and continued to decline for several more years, reaching a low of 264,343 in 1995. For the period 1999 thru 2015 the FAA projects total growth (enplanements) at the Santa Barbara Airport to increase by 2.3% per year reaching 550,000 in 2015. Based on the information above the airport is well below historic levels and operational capacity. In addition, the FAA states that the proposed improvements will not increase operational capacity.

In conclusion, the improvements are being proposed primarily to focus on public safety needs. In addition, the project is necessary to maintain existing capacity of runway and airport operations, and does not include a permanent roadway or runway expansion. While the location of the primary runway will be shifted to accommodate the runway safety areas prescribed by the FAA, the primary runway length and width (6,052 feet by 150 feet) and the capacity of the runway as designed will not change. The Commission therefore concludes that, as an incidental public service under Section 30233(a)(5), the project constitutes an allowable use for fill of wetlands.

(c.) Alternatives

The primary alternatives analyzed by the City of Santa Barbara in the Draft EIR/EIS have been: (1) The West Creek Realignment; (2) The West Creek Culvert; and (3) The No Project

² Draft Aviation Facilities Plan, City of Santa Barbara Airport Department (2001)

Alternative. The primary difference between the two build alternatives involves how Tecolotito Creek is affected. The preferred alternative (West Creek Realignment Alternative) would realign the creek around the runway safety area. The culvert alternative is designed to place Tecolotito Creek in a closed culvert beneath the runway safety area in lieu of rerouting it.

The City determined that realigning Tecolotito Creek would be less environmentally damaging than the culvert alternative because it preserves the creek as open water habitat. Realigning the creek using a culvert would require the additional culverting of San Pedro Creek, pose potential airfield flooding impacts from culvert blockages and sediment loading, and may require placing Fairview Avenue in a tunnel. Secondary impacts associated with the culvert alternative include the fragmentation of the estuary and adjacent wetland habitats (Belding's svannah sparrow) in the floodplain. The realignment alternative avoids potential significant impacts to the southern California Steelhead Trout designated critical habitat, a federally listed endangered species. The culvert alternative would result in long-term habitat modifications that have the potential to create barriers to migration for which there is no feasible mitigation.

West Creek Realignment Alternative (proposed alternative)

This alternative would combine Tecolotito Creek with Carneros Creek, rerouting Tecolotito Creek 2,000 feet to the west of the new runway safety area. The creek realignment would include an expanded settling basin to trap sediment before it reaches Goleta Slough, and include the filling of **4.62 acres** of Carneros and Tecolotito Creek to allow for the extension of runway 7-25 to the west. Approximately **13.30 acres** of permanent impacts to wetlands would occur under this alternative. The filled portion of the creeks would be covered with pavement or gravel to accommodate construction of the new runway safety areas. Additional permanent impacts include **18.91 acres** of upland habitat consisting of upland grassland and coastal sage scrub communities that function as buffers for wetland habitats.

West Creek Culvert Alternative

Under this alternative Tecolotito Creek would remain in its present location and be placed in a box culvert so that the runway can be constructed above it. A concrete box culvert (6-8 feet high by 80 feet wide by 750 feet long) will be constructed on Tecolotito Creek in its current location, at the westerly end of runway 7-25. The culvert would extend upstream and downstream from the 500-foot wide safety overrun area.

This alternative would result in **1.38 acres** of permanent impacts to stream channel and bank habitat, eliminate **5.79 acres** of palustrine wetlands in the floodplain bordering Tecolotito Creek and at Runway 15/33, and result in **13.14 acres** of permanent impacts to upland habitats consisting of grassland and coastal sage that function as buffers for wetlands.

The culvert alternative will disrupt upstream and downstream habitats during construction because tidal and freshwater stream flow, as well as groundwater would need to be kept out of the construction zone by damming, diversion or pumping. While these impacts are considered temporary-they are unavoidable and significant. The long-term habitat loss is considered significant because directing the creek through a box culvert would fragment the estuary and

create a partial or complete barrier to plant and animal dispersal, causing additional impacts to fish, wildlife, and botanical resources.³

No Project Alternative

Under the No-Action alternative, the construction of a regulation runway safety area and the relocation of runway 7-25, and taxiway M would not occur. The increase in passengers through the year 2015 (1.5 million) would still occur, although the required safety standards would not be met. The City states that the no project alternative would entail adverse effects on public access, the marine environment and sensitive species. Air quality and traffic congestion would continue to increase without efficient transportation modes that allow for maximum coastal access, flood hazards and sediment build up would threaten water quality and sensitive habitat, public buildings and structures would be subject to inundation in the event of flooding due to impaired circulation and sedimentation of main channels which drain into Goleta Slough, and estuarine functions and habitat values will continue to diminish as the slough undergoes a transformation from tidal marsh to transitional brackish wetland. The Santa Barbara Airport would not meet FAA standards of Certification and Operations necessary to ensure the safety of the public and aircraft operations, and the risk of damage to airplanes due to non-complying runway safety areas would continue.

The following table compares wetland impacts from each alternative.

**Alternative Analysis
 Permanent Impacts to Wetlands - Open Water Habitat⁴**

	(1.) West Creek Realignment Alternative	(2.) West Creek Culvert Alternative	(3.) No-Project Alternative
Creek Bed and Bank Habitat			
Tecolotito Creek	4.11	1.38	0
Carneros Creek	0.51	0	0
Salt Flats			
Carneros Creek Channel	0.34	0	0
Tecolotito Creek Channel	0.32	0	0
Service Rd	0.01	0	0
Wetlands			
Tecolotito Creek (East)	1.01	1.01	0
Tecolotito Creek (West)	6.61	4.39	0
Taxiway M	0.39	0.39	0
Total Sq ft.	579,334	312,318	0
Total Acres	13.30	7.17	0

³ Santa Barbara Airport Draft EIS/EIR for the Aviation Facilities Plan: pp. 3-190 (2001)

⁴ Santa Barbara Airport Draft EIS/EIR for the Aviation Facilities Plan: Table 3.10-2 "Impacts of Aviation Facilities Alternatives on Wetlands and Open Water Habitats" (2001)

The Commission finds that the City of Santa Barbara has examined feasible alternatives and proposes the least environmentally damaging feasible alternative. Where wetlands in the project area contain environmentally sensitive habitat (the Southern California Steelhead and Belding's savannah sparrow), the City has modified the project to avoid adverse effects to these species. Given complex physiographic and biological features that encompass Goleta Slough, feasible alternatives that would further reduce adverse impacts are either not available or are more environmentally damaging.

The Commission therefore concludes that the City has implemented design modifications that avoid significant wetland and environmentally sensitive habitat impacts, that the proposed project represents the least environmentally damaging feasible alternative, and that the project is therefore consistent with the alternatives test of Section 30233(a) of the Coastal Act.

(d.) Mitigation

The City has delineated wetlands based on both Coastal Act and the U.S. Army Corps of Engineers definitions, noting that the Coastal Act definition can be more inclusive than that contained in the Corps' manual. Using Corps manual definitions, the overall project would involve approximately **11.01 acres** of wetland fill. Using the broader Coastal Act definition, The City has determined the overall wetland fill would be **13.30 acres** of permanent wetland fill (which will be mitigated on-site) and **1.77 acres** of temporary wetland fill (which will be restored on-site). Replacement ratios recommended by Commission staff evaluated the habitat value and type affected, and there will be no permanent net loss of wetland habitat as a result of the project. Mitigation ratios for impacts to wetlands will be 2.9:1, and mitigation ratios for creeks and open channels will be 2:1.

Summary of Temporary and Permanent Wetland Impacts

Location	Habitat	Type	Permanent Impact	Temporary Impact
Service Road RSA (500'x1,000") Runway/Taxiway "B" West	Non-tidal seasonal wetlands dominated by annual grasses and herbs without impounded water. Palustrine persistent emergent wetlands.	Wetland	7.62	1.52
	Non-tidal unvegetated salt flats	Wetland	0.67	
Cameros Creek realignment Tecolotito Creek realignment	Tidal open water and mudflats. Estuarine intertidal aquatic bed and unconsolidated bottom.	Estuary	4.62	0.06
Taxiway "M"	Non-tidal seasonal wetlands dominated by annual grasses and herbs without impounded water. Palustrine persistent emergent wetlands.	Wetland	0.29	0.14
Approach lights/service road	Non-tidal seasonal wet grassland without impounded water. Palustrine persistent emergent wetlands.	Wetland	0.10	0.05
Total:			13.30	1.77

Impacts

The preferred alternative would result in **4.62 acres** of permanent impacts to existing stream channel bed and banks. The project could result in some loss of functions and values if tidal action and stream flow through the upper portions of the estuary are disrupted, and if native wetland and contiguous upland buffer vegetation are not reestablished along new stream banks.

Permanent impacts to **8.68 acres** of additional Coastal Act wetlands would occur from the project. These 8.68 acres are included in the 13.30 acres in the table above, although mitigation for these impacts will be at a higher ratio than for the 4.62 acres of stream channel impacts.

Impacts to upland habitats would result from the realignment of Tecolotito Creek, Taxiway M, construction of the runway safety area at the western end of runway 7-25, and the abandonment of sections of Carneros and Tecolotito Creek. Permanent and temporary impacts to grassland and coastal sage scrub communities (**18.91 acres**) will also occur in the existing graded runway safety area. These are not considered wetlands

**Impacts to Wetlands and Sensitive Habitat
 West Creek Realignment (Preferred Alternative)**

	Wetlands	Uplands	Other Areas
Carneros Creek realignment	0.51	2.04	.54
Tecolotito Creek realignment	4.11	3.73	.72
Service Road	0.99	0.58	0.01
RSA (500'x1,000")	1.50	9.97	0
Runway/Taxiway "B" West	0.58	1.67	0.60
Other RSA-West	1.30	0.92	0.20
Runway/Taxiway East	0.43	0	1.28
New RSA-East	0.58	0	2.58
New approach lights	0.10	0	0
Taxiway "M"	0.29	0	0
Total Sq ft.	579,334	823,719	258,310
Total Acres	13.30	18.91	5.93

Although the City has selected several mitigation sites adjacent to the project, the Federal Aviation Administration (FAA) and the USDA Wildlife Services has recommended deferring a wetland mitigation approach based on increasing tidal circulation in the slough until the Airport's *Tidal Circulation and Bird Strike Study* evaluating the relationship between bird strike hazards and the presence of tidal and non-tidal waters near the airfield is completed. The City's Draft EIS/R further states that the West Creek Realignment Alternative (the City's preferred alternative) includes an increase in the length of Tecolotito Creek and mitigation for wetlands that would be affected by the westward extension of runway 7/25. In order to reduce the potential for bird strikes, the mitigation (new creek channel and seasonal wetland) has been designed to be as far away from the end of runway 7/25 as possible. The wetland mitigation

would not result in additional areas of ponded water on the airport property, rather these areas would be saturated and capable of supporting vegetation species that tolerate saturated conditions.

The Wildlife Service (USDA) reviewed the City's proposal to realign Tecolotito Creek and the proposed mitigation measures and concluded that:

The western extension does not seem to increase the wildlife hazards at SBA based upon the information provided to Wildlife Services (WS)...Area I is the furthest distance from runway 7/25 and will not likely increase wildlife hazards to aviation...

In comments to the City of Santa Barbara related to the bird strike issue, the National Marine Fisheries Service, the Santa Barbara Audubon Society, and the Goleta Slough Management Committee have urged the City to consider tidal restoration to diked basins on the airport property. Although a long-term goal for Goleta Slough is to create a self sustaining and enhanced estuarine system, the uncertainties of bird strike hazards as a consequence of tidal restoration in the slough must be considered. There are conflicting views among FAA, and federal and state wildlife protection agencies, and a lack of data related to the effects of tidally influenced bodies of water in Goleta Slough on bird activity and bird strike hazards. The results of the *Tidal Circulation and Bird Strike Study* will provide information to evaluate the effects of such restoration in attracting different guilds of birds and their potential hazard to aircraft.

To compensate for the permanent loss of wetlands the City proposes to create and restore seasonal wetlands and open water habitat similar to those affected by the project. Mitigation could begin prior to the airfield improvements. Areas temporarily affected will be restored to pre-construction conditions. The City has selected potential mitigation sites that involve the restoration of palustrine transitional wetlands.

Open Water and Mudflats

The relocation of Tecolotito and Carneros Creeks will create 9.3 acres of channel containing open water and mudflat wetlands. The relocated creeks will have the same width and depth as the existing creek channels, and the banks will be stabilized with native shrubs to prevent erosion. The new creeks will have annual grassland buffers, identical to the current creeks, except the relocated creeks will be farther from the runway.

Wetland Restoration

Wetland restoration on slough berms encompassing 12.7 acres will include the removal of non-native species such as tree tobacco, Italian thistle, and poison hemlock. These non-native species (and their seed bank in the soil) will be removed from the tops and sides of the berms through a two-year series of "grow-kill" herbicide treatments. The tops of the berms will be treated to facilitate the establishment and long-term persistence of wetland species by increasing soil moisture conditions.

Shallow depressions (one inch in depth) would be graded on the tops of the berms. These depressions would increase percolation by rainfall and reduce runoff to Tecolotito Creek. The objective for the berm soils is to create soil saturation to within 6 inches of the surface for an average of 14 days or more. In the winter following the last treatment, the berms will be revegetated to create seasonal wet grassland using species such as alkali weed, saltgrass, alkali mallow, creeping rye-grass, meadow barley, western ragweed, alkali heath and saltbrush.

This weed removal and restoration of the berms would remove the single largest source of weed seeds in Goleta Slough and replace this with habitat similar to that being affected by the runway safety area extension. The new habitats will benefit the adjacent tidal marsh habitat by creating native plant cover and food sources for use by wildlife, particularly the federally listed Belding's savannah sparrow which nests in the pickleweed marsh and forages in nearby native grassland and scrub areas.

Wetland Creation and Enhancement in "Area I"

New seasonal wetlands will be created in upland portions of "Area I", a 25 acre site owned by the airport located between the UC Santa Barbara bluffs and Tecolotito Creek. This location is dominated by a complex mixture of annual grassland, coyote brush scrub, poison oak stands, scattered ornamental trees, eucalyptus groves, and weedy patches (pampas grass). The area contains several small isolated wetlands. Much of the site was originally an upland that was lowered to construct the airfields during the 1940's. Portions of the site are highly disturbed by weeds, piles of rubble and secondary soil deposits, and the presence of an abandoned brick incinerator. A large storm drain empties into the site conveying runoff from UC Santa Barbara.

Two existing wetland patches in the middle of Area I will be enhanced by removing non-native plants and planting additional wetland plants such as spikerush, net-sedge, toad rush, bulrush, and pickleweed. Upland habitats will be retained in continuous patches at the site to retain wildlife habitat and movement corridors. Eucalyptus trees, poison oak and an abandoned incinerator will be removed. A total of 9 acres of new seasonal wetlands will be created and 2.2 acres of existing seasonal wetlands will be enhanced at the 25 acre site, and it will be protected for habitat purposes. It is situated adjacent to the UC Santa Barbara bluffs where an upland habitat restoration project was completed several years ago that includes an educational trail.

The wetlands would provide some secondary functions such as flood reduction by capturing and detaining more of the runoff from UCSB that empties into Goleta Slough, and the use of the area for research and public education projects that will facilitate new non-consumptive recreational uses.⁵

Area R-2

Adjacent to Tecolotito Creek, and south of runway 7/25, a small man made basin exists which contains non-tidal seasonal wetlands. After Tecolotito Creek is filled and re-routed in this location, the disturbed areas will be graded to match the elevation of Area R-2, which supports

⁵ Draft Conceptual Wetland Mitigation Plan for the Airfield Safety Projects, URS Corporation (2001)

non-tidal wet grassland. These newly lowered areas will then be planted with pickleweed, alkali heath, alkali weed, sand spurrey, meadow barley and saltgrass, to create 2.2 acres of new seasonal wetlands.

Enlarged Sediment Basins

Existing sediment basins will be enlarged along Tecolotito and Carneros Creeks during the process of relocating the creeks. The enlarged basins will be designed to capture greater amounts of sediment, minimizing deposits in tidal wetlands of Goleta Slough that have affected tidal circulation and the conversion of wetlands to non-native uplands.

Seasonal Wetland Restoration at Tecolotito Creek Berms

Berms on both sides of Tecolotito Creek in the middle of Goleta Slough direct flood flows to the mouth of the slough, and function to protect the slough from sedimentation that would raise the elevation of the marsh and convert it to a non-tidal area. These earthen berms were constructed from on site material that appears to be sediment from the channel. The restoration in this area (12.7 acres) is described in the beginning of this section.

Wetland Mitigation Summary

Mitigation	Location	Wetland Type	Acres
Create new seasonal wetlands	On berms next to Tecolotito Creek and tidal salt marsh	Non-tidal low growing wetland herbs , grasses and shrubs; palustrine persistent emergent wetlands	12.7
Create new seasonal wetlands	Area "I" in uplands and adjacent to tidal marsh	" "	9.0
Create new seasonal wetlands	Area R-2 in uplands and wetland grassland	" "	2.2
Enhance existing seasonal wetland	Area "I" in uplands and wetlands	" "	1.3
Create new tidal open water and mudflats	New Tecolotito and Carneros Creek channels	Estuarine inter-tidal aquatic bed and unconsolidated bottom	9.3
Total			34.5

Performance Criteria

The City has included performance standards to measure the success of the proposed wetland mitigation plan that includes target hydrologic objectives, the establishment and maintenance of native wetland plants, target functions and values, and the reduction of non-native weedy species. Also included in this section is a maintenance and monitoring program that will provide for:

- A 2-year plant maintenance period and 5 year monitoring period.
- A provision to include an additional 3 year monitoring period after the end of any active management (such as irrigation, replanting, or substantial weed removal) to ensure that new habitats are self sustaining.
- A provision to extend the 7 year maintenance and monitoring period should the performance goals (target wetland vegetation goals) not be met by year 7.

- The Santa Barbara Airport will manage non-native weeding at the restoration sites in perpetuity.

* *Target Wetland Vegetation Goals at Year 7* included in this staff report identifies performance goals for native plant cover, the establishment of native wetland plant species, and acceptable cover percentages of non-natives for the mitigation areas (see exhibit 21).

This mitigation plan included in the City of Santa Barbara's consistency certification incorporates acceptable mitigation ratio commitments and locations, which were developed in consultation with CDFG, USFWS, and Commission staff (2.9:1 for 8.68 acres of wetlands and 2:1 for stream channel). The City has further provided an implementation schedule, detailed monitoring methodology, performance measurements, contingency plans, and an annual reporting process which would contain a quantitative analysis of attainment of performance standards. At this time, that the project satisfies the mitigation test of Section 30233(a) of the Coastal Act. Detailed design will follow and be the subject of the subsequent coastal development permit review stage, and if needed, further federal consistency review.

(e) Environmentally Sensitive Habitat

The FAA, as a co-lead agency on this project has consulted with the National Marine Fisheries Service (NMFS) pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, that requires federal agencies to confer with the NMFS when an activity by a federal agency may have adverse impacts on designated "Essential Fish Habitat" (EFH). The EFH regulations define an adverse effect as "any impact which reduces quality and/or quantity of EFH. The occurrence of EFH within the project area is designated by the Pacific Fishery Management Council, and includes Pacific Groundfish, Pacific Salmon and Coastal Pelagic Species. The Groundfish EFH, a tidal portion of Tecolotito Creek within Goleta Slough, is within the EFH. Ground fish that occur in Goleta Slough for part of their life-cycle include the rex sole and starry flounder.

National Marine Fisheries Service Concurrence

The NMFS determined that the potential impacts to Essential Fish Habitat from the project could include construction related turbidity and sedimentation, indirect impacts from hydrologic changes, increased storm water run-off from the paved surfaces on the runway, the permanent loss of 13.3 acres of wetlands, and the temporary disturbance of 1.77 acres of wetlands. The NMFS concurred with FAA's determination that the project will not have permanent adverse effects on EFH, provided its Conservation recommendations are implemented.

EFH Conservation Recommendation Response

Section 305(b)(4)(B) of the Magnuson-Stevens Act requires the City/FAA to provide a detailed written response to the conservation recommendations made by the NMFS, including a description of measures adopted by FAA for avoiding, mitigating, or offsetting the impact of the project on EFH. Should the FAA response be inconsistent with the NMFS recommendations, the FAA must provide justification, including scientific evidence for any disagreements related to

the anticipated effects of the project, and measures needed to avoid, minimize or mitigate such effects.

Fish Habitat

Construction impacts could potentially affect steelhead and Essential Fish Habitat in Goleta Slough because the relocation of Tecolotito Creek involves earthwork and a temporary stream diversion. Hydrologic impacts were modeled in November 2000 (URS)⁶, to determine the effects of changes to creek elevation, channel geometry, and current and sediment transport. Modeling indicated that the project would not affect the hydraulic conditions or the ability of fish to migrate through the slough. The Biological Assessment for the Southern Steelhead Trout (2001) states that there have been no sightings or historic records of steelhead along Carneros or Tecolotito Creek, although it is possible for steelhead to migrate upstream on Tecolotito Creek in the winter.

In its review of the project (Section 404(b)(1) Evaluation) the Corps of Engineers stated that:

Although the realignment of the creek would permanently affect 4.93 acres of habitat (Pacific Groundfish Essential Fish Habitat) for fish and other aquatic organisms in portions of Tecolotito and Carneros Creeks, there would be a net gain of 4.34 acres of habitat for fish (the PGEFH) and other aquatic organisms due to the proposed lengthening and realignment of Tecolotito Creek. Measures proposed to mitigate these impacts are included in the project (such as revegetation of the creek banks and overbank areas), and over time, habitat for fish and aquatic organisms is expected to improve as natural physical processes take place in the channel and in adjacent wetlands. Epifaunal and infaunal organisms are expected to recolonize the newly excavated channel as tidal action and/or flows from upstream areas bring aquatic species into the new channel.

Under the alternative to construct a box culvert under the runway safety area (least preferred) the Corps stated:

There would be a net loss of 1.38 acres of creek habitat (the PGEFH). The concrete box culvert would eliminate sunlight and the earthen channel bottom and banks that currently support habitat for fish and aquatic organisms. The culvert is also expected to fragment aquatic habitats upstream and downstream from the runway safety area, and it is expected to present a significant barrier to movement of aquatic species.

The City of Santa Barbara's Biological Assessment for the Southern Steelhead Trout, prepared under Section 7 consultation with the NMFS states that:

Connecting the new channels to the existing ones will involve temporary stream diversions and cofferdams. The work would be accomplished in the summer when flows

⁶ Channel Modification Alternatives for the Runway Safety Area Extension Project, Master Drainage Plan, URS (2000)

are minimal to absent, and during low tides. Under these conditions, steelhead would not be migrating upstream or downstream. The proposed channel relocation will not introduce any new passage impediments or barriers, nor will it exacerbate any existing impediments.

State and Federal Endangered Species and Sensitive Species/Habitats

Special status plant and wildlife species, and their associated habitats, are legally protected under the Federal Endangered Species Act of 1973 and the California Endangered Species Act of 1984. Under both state and federal legislation, the California Department of Fish and Game, U.S. Fish and Wildlife Service and National Marine Fisheries Service are responsible for the management and protection of special status species.

Any project that could potentially affect a special status plant or wildlife species, or its habitat, requires review and/or consultation with the previously mentioned agencies.

Section 7 Consultation

In addition, the FAA has been involved in informal Section 7 consultation with the U.S. Fish and Wildlife Service throughout the study process for the listed species. In accordance with Section 7 of the Endangered Species Act of 1973, the USFWS determined that the project as proposed, is not likely to adversely affect the Belding's savannah sparrow, or any federally threatened or endangered species

Plant Species

The City conducted field surveys to determine the presence of plant species of concern at the project site in 1996 and 2000. These initial aerial surveys were further supplemented with information from the previous Airport Master Plan EIR (1984), and an updated survey (2000) that mapped vegetation types and jurisdictional wetland habitats using the criteria of the U.S. Army Corps of Engineers and the California Coastal Commission. The findings of the 2000-URS surveys were consistent with earlier vegetation mapping and survey efforts of Ferren and Rinblaub (1983) identifying wetland and upland habitats and the occurrence of sensitive plant species. This baseline information was augmented with recent field observations (URS-2000).

The vegetation surveys determined that several sensitive plant species known or likely to occur on the airport property, could be impacted by the proposed project. Two species, estuary seablite (*Suaeda esteroa*) and arrow grass (*Triglochin concinna* var. *concinna*) have been previously reported from upper marsh area of Goleta Slough but have not been observed recently⁷. These species are considered locally rare, although neither has been listed by the USFWS/CDFG or CNPS.

Salt Marsh Bird's Beak (*Cordylanthus maritimus* ssp. *maritimus*)

The Salt Marsh Bird's Beak is a state and federally listed endangered plant species that is found at Carpinteria Marsh and at Morro Bay, but nowhere else in between. It is partially parasitic on the roots of other marsh plants in the intertidal zone of southern and central California salt

⁷ Biological Assessment and Impact Analysis of the Proposed Santa Barbara Airport Aviation Facilities Plan (2001)

marshes. Although there are reports of this plant in Goleta Slough in various planning documents, no verified records or herbarium specimens have been found to substantiate its historical occurrence in Goleta Slough (Ferren 1994). The Biological Assessment notes that a search of herbarium specimens and records failed to yield any evidence of the plant's occurrence at Goleta Slough. In 1985 the USFWS identified Goleta Slough as a potential introduction site to promote recovery of the species. Because the Salt Marsh Bird's Beak is not located in the project vicinity or Goleta Slough, the project will not affect this species.

The USFWS stated that:

Although there have been anecdotal reports of the federally endangered salt marsh bird's beak existing historically in the project area, no records have been found to verify its presence in Goleta Slough and it is not expected to occur in the proposed project area.

Southern Tarplant (*Hemizonia parryi* ssp. *australis*)

The Southern Tarplant, is a federal species of concern and a California Native Plant Society (CNPS) List 1B plant. It is a summer to fall flowering annual herb that occurs in relatively open, coastal habitats including grasslands, small drainages, or areas of seasonal ponding near the coast. It is found in numerous locations in Goleta Slough, in the area adjacent to the Tecolotito Creek sedimentation basin, and the disturbed uplands south of Tecolotito Creek. It has also been found within the runway safety areas, although not since the completion of a grading project that took place in 1999. The population in the vicinity of the Tecolotito Creek sediment basin would likely be affected by the project due to the proposed expansion of the sediment basin, access roads and creek excavation. Mitigation measures proposed by the City to address potential adverse impacts to the Tarplant would include the salvage of native plants and topsoil that would enable reestablishment of this species in other suitable areas of Goleta Slough.

Coulter's Goldfields (*Lasthenia glabrata* ssp. *coulteri*)

The Coulter's Goldfields, a federal Species of Concern, and a CNPS List 1B plant is located in an area associated with a diked basin adjacent to Tecolotito Creek, and in a narrow zone around the rims of several basins. The species is widely distributed in Southern California, but is restricted to rare habitats such as vernal pools, seasonally flooded playas and saline flats on the margins of estuaries. Additional populations of the species have been established within Goleta Slough as part of a mitigation/restoration project for a previous safety area grading project.

Impacts to the *Lasthenia* could occur at the diked basin during the excavation and realignment of Tecolotito Creek, grading of access roads adjacent to the creek, or modifications to existing berms along diked basins. Mitigation measures to minimize impacts would include the salvaging of native plants and topsoil that would promote the reestablishment of the species in Goleta Slough.

Wildlife

Listed and proposed species of wildlife that have a likelihood of occurrence in the project area include the California Brown Pelican (*Pelecanus occidentalis californicus*), light-footed clapper

rail (*Rallus longirostris levipes*), Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), California red-legged frog (*Rana aurora draytonii*), tidewater goby (*Eucyclogobius newberryi*) and Southern California steelhead trout (*Oncorhyncos mykiss irieus*).

Critical habitat has been designated for the western snowy plover and proposed for the California Red-legged frog (CRLF). The designated critical habitat for the western snowy plover includes beaches adjacent to the UCSB Coal Oil Point Reserve, located 2 miles west/southwest of the airport property and the beach area west and east of the Santa Barbara Pier approximately 10 miles east of the airport⁸. The City states that:

The proposed critical habitat for the CRLF (Federal Register 1996, Vol. 61, No. 101, 25813) does not include any of the creeks that flow into Goleta Slough, nor is it expected that the CRLF would be found in the slough or in any affected area due to its inability to tolerate saline conditions.

Southern California Steelhead (*Oncorhyncos mykiss irieus*)

The southern steelhead occurs in coastal streams and creeks of central and northern California and southern Oregon. Populations that occur between Los Angeles County and northern Santa Barbara County constitute the South Central California Coast Evolutionary Significant Steelhead trout (ESU), which has been designated as an endangered species by the NMFS.⁹ The NMFS has designated certain rivers and streams as critical habitat for the southern steelhead, including all accessible streams along the South Coast of Santa Barbara County. Streams without impassable fish barriers within the historic range of the steelhead would be included. Tecolotito and Glen Annie Creek represent this critical habitat from the mouth of Goleta Slough to Glen Annie Dam.

In commenting on the draft EIS/R the National Marine Fisheries Service stated:

*The proposed activities occur within the Southern California Evolutionary Significant Unit (ESU) for the Federally endangered steelhead (*Oncorhynchus mykiss*) and designated steelhead critical habitat. Steelhead migration may potentially be adversely affected by construction impacts related to the creek relocation. In addition, water quality impacts associated with improvements and modification to the AFP area related to construction, and overall increase of impervious surface areas, expanded airport operations, and storm water discharge, may potentially adversely affect steelhead migration.*

The National Marine Fisheries Service concurred with the City's determination that the proposed project will not adversely affect the Federally endangered steelhead provided the following special conditions are implemented. The NMFS further requires written documentation that the FAA/City of Santa Barbara will implement those conditions. Should the City choose not to modify the proposed project then formal section 7 consultation must be initiated.

⁸ Federal Register 2000, Vol. 64, No. 234, 68508

⁹ Biological Assessment for the Southern Steelhead Trout, Santa Barbara Airport Draft EIS/EIR for the Aviation Facilities Plan (2001)

1. The Carneros creek sediment basin should be enlarged according to the proposed plan described in URS Corporation's Proposed Enlargement of Carneros Creek Sediment Basin dated July 2001. The Tecolotito Creek sediment basin should also be enlarged as described in the DEIS/EIR.
2. The new channel should be completed before connecting to the existing channel to avoid the need for extensive stream diversions during construction.
3. Construction related to the connection of the new channel to the existing channel should only be conducted between July 15 and October 1 of any given year.
4. The applicant shall install silt fencing, temporary in-stream siltation basins, stream diversions and implement other best management practices to minimize downstream turbidity and sedimentation impacts.

The City has agreed to these conditions.

California Brown Pelican (*Pelecanus occidentalis californicus*)

The California Brown Pelican is a state and federal listed endangered species. It is a common year round species to coastal regions in Santa Barbara County, and they are known to breed at offshore islands such as Anacapa and the Channel Islands, from January to June. The Brown Pelican is often observed feeding and resting in lower Tecolotito Creek near Goleta Beach County Park. Although the California Brown Pelican is expected to occasionally fly near the project area, it generally feeds in near shore ocean waters, and rests on beaches and on Goleta Pier. Impacts to the Pelican are not likely to occur as a result of the project.

In reviewing the City's Biological Assessment, the U.S. Fish and Wildlife Service stated :

*The only species currently found in the vicinity of the airport is the federally endangered brown pelican (*Pelecanus occidentalis*). The brown pelican is occasionally observed roosting near the mouth of Goleta Slough, approximately two miles away from the proposed runway expansion area. Therefore, we concur that the airport facilities plan as proposed, would not affect federally threatened and endangered species.*

Light-footed Clapper Rail (*Rallus longirostris levipes*)

The light-footed clapper rail typically resides in California coastal salt marshes from Carpinteria to San Diego. It is a state and federal listed endangered species that has historically been found in Goleta Slough, although the last record of this was a single individual reported in 1972. Surveys of pickleweed habitat in Goleta Slough found no evidence of the species, and did not report vocalizations (Holmgren 1995). Potential habitats for the species could be affected if transitional creek habitats are removed during excavation of Tecolotito Creek.

Belding's Savannah Sparrow (*Passerculus sandsichensis beldingi*)

The Belding's savannah sparrow is a state listed endangered species and a federal Species of Concern. It is a permanent resident of Goleta Slough and breeds with the slough's ecosystem. Surveys conducted by Holmgren and Burnell in 1992 recorded 72 pairs of breeding birds within Goleta Slough. The highest density of Belding's savannah sparrows (more than 3 pairs per hectare) was observed in the central slough basin, south of runway 7/25 and west of runway 15R/33L. During these surveys, the sparrow was observed foraging in areas dominated by pickleweed at low tides, in the grassy area near the runways, and at the west end of Goleta Beach County Park.

On October 10, 2001, the Commission staff received updated survey information on the sparrow. The City has been conducting surveys for the Belding's savannah sparrow for its bird strike hazard study and to provide accurate estimates of the population for the US Fish and Wildlife Service. A total of 68 individuals were sighted during the May 2001 survey. Exhibit # 22 and 23 illustrate the approximate location of the population, which is primarily located in basins A, B, and C.

Basin "A" thru "D": 59 Birds
Basin "E" and "F" : 4 Birds
Basin "G" : 2 Birds
Basin "L" and "M": 3 Birds

The results of these surveys were consistent with the previous surveys done in 1994. The sparrow is typically restricted to the pickleweed marsh areas of Goleta Slough, although it may forage in adjacent upland scrub and grassland areas. No individuals were sighted at the location of the proposed Taxiway M or runway safety area extension site, at the end of Runway 7-25.

The Biological Assessment for the project states:

Goleta Slough supports suitable habitat and all the life history function for Belding's savannah sparrow. At least 117 pairs of breeding savannah sparrows were recorded in Goleta Slough in 1994 (Holmgren and Kisner 1994).

The proposed project would potentially affect and limit the distribution of this species in Goleta Slough because the existing undeveloped land west of runway 7/25 would become unavailable for life history functions (such as foraging) or restoration. However, relocation of Tecolotito Creek and restoration of native vegetation along the creek channel (see attached mitigation measures) would potentially provide a greater amount of higher quality suitable habitat for Belding's savannah sparrows over time.

The California Department of Fish and Game stated in commenting on the DEIS/EIR:

the Department finds the project as proposed (Alternative 1, relocations of the western portion of Tecolotito and Carneros Creeks) will result in significant, but mainly mitigable

impacts. The Department recommends the City select this alternative. The Department does not recommend selection of Alternative 2 (the box culverting of Tecolotito Creek) as this option would not fully mitigate for impacts to Belding's Savannah Sparrow as would be required by the California Endangered Species Act (CESA) The City will need to secure both an Incidental Take Permit for the Belding's Savannah Sparrow, and a Streambed Alteration Agreement for the relocation of Tecolotito and Carneros Creeks.

Under the existing California Endangered Species Act (Section 2081 of the Fish and Game Code) the CDFG may authorize, by permit, the take of endangered species. To obtain a California Incidental Take Permit the applicant must show that the impacts will not jeopardize the continued existence of the species, the impacts of the "taking" are minimized and fully mitigated to the extent that it is "roughly proportional" to the impact of the taking on the species, the proposed mitigation shall be capable of successful implementation, and that the applicant provide adequate funding to implement necessary mitigation measures including monitoring compliance of the effectiveness of those measures.

Western Snowy Plover (*Charadrius alexandrinus nivosus*)

The western snowy plover is a federally listed threatened species and a state Species of Concern. Critical habitat for this species has recently been designated by the USFWS (Federal Register 2000, Vol. 64, No. 234, 68508), although the designation does not include any of the airport property. The nearest critical habitat is located some 2 miles west/south west of the airport near the Santa Barbara Harbor. Historic records indicate that Goleta Beach Park supported wintering and nesting snowy plovers before the 1950's, though nesting activity at the park has not been observed for many decades. Recent surveys of Goleta Slough and the airport property have not reported the presence of snowy plovers (Holmgren 1995).

California Red-legged Frog *Rana aurora draytonii*

The California red-legged frog is a federal listed threatened species and a state Species of Concern. Although critical habitat has been proposed for the species, the critical habitat proposal does not include the airport property or any of the seven creeks that flow into Goleta Slough. The red-legged frog is a pond frog that frequents marshes, slow portions of streams, lakes and other permanent bodies of water. They are attracted to ponding areas which contain extensive plant cover including rushes and reeds. The City's Biological Assessment states that:

There are no records of the frog in Goleta Slough or in the project area, and it is not expected to occur in salt marshes due to its intolerance of saline conditions. Due to the absence of suitable or critical habitat for the CRLF in Goleta Slough and in the project area, the proposed project is not expected to affect this species or its habitat, therefore no mitigation is proposed

Tidewater Goby (*Eucyclogobius newberryi*)

The tidewater goby is a federal listed endangered species and a state Species of Concern. It was recently proposed for de-listing (Federal Register Vol. 64, No. 121, June 24, 1999). The species inhabits coastal lagoons and other brackish habitats in coastal streams along the California coast.

In Santa Barbara County, this species presently occurs only in stream and river mouths, and coastal canyon lagoons that are brackish due to freshwater inflow; it is not found in either of the major structural basin estuaries (Goleta Slough, Carpinteria Marsh) which have high salinity and are dominated by tidal circulation in the lower reaches. These structural basins also have relatively narrow estuarine-fresh water transition areas. Locally, this species occurs in brackish lagoons at the mouths of Tecolote Creek, Bell Canyon Creek, Devereux Creek, Arroyo Burro Creek, Mission Creek and Sycamore Creek.

The tidewater goby has been reported from Goleta Slough, but no museum records exist to verify these reports. Sampling in 1987 and in 1993 failed to locate any tidewater gobies in Goleta Slough, and none are assumed to be present.

The City states that potential impacts from the proposed project could result in:

Sedimentation of downstream area of Tecolotito Creek near the mouth of Goleta Slough in the event that erosion control measures fail or are ineffective. The resultant (potential) change to the bathymetry of Goleta Slough (from sedimentation) may adversely affect the mouth of Goleta Slough. However, since the species has not been reported from Goleta Slough in recent survey efforts, the proposed projects direct and indirect effects on downstream portion of Goleta Slough are not expected to adversely affect potential habitat for tidewater goby, and due to the proposed longer channel, more habitat would be available for the species in the event it were to re-colonize Goleta Slough in the future.

Mitigation

Fish Habitat

To avoid impacts that could affect steelhead, estuarine fish and other aquatic species in Goleta Slough during the relocation of the channel in Tecolotito Creek, the excavation of the existing channel will be conducted without connecting the old and new channels until the new channel is completed and the bank slopes are stabilized. The channel will be connected using a temporary stream diversion and cofferdams, and these activities will take place during the summer, when minimal flows and low tides take place. With construction taking place during this period, steelhead are not expected to be present in Goleta Slough, nor are they expected to be affected by activities at the construction site.

Southern Tarplant-Coulter's Goldfields

Mitigation measures proposed for impacts to the Southern Tarplant and the Coulter's Goldfields include the salvaging of native plants and topsoil that would promote the reestablishment of this species in Goleta Slough. The establishment of a second population of the Coulter's goldfields is considered necessary to reduce the risk of local extinction, and to fully mitigate the potential impacts of the project. The cumulative loss of potential habitat for this species in Goleta Slough is considered an adverse impact, according to the City.

Belding's savannah sparrow

Additional areas of Potential habitat would be created for the Belding's savannah sparrow in a continuous corridor along the realigned creek. Reestablishment of bands of tidal marsh along creek banks and the restoration of tidal wetlands would take place. The city will monitor the restored areas to assess the success of the mitigation for 5 years following construction.

In addition to the measures above, the Biological Assessment for the project states that:

1. A wetlands biologist shall be retained by the Airport to design and oversee the implementation of the mitigation program for the project.
2. The biologist shall be responsible for the development of site-specific plan for revegetation and restoration activities for the wetlands and creek channel and banks.
3. The City will prepare pre-construction and post-construction monitoring reports of mitigation sites.
4. The City will monitor previously mapped wetlands and endangered species habitats adjacent to construction areas to confirm the avoidance of impacts to wetlands and species. Should impacts occur, they will be documented by the City and notification will be sent to other responsible agencies.

The City will also implement the following measures to mitigate potential impacts during construction:

1. Temporary fencing shall be installed to protect environmentally sensitive areas (ESA) and wetlands from incidental impacts.
2. Stockpiling of excavated soil and construction materials, and the haul routes for heavy equipment shall be confined to areas shown on grading plans to avoid ESA's.
3. Native plants and topsoil shall be salvaged from impact areas for use in revegetation. The project biologist shall select these areas and they will be depicted on grading plans, along with locations and methods for temporary storage.
4. Construction of individual projects shall use methods to avoid the nesting and breeding season from mid-march to the end of June, minimize compaction of soils during the wet season, and minimize erosion from barren areas into adjacent waters and wetlands.
5. Areas disturbed by construction shall be graded to encourage development of a water regime similar to the one that existed before the disturbance.

6. For impacts to the Belding's savannah sparrow, reestablishment of bands of tidal marsh along creek banks, and the restoration and enhancement of remnant or poorly flushed tidal wetlands. The species use of these restored areas shall be monitored before and after the mitigation is implemented. Monitoring shall be combined with annual Slough-wide surveys to establish the status of the species, and shall continue for five years following construction.
7. The final design and limitations of construction activities shall minimize habitat loss and disturbance in the diked basin that supports Coulter's goldfields and Frost's tiger beetle. To minimize the possibility of local extinction of the Coulter's goldfields, the City will collect small amounts of seed from this species and establish new populations in other locations in Goleta Slough where similar habitat conditions are replicated.
8. Revegetation of disturbed areas and new creek alignments that impact the southern tarplant, horned seablite, and giant horsetail will include species specific seed collection for the establishment of new populations.

In conclusion, the City has incorporated avoidance, monitoring, and enhancement measures to avoid adversely affecting federally listed and other sensitive species. These measures were developed in consultation with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. With these measures, the Commission finds the project consistent with Section 30240 of the Coastal Act.

B. Stream Alteration. The Coastal Act provides that:

Section 30236: Channelizations, dams, or other substantial alteration of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects; (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development; or (3) developments where the primary function is the improvement of fish and wildlife habitat.

The construction of the runway safety areas and the relocation of runway 7-25 and taxiway M under the "west creek realignment alternative" would combine Tecolotito and Carneros Creeks, rerouting Tecolotito Creek 2,000 feet to the west of the new runway area. A complete description of this and other alternatives is described in the alternatives analysis of this staff report.

Section 30236 of the Coastal Act allows for the alteration of rivers and streams if those alterations or channelizations are necessary to protect existing structures in the floodplain and such protection is necessary for public safety.

When the Santa Barbara Airport was constructed in the late 1920's, Tecolotito Creek was excavated and channelized numerous times to re-route floodwaters around the airport. The most recent projects have occurred between 1967 and 1975. In 1969 water completely surrounded the main terminal, although it did not enter the building. Other public buildings and structures are threatened with inundation during heavy rains, and the flooding of the runways presents a safety hazard that prevents planes from landing or taking off. In 1995 and 1998 all three runways were flooded and the airport was closed for several days. Damage and loss related to the most recent flooding was estimated to be \$118,000 by FEMA.

Historical Flooding of the Property

As an area of convergence of five major streams, the Santa Barbara airport has historically been subject to flooding. Most recent flooding has occurred due to flows exceeding the capacity of the stream channels. The combined watershed of these five streams is approximately 30,000 acres (46 square miles). The topography of the airport is generally flat, with little change in elevation between Hollister Avenue and the ocean. As flood flows over-bank the streams, the flow slows down and deposits sediment. During a flood event, the sediment is carried by these flows and deposited in stream channels reducing the channel capacity.

Floodplains

Flood hazard areas (floodplain) as defined by FEMA are areas subject to inundation by a 100 year flood. The floodplain is the land area susceptible to inundation during a given flood. The majority of the Airport property is within the 100 year FEMA floodplain. If Tecolotito and Carneros Creek are realigned around the proposed runway safety area (Realignment Alternative) the realigned creek would have a flow that equals or exceeds the flow capacity of the existing channel. Under the culvert alternative, there would be a significant overflow during a 100 year run-off event as much as two to three feet above the existing runway elevation. This same overflow would occur under the existing conditions. The use of a culvert may increase the likelihood of flooding because of the potential for plugging of the culvert due to sediment deposition. To accommodate the existing flow, the level of the culvert bottom would have to be placed at an elevation between minus 1 to minus 0 feet mean sea level datum. If a blockage of the culvert occurred during a flood event, this would result in major damage to the runway and safety area.

The City's LCP further states that:

Sediment buildup threatens the water flow capacity of the slough and increases the existing flood hazard. Consequently, the Santa Barbara County Flood Control and Water Conservation District have widened the main channels draining into the slough and enlarged the sediment/debris silt\ basins. Two of the major threats to the slough's continued existence as a wildlife habitat are sedimentation and impaired tidal circulation

The Goleta Slough watershed floodwaters are channeled toward the sea, carrying upstream debris and sediment, which becomes deposited in the coastal plain. The accumulation of silt and the growth of vegetation narrows the slough channels to sluggish streams. Continued,

unmanaged sedimentation would ultimately result in the destruction of the salt marsh habitat and significant alteration of the slough's flood carrying capacity.

An estimated 15,000 cubic yards of silt enters the slough each year from Carneros and Tecolotito Creeks, although two silt basins have been installed in these creeks just below Hollister Avenue.

Previous Projects

In the mid 70's the Flood Control District widened and deepened sections of the slough's channel system. The project included widening the main channel from the confluence of Tecolotito and Carneros Creeks an estimated 0.875 miles into the marsh, and widening and deepening of the main channel near the slough's ocean outlet. This two-phase project created a more efficient flood control system, and a more biologically healthy salt marsh. The Flood Control District also installed a series of culverts and removed several levees to accommodate tidal flooding. This project had limited success in that culverts accumulated silt and vegetation, and minimal tidal circulation was achieved.

Sedimentation

Sedimentation from the upper portions of the slough can also negatively affect biological productivity. At the lower portion of Goleta Slough the mouth of the slough is tidally influenced, and a sand bar develops across the mouth as winter runoff declines. This sand bar is periodically breached by the flood control district to allow tidal flushing. Slough closure to tidal influences typically results in increased salinity that can dwarf plant growth and destroy both plant and animal communities. If closure lasts more than three or four days, the waters become anaerobic and fish and other organisms begin to die¹⁰.

Berm Formation

In 1995, flood waters laden with sediment spilled over creek banks at the point of constriction creating a "natural berm" that increased elevation of the surrounding marsh plain. The elevated creek banks and marsh plain can impound floodwaters causing greater sedimentation in lower areas. Surveys by the City indicate that this process has raised elevations enough to completely eliminate tidal circulation from large areas. Vegetation in these locations is undergoing a transformation from tidal marsh, to transitional brackish wetland and upland habitat, and non-native brackish wetland and upland species are replacing native salt marsh vegetation.

The City proposes to incorporate the best mitigation measures feasible for the diversion of Tecolotito Creek around the proposed project. The City has consulted with the U.S Army Corps of Engineers and the U.S. Fish and Wildlife Service to evaluate the least environmentally damaging alternative to realigning Tecolotito Creek. The Corp stated in its review of the project that:

the longer channel would constrict the over-bank flow area which would increase water velocity and shear forces during extreme flooding events. This would result in a maximum rise in water surface elevation of 0.4 feet on Tecolotito Creek downstream of Hollister Avenue. The

¹⁰ City of Santa Barbara Airport and Goleta Slough LCP (1982)

longer channel and expanded sediment basin on Tecolotito Creek would provide a larger storage volume and it is expected to result in a net decrease in the amount of sediment delivered to Goleta Slough

The Commission finds that the project: (1) is an allowable use for stream alteration under Section 30236; and (2) provides commitments to mitigation measures to protect wetland and sensitive habitat resources. Additionally, the Commission notes its conclusions are based on the commitments and information submitted to date. Detailed designs and plans will follow and be the subject of the subsequent coastal development permit application to the City of Santa Barbara, and the Commission (and, possibly, on appeal to the Commission). Further, any modifications to any of these commitments may also trigger the need for additional federal consistency review by the Commission.

C. Public Access and Recreation Resources. The Coastal Act provides that:

Section 30210: In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30212(a): Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:

- (1) It is inconsistent with public safety, military security needs, or the protection of fragile coastal resources,*
- (2) Adequate access exists nearby*

Section 30212.5: Whenever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area

Section 30252: The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in areas that will minimize the use of coastal access roads, (3) providing non-automobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high density uses such as high rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with

local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.

The proposed airfield safety projects are designed to ensure public safety by meeting the current FAA design standards and minimizing runway incursions. Expansion of the airline terminal building is designed to meet the projected passenger needs in the Santa Barbara coastal zone through 2015, and the proposed safety projects and terminal expansion will help provide maximum public access to the coastal zone. As the southern California coastal region becomes increasingly populated, the necessity for improving the distribution of public transportation throughout the region will become more critical.

Typically, many Santa Barbara bound tourists drive from Los Angeles area airports, adding to traffic congestion and affecting air quality along the coast. Improved facilities would lessen these impacts and provide relief to air quality and traffic impacts. Section 30252 further identifies the connection between efficient transportation modes and maximum coastal access. In past actions, the Commission has considered traffic congestion in recreation areas to be an impact on public access to the shoreline.

Goleta Beach County Park is adjacent to the southern boundary of the Santa Barbara Airport. The 29 acre park includes almost a mile of sandy beach, picnic and day use areas, and the Goleta Pier which is used for boat launching, fishing and strolling. Several hiking trails are proposed near the airport property as well as a trail corridor at the foot bridge crossing Goleta Slough. A class one bicycle trail borders the airport property on Carneros Road, continues through the UC Santa Barbara Campus, and eastward across airport property to the mouth of Goleta Slough at Goleta Beach County Park. The City is encouraging the use of areas surrounding the airport for the development of trails, and passive recreational opportunities are encouraged and provided for in the Airport Goleta Slough LCP.

The proposed project is consistent with Sections 30210-30212 and 30252 of the Coastal Act in that it will improve public access to the shoreline through efficient and modern commercial facilities (airline operations, the provision of public modes of transportation, essential public services and adequate parking facilities), and promotes recreational opportunities in the areas adjacent to Goleta Slough.

D. Water Quality. The Coastal Act provides that:

30231: The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling run-off, preventing depletion of groundwater supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitat, and minimizing alteration of natural streams.

The City states that:

Relocating runway 7/25 800 feet to the west under either alternative, could result in temporary impacts to water quality. Construction could affect local waterways, increase sedimentation, create toxic discharges due to in-channel construction, vehicle maintenance, asphalt operations or accidental spills. Degradation of Goleta Slough could also occur from non-point source pollutant runoff. Storm water run-off from the runway and safety area is conveyed to twenty-four 24" drain inlets. The inlets are connected to twenty-six 36" diameter reinforced concrete pipes that then convey storm water to various outlets to Tecolotito Creek or Goleta Slough.

In commenting on the EIS the U.S. Army Corps of Engineers noted that:

the increased length of the channel and the expanded sediment basin on the Creek would provide a larger water storage capacity, resulting in a net decrease in sediment transported downstream into Goleta Slough..

An increase in the amount of impervious surfaces on the airport property will occur due to the extension of the paved surfaces of runway 7/25 and Taxiway A and the construction of Taxiway M. The safety area at the western end of runway 7/25 will be compacted with gravel which will permit groundwater infiltration and aquifer recharge, but the RSA at the eastern end will remain a paved surface. The realignment and lengthening of Tecolotito Creek channel and expanded sediment basin will not alter the aquifer recharge capacity compared to existing conditions. The creek channels are inundated perennially, from either tidal action or flows entering the channel from upstream areas. Short term construction impacts could include: erosion due to clearing and grading resulting in sedimentation of adjacent waterways, toxic discharges from equipment and accidental spills, ground disturbances, and the potential to encounter sub-surface contamination.

The majority of the impacts to water quality would likely occur during construction, and the potential exists for encountering sub-surface contamination during earth moving activities. However, these impacts will be further regulated by an NPDES permit because the area of disturbance constitutes an area greater than 5 acres. The City describes numerous mitigation and containment measures including:

1. A drainage and erosion control plan to be developed for each area of construction to mitigate erosion and address sedimentation impacts to Goleta Slough;
2. Scheduling construction to minimize graded soil exposure;
3. Minimum curing times for concrete to avoid contact with the aquatic environment;
4. Limitations on grading activities to dry weather conditions, the use of silt fences, straw bales and other measures to control siltation;
5. Disturbed areas will be seeded and planted with native vegetation immediately following construction activities;
6. Protection of new storm drain outlets to prevent scouring at the point of discharge;

7. A contingency Plan will be developed to address migration of contamination if it is encountered during construction;
8. The Airport will obtain a construction NPDES permit as required for projects that disturb an area of 5 acres or more;
9. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared detailing specific erosion and sediment controls to minimize turbidity and total suspended solids; and
10. Silt and grease traps will be installed in paved areas.

The SWPPP that will be prepared as part of the storm water permitting process will include pollution prevention control measures to achieve water quality standards, monitoring of stormwater discharges, and the maintenance of monitoring records. The plan must include BMP's and a description of erosion and sediment control measures such as soil stabilization, seeding, vegetative buffer strips, detention basins, straw bale dikes, silt fences, storm drain inlet protection, velocity dissipators, earthen dikes, check dams, sediment basins and other controls. The SWPPP will also include:

Non-storm water management-measures to eliminate or reduce discharge of pollutants from point sources such as equipment and dewatering operations;

Post-construction storm water management-measures to reduce sedimentation from the site after construction;

Waste disposal-procedures to remove all construction wastes from the site;

Inspection, maintenance and repair-procedures to inspect, maintain, and repair all erosion and sediment control devices after construction.

Based on the City's commitment to the above measures, adverse impacts to water quality will be controlled, and the project will enhance the biological productivity of the Slough through planned restoration and enhancement of streams and adjacent transitional wetlands. Although some streams will be altered, these alterations create additional habitat and reduce sedimentation.

During the process of relocating the creeks, enlarged basins will be designed to capture greater amounts of sediment, minimizing deposits in tidal wetlands of Goleta Slough that have affected tidal circulation and the conversion of wetlands to non-native uplands. The increased length of the channel and the expanded sediment basin on the Creek would provide a larger water storage capacity, resulting in a net decrease in sediment transported downstream into Goleta Slough. Given that these measures will reduce impacts to water quality resources, the Commission finds that the proposed project is consistent with Section 30231 of the Coastal Act.

E. Archaeological Resources. Section 30244 provides for the protection of archaeological resources of the coastal zone in that:

Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

The City of Santa Barbara has conducted an archaeological assessment, prehistoric background study, a review of historic maps and aerial photographs, and a review of historic sites listed on the National Register of Historic Places. Four prehistoric sites (CA-SBA-46, CA-SBA-52, CA-SBA-1694 and SAIC-93-1) are described in the Draft EIS/R.

The Area of Potential Effect (APE) for cultural resources within the Santa Barbara Airport Aviation Facilities Plan boundary has been defined by the FAA as the entire airport property boundary, in accordance with 36 CFR Part 800.2. Archaeological surveys and excavations (1993) within this area have recorded four prehistoric Native American sites. These areas, including major village sites, are characterized by high artifact densities, house remains, exotic trade goods, and cemeteries.

Mescalitan Island (CA-SBA-46), located near the southeast corner of the property is most notable as it contained two major sites associated with the historic Chumash village of *Helo'*. Historical perspectives of the area have associated *Helo'* with a wealthy village that functioned as a regional political, economic, and ceremonial center between the Channel Island and mainland Chumash¹¹.

During the original construction of the airport, an estimated 50 to 75 percent of the island was bulldozed, and then used as fill when the airport was constructed. Although portions of *Helo'* remain intact, artifacts from Mescalitan Island and other prehistoric archaeological sites have been relocated or re-deposited throughout many areas of the airport. This combination of events has made the contextual relationship of the artifacts difficult to assess. The city describes these resources as:

one location of high prehistoric and historic Native American sensitivity, four areas of moderate sensitivity, and four areas categorized as low sensitivity. Two major prehistoric village sites have been recorded within the Aviation Facilities Plan area. One village site, CA-SBA-52, was leased to the Santa Barbara Indian Center in the early 1980's to provide a re-burial area for Native American burial disturbed by other construction projects.

¹¹ Phase 1 Archaeological Assessment, Santa Barbara Municipal Airport, City of Santa Barbara (Snethkamp and Associates-1993)

Archaeological Resources within the Santa Barbara Airport APE

Resource	Type	Integrity
CA-SBA-46	Prehistoric village of <i>Helo'</i> (Mescalitan Island)	25-25 percent intact
CA-SBA-52	Prehistoric village and reburial area	85 percent intact
CA-SBA-1694	Prehistoric artifact scatter	Unknown
SAIC-93-1	Prehistoric artifact scatter	Heavily disturbed, Redeposited, some intact areas

The City describes the following potential impacts:

The realignment of Tecolotito Creek would require ground disturbances 50 feet away from moderate sensitivity zones and 150 feet away from the high sensitivity zones associated with SBA-52. Accidental construction equipment encroachment could disturb significant deposits. The southern airline terminal wing extension will extend to within 50 feet of the (moderate archaeological sensitivity) prehistoric and historic Native American sensitivity zone. An estimated 140 feet of the southern extension of the new terminal access road would also fall within the moderate sensitivity zone. Grading for the new parking area and future garage site would be adjacent to a moderate sensitivity zone.

To mitigate for these impacts the City will maintain 50 foot buffer areas from the moderate archaeological sensitivity zone associated with SBA 52 to ensure avoidance of prehistoric remains. The area will be inspected by a qualified archaeologist, and visually marked to reduce the possibility of intrusion into the high sensitivity area by construction personnel and equipment. Prior to the start of any activities such as vegetation removal, demolition, trenching or grading, personnel will be alerted to the possibility of uncovering subsurface archaeological artifacts. If such cultural resources are encountered or suspected, work shall be halted and a qualified archaeologist will be consulted. If a discovery consists of potentially human remains, The Santa Barbara County Coroner and the California Native American Heritage Commission shall also be contacted.

Before any construction activities take place, the airport shall assure that all ground disturbances within the low Prehistoric and Historic Native American sensitivity zone north of Runway 7/25 and east of Runway 15R/33L shall be monitored by a City qualified archaeologist and Native American Observer.

The Office of Historic Preservation concurred with the City's determination of archeological resources in the project area and stated:

The FAA has provided evidence that adequate measures were taken to include interested persons in the planning process, and that Native American monitors will be present at areas previously determined to be archeologically sensitive should ground disturbance

occur. Should the FAA identify archeological resources during project implementation, it will have additional responsibilities as defined by 36 CFR 800.11.

With these proposed mitigation and avoidance measures, the project will protect archaeological and paleontological resources. Therefore, the Commissions finds the proposed project is consistent with the archaeological resource policy (Section 30244) of the Coastal Act.

F. Visual Resources. Section 30251 provides for the protection of scenic and visual qualities of coastal resources in that:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect view to and along the ocean and scenic coastal area, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding area, and where feasible, to restore and enhance visual quality in visually degraded areas.

The proposed project is located in an area described by the city as one of five design areas included in the *Airport Development Design Guidelines* which were adopted as part of the LCP for the airport. The "South Ramp Terminal Area" referenced in these design guidelines include the terminal, its associated parking and all of the development to the south of the terminal along William Moffett Place. These guidelines recommend that new development and renovations of existing structures adjacent to the terminal building be consistent with the El Pueblo Viejo Landmark District Design Guidelines. Expansion of the Terminal has been designed to continue the Spanish Colonial Revival architecture of the existing terminal.

The City states that the design of the terminal additions will be visually compatible with the character of the surrounding area in that:

The views of the terminal from UCSB would not be impacted and the proposed structures would not be located within sensitive view corridors. Public views from William Moffett Place would be most changed by construction of the new buildings. However, the appearance would be enhanced with the demolition of the Pilot House Motel and other structures built during World War II by the U.S. Marine Corps.

Views from public roadways and bicycle paths were taken from various vantage points representing views that would potentially be affected by the additions to the terminal, the new air cargo building and the parking garage. No photographs were taken from Goleta Beach or Fairview Avenue as the terminal building cannot be seen from these locations. The view from Goleta Beach is blocked by Ward Memorial Highway, and the view from Fairview Avenue is blocked by a wooden fence.

The new parking structure (240 feet by 325 feet) and the air cargo building (70 feet by 220 feet) have yet to be designed. However, the structures would be designed to be consistent with

the terminal architecture. None of the new buildings will block views of the mountains or ocean from public viewing areas.

The project is consistent with the visual resources policy of the Coastal Act, because design options and treatments will be visually compatible with the existing architecture, and initial visual impacts will be temporary in nature. Future projects components not yet designed will be subject to further review by the Commission. Based on the information now available, the Commission therefore concludes that the project is consistent with the requirements of Section 30251 of the Coastal Act.

SUBSTANTIVE FILE DOCUMENTS:

City of Santa Barbara Coastal Plan, Airport and Goleta Slough
City of Santa Barbara, 1982.

**Santa Barbara Airport Final Environmental Impact Statement/Environmental Impact Report
for the Aviation Facilities Plan**
U.S. Department of Transportation Federal Aviation Administration/City of Santa Barbara, 2001.

Section 404(b)(1) Assessment
US Army Corps of Engineers (1996)

Biological Assessment and Impact Analysis
Federal Aviation Administration and City of Santa Barbara (2001 URS Corp)

Biological Assessment for the Southern Steelhead Trout
Santa Barbara Municipal Airport (2001 URS Corp)

Master Drainage Plan, Santa Barbara Municipal Airport-Drainage Assessment for Airport Facility
URS Corporation, 2001

Essential Fish Habitat Assessment
Santa Barbara Municipal Airport (2001 URS Corp)

Santa Barbara Municipal Airport: Runway 7-25 Alternatives
Hodges and Shutt, 1995.

Federal Aviation Administration Advisory Circular 150/5300-13
U.S. Department of Transportation Federal Aviation Administration, 1997.

**Alternatives Study for the Runway Safety Area Extension Project
Master Drainage Plan Santa Barbara Airport**
URS Corporation, 2001.

Draft Aviation Facilities Plan
City of Santa Barbara Airport Department, 2001.

**Draft Final Conceptual Wetland Mitigation Plan for the Airfield Safety Projects,
Santa Barbara Airport**
URS Corporation, 2001.

**Supporting Environmental Information for the Safety Area Grading Project
Santa Barbara Municipal Airport**
Woodward-Clyde, 1996.

Staff Report and Recommendation on Consistency Determination No. CD-70-92
California Coastal Commission, 1992.

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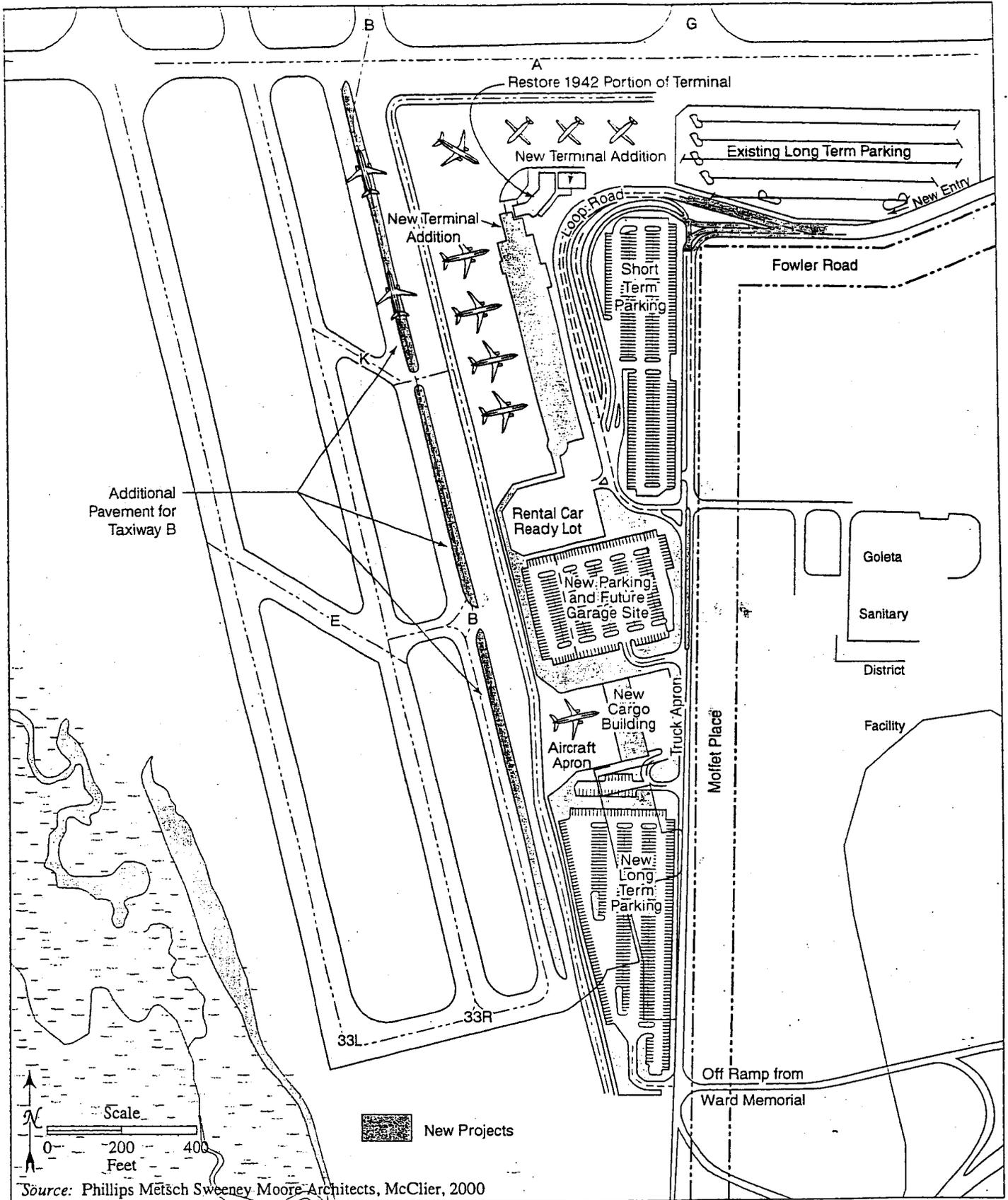
Proposed Findings on Consistency Certification No. CC-064-99
California Coastal Commission, 1999.

Staff Report: Application No. 4-97-134
California Coastal Commission, 1997

List of Exhibits

Exhibit	Description
1	Figure 2-6 Santa Barbara Airport Terminal Expansion Project
2	Figure I-2 Proposed Projects
3	Figure 2-3 Alternative 1: West Creek Realignment Alternative
4	Figure 3 Proposed Creek Realignment and New RSA
5	Figure 2-4 Alternative 2: West Creek Culvert Alternative
6	Figure 2-7 Proposed Terminal Renovation
7	Figure 3.13-2 Flood Hazard Areas
8	Figure 3.7-2 Stormwater Drainage System
9	Figure 3.2-5 Existing and Proposed Bikeways in the Project Area
10	Figure 10 Coastal Zone Boundaries
11	Figure 7A Permanent Wetland Impacts in the RSA Extension Area
12	Table 3 Detailed Impacts to Coastal Act Wetlands
13	Table 4A Summary of Impacts to Coastal Act Wetlands
14	Figure 7A Future Wetlands in the RSA Extension Area
15	Wetland Impacts Along Taxiway M
16	Figure 11 Berms to be Restored
17	Figure 13 Cross Sections of Berm Habitat Restoration
18	Figure 15 Topographic Map of Wetland Restoration Site
19	Figure 19 Cross Section of Habitat Restoration
20	Figure 18 Proposed Habitat Restoration at "Area I"
21	Table 11 Target Wetland Vegetation Goals at Year 7
22	Update on Surveys for the Belding's Savannah Sparrow (URS 2001)
23	GSEMP Habitat Planning Units
24	Figure 3.11-2 Distribution and Density of Belding's Sparrows in Goleta Slough in 1992 and 1994
25	National Marine Fisheries Service: Informal Section 7 Consultation Correspondence (2001)
26	Federal Aviation Administration: Conclusion of Section 7 Consultation (2001)
27	California Department of Fish and Game: Comments on the Santa Barbara Airport EIS/EIR for the Aviation Facilities Plan (2001)
28	US Fish and Wildlife Service: Section 7 Consultation (2001)
29	Runway Capacity Factors-Draft Aviation Facilities Plan, City of Santa Barbara (2001)
30	Airport Capacity and Delay-FAA Advisory Circular No. 150/5060-5 U.S. Department of Transportation (1983)





Source: Phillips M&S Sweeney Moore Architects, McClier, 2000

Figure 2-6. Santa Barbara Airport Terminal Expansion Project

EXHIBIT NO. 1

APPLICATION NO. CC-058-01

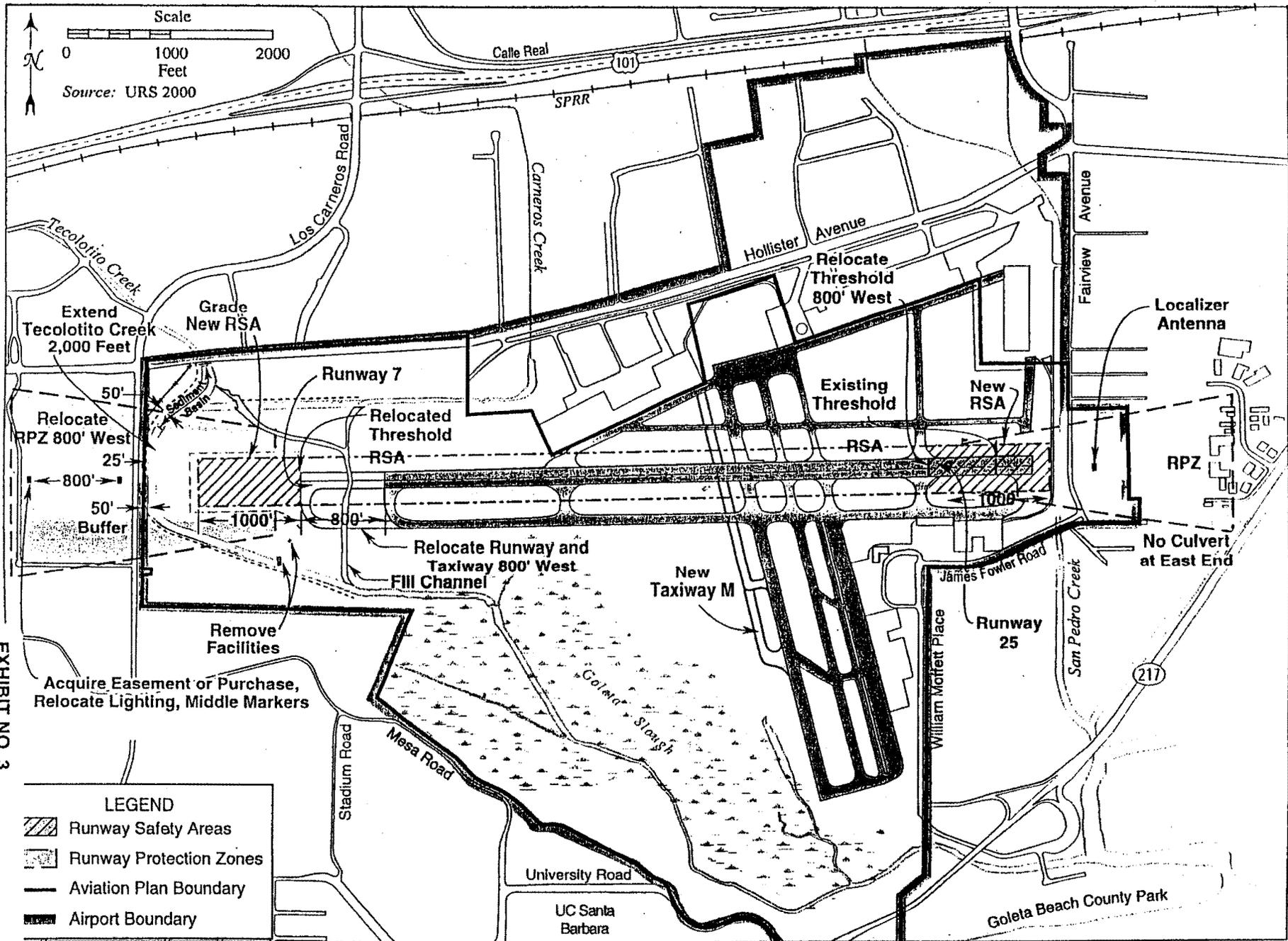
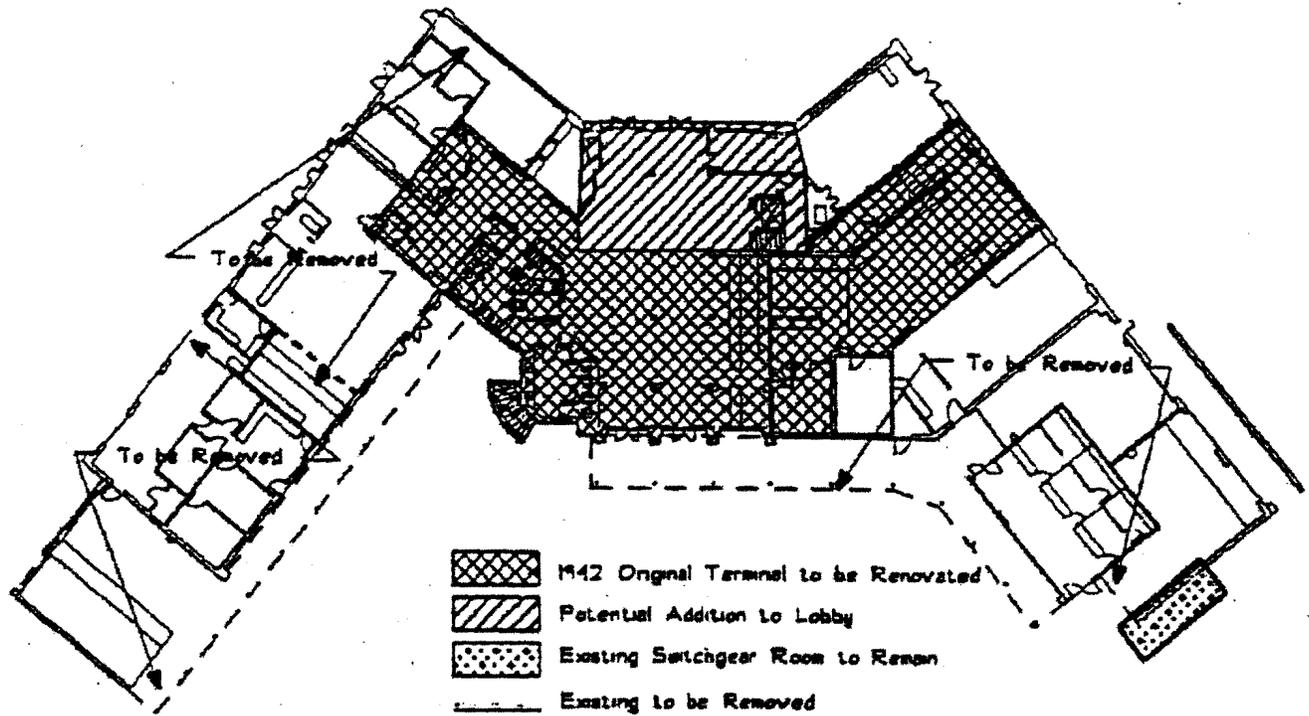


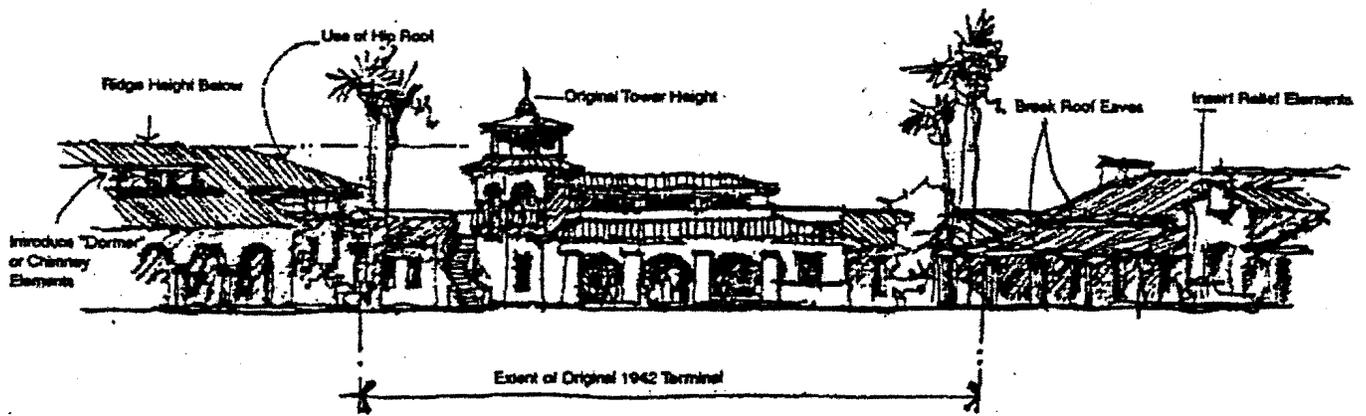
EXHIBIT NO. 3
APPLICATION NO. CC-058-01

California Coastal Commission

Figure 2-3. Alternative 1, West Creek Realignment Alternative



Proposed Terminal Renovation



Conceptual Elevation Sketch Denoting Visual Separation of the 1942 Airline Terminal from the Proposed New Additions

Source: Phillips Metsch Sweeney Moore Architects McCluer, 2000

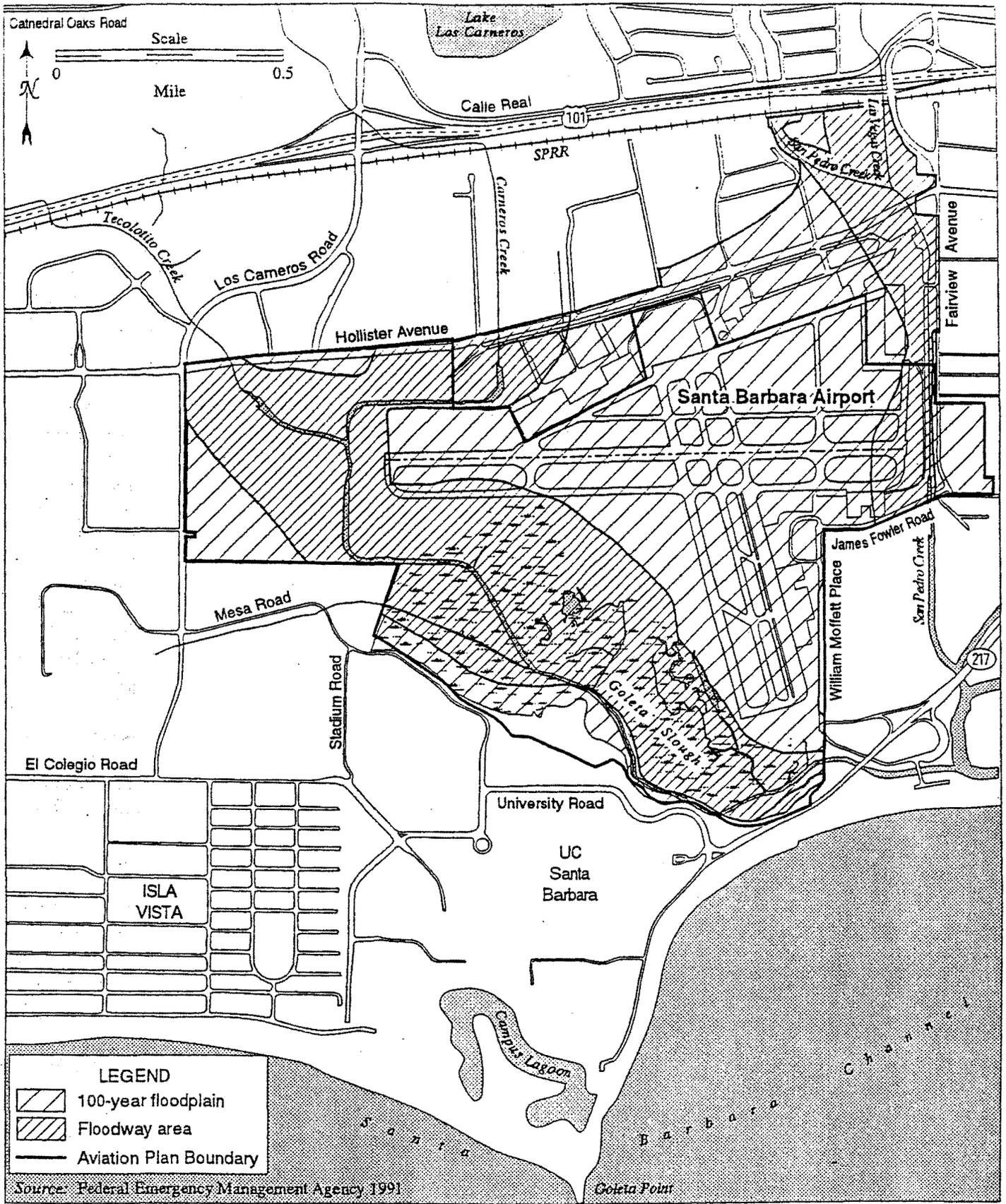


Figure 3.13-2. Flood Hazard Areas

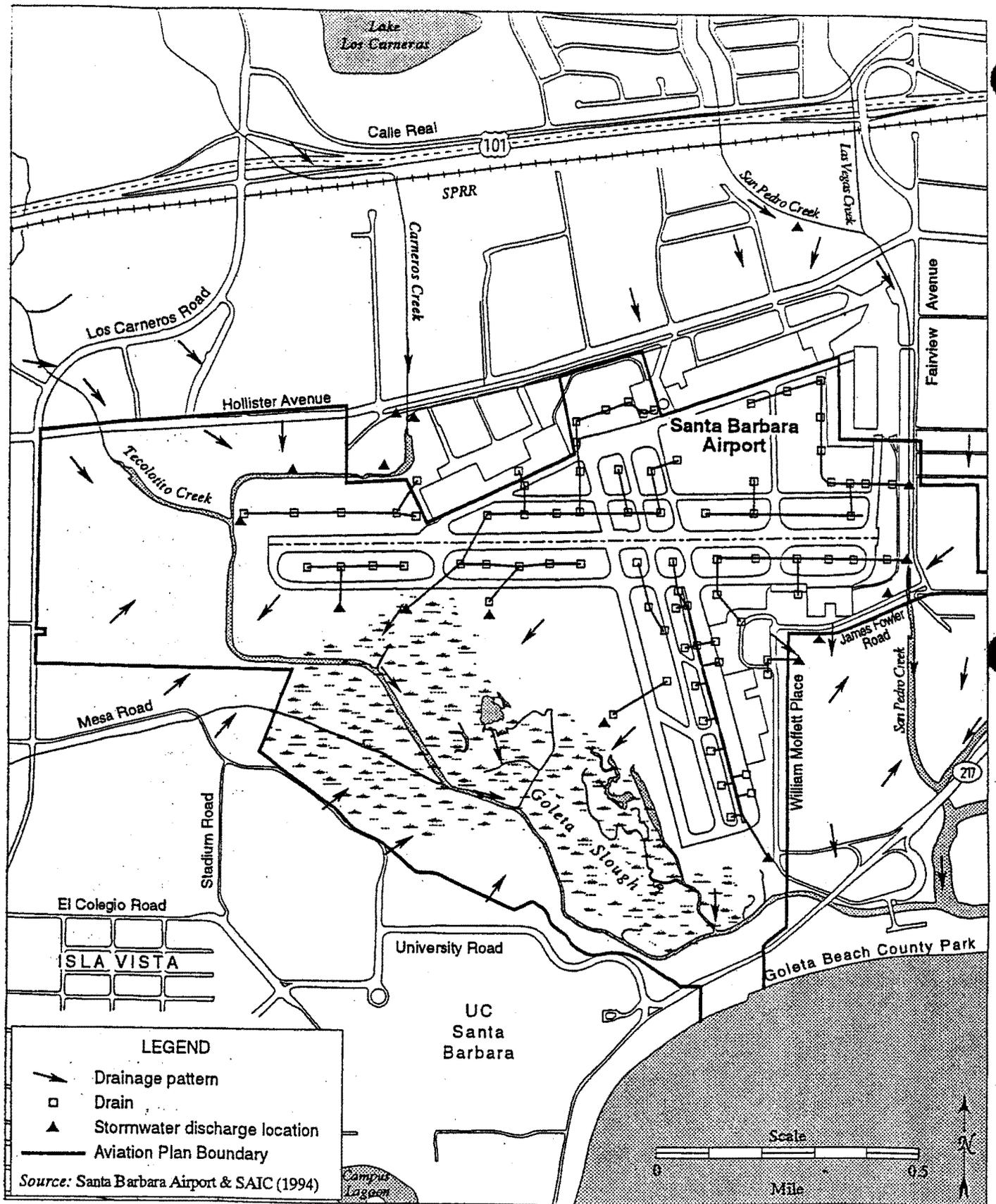
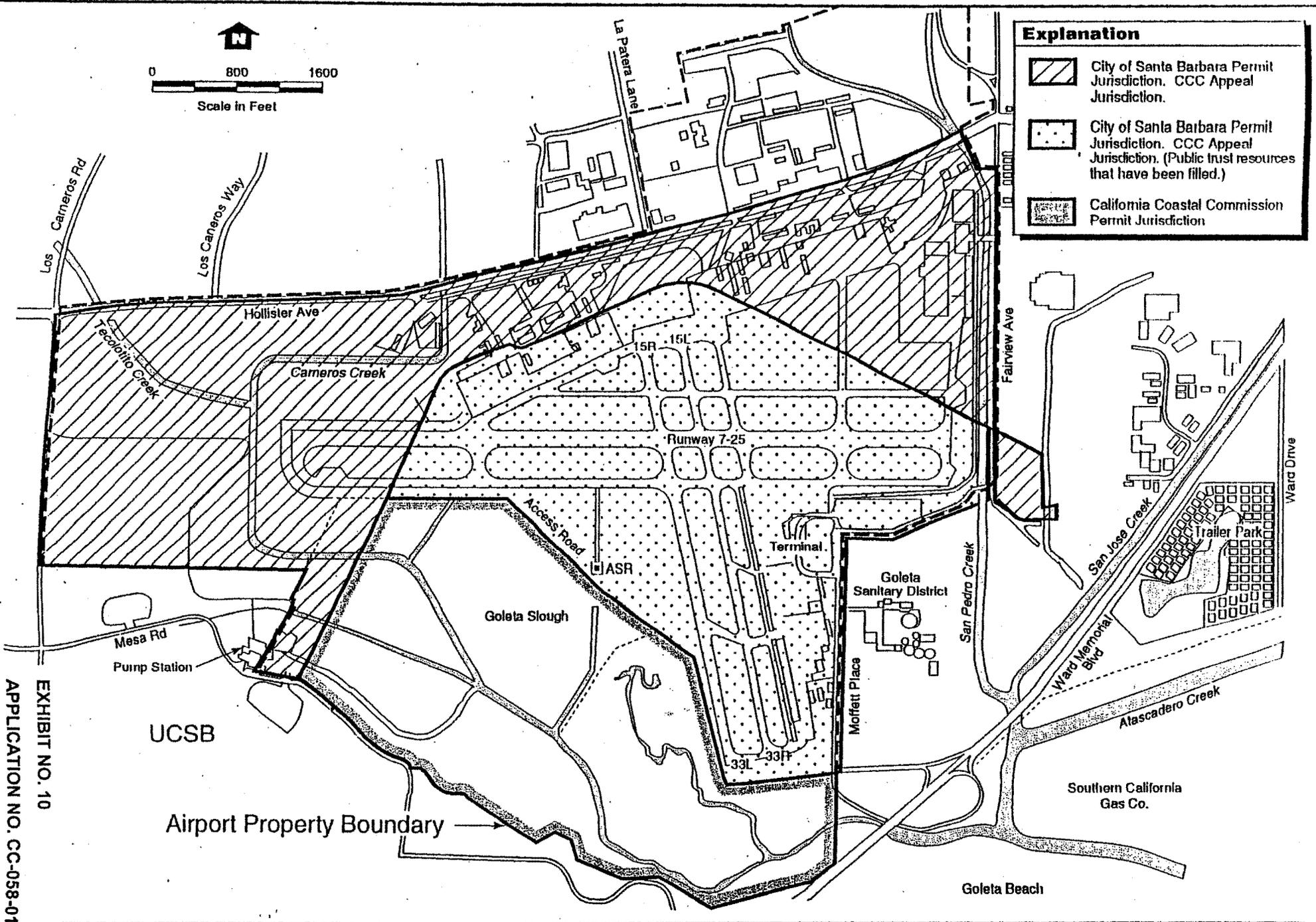


Figure 3.7-2. Stormwater Drainage System



Explanation

-  City of Santa Barbara Permit Jurisdiction. CCC Appeal Jurisdiction.
-  City of Santa Barbara Permit Jurisdiction. CCC Appeal Jurisdiction. (Public Trust resources that have been filled.)
-  California Coastal Commission Permit Jurisdiction

EXHIBIT NO. 10
 APPLICATION NO. CC-058-01

Figure 10. Coastal Zone Boundaries

**TABLE 3A
DETAILED IMPACTS TO COASTAL ACT WETLANDS**

Map Code	Vegetation Series	Acres of permanent effect (removal due to paving or creek construction, or conversion to other habitat types)												Total
		Ex. Cameros Ck to be filled	Ex. Tec. Ck to be filled	New Cameros Ck channel	New Tec. Ck channel	Service Road along Tec. Ck. S. of Sed. Basin	New RSA (500x1000') at end of Runway	New Runway and Taxiway W. of Tec. Ck.	Other New RSA areas W. of Tec. Ck.	New Runway and Taxiway E. of Tec. Ck.	New RSA areas E. of Tec. Ck.	New Approach Lights on Sares-Regis	Taxiway M	
Wetland Vegetation (dominated by hydrophytes)*														
1	Pickleweed				0.09	0.12				0.43	0.58		0.02	1.24
1H	Pickleweed-Mediterranean barley				0.22	0.01								0.23
1HB	Pickleweed-Mediterranean barley-brass buttons											0.11		0.11
1HC	Pickleweed-Mediterranean barley-alkali weed				0.40	0.08		0.06	0.06					0.60
3	Saltgrass							0.54						0.54
3CF	Saltgrass-alkali weed-alkali heath							0.25						0.25
4C	Curly dock-alkali weed							0.02			0.08			0.10
4FD	Curly dock-alkali heath-saltgrass					0.10			0.04	0.05				0.19
4P	Curly dock-bristly ox-tongue				0.02									0.02
7ER	Spikerush-curly dock											0.04		0.04
8	Arroyo willow				0.17			0.04						0.21
11	Italian ryegrass											0.10		0.10
11LC	Italian ryegrass-alkali weed				0.03	0.05								0.08
11LCF	Italian ryegrass-alkali weed-alkali heath					0.08								0.08
11LGT	Italian ryegrass-alkali weed-wild lettuce								0.03	0.03				0.06
11LCR	Italian ryegrass-alkali weed-curly dock								0.11	0.15				0.26
11LFR	Italian ryegrass-alkali weed-alkali heath-curly dock					0.07		0.14					0.12	0.33
11LFRD	Italian ryegrass-alkali heath-curly dock-pickleweed							0.08						0.08
11LSC	Italian ryegrass-pickleweed-alkali weed				0.20	0.21			0.11					0.52
14R	Cocklebur-curly dock								0.09	0.42				0.51
14RMC	Cocklebur-curly dock-alkali mallow-alkali weed									0.24				0.24
22LR	Alkali weed-Italian ryegrass-curly dock							0.17						0.17
22LFR	Alkali weed-Italian ryegrass-alkali heath-curly dock								0.14	0.24				0.38
22LFRS	Alkali weed-Italian ryegrass-alkali heath-curly dock-saltgrass				1.03	0.27		0.11						1.41
22S	Alkali weed-pickleweed				0.08									0.08
22XM	Alkali weed-cocklebur-alkali mallow									0.03				0.03
24	Heliotope							0.15						0.15
Subtotal=		0	0	0.00	2.24	0.99	1.50	0.58	1.30	0.43	0.58	0.10	0.29	8.01
Non-vegetated Areas Seasonally Inundated or Saturated*														
19	Salt flats				0.34	0.32	0.01							0.67
Open Water and Mudflats in Tecolotito and Cameros Creeks*														
21	Open water - channels filled for RSA	0.51	4.11											4.62
Total Coastal Act Wetland Impacts=		0.51	4.11	0.34	2.56	1.00	1.50	0.58	1.30	0.43	0.58	0.10	0.29	13.30

*= Areas considered "wetlands" as defined in the Coastal Act, including non vegetated areas subject to periodic inundation and open water

TABLE 4A
SUMMARY OF IMPACTS TO COASTAL ACT WETLANDS

Map Code	Wetland Type (Vegetated or Non-vegetated)	Permanent Effect* (acres)	Temporary Impacts (acres)
<i>Coastal Act Wetlands (Vegetated wetlands) - RSA Extension and Creek Relocation Impacts</i>			
1	Pickleweed Series	2.05	0.18
3	Saltgrass Series	0.79	0.06
4	Curly Dock Series	0.31	0.21
7	Spikerush Series	0.00	0.11
8	Arroyo Willow Series	0.21	0.00
11	Annual Grassland Series (wetland affinities)	1.29	0.73
14	Cocklebur Series	0.75	0.00
22	Alkali Weed Series	2.07	0.23
24	Heliotrope Series	0.15	0.00
<i>Subtotal=</i>		7.62	1.52
<i>Coastal Act Wetlands (Unvegetated) - RSA Extension and Creek Relocation Impacts</i>			
19	Salt flats (periodically inundated, no drainage)	0.67	0.00
<i>Subtotal=</i>		0.67	0.00
<i>Coastal Act Wetlands (Unvegetated Open Water & Mudflats) - RSA Extn. & Ck Relocation</i>			
21	Open water and mudflats (filling Carneros Creek for RSA)	0.51	0.03
21	Open water and mudflats (filling Tecolotito Creek for RSA)	4.11	0.03
<i>Subtotal=</i>		4.62	0.06
<i>Coastal Act Wetlands (Vegetated) - Taxiway M</i>			
1	Pickleweed Series	0.13	0.06
7	Spikerush Series	0.04	0.02
11	Annual Grassland (wet affinities)	0.12	0.06
<i>Subtotal=</i>		0.29	0.14
<i>Coastal Act Wetlands (Vegetated) - Approach Light on Sares-Regis</i>			
11	Annual Grassland (wet affinities)	0.10	0.05
<i>Subtotal=</i>		0.10	0.05
TOTAL COASTAL ACT WETLANDS=		13.30	1.77
TOTAL COASTAL ACT VEGETATED WETLANDS=		8.01	1.71
* Permanent effect = loss due to paving or creek construction, or conversion to another habitat type. Hence, some wetlands will be converted to upland habitat.			

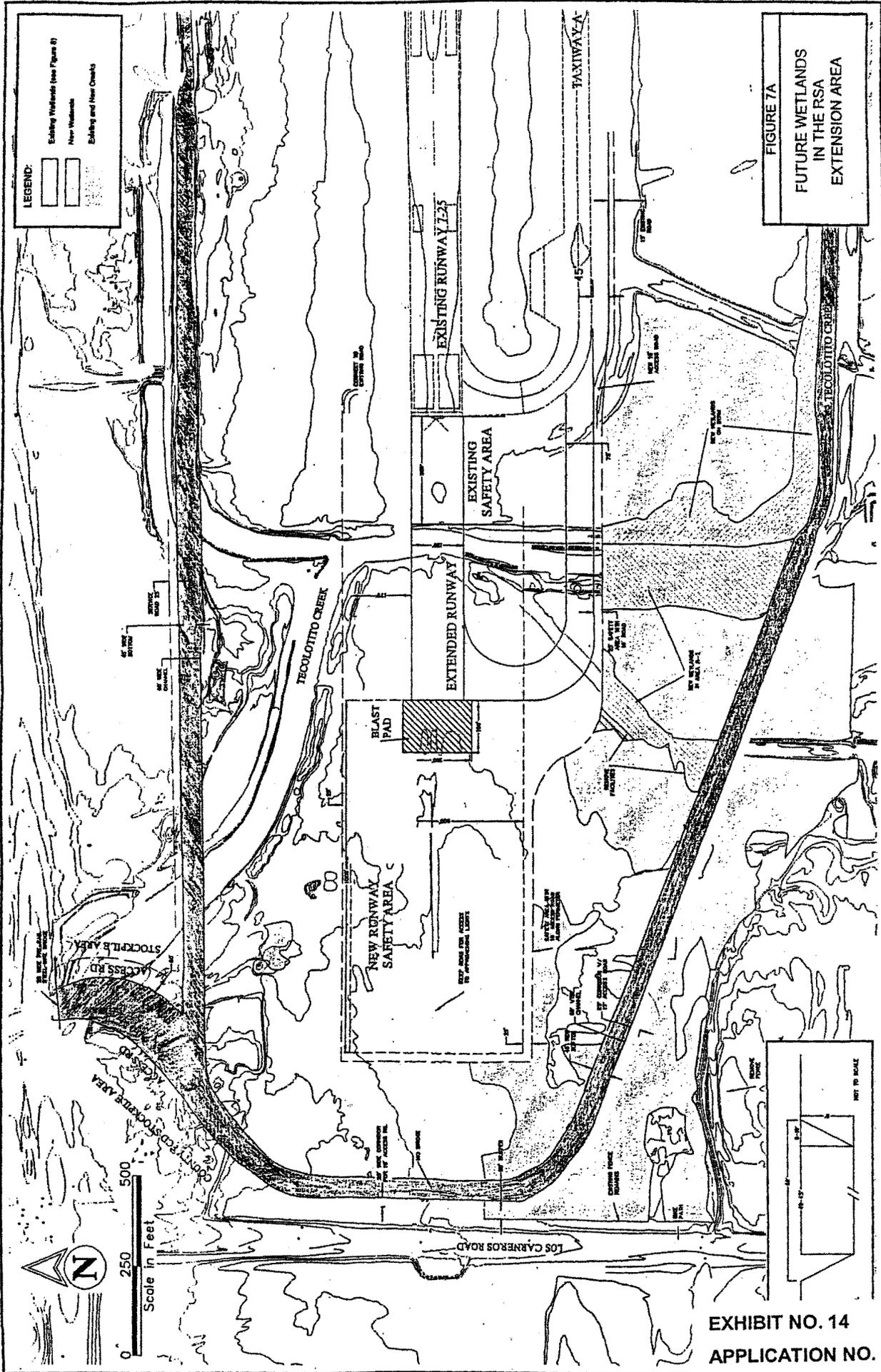
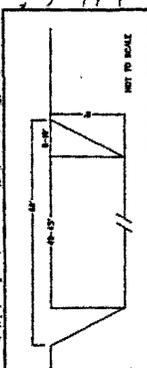
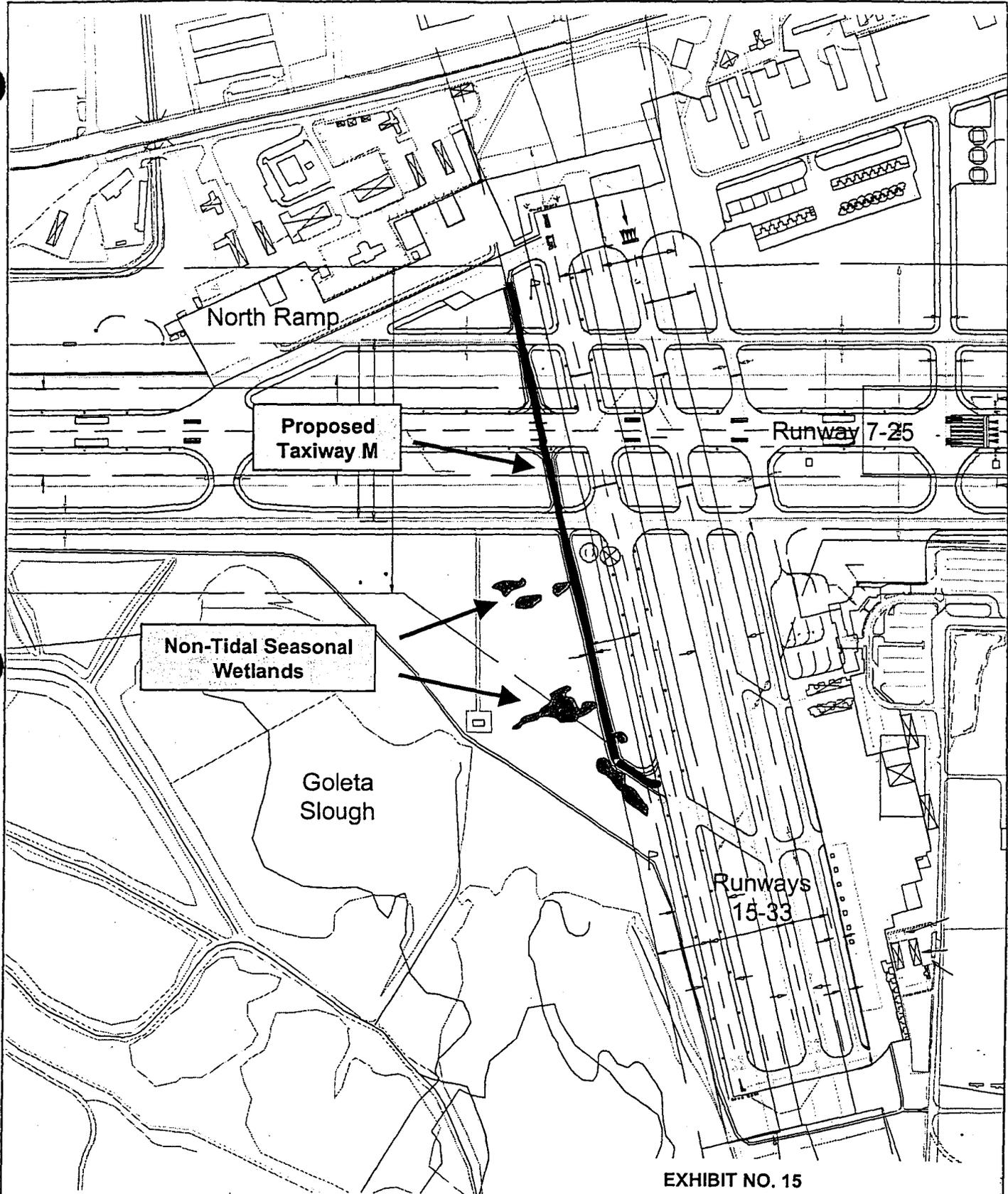


FIGURE 7A
 FUTURE WETLANDS
 IN THE RSA
 EXTENSION AREA



481-BI derived from 082701-01 & 081501-01.dwg




NORTH

No Scale

EXHIBIT NO. 15
APPLICATION NO. CC-058-01

 California Coastal Commission

Wetland Impacts Along Taxiway M

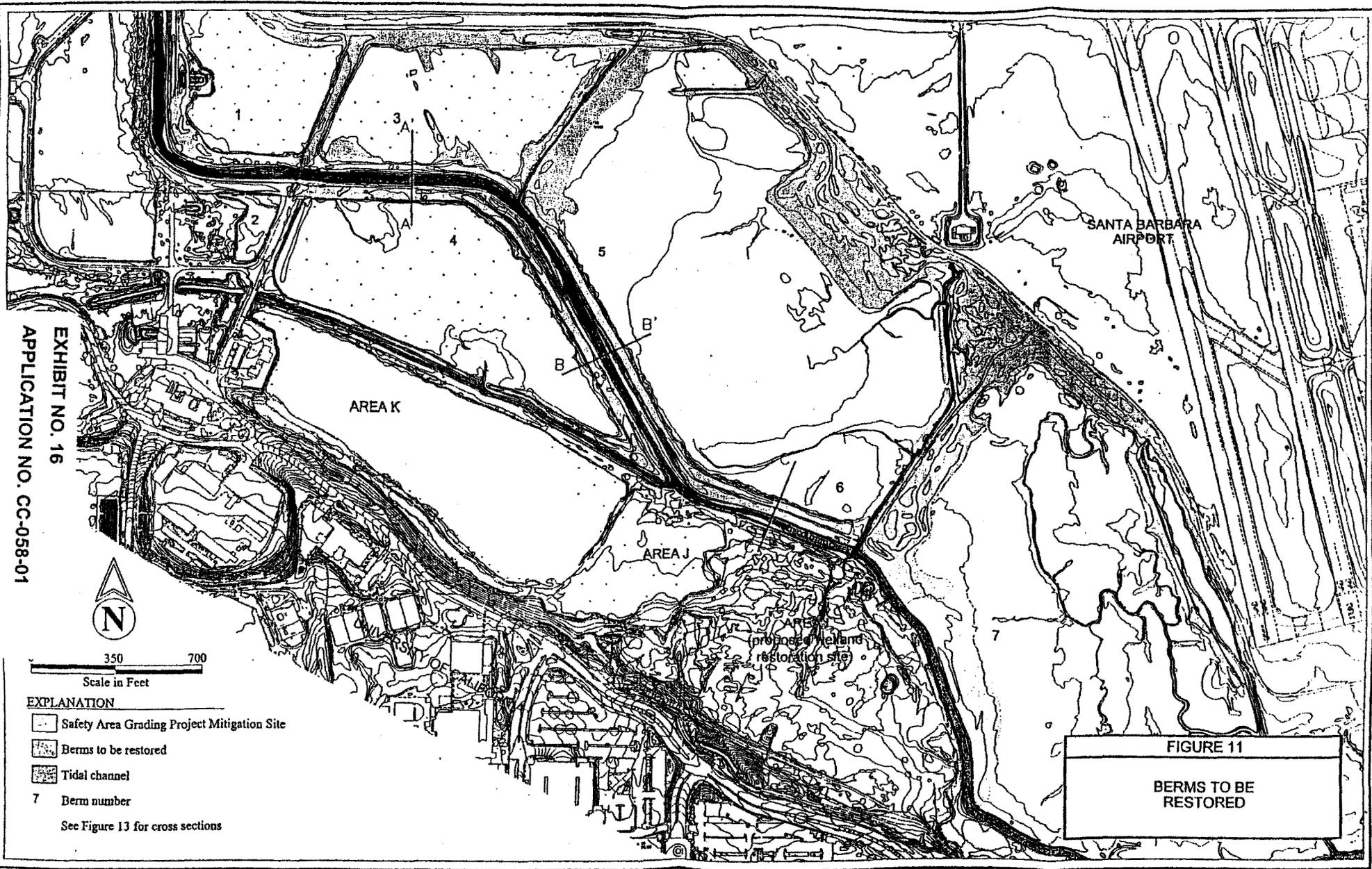


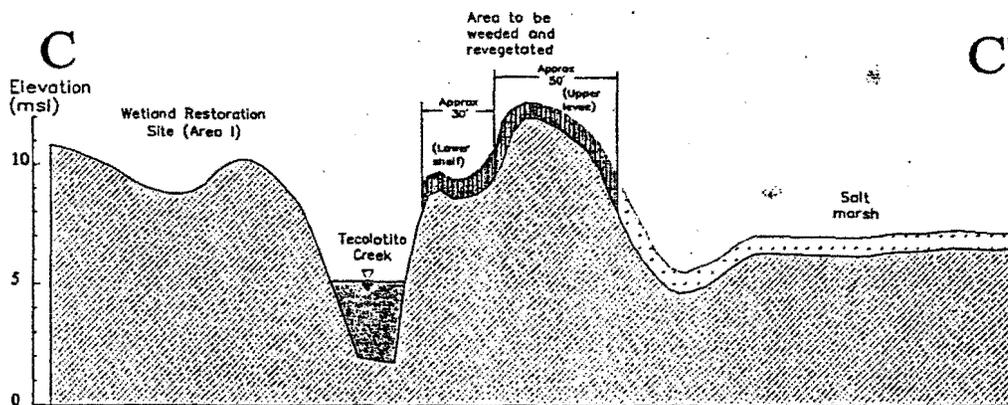
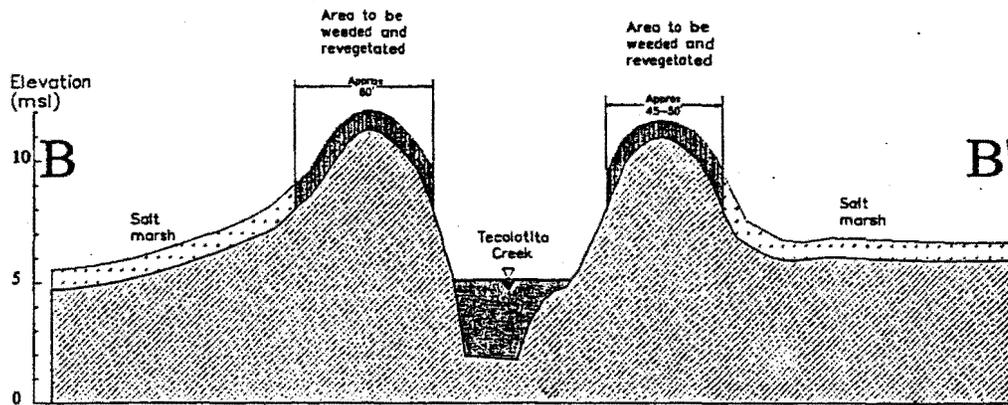
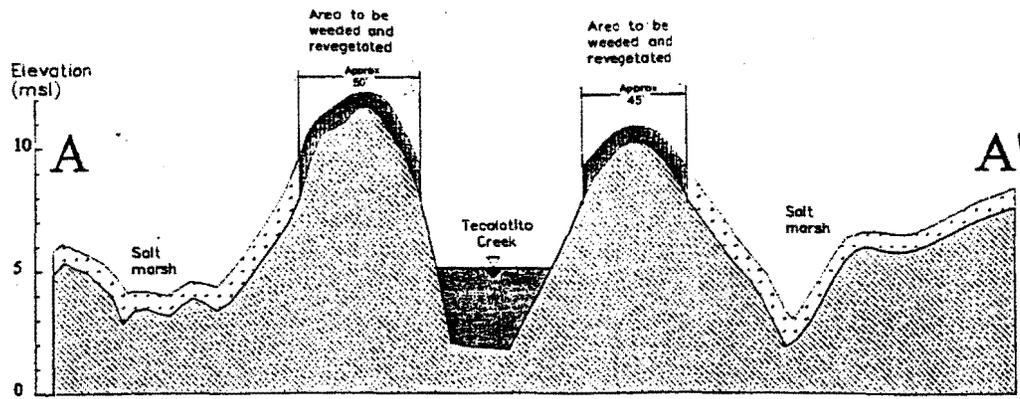
EXHIBIT NO. 16
 APPLICATION NO. CC-058-01



350 700
 Scale in Feet

- EXPLANATION**
- Safety Area Grading Project Mitigation Site
 - Berms to be restored
 - Tidal channel
 - 7 Berm number
- See Figure 13 for cross sections

FIGURE 11
 BERMS TO BE RESTORED



EXPLANATION

 Dense, 6'-high mustard stands

Cross section locations shown on Figure 11

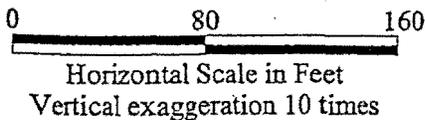


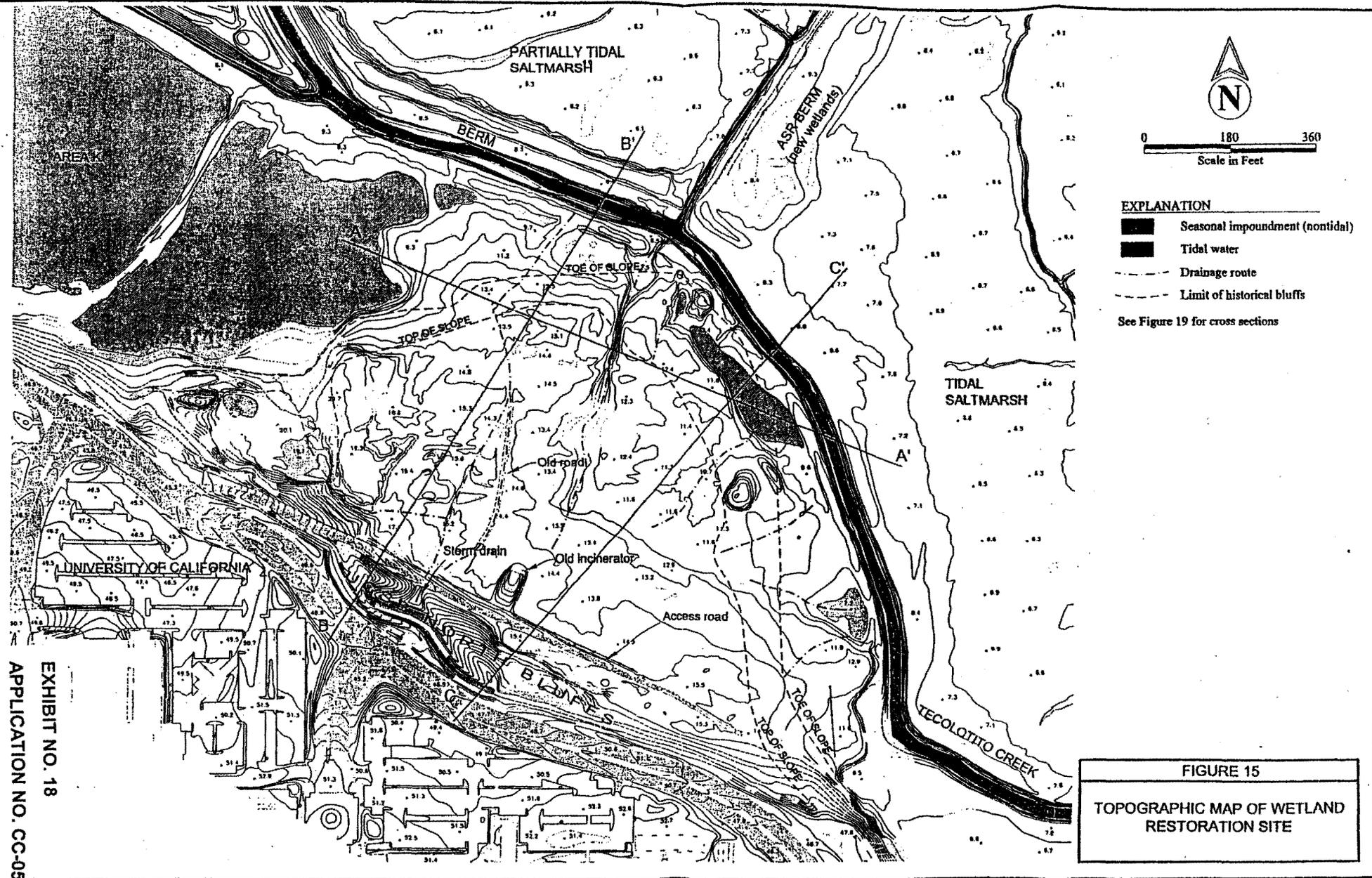
EXHIBIT NO. 17

APPLICATION NO. CC-058-01

 California Coastal Commission

FIGURE 13

**CROSS SECTIONS OF
BERM HABITAT
RESTORATION**



EXPLANATION

-  Seasonal impoundment (nontidal)
-  Tidal water
-  Drainage route
-  Limit of historical bluffs

See Figure 19 for cross sections

FIGURE 15
TOPOGRAPHIC MAP OF WETLAND RESTORATION SITE

EXHIBIT NO. 18
 APPLICATION NO. CC-058-01

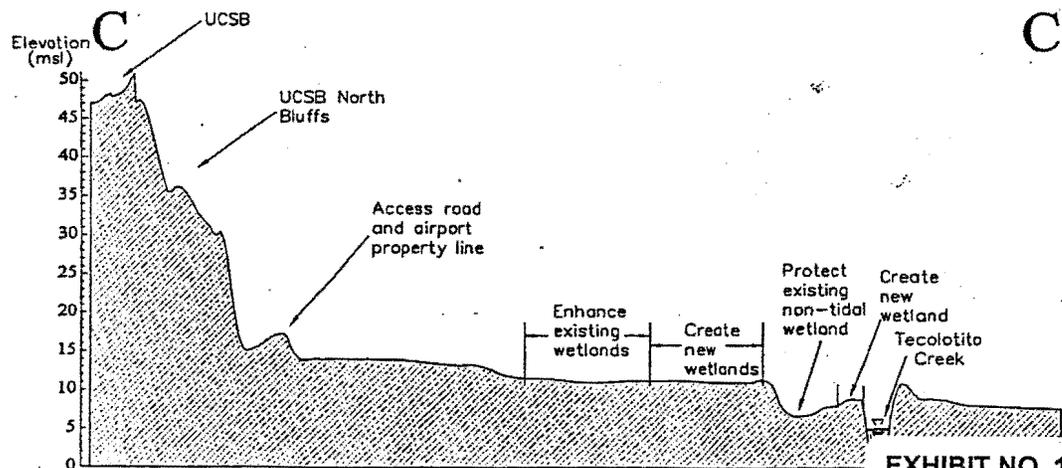
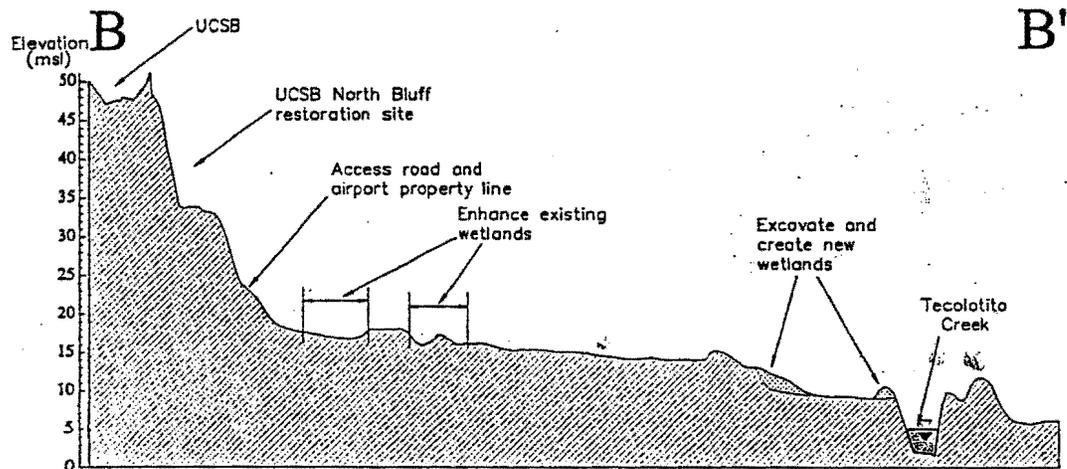
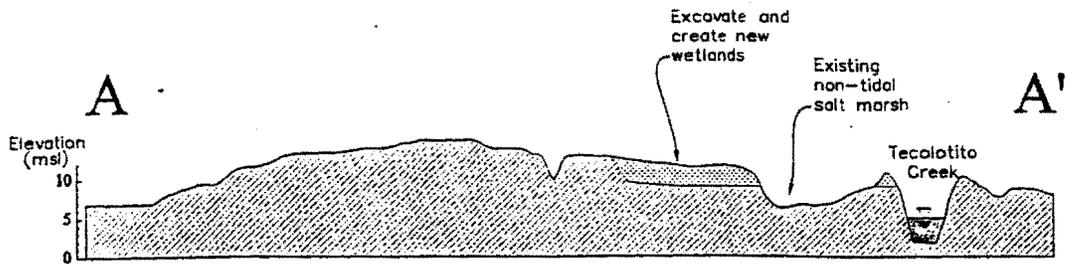


EXHIBIT NO. 19

APPLICATION NO. CC-058-01

California Coastal Commission

Cross section locations
shown on Figure 15

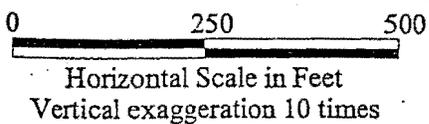
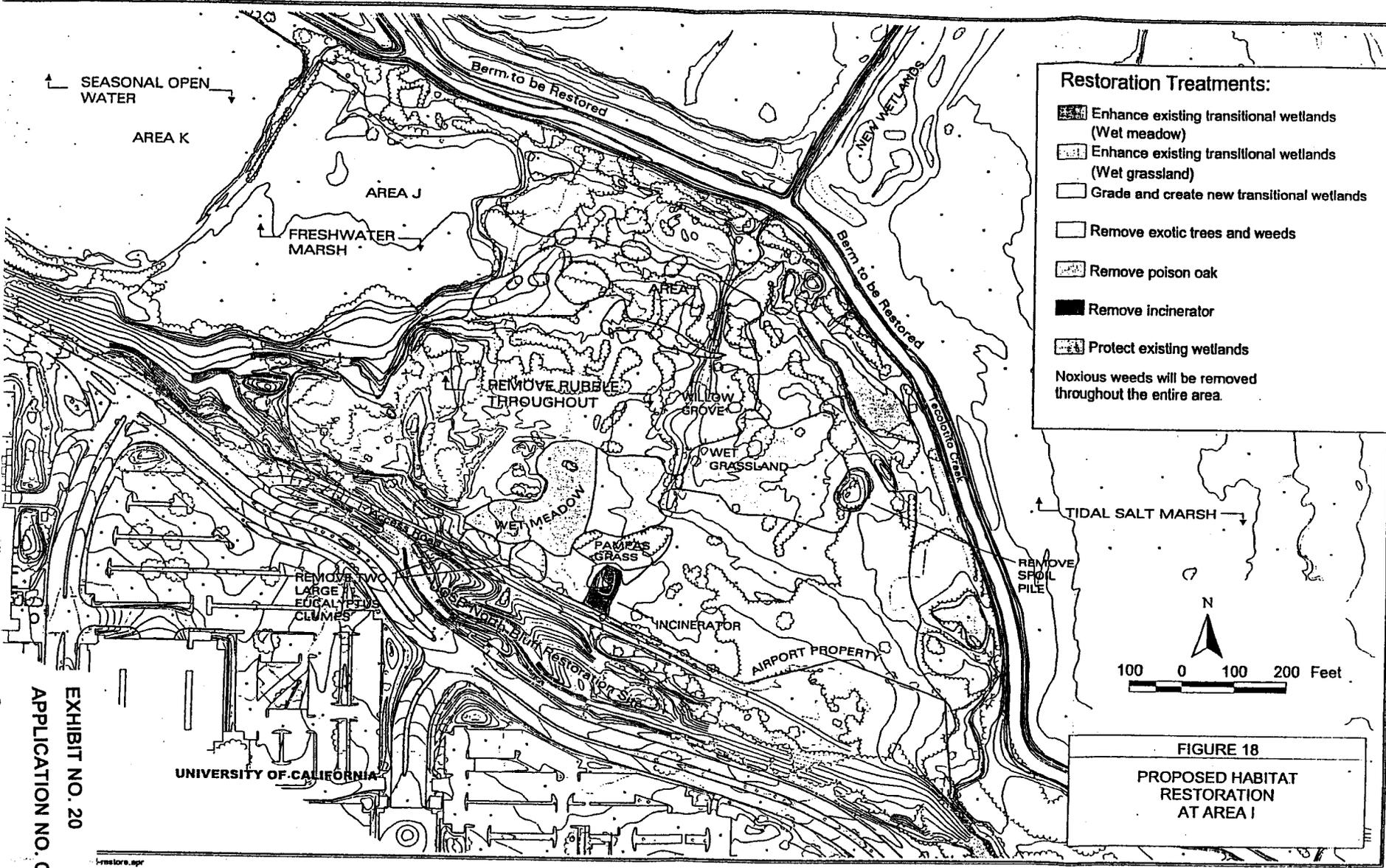


FIGURE 19

CROSS SECTIONS OF
HABITAT
RESTORATION



Restoration Treatments:

- Enhance existing transitional wetlands (Wet meadow)
- Enhance existing transitional wetlands (Wet grassland)
- Grade and create new transitional wetlands
- Remove exotic trees and weeds
- Remove poison oak
- Remove incinerator
- Protect existing wetlands

Noxious weeds will be removed throughout the entire area.

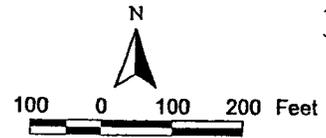


FIGURE 18
PROPOSED HABITAT RESTORATION AT AREA I

EXHIBIT NO. 20
 APPLICATION NO. CC-058-01

restore.apr

Table 11 will be modified as shown below to provide more accurate and measurable performance goals:

**TABLE 11
TARGET WETLAND VEGETATION GOALS AT YEAR 7***

Restoration Site	Type of Wetland	Acres	Minimum Total Percent Native Plant Cover by 7 Years	Minimum Number of Native Wetland Plant Species Successfully Established by 7 Years	Maximum Percent Cover of Non-native Weedy Species by 7 Years**
On berms next to Tecolotito Ck and tidal salt marsh	Non-tidal low-growing wetland herbs, grasses, & shrubs; palustrine persistent emergent wetlands	12.7	85	At least 3 species from the following list: alkali weed, saltgrass, alkali mallow, creeping ryegrass, meadow barley, western ragweed, woolly sea-blight, and alkali heath	10
In Area I, amongst uplands and adjacent to tidal marsh	Non-tidal low-growing wetland herbs and grasses; palustrine persistent emergent wetlands	11.6	75	At least 5 species from the following list: spikerush, nut-sedge, toad rush, bulrush, pickleweed, alkali heath, alkali weed, sand spurrey, meadow barley, and saltgrass	10
In Area R-2, amongst upland and wetland grassland mosaic	Non-tidal low-growing wetland herbs and grasses; palustrine persistent emergent wetlands.	2.2	75	At least 4 species from the following list: spikerush, nut-sedge, toad rush, bulrush, pickleweed, alkali heath, alkali weed, sand spurrey, meadow barley, and saltgrass	10
New channels for Tecolotito and Carneros Cks	Estuarine intertidal aquatic bed and unconsolidated bottom.	9.3	10	At least 2 species from the following list: bulrush, pickleweed, alkali heath, and jaumea	10

* The period to measure performance may be extended if goals are not achieved, or three consecutive years since the last active management have not occurred.

**Does not include common naturalized species that are not aggressive, such as Italian ryegrass or brass buttons.

URS

October 10, 2001

Santa Barbara Airport
601 Firestone Road
Santa Barbara, California 93117

Attention: Mr. John Ledbetter

Re: Update on Surveys for the Belding's Savannah Sparrow
Santa Barbara Airport, Aviation Facilities Plan

RECEIVED
OCT 15 2001

CALIFORNIA
COASTAL COMMISSION

Dear Mr. Ledbetter,

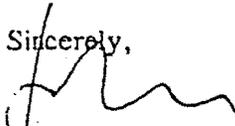
Per your request, we are summarizing our most recent surveys of the state endangered Belding's savannah sparrow in Goleta Slough at the Santa Barbara Airport. URS Corporation is currently studying bird strike hazards for the Airport. We have been conducting various bird surveys in and around the airfield since April 2001. On May 21, 2001, Mr. Dave Compton, the senior ornithologist on our team, conducted a special early morning survey for the Belding's savannah sparrow as part of our study. In addition, the survey was conducted to provide an estimate of the population for the US Fish and Wildlife Service.

The savannah sparrow resides in tidal pickleweed marsh habitat in Goleta Slough. Scientists at UC Santa Barbara Museum of Vertebrate Biology conducted two previous studies of this species in 1992 and 1994. The studies demonstrated that a moderate sized population is present, primarily located in basins A, B, and C (see attached map). The occurrence of the savannah sparrow was recently summarized in the EIR/EIS for the Aviation Facilities Plan (page 3-210, and Figure 3.11-2) based on these studies.

A total of 68 individuals were sighted during our May 2001 survey, including 43 territorial males. Fifty-nine birds were sighted in basins A through D, and four were sighted in basins E and F. Two individual were sighted in basin G and three were sighted in basin L/M. These results are completely consistent with the previous surveys. The savannah sparrow is highly restricted to the pickleweed marsh areas. No individuals were sighted at the location of the proposed Taxiway M or runway safety area extension site at the end of Runway 7-25. Although it may forage in adjacent upland scrub and grassland areas, this species is not expected to occur at the above locations.

Please call me if you have any questions or need additional information. Thank you.

Sincerely,


John T. Gray, Ph.D.
Manager of Environmental Services

Encls.

URS Corporation
130 Robin Hill Road, Suite 100
Santa Barbara, CA 93117
Tel: 805.964.6010
Fax: 805.964.0259

EXHIBIT NO. 22

APPLICATION NO. CC-058-01

 California Coastal Commission

E = Areas examined for possible restoration in the Goleta Slough Ecosystem Management Plan (1997)

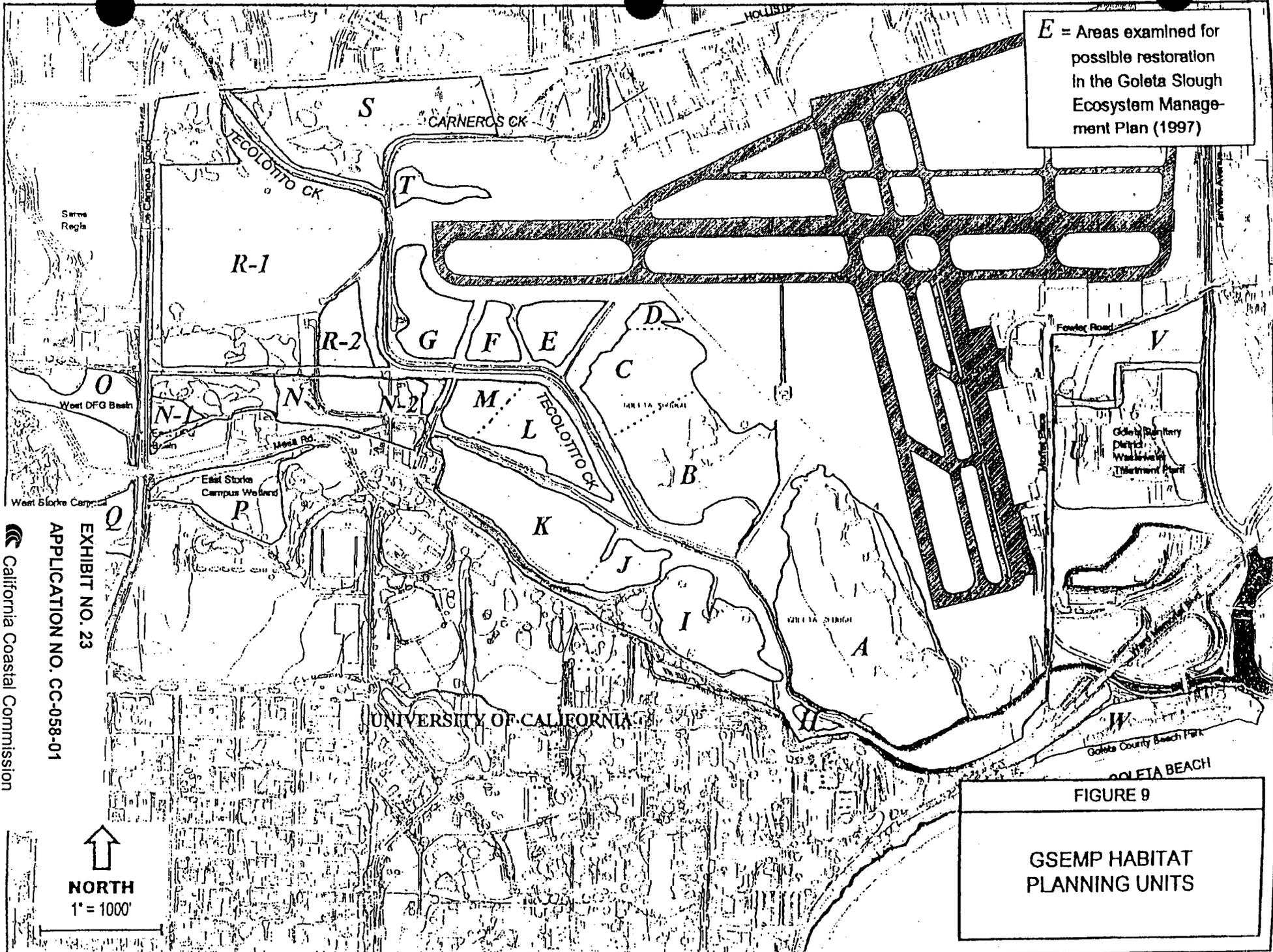


FIGURE 9
GSEMP HABITAT PLANNING UNITS

EXHIBIT NO. 23
APPLICATION NO. CC-058-01
California Coastal Commission

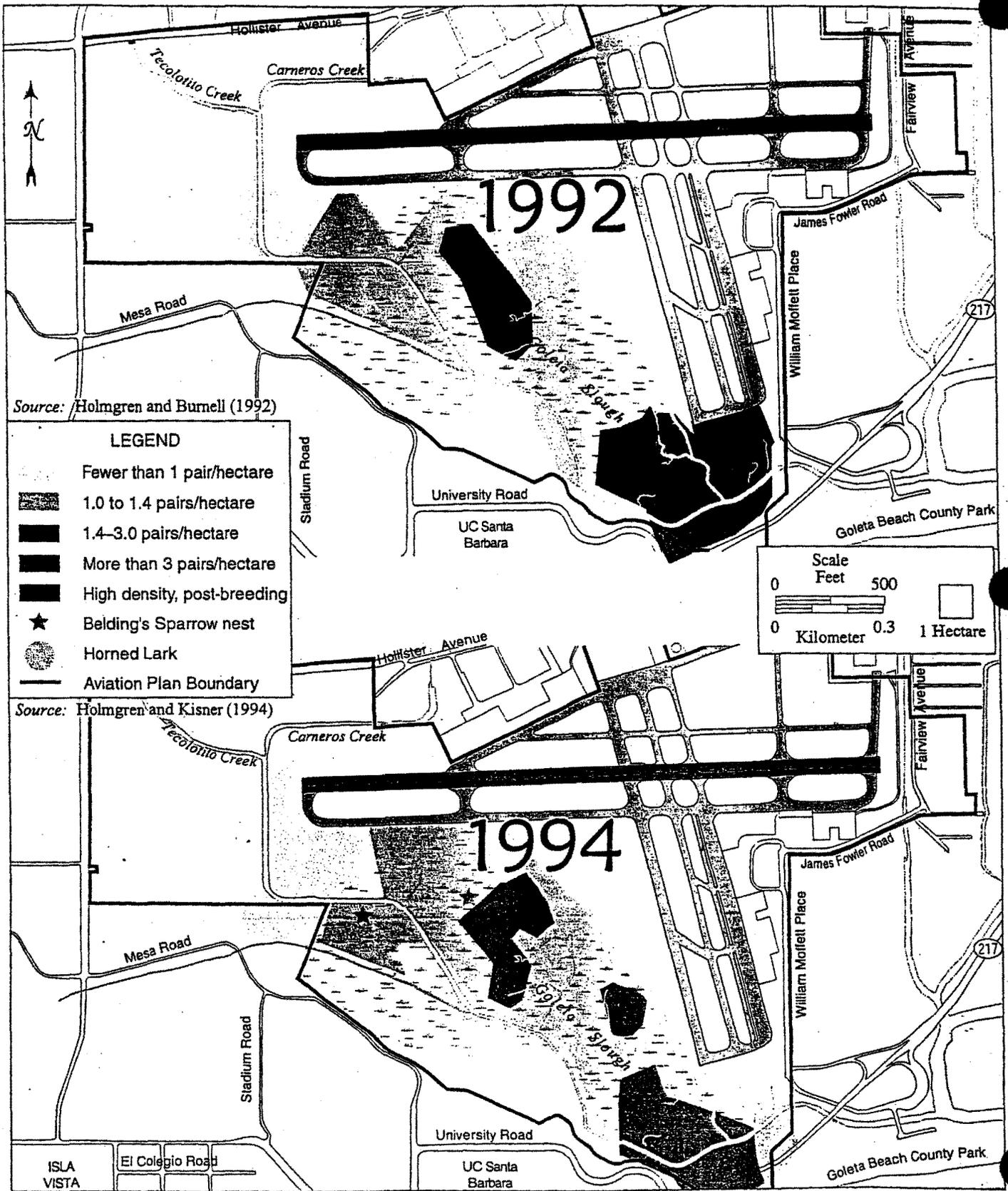


Figure 3.11-2. Distribution and Density of Belding's Sparrows in Goleta Slou

EXHIBIT NO. 24

APPLICATION NO. CC-058-01

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OCT 26 2001
CALIFORNIA
COASTAL COMMISSION



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

F/SWR4:WBC
151422SWR01HC441
HCD_J150

OCT 26 2001

David B. Kessler, AICP
U.S. Department of Transportation
Federal Aviation Administration
P.O. Box 92007
Worldway Postal Center
Los Angeles, California 90009

RECEIVED
OCT 26 2001
City of Santa Barbara
Airport Department

Dear Mr. Kessler:

The National Marine Fisheries Service (NMFS) has reviewed the Santa Barbara Airport Draft Environmental Impact Report/Environmental Impact Statement (DEIR/EIS) for the Aviation Facilities Plan (AFP), the Biological Assessment for the Southern Steelhead Trout (BA), the Essential Fish Habitat Assessment (EFHA), the Goleta Slough Tidal Restoration Feasibility and Bird Strike Study, the Proposed Enlargement of Carneros Creek Sedimentation Basin, the Draft Final Wetlands Mitigation Plan, and various correspondence between NMFS, the Federal Aviation Administration (FAA), and the City of Santa Barbara (City). All of these documents refer to the City of Santa Barbara (City) and FAA's proposed project involving the extension of Runway Safety Areas for Runway 7/25, expansion of the Airline Terminal Building, New Air Cargo Building, New and Improved Taxiways, additional T-hangars, and a new road. NMFS offers the following comments pursuant to the Endangered Species Act (ESA) and the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA).

Endangered Species Act (ESA) Comments

The proposed activities occur within the Southern California Evolutionary Significant Unit (ESU) for the Federally endangered steelhead (*Oncorhynchus mykiss*) and designated steelhead critical habitat. Activities that may potentially adversely affect steelhead and its critical habitat are described below.

One of the primary elements of the AFP is to modify the airfield to meet requirements of the FAA for Runway Safety Areas (RSAs). The RSA is the land surrounding a runway that must be smoothed and compacted such that damage to airplanes that overrun the paved surface would be minimized. Currently, the existing RSAs for Runway 7/25 do not meet FAA requirements. In order to comply with these requirements, the Airport has identified a preferred RSA extension alternative, which is described in Section 2.0 of the DEIR/EIS as 'Alternative 1 - West Creek Realignment'. For this alternative, Tecolotito Creek combined with Carneros Creek would be realigned. Specifically, the creek would be rerouted 2,000 feet to the west so that it would flow around the westerly end of the newly extended RSA. Due to the significant earthwork, steelhead

EXHIBIT NO. 25

APPLICATION NO. CC-058-01



migration may potentially be adversely affected by construction impacts related to the creek relocation.

In addition, water quality impacts, associated with improvements and modifications to the AFP area related to construction, an overall increase of impervious surface areas, expanded Airport operations, and storm water discharge, may potentially adversely affect steelhead migration. The FAA has determined that the proposed project will not adversely affect the Federally endangered steelhead. NMFS concurs with this determination provided the following special conditions are implemented.

1. The Carneros Creek sediment basin should be enlarged according to the proposed plan described in URS Corporation's Proposed Enlargement of Carneros Creek Sedimentation Basin dated July 31, 2001. The Tecolotito Creek sediment basin should also be enlarged as described in the DEIS/EIR. Enlarging these basins will reduce the frequency of emergency dredging during times when steelhead may be present in Tecolotito and Carneros Creek.
2. The new channel should be completed before connecting to the existing channel to avoid the need for extensive stream diversions during construction. This reduces the time period when steelhead migration may be impacted.
3. Construction related to the connection of the new channel to the existing channel should only be conducted between July 15 and October 1 of any given year. During this time period, the likelihood of any adult or juvenile steelhead being present in the project vicinity is minimal.
4. The applicant should install silt fencing, temporary instream siltation basins, stream diversions and implement other Best Management Practices (BMPs) to minimize downstream turbidity and sedimentation impacts.

If the FAA modifies the proposed action as identified above and then determines that the modified proposal action is not likely to adversely affect listed species or critical habitat, this letter will constitute a written concurrence that the proposed action is not likely to adversely affect listed species or critical habitat pursuant to 50 C.F.R. section 402.12(b). Please provide documentation, either by written notice or by copy of the permit, of your decision to modify the proposed action as we have requested. If, however, the FAA chooses not to modify the proposed action as above, the FAA must then initiate formal section 7 consultation.

This concludes the informal section 7 consultation for this proposed action. Consultation must be reinitiated where discretionary federal agency involvement or control over the action has been retained (or is authorized by law) and; (1) if new information becomes available revealing effects of the action on listed species in a manner or to an extent not previously considered, (2) if project plans change, (3) if the agency action is subsequently modified in a manner that causes an effect to listed species that was not considered, or (4) if a new species or critical habitat is designated that may be affected by this action.

Essential Fish Habitat Comments

The proposed project occurs within Essential Fish Habitat (EFH) for the Coastal Pelagics and Pacific Groundfish Fishery Management Plans. Potential impacts to EFH related to this project include construction related turbidity and sedimentation, indirect impacts from hydrologic changes, increased stormwater runoff from an increased paved surface on the runway, the permanent loss of 13.3 acres of wetlands, and the temporary disturbance of 1.77 acres of wetlands. The FAA has determined that the proposed project will not have permanent adverse effects on EFH. NMFS concurs with this determination provided the following recommendations are implemented.

EFH Conservation Recommendations

1. In order to reduce adverse effects associated with increased stormwater runoff, the Airport should utilize BMPs to control industrial stormwater pollution and to monitor stormwater quality. After the Regional Water Quality Control Board approves the newly updated Stormwater Pollution Prevention Plan (SPPP) for the new facilities, the Airport should submit a copy of the SPPP to NMFS.
2. Due to the valuable ecosystem functions that wetlands provide, the Airport should mitigate for the loss of wetlands associated with this project. Specifically, the Airport should mitigate at a 2:1 ratio in accordance with the procedures described in the Draft Final Wetlands Mitigation Plan. Copies of the monitoring reports should be forwarded to NMFS.
3. NMFS believes that out-of-kind habitat replacement, which involves restoring tidal circulation to closed basins in the Goleta Slough, would be beneficial to EFH. However, the FAA has concerns about the effect of increased tidal water on bird strike hazards at the airport. Therefore, the Airport should implement a tidal restoration feasibility and bird strike study to evaluate the effects of increased tidal circulation on bird strike hazards. Once completed, a copy of the study and its recommendations for the future should be forwarded to NMFS.

Section 305(b)(4)(B) of the Magnuson-Stevens Act requires FAA to provide NMFS with a detailed written response to these EFH Conservation Recommendations, including a description of measures adopted by FAA for avoiding, mitigating, or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with NMFS's recommendations, FAA must explain its reasons for not following the recommendations, including the scientific justification for any disagreements with NMFS over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects (50 CFR 600.920(j)).

Thank you for consulting with NMFS. If you have any questions related to this project, please contact Bryant Chesney at (562) 980-4037 or bryant.chesney@noaa.gov.

Sincerely,



Rodney R. McInnis
Acting Regional Administrator

cc:

John Ledbetter, Santa Barbara Airport
Sarah Iza, Santa Barbara Airport



U.S Department
of Transportation
Federal Aviation
Administration

Western-Pacific Region
Airports Division

Federal Aviation Administration
P.O. Box 92007
Los Angeles, CA 90009-2007

November 26, 2001

Mr. Bryant Chesney
U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

RECEIVED

DEC 03 2001

City of Santa Barbara
Airport Department

Dear Mr. Chesney:

**Santa Barbara Airport
Santa Barbara, California
Draft Environmental Impact Report/Environmental Impact Statement
Conclusion of Consultation**

The Federal Aviation Administration (FAA) and the city of Santa Barbara (City) have had the opportunity to review the National Marine Fisheries Service (NMFS) letter to us dated, October 26, 2001. This letter was responding to the FAA's determinations pursuant to the Endangered Species Act (ESA) Section 7 and Magnuson Stevens Fisheries Conservation and Management Act - Essential Fish Habitat (EFH) Consultations related to the proposed Aviation Facilities Plan (AFP) at Santa Barbara Airport. The AFP is currently under environmental review pursuant to the National Environmental Policy Act of 1969 (NEPA) and the California Environmental Quality Act of 1970 (CEQA).

Endangered Species:

The proposed projects occur within the range of the Southern California Evolutionary Significant Unit (ESU) for the Federally Endangered Southern Steelhead Trout and designated Steelhead Critical Habitat. The primary element of the Aviation Facilities Plan for Santa Barbara Airport is the enlargement of the Runway Safety Areas that surround Runway 7/25. These Safety Areas currently do not meet the minimum design standards established by the FAA. The preferred alternative, as identified in the corresponding Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) would involve the relocation of Tecolotito and Carneros Creeks in order to accommodate these safety areas. The NMFS is concerned that the significant earthwork and modification of critical habitat may potentially affect steelhead migration. The NMFS has proposed the following special conditions, which the Airport and the FAA have agreed to follow:

1. The Carneros Creek sediment basin will be enlarged according to the proposed plan as described in the URS Corporation's Proposed Enlargement of Carneros Creek Sedimentation Basin, dated July 31, 2001. In addition, the Tecolotito Creek sediment basin will be enlarged, as outlined in our previous correspondence.

EXHIBIT NO. 26

APPLICATION NO. CC-058-01

California Coastal Commission

2. To avoid the need for extensive stream diversions during construction, the new channel will be completed prior to connection with the existing channel. This will reduce the opportunity for interruption during steelhead migration.
3. Construction related to the connection of the new channel to the existing channel will be completed between July 15 and October 1 of each year. This schedule will minimize the potential for adult or juvenile steelhead to be in the project area.
4. To minimize downstream turbidity and sedimentation impacts, silt fencing, temporary in stream siltation basins, stream diversions, and other Best Management Practices (BMPs) will be used.

These statements hereby modify the proposed project as requested by NMFS; the adherence to these conditions concludes the informal section 7 consultation for this proposed action.

Essential Fish Habitat:

Pursuant to Section 305(b) (4) (B) of the Magnuson-Stevens Act for EFH consultation, the following statements outline the FAA's commitment to the adherence of the each of the Special Conditions and Conservation Recommendations outlined your October 26, 2001, letter.

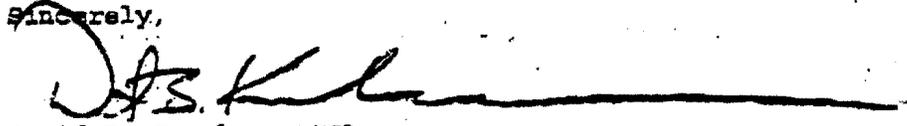
The proposed project is also located within the Essential Fish Habitat (EFH), for the Coastal Pelagics and Pacific Groundfish Management Plans. Potential impacts to EFH related to this project include; increased turbidity and sedimentation, indirect impacts from hydrologic changes, increased stormwater runoff, permanent loss of 13.3 acres of wetlands, and the temporary disturbance of 1.77 acres of wetlands. The FAA is committed to following the NMFS's proposed conservation recommendations pursuant to your letter dated October 26, 2001.

1. To reduce the adverse effects associated with increased stormwater runoff, the FAA will utilize BMPs to control industrial stormwater pollution and to monitor stormwater quality. The Airport will also submit a copy of the Stormwater Pollution Prevention Plan for the new facilities once, once it is approved by the Regional Water Quality Control Board.
2. The Airport will mitigate for wetlands at a 2.7:1 ratio, as described in the Proposed Final Wetlands Mitigation Plan. The 2.7:1 ratio is clearly higher than the 2:1 ratio as described in the Draft Wetlands Mitigation Plan. Copies of the monitoring plans will be forwarded to NMFS as the projects progress.
3. While the FAA concurs with the NMFS assertion that out-of-kind replacement would be beneficial to EFH, the FAA has concerns regarding tidal restoration and bird strike hazards. Currently, a tidal restoration feasibility/bird strike study is underway at the Goleta Slough to evaluate the effects of increased circulation on bird strike hazards. Once completed, a copy of the study and its recommendations will be forwarded to NMFS.

These measures are conditions of the permit as described in the October 26, 2001 letter. The statements above hereby coincide with the NMFS Conservation Recommendations related to the proposed projects.

Please call me at 310/725-3615 if you have any questions concerning this matter.

Sincerely,



David B. Kessler, AICP
Environmental Protection Specialist

cc: John Ledbetter, Santa Barbara Airport
Owen Thomas, Santa Barbara Airport

FROM : CDFG

~~STATE OF CALIFORNIA-THE RESOURCES AGENCY~~
~~DEPARTMENT OF FISH AND GAME~~

GRAY DAVIS, Governor

South Coast Region 5
4949 Viewridge Avenue
San Diego, California 92123
(619) 487-4201



July 8, 2001

Jon Ledbetter, AICP
Airport Planner
Santa Barbara Airport
City of Santa Barbara
601 Firestone Road
Goleta, California 93117

**SANTA BARBARA AIRPORT JOINT EIR/EIS
FOR AVIATION FACILITIES PLAN**

This Draft EIR/EIS evaluates the impacts resulting from the extension of the Runway Safety Areas for Runway 7/25 to meet current Federal Aviation Administration (FAA) design standards, the construction of Taxiway M adjacent to Runway 15R-33L, the expansion of the Airline Terminal Building and associated automobile parking facilities, and the improvement of Taxiway B, aircraft parking aprons, air cargo processing facilities, 75 aircraft T-hangars, and a new on-airport service road. The project is located in the Southcoast region of Santa Barbara County, and is owned and operated by the City of Santa Barbara. The project is located within and adjacent to the Goleta Slough Ecological Reserve, an area designated and defined under the California Code of Regulations, Title 14 section 630. The project has the potential to impact up to 8.36 acres of wetland habitats, a state listed species, *Passerculus sandwichensis beldingi* (Belding's savannah sparrow), and alter lands or boundaries within the Goleta Slough Ecological Reserve.

The following statements and comments have been prepared pursuant to the California Department of Fish & Game's (The Department) authority as Trustee Agency with jurisdiction over natural resources affected by the project (CEQA Section 15386) and pursuant to our authority as a Responsible Agency under CEQA Section 15381 over those aspects of the proposed project that come under the purview of the California Endangered Species Act (Fish and Game Code Section 2050 et seq) and Fish and Game Code Section 1600 et seq, and as manager of the Goleta Slough Ecological Reserve.

The Department has worked over the years with the Airport, the City and other members of the Goleta Slough Management Committee (GSMC) to evaluate and shape the proposed project design as it relates to impacts to wildlife and their habitats both within the Ecological Reserve and the surrounding watershed. On the whole the Department finds the project as proposed (Alternative 1, relocations of the western portion of Tecolotito and Cameros Creeks) will result in significant, but mainly mitigable impacts. The Department

FROM : CDFG

Page 2
Aviation Facilities Plan

recommends the City select this alternative. The Department does not recommend the selection of Alternative 2 (the box culverting of Tecolotito Creek as this option would not fully mitigate for impacts to Belding's Savannah Sparrow as would be required by the California Endangered Species Act(CESA). In addition this alternative does not offer as wide as range of wetland mitigation options, and could create a passage barrier for Southern Steelhead .

The Department finds the wetland mitigation plan for the project acceptable, but is very concerned about the emphasis placed on giving the FAA's consultant Wildlife Services (WS) ultimate approval authority over mitigation and restoration actions within the Slough. The Department understands the FAA's concern about bird strike hazard, and realizes the importance of maintaining a safe airport operation, but the Department feels that the overall mission and qualifications of WS does not provide for an objective or ecologically sound approach to management of the Ecological Reserve. The Department hopes the Airport will continue to utilize the GSMC as the primary sounding board for review of activities impacting wildlife and their habitats within the slough and it's watershed. Use of this well established and watershed based process may help the City avoid the need for additional mitigation measures to compensate for actions proposed by WS.

Typically the Department would ask for mitigation ratios higher than 2:1 for impacts to wetland resources such as those proposed by the project. Because the City has been the main funding source for the GSMC management plan, and plans to continue the process the Department is willing to allow a lower mitigation ratio. Though this is not a standard procedure the Department feels the GSMC process has resulted (and will result) in an overall benefit to the health of the Slough and Ecological Reserve.

> MIT
RANOS

The City will need to secure both an incidental take permit for Belding's Savannah Sparrow, and a Streambed Alteration Agreement for the relocation of Tecolotito and Cameros Creeks. The Department encourages the City to begin these processes soon, so construction can occur according to schedule. The Department will provide the City or Airport planners with the appropriate information to initiate the processes. The City will need to provide proof of payment of CEQA filing fees for both the SAA and the incidental take permit.

2 RPA
Permits

On the whole the Department finds the Draft EIR/EIS for the Airport Facilities plan to be one of the most thorough and well presented CEQA documents they have reviewed. The Department believes the GSMC process was instrumental in helping develop this level of clarity and thoroughness. If you have any questions regarding these comments please contact Morgan Wehtje at 805-491-3571.

Sincerely

Morgan Wehtje
ESIV Supervisor



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

JL
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SEP 25 2001

City of Santa Barbara
Airport Department

September 24, 2001

David Kessler
Federal Aviation Administration
U.S. Department of Transportation
P.O. Box 92007
Los Angeles, California 90009-2007

Subject: Proposed Santa Barbara Municipal Airport Aviation Facilities Plan and the Need for Section 7 Endangered Species Act Consultation, Santa Barbara County, California

Dear Mr. Kessler:

We received a letter, dated January 30, 2001, and received by us on February 1, 2001, from John Ledbetter of the City of Santa Barbara Municipal Airport requesting consultation pursuant to section 7(a)(2) of the Endangered Species Act of 1973, as amended (Act), on behalf of the Federal Aviation Administration (FAA).

The City of Santa Barbara (City) is preparing an Aviation Facilities Plan to meet the aviation needs at the airport through the year 2015. As part of this facilities plan, the current airport runway will need to be expanded to meet FAA safety regulations for runway overruns. An additional 1,000 feet of safety overrun would be required over and above the existing runway. A total of 20.66 terrestrial acres would be affected by the proposed project.

The biological assessment conducted for the project notes that, no federally listed threatened or endangered species are likely to be affected by the proposed project. The only listed species currently found in the vicinity of the airport is the federally endangered brown pelican (*Pelecanus occidentalis*). The brown pelican is occasionally observed roosting near the mouth of the Goleta Slough, approximately two miles away from the proposed runway expansion area. The City asserts that brown pelicans would not be affected either directly or indirectly by the proposed project because they only occasionally roost at Goleta Slough, and the proposed project is nearly two miles from the roosting location. Although there have been anecdotal reports of the federally endangered salt marsh bird's beak (*Cordylanthus maritimus* ssp. *maritimus*) existing historically in the project area, no records have been found to verify its presence in Goleta Slough and it is not expected to occur in the proposed project area. Goleta Slough historically supported the federally endangered light-footed clapper rail (*Rallus longirostris levipes*), but the species has not been observed since 1972 and is not expected to inhabit the proposed project area. The habitat in

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David Kessler

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the proposed project area offers limited potential habitat for light-footed clapper rails. The federally endangered tidewater goby (*Eucyclogobius newberryi*) has also been reported from Goleta Slough, but no records have been found to verify their presence. Surveys conducted in 1995 did not find tidewater goby in Goleta Slough. Furthermore, the tidewater goby has not been found, nor is it expected to be found, in Tecolotito Creek (Lafferty pers. comm. 2001).

We do not expect that salt marsh bird's beak, light-footed clapper rail, or tidewater goby inhabit the Goleta Slough area. Therefore, we concur that the airport facilities plan, as proposed, would not affect federally threatened and endangered species. If federally listed species are subsequently detected in the project area, you must contact us to determine whether further compliance with the Endangered Species Act of 1973, as amended, is required. If you have any further questions please contact Lisa Roberts of my staff at (805) 644-1766.

Sincerely,



for Diane K. Noda
Field Supervisor

cc: John Ledbetter, Santa Barbara Airport

velocity are tied to the approach category (the approach speed) and design group (wingspan) of the aircraft using the airport as defined above. In general, the faster and larger the aircraft, the more crosswind it can tolerate. Also, most aircraft can tolerate stronger crosswinds on takeoff than on landing. Exhibit 5F indicates the maximum crosswind components considered acceptable for various aircraft categories.

Exhibit 5F
Acceptable Crosswind
Velocities (in knots)
 1.0 knot = 1.15 mph

Design Group	Approach Category		
	A	B	C
I	10.5	10.5	16.0
II	13.0	13.0	16.0
III	16.0	16.0	16.0
IV	20.0	20.0	20.0

Source: Airport Design Advisory Circular (AC 150/5300-13)

Current and projected future aircraft use of Santa Barbara Airport runs the full range of this approach category and design group spectrum. Data on crosswind coverage at various velocities are thus significant. Analysis of wind data for the Airport (see Wind Rose, Exhibit 3D in Chapter 3) indicates that winds from the southwest, south, and southeast are common, they mostly remain below 12.0 mph. The east/west primary runway thus has very good (98.9%) coverage even at a low crosswind tolerance of 10.5 knots (12.0 mph). When combined with the coverage provided by the crosswind (parallel) runway alignment, the airfield provides nearly 100% coverage.

The conclusion drawn from this data is that, although not essential for crosswind coverage purposes, the two north-south runways are well aligned for the common, mild southerly winds. The more important function of the north-south runways is for operational capacity and flexibility as outlined in the following discussion.

Operational Capacity

Adequate capacity to accommodate the projected volume of aircraft operations is a primary design consideration. Airfield capacity is generally measured in terms of the number of aircraft operations the runway and taxiway system can accommodate without unreasonable delay in an hour or over a year. Calculation of airfield capacity is dependent upon various physical and operational factors as shown in Exhibit 5G.

Exhibit 5G
Runway Capacity Factors

- Runway configuration
- Location of runway exits
- Frequency in which different combinations of runways are used
- Mix of aircraft types using the airport (including helicopters)
- Amount of touch-and-go training activity
- Wind conditions and the degree of airfield wind coverage
- Existence of air traffic control facilities and navigational aids
- Extent of instrument vs. visual weather conditions
- Peaking conditions (i.e., hourly, daily, and seasonal variations in traffic demand)
- Proximity of nearby airports and other factors affecting airspace

Source: Airport Design Advisory Circular

At airports with instrument approach capabilities, such as Santa Barbara, hourly capacity is often measured separately for instrument flight rules (IFR) versus visual flight rules (VFR) weather conditions. IFR conditions are when weather conditions are below the minimum for flight under visual flight rules. IFR conditions, limiting operations to a single runway, occur 10% of the time.

Most of the input data required for determining the Santa Barbara Airport runway capacities was originally documented in the 1990 Draft Airport Master Plan Update. This data has been reviewed as part of the present study and the most important information is brought forward into the analyses below.

Peak Hour Capacity

The FAA defines peak hour activity as being the busiest or peak hour of an average day of the peak month of the year. With respect to determining hourly capacity at Santa Barbara Airport, the following is assumed:

- The peak hour activity typically occurs between 5:00 and 6:00 p.m.;
- Arrivals represent 45% of peak hour operations under VFR (or visual) conditions and 50% during IFR (or instrument) conditions;
- Large aircraft represent 5% of the VFR peak hour operations and 6% of the IFR peak hour operations;
- Touch-and-goes account for about 15% of the peak hour operations;
- All operations by airline and general aviation jets, commuter airline turboprops, and fire attack aircraft are on the primary runway;
- About 65% of general aviation propeller airplane operations, including some twins, are on the north-south runways;

- Simultaneous use of the two north-south is permitted under FAA air traffic control guidelines. However, because of the close spacing between the two runways, such operations are allowed only by small, single-engine airplanes maintaining two-way communications and only under VFR conditions; and
- Runway exits are optimally located to provide maximum capacity.

Given these assumptions, the hourly capacity of the Santa Barbara Airport runway system is calculated at approximately 180 operations during VFR or visual conditions. This capacity is provided only when wind conditions and the air traffic mix permit near simultaneous use of Runways 15R/L or 33L/R with limited use of Runways 7 or 25. The need for coordination of operations on the intersecting runways means that a heavy traffic volume by large aircraft on Runway 7-25 reduces the capacity available for the north-south.

At present, the Airport is operating at well below this theoretical capacity. The 1993 VFR peak-hour air traffic volume was 65 operations/hour. The number of peak hour operations has not been calculated since 1993, however, informal discussions with Air Traffic Control staff indicate that the 65 operations/hour is probably a realistic peak for 2001. This demand is projected to increase only to 77 operations per hour, still less than half of the potential capacity. Consequently, the operational constraints described above, specifically, light aircraft operations limited mostly to the north-south runways, are seldom necessary. The spacing of aircraft operations on Runway 7-25 is such that the delays to aircraft using Runways 15 or 33 are minimal.

Instrument flight rules or IFR capacity is calculated at 60 operations/hour. Although instrument departures can be made from any runway, all approaches are to Runway 7-25 even if some aircraft land on the north-south runways. In effect, under IFR conditions, only one aircraft at a time is able to operate. No projection has been made of hourly IFR demand, but it is certainly well below the hourly IFR capacity.

Annual Capacity

Theoretically, annual capacity might be calculated simply by multiplying hourly capacity by the number of hours in a year. Such a number would be meaningless, however, because demand at most airports drops nearly to zero during nighttime hours and also varies substantially from month to month. Calculation of annual capacity therefore greatly depends upon assumptions regarding the relationships between peak hour and annual demand. In recognition of the variability introduced by these assumptions, the FAA uses the term annual service volume to represent a "reasonable" annual capacity.

Additional assumptions for the calculation of the annual runway capacity for Santa Barbara Airport include the following:

- Wind and weather conditions allow the optimum-capacity runway combinations (i.e., all three runways in use and most operations on the north-south runways);
- Instrument conditions, limiting operations to a single runway, occur 10% of the time;
- The Airport is below operating minimums (i.e., effectively closed to all operations) 2% of the time; and

- Historically, peak month (August) activity has equaled 9.3% of the year and the peak hour has represented 9.8% of the average day of the peak month.

These assumptions yield an annual service volume of approximately 475,000 operations. Higher off-peak usage would increase this capacity by 10% or more. However, even the 475,000-operations capacity is well above both the projected 218,000 annual aircraft operations volume indicated in Chapter 4 and the historical (1984) peak of some 241,000 operations. Total annual aircraft operations counts averaged just less 170,000 during the 1995 to 1999 period.

When the tower is closed (11 pm to 6 am), the Los Angeles Center handles approach/departure control. As is common throughout the United States where airports do not have a 24-hour tower, pilots communicate with each other using the Common Traffic Advisory Frequency or CTAF of 119.7. Pilots announce their intentions and call their position as they transition in and out of the Airport.

Runway Length

For the purpose of assessing runway length requirements, the FAA considers only the aircraft types that conduct at least 250 operations per year on that runway or are forecasted to do so in the future. Of the many aircraft types regularly flown at Santa Barbara Airport, airline jets operating in scheduled service are the most affected by runway length limitations and are therefore deemed the critical aircraft group. Generally, the higher the temperature, the lighter the load the aircraft can carry in order to takeoff safely. Because these aircraft operate at



U.S. Department
of Transportation
Federal Aviation
Administration

Airport Capacity and Delay

AC: 150/5060-5
Date: 9-23-83

Advisory Circular

EXHIBIT NO. 30

APPLICATION NO. CC-058-01



US Department
of Transportation
Federal Aviation
Administration

Advisory Circular

Subject: AIRPORT CAPACITY AND DELAY

Date: 9/23/83

AC No: 150/5060-5

Initiated by: AAS-100

Change:

1. **PURPOSE.** This advisory circular (AC) explains how to compute airport capacity and aircraft delay for airport planning and design.
2. **CHANGES.** This publication cancels the following Federal Aviation Administration (FAA) Advisory Circulars (ACs):
 - a. AC 150/5060-1A, Airport Capacity Criteria Used in Preparing the National Airport Plan, dated July 8, 1968, and
 - b. AC 150/5060-3A, Airport Capacity Criteria Used in Long Range Planning, dated December 24, 1969.

3. **BACKGROUND.** Changes in the composition of the nation's aircraft fleet together with improvements in air traffic control (ATC) practices have outdated capacity calculations contained the cancelled ACs. An FAA contractor reexamined the procedures for determining airport capacity and suggested improvements to update them. This AC implements these improvements. In addition, this AC refines definitions of capacity and delay. CAPACITY is the throughput rate, i.e. the maximum number of operations that can take place in an hour. DELAY is the difference in time between a constrained and an unconstrained aircraft operation. These definitions take into account that delays occur because of simultaneous demands on the facility. The acceptable level of delay will vary from airport to airport.

4. **APPLICATION TO AIRPORT DESIGN.** To apply these procedures, a reasonable understanding of the aeronautical activities being conducted at, or projected for, the airport is required. Care should be exercised in using available data so as to avoid data which represents a level of activity occurring sporadically during the year—unless it is intended to examine that specific condition. Since few airports operate at "peak demand" levels for more than two or three consecutive hours in any one day and demand fluctuates throughout a period even as short as one hour, some delay will occur during a typical hours operations. It is suggested that airport design be based on an hourly demand which can be expected to occur at least on a weekly basis.

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6. REFERENCE. Report No. FAA-ED-74-124, Techniques for Determining Airport Airside Capacity and Delay, dated June 1976 is available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161, telephone (703) 557-4650. The NTIS reference number is AD-A032 475.

Leonard E. Mudd

LEONARD E. MUDD

Director, Office of Airport Standards

9/23/83

AC 150/5060-5

CHAPTER 1. AIRPORT CAPACITY AND AIRWAY DELAY

1-1. GENERAL. Hourly airport capacities and annual aircraft delay computations are needed to design and evaluate airport development and improvement projects. The method for computing airport capacity and aircraft delay is the throughput method provided in this AC.

a. Background. The throughput method for calculating airport capacity and average delay per aircraft is derived from computer models used by the Federal Aviation Administration (FAA) to analyze airport capacity and reduce aircraft delay. Calculations of hourly capacity are needed to determine average delay. Since airport and airport component hourly capacities vary throughout the day due to variations in runway use, aircraft mix, AIC rules, etc., a number of calculations may be needed.

b. AC Organization.

(1) Chapter 1 provides an overview of airport capacity and aircraft delay analyses.

(2) Chapter 2 contains calculations for computing airport capacity, annual service volume (ASV), and aircraft delay for long range evaluations.

(3) Chapter 3 contains more detailed computations suitable for a wide range of airport design and planning applications.

(4) Chapter 4 contains special computations of capacity relating to:

(1) Periods of poor visibility and ceiling conditions.

(11) Airports without radar coverage and/or an instrument landing system (ILS).

(111) Airports with parallel runways when one runway is limited to use by small aircraft.

(5) Chapter 5 identifies computer models which may be used to further refine runway capacity and aircraft delay analyses.

(6) The appendices contain examples applying chapter 2, 3, and 4 calculations.

c. Units. Since FAA operational standards for spacing aircraft taking-off and landing are in customary units (feet, knots, etc.), it is expedient to perform capacity and delay computations in the same units.

1-2. AIRPORT COMPONENTS.

a. Runway. The term runway includes the landing surface, plus those portions of the approach and departure paths used in common by all aircraft.

b. Taxiway. The term taxiway includes the parallel taxiways, entrance-exit taxiways, and crossing taxiways, recognizing that a capacity limiting condition may exist where an arriving or departing stream of aircraft must cross an active runway.

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c. Gate Group. The term gate group identifies the number of gates located in the terminal complex which are used by an airline, or shared by two or more airlines, or other aircraft operating at the airport on a regularly scheduled basis. In most cases the terminal gates are not used by general aviation aircraft.

1-3. CAPACITY TERMS. The following subparagraphs define terms used herein. Symbols used in this AC are defined in Appendix 4, Glossary of Symbols/Terms.

a. Aircraft Mix. Aircraft mix is the relative percentage of operations conducted by each of the four classes of aircraft (A, B, C, and D). Table 1-1 identifies physical aspects of the four aircraft classes and their relationship to terms used in the wake turbulence standards.

Table 1-1. Aircraft classifications

Aircraft Class	Max. Cert. T.O. Weight (lbs)	Number Engines	Wake Turbulence Classification
A	12,500 or less	Single	Small (S)
B		Multi	
C	12,500 - 300,000	Multi	Large (L)
D	over 300,000	Multi	Heavy (H)

b. Annual Service Volume (ASV). ASV is a reasonable estimate of an airport's annual capacity. It accounts for differences in runway use, aircraft mix, weather conditions, etc., that would be encountered over a year's time.

c. Capacity. Capacity (throughput capacity) is a measure of the maximum number of aircraft operations which can be accommodated on the airport or airport component in an hour. Since the capacity of an airport component is independent of the capacity of other airport components, it can be calculated separately.

d. Ceiling and Visibility. For purposes of this AC, the terms VFR, IFR, and PFC are used as measures relating to the following ceilings and visibilities.

(1) Visual flight rule (VFR) conditions occur whenever the cloud ceiling is at least 1,000 feet above ground level and the visibility is at least three statute miles.

(2) Instrument flight rule (IFR) conditions occur whenever the reported cloud ceiling is at least 500 feet but less than 1,000 feet and/or visibility is at least one statute mile but less than three statute miles.

(3) Poor visibility and ceiling (PVC) conditions exist whenever the cloud ceiling is less than 500 feet and/or the visibility is less than one statute mile.

e. Delay. Delay is the difference between constrained and unconstrained operating time.

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f. Demand. Demand is the magnitude of aircraft operations to be accommodated in a specified time period.

g. Gate. A gate is an aircraft parking position used by a single aircraft loading or unloading passengers, mail, cargo, etc. A parking position which is regularly used by two aircraft at the same time is two gates for capacity calculations.

(1) Gate type is the size of the gate. A Type 1 gate is capable of accommodating all aircraft, including widebodies such as the A-300, B-747, B-767, DC-10, L-1011. A Type 2 gate will accommodate only non-widebodied aircraft.

(2) Gate mix is the percent of non-widebodied aircraft accommodated by the gate group.

(3) Gate occupancy time is the length of time required to cycle an aircraft through the gate.

h. Mix Index. Mix index is a mathematical expression. It is the percent of Class C aircraft plus 3 times the percent of Class D aircraft, and is written: $3(C+3D)$.

i. Percent Arrivals (PA). The percent of arrivals is the ratio of arrivals to total operations and is computed as follows:

$$\text{Percent arrivals} = \frac{A + \frac{1}{2}(T\&G)}{A + DA + (T\&G)} \times 100, \text{ where}$$

A = number of arriving aircraft in the hour
 DA = number of departing aircraft in the hour
 T&G = number of touch and go's in the hour

j. Percent Touch and Go's. The percent touch and go's is the ratio of landings with an immediate takeoff to total operations and is computed as follows:

$$\text{Percent touch and go's} = \frac{(T\&G)}{A + DA + (T\&G)} \times 100, \text{ where}$$

A = number of arriving aircraft in the hour
 DA = number of departing aircraft in the hour
 T&G = number of touch and go's in the hour

Touch and go operations are normally associated with flight training. The number of these operations usually decreases as the number of air carrier operations increase, as demand for service approaches runway capacity, or as weather conditions deteriorate.

k. Runway-use Configuration. Runway-use configuration is the number, location, and orientation of the active runway(s), the type and direction of operations, and the flight rules in effect at a particular time.

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1-4. CAPACITY, DEMAND, DELAY RELATIONSHIPS. As demand approaches capacity, individual aircraft delay is increased. Successive hourly demands exceeding the hourly capacity result in unacceptable delays. When the hourly demand is less than the hourly capacity, aircraft delays will still occur if the demand within a portion of the time interval exceeds the capacity during that interval. Because the magnitude and scheduling of user demand is relatively unconstrained, reductions in aircraft delay can best be achieved through airport improvements which increase capacity.

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2-3. ASV ASSUMPTIONS. The ASV values in figure 2-1 are based on the assumptions of paragraph 2-2, Table 2-1, and the following:

- a. Weather. IFR weather conditions occur roughly 10 percent of the time.
- b. Runway-use Configuration. Roughly 80 percent of the time the airport is operated with the runway-use configuration which produces the greatest hourly capacity.

2-4. AIRPORT CAPACITY AND ANNUAL SERVICE VOLUME. Calculate the approximate hourly capacities and the ASV as follows:

- a. Determine the percentage of aircraft classes C and D using, or expected to use, the airport.
- b. Select the runway-use configuration from figure 2-1 that best represents the airport. Runway-use configurations 9 through 19 show by means of arrows the predominant direction of runway operations. When no direction is specified, the direction of operation is not critical. Runway-use configurations 14 through 19 indicate by dashed lines the limit of the range of runway orientation. For airports having three or more runway orientations (consider parallel runways as one runway orientation), identify the two-runway orientation that is generated most frequently. To adjust for staggered thresholds see paragraph 4-6.

- c. Calculate the mix index.

d. Read the approximate VFR and IFR hourly capacities and the ASV directly from figure 2-1.

2-5. AIRCRAFT DELAY. Calculate the aircraft delay as follows:

- a. Estimate annual demand using current or historical information or projections of future traffic.
- b. Calculate the ratio of annual demand to ASV.
- c. Obtain average delay per aircraft from figure 2-2. The upper portion of the band applies to airports where air carrier operations dominate. The full width of the band applies to airports where general aviation operations dominate. Delays 5 to 10 times average could be experienced by individual aircraft.
- d. Calculate total annual aircraft delay as the average delay multiplied by the annual demand.

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No.	Runway-use Configuration	Mix Index % (C+3D)	Hourly Capacity Ops/Hr		Annual Service Volume Ops/Yr
			VFR	IFR	
1.		0 to 20	98	59	230,000
		21 to 50	74	57	195,000
		51 to 80	63	56	205,000
		81 to 120	55	53	210,000
		121 to 180	51	50	240,000
2.		0 to 20	197	59	355,000
		21 to 50	145	57	275,000
		51 to 80	121	56	260,000
		81 to 120	105	59	285,000
		121 to 180	94	60	340,000
3.		0 to 20	197	62	355,000
		21 to 50	149	63	285,000
		51 to 80	126	65	275,000
		81 to 120	111	70	300,000
		121 to 180	103	75	365,000
4.		0 to 20	197	119	370,000
		21 to 50	149	113	320,000
		51 to 80	126	111	305,000
		81 to 120	111	105	315,000
		121 to 180	103	99	370,000
5.		0 to 20	295	62	385,000
		21 to 50	213	63	305,000
		51 to 80	171	65	285,000
		81 to 120	149	70	310,000
		121 to 180	129	75	375,000

* Staggered threshold adjustments may apply, see paragraph 4-6.

Figure 2-1. Capacity and ASV for long range planning

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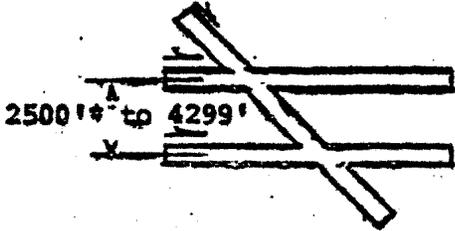
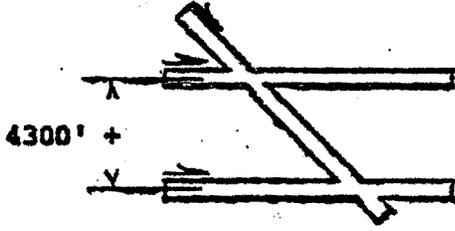
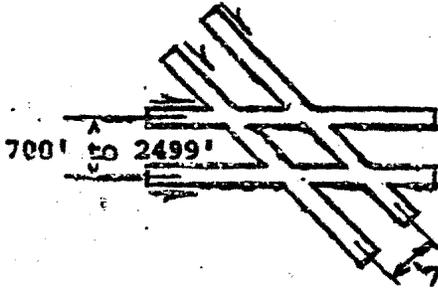
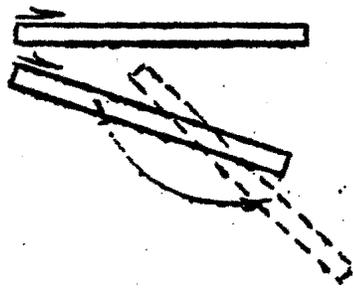
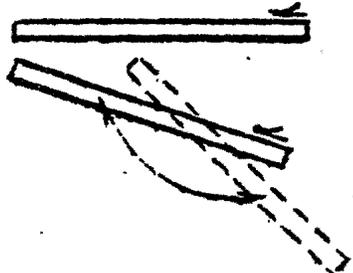
No.	Runway-use Configuration	Mix Index % (C+3D)	Hourly Capacity		Annual Service Volume Ops/Yr
			Ops/Hr VFR	IFR	
6.		0 to 20	295	62	385,000
		21 to 50	219	63	310,000
		51 to 80	184	65	290,000
		81 to 120	161	70	315,000
		121 to 180	146	75	385,000
7.		0 to 20	295	119	625,000
		21 to 50	219	114	475,000
		51 to 80	184	111	455,000
		81 to 120	161	117	510,000
		121 to 180	146	120	645,000
8.		0 to 20	394	119	715,000
		21 to 50	290	114	550,000
		51 to 80	242	111	515,000
		81 to 120	210	117	565,000
		121 to 180	189	120	675,000
9.		0 to 20	98	59	230,000
		21 to 50	77	57	200,000
		51 to 80	77	56	215,000
		81 to 120	76	59	225,000
		121 to 180	72	60	265,000
10.		0 to 20	197	59	355,000
		21 to 50	145	57	275,000
		51 to 80	121	56	260,000
		81 to 120	105	59	285,000
		121 to 180	94	60	340,000

*Staggered threshold adjustments may apply, see paragraph 4-6.

Figure 2-1. Capacity and ASV for long range planning (cont.).

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No.	Runway-use Configuration	Mix Index I(C+3D)	Hourly Capacity Ops/Hr		Annual Service Volume Ops/Yr
			VFR	IFR	
11.		0 to 20	197	62	355,000
		21 to 50	149	63	285,000
		51 to 80	126	65	275,000
		81 to 120	111	70	300,000
		121 to 180	103	75	365,000
12.		0 to 20	197	119	370,000
		21 to 50	149	114	320,000
		51 to 80	126	111	305,000
		81 to 120	111	105	315,000
		121 to 180	103	99	370,000
13.		0 to 20	197	59	355,000
		21 to 50	147	57	275,000
		51 to 80	145	56	270,000
		81 to 120	138	59	295,000
		121 to 180	125	60	350,000
14.		0 to 20	150	59	270,000
		21 to 50	108	57	225,000
		51 to 80	85	56	220,000
		81 to 120	77	59	225,000
		121 to 180	73	60	265,000
15.		0 to 20	132	59	260,000
		21 to 50	99	57	220,000
		51 to 80	82	56	215,000
		81 to 120	77	59	225,000
		121 to 180	73	60	265,000

*Staggered threshold adjustments may apply, see paragraph 4-6.

Figure 2-1. Capacity and ASV for long range planning (cont.)

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No.	Runway-use Configuration	Mix Index % (C+3D)	Hourly Capacity Ops/Hr		Annual Service Volume Ops/Yr
			VFR	IFR	
16.		0 to 20	295	59	385,000
		21 to 50	210	57	305,000
		51 to 80	164	56	275,000
		81 to 120	146	59	300,000
		121 to 180	129	60	355,000
17.		0 to 20	197	59	355,000
		21 to 50	145	57	275,000
		51 to 80	121	56	260,000
		81 to 120	105	59	285,000
		121 to 180	94	60	340,000
18.		0 to 20	301	59	385,000
		21 to 50	210	57	305,000
		51 to 80	164	56	275,000
		81 to 120	146	59	300,000
		121 to 180	129	60	355,000
19.		0 to 20	264	59	375,000
		21 to 50	193	57	295,000
		51 to 80	158	56	275,000
		81 to 120	146	59	300,000
		121 to 180	129	60	355,000

Figure 2-1. Capacity and ASV for long range planning (cont.)

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c. Calculate the component quotients by dividing each components capacity by its demand ratio.

d. Identify the airport hourly capacity, i.e., the lowest quotient calculated in c above.

3-6. ANNUAL SERVICE VOLUME (ASV). Calculate the ASV as follows:

a. Calculate the weighted hourly capacity (C_w) for the runway component as follows:

(1) Identify the different runway-use configurations used over the course of a year.

(2) Determine the percent of time each runway-use configuration is in use (P_1 through P_n). Include those times when the hourly capacity is zero, i.e., the weather conditions are below airport minimums or the airport is closed for other reasons. If a runway-use configuration is used less than 2 percent of the time, that time may be credited to another runway-use configuration.

(3) Calculate the hourly capacity for each runway-use configuration (C_1 through C_n).

(4) Identify the runway-use configuration that provides the maximum capacity. Generally, this configuration is also the configuration most frequently used.

(5) Divide the hourly capacity of each runway-use configuration by the hourly capacity of the runway-use configuration that provides the maximum capacity.

(6) Determine the ASV weighting factor (W_1 through W_n) for each runway-use configuration from Table 3-1.

Table 3-1. ASV Weighting Factors

Percent of Maximum Capacity	Weighting Factors			
	VFR	IFR		
		Mix Index (0-20)	Mix Index (21-50)	Mix Index (51-100)
91+	1	1	1	1
81-90	5	1	3	5
66-80	15	2	8	15
51-65	20	3	12	20
0-50	25	4	16	25

9/23/83

AC 150/5060-5

(7) Calculate the weighted hourly capacity (C_p) of the runway component by the following equation:

$$C_p = \frac{(P_1 \cdot C_1 \cdot W_1) + (P_2 \cdot C_2 \cdot W_2) + \dots + (P_n \cdot C_n \cdot W_n)}{(P_1 \cdot W_1) + (P_2 \cdot W_2) + \dots + (P_n \cdot W_n)}$$

b. Calculate the ratio of annual demand to average daily demand during the peak month (D). Typical annual demand to average daily demand ratios are provided in table 3-2.

c. Calculate the ratio of average daily demand to average peak hour demand during the peak month (H). Typical average daily to average peak hour demand ratios are provided in table 3-2.

Table 3-2. Typical Demand Ratios

Mix Index	Daily (D)	Hourly (H)
0-20	280-310	7-11
21-50	300-320	10-13
51-180	310-350	11-15

d. Calculate ASV by the following equation:

$$ASV = C_p \cdot D \cdot H$$

3-7. HOURLY DELAY TO AIRCRAFT ON THE RUNWAY COMPONENT. Hourly delay calculations described in this paragraph apply to those hours when the hourly demand does not exceed the hourly capacity of the runway component. For those hours when the hourly demand exceeds the hourly capacity of the runway component, paragraph 3-9 calculations apply. Calculate hourly delay as follows:

- Calculate the hourly capacity of the runway component for the specific hour of interest.
- Identify from figure 3-2 the figure number for delay (for the arrival delay index (ADI) and the departure delay index (DDI)).
- Identify the hourly demand (HD) and the peak 15 minute demand (D) on the runway component.
- Calculate the ratio of hourly demand to hourly capacity (D/C).
- Determine the arrival delay index (ADI) and departure delay index (DDI).

9/23/83

AC 150/5060-5
Appendix 2

EXAMPLE 5. Determine the ASV of the example airport assuming there are 219,750 annual operations, 690 average day operations and 50 peak hour operations.

SOLUTION: The work sheet on page 12 illustrates one method of recording data.

1. Calculate C_p .

a. Runway-use Configuration. Identify the different runway-use conditions used over the course of a year and the mix index for each use. Enter in columns 1 through 4.

b. Percent of Use (P). Identify the percent of the time each configuration is used and enter in column 5. The figures shown on the work sheet in column 5 are hypothetical.

c. Runway Hourly Capacity (C). Calculate the hourly capacities of operating conditions as in example 1 and enter in column 6. Example 1 data are used for operating conditions 1 and 2.

d. Maximum Capacity Configuration. Identify the runway-use configuration that provides the maximum capacity.

e. Percent of Maximum Capacity. Divide the hourly capacity of each runway-use configuration by the capacity of the configuration that provides the maximum capacity and enter in column 7.

Operating condition 1	89/89 = 100
" " 2	51/89 = 57
" " 3	62/89 = 70
" " 4	52/89 = 58
" " 5	59/89 = 66
" " 6	46/89 = 52

f. ASV Weighting Factor (W). From Table 3-1, identify the weighting factor (W) for each operating condition and enter in column 8.

Table 3-1. ASV Weighting Factors

Percent of Maximum Capacity	Weighting Factors			
	VFR	IFR		
		Mix Index (0-20)	Mix Index (21-50)	Mix Index (51-100)
81+	1	1	1	1
61-80	5	1	2	5
41-60	15	2	8	15
21-40	20	3	12	20
0-20	25	4	16	25

Figure A2-5. Annual service volume

AC 150/5060-5
Appendix 2

9/23/83

Operating Condition			Mix Index	Percent of Hour (P)	Hourly Capacity (C)	Percent Maximum Capacity	Weighting Factor (W)
No.	Weather	Bar-Vis-Bleas					
1	VFR	↑	62	74	89	100	1
2	IFR		91	5	51	57	20
3	VFR	↓	62	5	62	70	15
4	IFR		91	5	52	58	20
5	VFR	/ or	62	4	59	66	15
6	IFR		91	4	46	52	20
7	IFR	Below Minimum		3		-	25

Work sheet for ASV factors.

g. Weighted Hourly Capacity (C_w). Calculate the weighted hourly capacity using the following equation:

$$C_w = \frac{(P_1 C_1 W_1) + (P_2 C_2 W_2) + \dots + (P_n C_n W_n)}{(P_1 W_1) + (P_2 W_2) + \dots + (P_n W_n)}$$

$$C_w = \frac{(.74 \cdot 89 \cdot 1) + (.05 \cdot 51 \cdot 20) + (.05 \cdot 62 \cdot 15) + (.05 \cdot 52 \cdot 20) + (.04 \cdot 59 \cdot 15) + (.04 \cdot 46 \cdot 20) + (.03 \cdot 0 \cdot 25)}{(.74 \cdot 1) + (.05 \cdot 20) + (.05 \cdot 15) + (.05 \cdot 20) + (.04 \cdot 15) + (.04 \cdot 29) + (.03 \cdot 25)}$$

$$C_w = \frac{287.56}{5.64} \text{ or } 51 \text{ operations per hour.}$$

2. Daily Demand Ratio (D). Calculate D using the equation:

$$D = \frac{\text{Annual}}{\text{Average Day—peak month}} = \frac{219,750}{690} = 318$$

3. Hourly Demand Ratio (H). Calculate H from the equation:

$$H = \frac{\text{Average Day—peak month}}{\text{Average Peak Hour—peak month}} = \frac{690}{50} = 14$$

4. Calculate ASV. ASV is calculated from the equation $ASV = C_w \cdot D \cdot H$

$$ASV = 51 \cdot 318 \cdot 14 = 227,052 \text{ operations per year.}$$

5. Conclusion. ASV is an indicator of the annual operational capability of an airport adjusted for differences in hourly capacities which occur over the course of a year. In this example, the airport theoretically could have accommodated and additional 7,302 operations during the year.

Figure A2-5. Annual service volume (cont.)

CALIFORNIA COASTAL COMMISSION

150 FREMONT STREET, SUITE 2000
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M 11a

ADDENDUM

December 20, 2001

TO: Commissioners and Interested Parties

From: Peter Douglas, Executive Director
Kathleen Stycket, Federal Consistency Staff

RE: CC-058-01 construction of two 1,000 foot runway safety areas, extension of the runway protection zone, a taxiway, a 15,000 square foot air cargo facility, service road, a 3-story parking structure, taxiway widening, 75 T-hangers, a 49,700 square foot airline terminal expansion, and the demolition of several existing terminal buildings.

Additional Information

Additional information was received for this item after the mailing deadline. The following documents are related to the determination of airfield capacity, and airport operations at the Santa Barbara Airport.

1. Executive Order 5090.3C
Field Formulation of the National Plan of Integrate Airport Systems (NPIAS)
Department of Transportation, Federal Aviation Administration (2000)
2. Exhibit 4H
Historical Aircraft Operations, Santa Barbara Airport 1977-1999
Draft Aviation Facilities Plan, City of Santa Barbara (2001)



ORDER

FEB 2 2001

5090.3C

**FIELD FORMULATION OF THE
NATIONAL PLAN OF INTEGRATE
AIRPORT SYSTEMS (NPIAS)**



December 4, 2000

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

Distribution: ZRP-509; A-FAS-1 (STD)

Initiated By: [signature]

Chapter 3. AIRFIELD DEVELOPMENT

3-1. GENERAL

a. This section provides guidance for determining airfield improvements necessary to meet the purpose of establishing, maintaining and improving a safe and efficient national system of airports. The rationale and justification for improvements and costs for existing and proposed airports included in the NPIAS should be clearly documented and well thought out.

b. The guidance contained in this section is not intended to be an all-encompassing analysis of proposed airfield improvements. Rather, the information contained herein should supplement and be consistent with, but not supersede, the recommendations contained in FAA accepted Aviation System or Airport Master Plans or shown on approved Airport Layout Plans.

c. When preparing recommendations for each existing and proposed airport included in the NPIAS, sound judgment should be used to identify appropriate and realistic development. The same judgment that was applied during the preparation of the system or master plan should be used in the development of the NPIAS. The guidance contained in this section is to be applied with considered professional judgment.

d. Airport development included in the NPIAS should conform to applicable FAA design criteria and standards contained in current advisory circulars, orders, and notices.

e. Occasionally, during the preparation of the Airport Master Plan and ALP, questions may arise whether applicable design standards can be met. If all alternatives are exhausted and it is determined that certain applicable design criteria and standards cannot be met, the sponsor may request FAA approval of a deviation from the standard. If the modification is approved by the FAA, the modification should be shown on the ALP in accordance with the specifications of AC 150-5300-13, Airport Design, and included in the NPIAS.

3-2. FORECASTS

a. Forecasts should be:

- (1) realistic,
- (2) based on the latest available data,
- (3) reflect the current conditions at the airport,
- (4) supported by information in the study,
- (5) provide an adequate justification for the airport planning and development.

b. Forecasts supplied by the airport sponsor should not vary significantly (more than 10%) from the FAA's forecast. When a sponsor's forecast does vary significantly from the FAA's forecast, the sponsor's methodology should be verified, the forecast coordinated with APO-110, and only after the difference is resolved and the FAA is satisfied that the sponsor's forecast is valid will sponsor's forecast be included in the NPIAS. In the absence of other forecast information, data from the FAA's forecast are included in the NPIAS database. When FAA forecast data are not available (usually a proposed airport) the master plan forecast should be validated against FAA's regional forecasts, and if appropriate, coordinated with APO-110.

c. When forecast data of aircraft operations is not available, a satisfactory procedure is to forecast based aircraft using the statewide growth rate from the TAF and to develop activity statistics by estimating annual operations per based aircraft. A general guideline is 250 operations per based aircraft for rural general aviation airports with little itinerant traffic, 350 operations per based aircraft for busier general aviation airports with more itinerant traffic, and 450 operations per based aircraft for busy reliever airports. In unusual circumstances, such as a busy reliever airport with a large number of itinerant operations, the number of operations per based aircraft may be as high as 750 operations per based aircraft. An effort should be made to refine such estimates by comparing them to activity levels at similar airports or by conducting an activity survey.

d. However, all forecasts should be reviewed on a regular basis and updated as necessary. Forecasts approved by the FAA should be retained in the appropriate FAA field office. For further information on forecasting see Airport Master Plan AC (150-5070-6).

3-3. DETERMINATION OF AIRFIELD CAPACITY

a. **Runway Capacity.** Runway capacity for each existing airport in the NPIAS should be determined using the procedures described in FAA Advisory Circular 150/5060-5, Airport Capacity and Delay and included in the NPIAS database. Chapter 2 of AC 150/5060-5 describes a method for determining hourly and annual capacity for long-range planning purposes. This methodology should be used for most airports, particularly where capacity is not a constraining factor. The methods for calculating capacity as described in other chapters of the AC should be used for airports where capacity is limiting the operational capability of the airport. These methods are useful when critical development decisions warrant a more precise estimate of capacity. Complex runway capacity issues may be analyzed using a computer model. The results of computer models may be included in the NPIAS if the procedures used are shown to be logical and comparable to the procedures described in AC 150/5060-5.

b. **Annual Capacity.** Annual Capacity or Annual Service Volume, as reported in the NPIAS, is the level of annual activity at which the average delay per operation is 4 minutes.

c. **Other Airport Components.** The capacity of other airport components should be established during the preparation of the airport master plan or other similar study. The forecasts of aviation demand as previously established will be used to calculate the needs for other airfield components. Facilities such as aprons and terminals can limit the airport

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FAR AIRPORTS DIVISION
12/20/01

12/4/2000

Order 5090.3C

from operating at its full potential. In addition, constrained airport components could lead to unacceptable levels of delay.

3-4. AIRPORT DIMENSIONAL STANDARDS

Airport dimensional standards (such as runway length and width, separation standards, surface gradients, etc.) should be selected which are appropriate for the critical aircraft that will make substantial use of the airport in the planning period. Substantial use means either 500 or more annual itinerant operations, or scheduled commercial service. The critical aircraft may be a single aircraft or a composite of the most demanding characteristics of several aircraft. The critical aircraft (or composite aircraft) is used to identify the appropriate Airport Reference Code for airport design criteria. Design criteria (such as dimensional standards and appropriate pavement strength) are contained within AC 150-5300-13, Airport Design.

3-5. FUNDAMENTAL DEVELOPMENT

Fundamental development is the basic configuration recommended for an airport in the national system (see Table 3-1). It is affected by the type, but generally not the amount, of activity that the airport will serve. This development would include, but not be limited to, land acquisition, aircraft movement areas, landing and navigation aids and aircraft parking areas. Fundamental development appropriate for the airport should be recommended in accordance with the standards and criteria contained in all appropriate Advisory Circulars and Orders.

Table 3-2. Fundamental Airport Development	
Development Item	Comment
<input type="checkbox"/> Land	Airfield development, building area, runway protection zones, approach aids, compatible land use in accordance with current criteria
<input type="checkbox"/> Single Runway	
<input type="checkbox"/> Crosswind Runway	Recommended if wind coverage on main runway is less than 95%
<input type="checkbox"/> Lighting	Type of lighting for runway and taxiway is dependent on the airport and type of approach
<input type="checkbox"/> Full Parallel Taxiway	
<input type="checkbox"/> Visual Glide Slope Indicator (VGSI)	
<input type="checkbox"/> Runway End Identification Lights (REIL)	If runway is approved for night operations and is lighted then it may qualify for a REIL
<input type="checkbox"/> Runway Marking	Marking as necessary to support the applicable approach
<input type="checkbox"/> Apron	
<input type="checkbox"/> Runway Grooving, as appropriate	
<input type="checkbox"/> Instrument Approach, as appropriate	The introduction of satellite navigation will be able to support instrument approaches to virtually all runway ends, dependent on satellite signal availability
<input type="checkbox"/> Rotating Beacon	Not required unless the airport is approved for night operations or has a published instrument approach.
<input type="checkbox"/> Wind Cone and Segmented Circle	Wind cone lighted if airport approved for night operations
<input type="checkbox"/> Obstruction Lighting and Marking	Where necessary
<input type="checkbox"/> Access and Service Roads	In accordance with Order 5100.17 (paragraph 122)
<input type="checkbox"/> Perimeter Fencing	

3-6. INCREASED OPERATIONAL EFFICIENCY

a. Capacity development beyond the fundamental airport configuration is the improvement of an airport or system of airports for the primary purpose of reducing delay and/or accommodating more passengers, cargo, aircraft operations or based aircraft.

b. Capacity development should be recommended with sufficient lead-time so that the improvement can be made before a problem becomes critical. Capacity development should be recommended when activity approaches the levels shown in Table 3-2. These levels are approximate thresholds for beginning the detailed planning of improvements. The actual implementation of capacity improvements may be deferred until such time as the airport operator and users agree that the improvement is timely and cost beneficial.

c. Inadequate capacity at an airport may constrain the number of operations or result in high delay and an unacceptable level of service.

12/4/2000

Order 5090.3C

d. Recommendations for capacity enhancement must be realistic and implementable. Recommendations for major new runways should not be made at airports until there is some possibility of implementing such development.

e. There is usually more than one alternative solution to a capacity problem. Recommendations for capacity enhancements or delay reduction should be evaluated as part of the Master Plan or Capacity Study. In order to support this type of development, a benefit/cost analysis should be conducted, and is required when an airport sponsor is requesting \$5 million or more in AIP discretionary funds (see Benefit Cost Analysis Guidance dated December 15, 1999), and retained by the appropriate field office.

f. For airports where projects are being proposed to increase capacity, the new capacity must be calculated and included in the field office file and in the NPIAS database for the current, 5-year, and 10-year time-periods.

3-7. ESTIMATES OF TOTAL COST

A master plan or airport layout plan report will include the estimated cost to implement the development plan. In many cases, the plan will also suggest how to finance the proposed improvements. If a planning document is not available, estimates of the total cost of eligible development should be prepared on the basis of estimated quantities, such as cubic yards of embankment or square yards of pavement, using costs prevailing at the time the NPIAS is prepared. Provision for future increases in costs due to inflation, increased labor costs, etc. should not be included. Development costs at airports can be broken down into AIP eligible and non-AIP eligible projects.

Only AIP eligible development should be included in the Plan. Fund availability should not be a concern when entering development into the NPIAS. Allocation of funds occurs at the time of project implementation. Inclusion of eligible project costs in the NPIAS does not constitute a commitment on behalf of the Federal government to participate financially in a project. Several criteria must be met prior to Federal funding of a project including availability of funds and priority ranking.

Table 3-2 Activity Levels for Planning Capacity Development		
CAPACITY DEVELOPMENT ITEM	ACTIVITY LEVEL	REMARKS
<input type="checkbox"/> New Runway	60% to 75% Annual Capacity	1. Parallel preferred. 2. Same length and strength as primary if serving same aircraft.
<input type="checkbox"/> Short Runway	75,000 Total Operations 20,000 Itinerant Operations	1. Small aircraft only. 2. Not necessarily parallel.
<input type="checkbox"/> Extension of Short Runway	60% to 75% Annual Capacity	1. If the critical aircraft changes, an extension may be warranted.
<input type="checkbox"/> Additional Exit Taxiways	60% to 75% Annual Capacity	1. If the critical aircraft changes, additional exit taxiways may be warranted.
<input type="checkbox"/> Holding Aprons/ By-Pass Taxiway	75,000 Total Operations 20,000 Itinerant Operations or 30 Peak Hour Operations	1. Consider effect on NAVAID's. 2. Limit holding apron to no more than 4 positions
<input type="checkbox"/> Terminal Aprons, Aircraft Loading Aprons, Parking Aprons	60% to 75% Annual Capacity	1. Recommend 5 years before aprons are expected to be congested during peak periods.
<input type="checkbox"/> Replacement/ Supplemental Airports	60% to 75% Annual Capacity	1. Timing depends upon forecasts, type of airport, location (metropolitan area), cost and other factors.
<input type="checkbox"/> Additional Instrumentation	Recommend 5 years before airport is forecast to reach activity levels specified in APS #1.	

NOTE: NAVAID's must be justified in accordance with the criteria in Order 7031.2C, Airway Planning Standard Number One - Terminal Air Navigation Facilities and Air Traffic Control Services. Requests for visual and electronic navigation aids are to be first referred to ANI. No NAVAID's is to be shown in the NPIAS if it is already included in an approved ANI budget or budget request. NAVAID's with a cost/benefit ratio greater than one (according to Order 70321.2C criteria) may be included in the NPIAS only if no funding is available from ANI).

Exhibit 4H
Historical Aircraft Operations
Santa Barbara Airport
1977-1999

Year	Itinerant				Local	Total	
	Air Carrier	Air Taxi	General Aviation	Military	Total Itinerant	Total Local	Total Operations
1977	5,923	13,030	109,710	1,128	129,791	80,019	209,810
1978	5,575	20,345	118,279	977	145,176	82,957	228,133
1979	3,634	22,390	114,112	905	141,041	92,026	233,067
1980	3,205	27,935	101,072	956	133,168	84,497	217,665
1981	2,297	26,949	94,644	1,002	124,892	67,127	192,019
1982	2,621	29,172	86,768	697	119,258	70,671	189,929
1983	3,621	48,693	98,213	694	151,221	66,692	217,913
1984	4,427	50,932	115,860	659	171,878	68,941	240,819
1985	5,421	43,548	98,863	632	148,464	53,802	202,266
1986	7,391	39,572	89,295	760	137,018	49,658	186,676
1987	9,094	47,756	85,581	808	143,239	47,402	190,641
1988	6,952	43,795	89,307	1,198	141,252	41,271	182,523
1989	6,899	43,183	87,166	1,282	138,530	44,247	182,777
1990	8,529	46,250	87,530	816	143,125	45,714	188,839
1991	8,477	41,967	73,677	877	124,998	43,951	168,949
1992	6,713	41,580	76,399	1,071	125,763	41,367	167,130
1993	6,766	46,474	76,758	1,211	131,209	51,467	182,676
1994	4,847	44,118	73,618	998	123,581	56,481	180,062
1995	4,534	44,682	66,224	1,414	116,854	50,963	167,817
1996	4,556	44,008	70,793	1,341	120,698	44,949	165,647
1997	5,781	49,542	72,905	955	129,183	45,981	175,164
1998	6,861	40,461	68,433	712	116,487	42,435	158,922
1999	8,196	36,647	69,706	804	115,353	53,104	168,457

Source: Aries and Santa Barbara Municipal Airport FAA Air Traffic Records

CALIFORNIA COASTAL COMMISSION

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VOICE AND TDD (415) 904-5200



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ADDENDUM No. 2

December 24, 2001

TO: Commissioners and Interested Parties

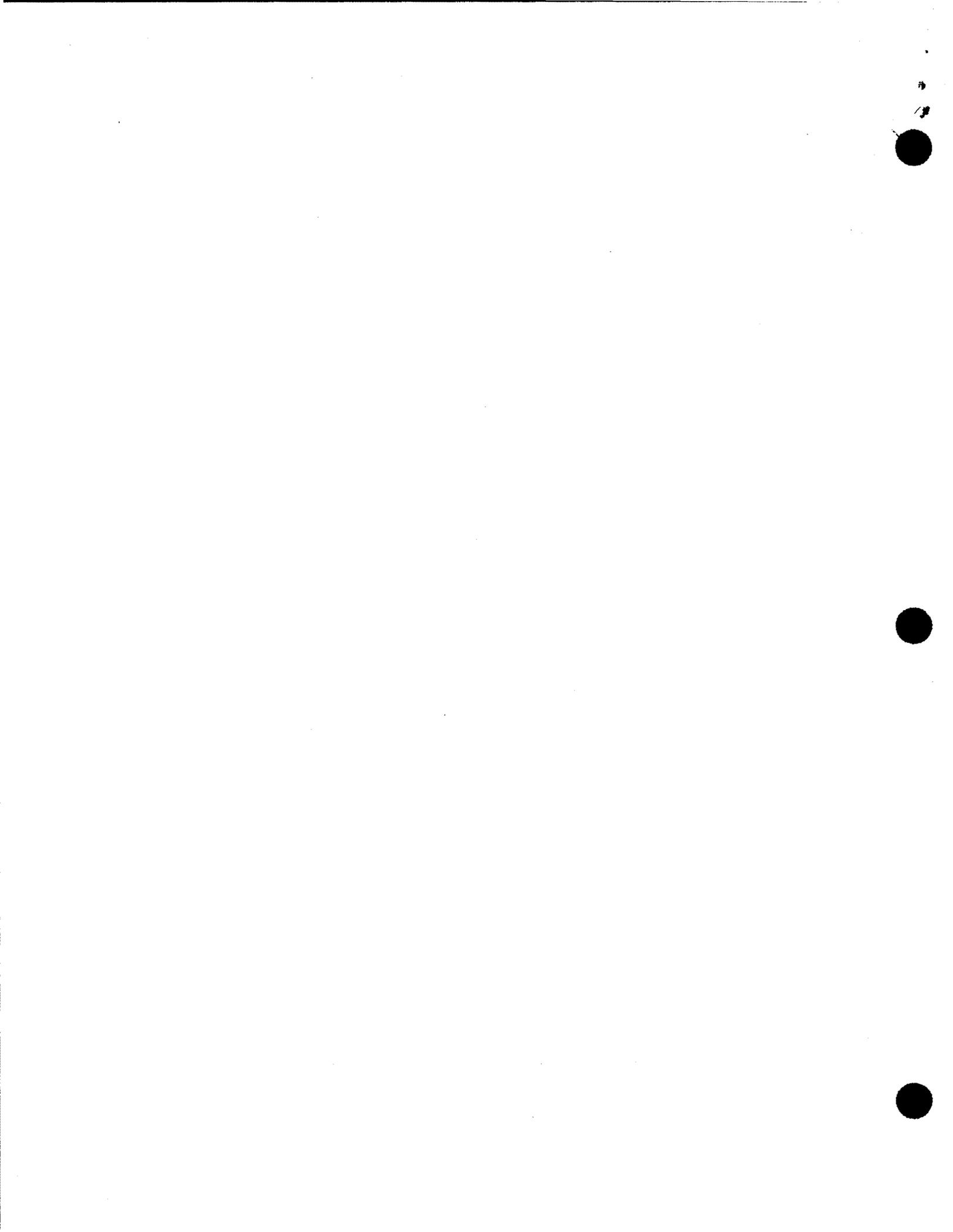
From: Peter Douglas, Executive Director
Kathleen Stycket, Federal Consistency Staff

RE: CC-058-01 construction of two 1,000 foot runway safety areas, extension of the runway protection zone, a taxiway, a 15,000 square foot air cargo facility, service road, a 3-story parking structure, taxiway widening, 75 T-hangers, a 49,700 square foot airline terminal expansion, and the demolition of several existing terminal buildings.

Additional Information

Additional information was received for this item after the mailing deadline. The following documents are related to the restoration of tidal circulation in Goleta Slough, bird strike hazards, and airfield capacity at the Barbara Airport.

1. Letter to Commission Staff
Re: Airport Delay and Capacity (FAA Advisory Circular 150/5060-5)
Department of Transportation, Federal Aviation Administration (2001)
2. Letter to Santa Barbara Municipal Airport
Re: Goleta Slough Tidal Restoration Feasibility Study, Grant Agreement 00-070
California Coastal Conservancy (2001)
3. Goleta Slough Tidal Restoration Feasibility and Bird Strike Study
Study Objectives and Scope
Santa Barbara Municipal Airport (URS Corp 2001)
4. Staff Recommendation No. 99-92
Planning Documents for the Goleta Slough Tidal Restoration Feasibility Study
California Coastal Conservancy (2000)





U.S. Department
of Transportation

Federal Aviation
Administration

Western-Pacific Region
Airports Division

Federal Aviation Administration
P.O. Box 92007
Los Angeles, CA 90009-2007

December 21, 2001

Ms. Kathleen Stycket
Coastal Program Analyst
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, California 94105-2219

Dear Ms. Stycket:

**Santa Barbara Municipal Airport,
Santa Barbara, California**

As a follow up to our discussion, Paragraph 1-3 of Federal Aviation Administration (FAA) Advisory Circular 150/5060-5, *Airport Delay and Capacity*, defines "capacity (throughput capacity)" as a measure of the maximum number of aircraft operations that can be accommodated on the airport in an hour. In the case of the Santa Barbara Municipal Airport (SBA), it is the position of the FAA that increasing the length of the Runway Safety Areas for Runway 7/25 to comply with FAA Airport Design Standards will not impact the capacity of the airport as defined in the referenced Advisory Circular. The proposed Runway Safety Area extension project would simply enhance the safety of aircraft operations at the airport. Furthermore, given the current layout of the airport's parallel and connector taxiway system and the predominant use of Runway 7/25 by commercial service operators at the airport, the construction of partial parallel Taxiway M, as proposed, will not increase capacity at the airport. The purpose and need for the taxiway project is to reduce the potential for runway incursions by minimizing the number of runway crossings required by users at the airport.

Both the runway safety area extension project and the partial parallel taxiway project are supported by the FAA in the fulfillment of our mission to ensure the safe and efficient use of navigable airspace in the United States.

If you have any questions or would to discuss this issue in more detail, please call me at 310/725-3615.

Sincerely,

David B. Kessler, AICP
Environmental Protection Specialist

JL



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SEP 6 2001

**City of Santa Barbara
Airport Department**

September 4, 2001

John Ledbetter
Santa Barbara Municipal Airport
601 Firestone Road
Goleta, CA 93117

RE: Goleta Slough Tidal Restoration Feasibility Study, Grant Agreement 00-070

Dear John:

This letter is to confirm in writing the Coastal Conservancy approves the scope of work dated June 26, 2000 (attached) submitted by the City for the Goleta Slough Tidal Restoration Feasibility Study. This letter also approves the use of URS Greiner as a subcontractor for the project.

Please contact me at (510) 286-0749 if you have any questions regarding this project.

Sincerely,

Trish Chapman
Project Manager

1330 Broadway, 11th Floor
Oakland, California 94612-2530
510-286-1015 Fax: 510-286-0470

**GOLETA SLOUGH TIDAL RESTORATION FEASIBILITY
AND BIRD STRIKE STUDY
SANTA BARBARA MUNICIPAL AIRPORT**

**URS Corporation
June 26, 2000**

STUDY OBJECTIVES

The objectives of the study are threefold: (1) design a short-term experimental field study in Goleta Slough to determine the effect of increased tidal circulation on habitat development, bird use, and bird strike hazard, and if appropriate, acquire permits for the field experiment; (2) determine the effect of tidally influenced bodies of water in Goleta Slough on bird activity and bird strike hazard at the Santa Barbara Municipal Airport (Airport) under existing conditions; and (3) evaluate the long-term potential effect of altering the amount and configuration of tidally influenced areas in Goleta Slough on bird activity and bird strike hazard.

The study is being conducted to assess the feasibility of increasing tidal circulation in portions of Goleta Slough, particularly relative to the potential for increased bird strike hazards. The study will be conducted by URS Corporation under contract to the Airport. The deliverables include a study plan, environmental review document, and permit applications, as described below.

Phase 1 would begin in July 2000 and end one year later. Phase 2 would begin in the fall of 2000. The study would be completed by the end of 2001. Each phase will be conducted under a separate contract or task order from the City of Santa Barbara.

STUDY SCOPE

The study includes the following elements:

1. Ongoing coordination with the Federal Aviation Administration (FAA), USDA Wildlife Services Division, and Goleta Slough Ecosystem Management Committee (GSEMC)
2. Collection of baseline data on bird use in and around Goleta Slough, and the existing bird strike hazard at the Airport
3. Design of a field experiment, including selection of experimental basins, using hydrologic modeling tools. The experiment will be described in a "study plan."
4. Preparation of environmental review document and acquisition of permits for the field experiment

Implementation of the study will occur under a separate scope of work.

There are several key constraints that apply to the study, which are listed below:

- The study plan must be acceptable to the FAA and USDA Wildlife Services Division

- The hydrologic modeling must demonstrate that the experimental basin(s) will completely drain at low tide
- All field manipulations must be reversible; that is, no permanent modifications to the hydrology of Goleta Slough would be involved
- The study design must include monitoring to identify any unexpected increase in bird strike hazard during the course of the experiment and contingencies to terminate or modify the experiment to avoid unacceptable hazards
- Basins to be modified would be restricted to Airport property

PHASE 1 TASKS (2000-2001) - BACKGROUND DATA GATHERING FOR THE STUDY PLAN

Task 1-1: Ongoing Agency Coordination

During the course of this phase, URS will coordinate with key agencies on an as-needed and ongoing basis to keep them informed of the progress of the studies and upcoming events. These agencies include the FAA, USDA Wildlife Services Division, Coastal Conservancy, and the GSEMC. URS personnel will attend meetings with these agencies as requested by the Airport staff.

Task 1-2: Characterize Baseline Conditions to be Used in the Study Plan

Characterize Bird Activity at and near the Airport

The purpose of this task is to characterize the bird activity at the Airport based on 12 months of field monitoring. We will identify monitoring locations in and around the Airport that will be visited on a periodic basis during the course of the study. Field personnel will record observations of bird species, activity, and approximate number during the visits to each monitoring site. Activities would be categorized such as ground feeding/foraging, tree feeding/foraging, loafing (in water, on grass, in shrubs, etc), nesting, and other activities. Particular attention will be given to the number and type of birds using tidal and non-tidal bodies of water, and their specific usage of these habitats during the year. Flight behavior will be recorded such as movement to and from the monitoring site, relative elevation, and movement as flocks or scattered individuals, and direction of movement. Monitors will also observe any behavior that is related to the time of day or season of the year. Finally, behavior of birds in proximity of aircraft will be noted.

At this time, we estimate that eight monitoring locations would be selected with representative habitats that surround the Airport. Examples include Goleta Beach County Park, Basin K, Storke Wetlands, Delco property, Goleta Sanitary District, end of runway 33/15, and Lake Los Carneros. Each site would be visited for a 30 to 60-minute period on a weekly basis. The time of the visit will vary from week to week in order to observe diurnal variation. Monitoring for 12 months will allow observations of migrants and winter visitors.

Contact Other Airports and Review Other Studies

URS will contact other airports on the west coast that are situated near tidally influenced areas, salt marshes, and freshwater marshes to acquire reports and documents on related studies, and to elicit ideas and "lessons learned" from other airports regarding bird strike hazards and open water habitats. We will identify and review applicable reports on bird strike hazards from other airports with similar ecological conditions.

Characterize Existing Bird Strike Hazard for Inclusion in the Study Plan

URS would define the potential strike zones for the parallel runways and runway 7/25 at the Airport based on information provided by the Airport on the number and type of aircraft on these runways, landing and takeoff elevations, and time of day usage factors. The objective of this effort is to clearly define the zones where bird strikes could occur based on individual runways and on the associated aircraft usage.

URS will identify human and natural bird attractants on and around the Airport based on a review of aerial photographs and field surveys. Attractants will differ among bird species, but would include (but not limited to): open water, shallow water, mud flats, grassy fields, trash receptacles, other scavenging areas like parks and picnic areas, perching sites and fences, and prey populations.

We will also provide a summary of the current state of knowledge about bird strike hazards at the Airport based on the 1993 Ecological Evaluation and the 1997 Biological Assessment of Wildlife Hazards prepared by the US Department of Agriculture. We will define strike hazard related to type, number, and spatial distribution of birds. This summary will also include a review of previous studies on bird use of the Airport, Goleta Slough and environs.

Based on the field data and other information collected under this task, we will prepare a preliminary assessment of the current bird strike hazards at the Airport relative to fresh and tidally influenced bodies of water in Goleta Slough. We will evaluate the relative attractiveness of these types of bodies of water to different birds, and determine the extent to which these birds and their usage of the aquatic habitats represent a bird strike hazard. This assessment will also include the results of the 1993 and 1997 investigations on bird strike hazards (as well as recorded strikes) at the Airport by the USDA.

PHASE 2 TASKS (2000-2001) - COMPLETION OF THE STUDY PLAN

Task 2-1: Ongoing Agency Coordination

URS will coordinate with key agencies on an as-needed and ongoing basis to keep them informed of the progress of the studies and to request their concurrence with key decisions regarding the study basins (see below). These agencies include the FAA, USDA Wildlife Services Division, Coastal Conservancy, and the GSEMC. URS personnel will attend meetings with these agencies as requested by the Airport staff.

Task 2-2: Select and Characterize Tidal Basins for Field Experiment

Under this task, we will identify the desired tidal habitats to be created (as envisioned in the Goleta Slough Ecosystem Management Plan) by breaching existing berms or obstructions in Goleta Slough and increasing tidal influence. We will review topographic maps of Goleta Slough to select 2 or 3 candidate "basins" (or portions thereof) for breaching, including a consideration of the various "basins" in the slough. We will review previously developed information about these basins, including specific recommendations in the Goleta Slough Ecosystem Management Plan and by GSEMC members while recognizing that the Airport and FAA have significant concerns about modifying and/or creating water bodies near the runways.

URS will inspect the candidate basins in the field to record hydrologic features and habitat conditions. We will collect elevation data, if necessary, to supplement the new topographic map of Goleta Slough being developed by the Airport and available in summer 2000.

In addition to selecting a non-tidal area for experimentation, we will also identify "control basins," that is, non-tidal areas to be monitoring during the field experiment that resemble the experimental basins before breaching berms.

We will characterize the existing hydrology of the candidate basins based on field observations during Phase 2. We will visit the candidate basins during different tide conditions, as well as after major rain events (if feasible), to observe the impoundment of freshwater in the basins, and the elevation of the nearest tidally-influenced bodies of water. We will also make observations of the performance of culverts in and near the candidate basins.

URS will map and characterize habitats at the candidate basins, compiling a list of plant species observed and noting boundaries of vegetation that may indicate levels of inundation and/or salinity. We will also characterize the bird use at the basins through a series of field surveys and extrapolation from our other investigations in the slough under Task 1-2.

We will review the findings of this task with the FAA, USDA Wildlife Services Division, and GSEMC.

Task 2-3 - Model Changes in Hydrology/Habitat, and Prepare Final Study Plan

The primary objectives of this task are: (1) to predict the changes in hydrology and resultant changes in habitat conditions in the experimental basins once tidal influence has been restored; and (2) to ensure that the experimental basins will completely drain at low tide to reduce the potential to create new open water attractants for birds. Predictive hydrologic models will be used to select the final basins for the experiment and to determine the appropriate methods to introduce tidal circulation.

URS will be preparing a Master Drainage Plan (MDP) for the Airport under a separate contract. We will expand and modify the MDP hydrology model in order to create a two-dimensional

hydrodynamic model of a portion of the Goleta Slough where the study basins are located. The model will incorporate discharges of freshwater in Tecolotito Creek and other inflows to the slough, and tidal inflows under various storm and non-storm conditions. The model will predict the water surface elevations, water movement, and mixture of fresh and salt water in the experimental basins. The model can be used to determine the extent of breach, target elevations and duration, and size of connections to tidal channels. We will model the effects of breaching the candidate basins, showing depth and duration of tidal circulation, as well as wetting and drying cycles.

The predicted change in hydrologic conditions will be used to predict changes in habitat features, including the conversion to estuarine vegetation and open water habitat. The predicted change in habitat will be used to predict bird usage based on our characterization of bird activity in Goleta Slough.

The result of the modeling will be used to prepare a final field experiment study plan. We will identify experimental and control basins, target hydrologic and habitat conditions in the experimental basins, and modifications necessary to introduce tidal circulation. Performance criteria will be developed that can be measured in the field, such as target water surface elevations, salinity levels, and inundation durations. Necessary modifications will be described such as berms to be lowered, culverts to be opened or modified, and channels to be re-aligned or otherwise altered.

The field experiment will include a program to monitor bird activity at the experimental and control basins to determine if the predicted bird use is realized, and most importantly, to evaluate bird strike hazards that may be introduced by the field experiment. A contingency plan will be developed in the event that an unacceptable bird strike hazard is identified during the course of the experiment. The field modifications to introduce tidal circulation will be designed to be reversible on a short notice to allow termination of the experiment on an emergency basis.

The results of the modeling and the final experimental study plan will be presented to the FAA and GSEMC for consideration and approval.

Task 2-4: Prepare Environmental Documents

URS will prepare a combined CEQA/NEPA environmental review document. For this scope of work, we assume it will be a combined Negative Declaration/Environmental Assessment (ND/EA). We also assume that the document will be based on information developed during our study and other available information; no original data gathering (e.g., field surveys, sampling, etc) or new technical analyses (e.g., modeling, hydraulic calculations) for the ND/EA are included in the scope of work. The document will be required for local and federal approvals of the field experiment, including the possible issuance of a Coastal Development Permit by the California Coastal Commission, funding of the study by the City and Coastal Conservancy, and possible issuance of a federal 404 permit by the Corps of Engineers for work in the slough. We will complete draft and final documents for the state and federal lead agencies, and complete public review process (e.g., issue notices, make public presentations, reproduce and mail documents).

Task 2-5: Prepare Permit Applications

As noted above, the field experiment may require several permits, including the following:

- Coastal Development Permit - California Coastal Commission
- 404 Permit from the Corps of Engineers
- 401 Water Quality Certification from the Regional Water Quality Control Board
- Streambed Alteration Agreement from the California Department of Fish and Game

URS will prepare permit applications on behalf of the Airport and coordinate with the above agencies prior to submittal of applications. We will also attend any required pre-application meetings with these agencies. Any additional technical analyses or data gathering in support of the permit process would be outside this scope of work. Fees for the applications would be provided by the Airport.

COASTAL CONSERVANCY

Staff Recommendation
September 28, 2000

**PLANNING DOCUMENTS FOR THE GOLETA SLOUGH
TIDAL RESTORATION FEASIBILITY STUDY**

File No. 99-92
Project Manager: Trish Chapman

**STAFF
RECOMMENDATION:** Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31251-31270 of the Public Resources Code:

"The State Coastal Conservancy hereby authorizes the disbursement of an amount not to exceed eighty thousand dollars (\$80,000) to the City of Santa Barbara for baseline data collection on bird activity and bird-strike hazard, to supplement funds authorized by the Conservancy on January 27, 2000 for preparation of planning documents for the Goleta Slough Tidal Restoration Feasibility Study, subject to the condition that, prior to the disbursement of any funds, the City of Santa Barbara shall submit for the review and approval of the Executive Officer of the Conservancy a detailed work program, project budget, schedule and the names and qualifications of any subcontractors to be employed for these tasks."

Staff further recommends that the Conservancy adopt the following findings:

"Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that the expansion of the scope and additional funding for the preparation of planning documents for the Goleta Slough Tidal Restoration Feasibility Study remain consistent with the findings made by the Conservancy on January 27, 2000."

STAFF DISCUSSION:

Project Description: On January 27, 2000, the Conservancy authorized disbursement of \$70,000 for preparation of planning documents for the Go-

Goleta Slough Tidal Restoration Feasibility Study, including a study plan, environmental review document, and permit applications (Exhibit 2). The proposed authorization would amend this prior authorization in two ways: 1) the scope of the project would be expanded to include baseline data collection regarding bird activity in Goleta Slough and the existing bird-strike hazard at the Santa Barbara Municipal Airport; and 2) an additional \$80,000 would be approved for the planning phase to cover the cost of the baseline data collection. The City has requested that baseline data collection be included in the planning phase of the Goleta Slough Tidal Restoration Feasibility Study, rather than the implementation phase, because the baseline data is needed in order to develop a suitable method for assessing bird-strike hazard and to identify an appropriate project site for the Tidal Restoration Feasibility Study.

One purpose of the baseline data collection is to characterize the bird activity at the Santa Barbara Airport based on 12 months of field monitoring. Monitoring locations in and around the Airport will be visited for a 30- to 60-minute period on a weekly basis during the course of the study. Field personnel will record observations of bird species, activity, and approximate number during the visits to each monitoring site. Activities would be categorized such as ground feeding/foraging, tree feeding/foraging, loafing, nesting, and other activities. Particular attention will be given to the number and type of birds using tidal and non-tidal bodies of water, and their specific usage of these habitats during the year. Flight behavior will be recorded such as movement to and from the monitoring site, relative elevation, movement as flocks or scattered individuals, and direction of movement. Monitors will also observe any behavior that is related to the time of day or season of the year. Finally, behavior of birds in proximity to aircraft will be noted.

The second goal of the baseline data collection is to evaluate the existing bird-strike hazard at the Airport. Potential strike zones for the parallel runways and runway 7/25 at the Airport will be defined based on information provided by the Airport on the number and type of aircraft on these runways, landing and takeoff elevations, and time of day usage factors. The objective of this effort is to clearly define the zones where bird strikes could occur based on individual runways and on the associated aircraft usage. Manmade and natural bird attractants on and around the Airport will also be identified. Attractants will differ among bird species, but would include: open water, shallow water, mud flats, grassy fields, trash receptacles, other

scavenging areas like parks and picnic areas, perching sites and fences, and prey populations.

The information gathered through these efforts will be used in developing the planning documents previously authorized by the Conservancy, including the study plan, environmental review document, and permit applications (see Exhibit 2).

The Tidal Restoration Feasibility Study is a multi-agency cooperative effort to resolve the bird-strike debate at Santa Barbara Airport and possibly move towards tidal restoration in western Goleta Slough.

Project Financing: Preparation of the Feasibility Study planning documents, including the baseline data collection, will cost an estimated \$150,000. Funding for this phase of the Feasibility Study will be provided by funds contributed to the project by the County of Santa Barbara and previously accepted by the Conservancy on June 24, 1999.

County of Santa Barbara \$150,000

Project Cost: \$150,000

In the January 27, 2000 staff recommendation, project costs were split between the County and Conservancy funds appropriated for the Southern California Wetlands Recovery Project. Due to time constraints on using the County's grant funds, initial project costs will be funded solely by the County, with the expectation that the implementation phase of the project will be funded with Wetlands Recovery Project monies. No estimates are currently available for the cost of implementing the Feasibility Study. Authorization to disburse funds for implementation of the Feasibility Study will be the subject of a future staff recommendation.

Site Description: Goleta Slough encompasses over 700 acres of coastal wetlands located on the south coast of Santa Barbara County. The slough represents the northern limit of distribution for several plant and animal species found in southern California estuaries. Historically Goleta Slough supported 1,800 acres of tidal salt marsh, but the site has been degraded and greatly reduced in size through both natural sedimentation and artificial filling. In the 1940s a substantial portion of the western slough was filled to construct a military airfield, which later became the Santa Barbara Municipal Airport. The 430 acres of the slough which are owned by the California Department of Fish and Game

("DFG") and the Santa Barbara Municipal Airport have been designated the Goleta Slough Ecological Reserve. The Reserve is managed by DFG.

Both natural and anthropogenic processes have contributed to a reduction in tidal circulation within the slough. During this century, approximately 60 percent of the tidal wetlands in the slough have been lost (largely filled) or isolated from tidal action. The resulting loss of intertidal salt marsh has substantially reduced the biological diversity at Goleta Slough. Restoration of tidal circulation to areas that have become hydrologically isolated in the slough has been identified as a top priority in the draft Goleta Slough Ecosystem Management Plan.

Project History: On June 24, 1999, the Conservancy accepted \$938,000 from the U.S. Fish and Wildlife Service and \$200,000 from the County of Santa Barbara, and approved \$120,000 of funding for preparation of an enhancement plan for the Goleta Slough Tidal Restoration Project. This project would entail restoration of tidal circulation to approximately 25 acres of degraded salt marsh in the western slough, and enhancement of 13 acres of surrounding transitional and upland habitat. This project was to be funded through monies from the U.S. Fish and Wildlife Service, County of Santa Barbara, and the Conservancy's Wetlands Recovery Project funds.

At the time of project approval, indications were that the Federal Aviation Administration ("FAA") would not object to the Tidal Restoration Project. The Conservancy directed staff to work with the FAA and to discontinue project development if the FAA indicated opposition to the project. On September 27, 1999, the Conservancy received a letter from the FAA stating their position that tidal restoration projects in the vicinity of the airport should not proceed without additional information to support the conclusion that restoration would not increase the bird-strike hazard.

In 1998, the airport commissioned a "Wetlands Mitigation Feasibility Study and Wildlife Hazard Assessment." This study found that the isolated basins surrounding the airport currently support seasonal ponds and wet grasslands. In general, these seasonal wetlands attract medium- to large-size birds, including several species of migratory birds that fly in flocks. In contrast, the study predicted that restored tidal wetlands would attract smaller, low flying birds, that were less prone to flocking. Thus, the study concluded that tidal restoration could increase the overall bird use by converting seasonal wetlands to peren-

nial wetlands; however, it also predicted that this would not result in an increase in bird-strike hazard due to the change in bird population to lower risk birds. These conclusion were questioned by the USDA Wildlife Services, which serve as advisors to the FAA on bird-strike hazards.

The FAA indicated conditional support in their September 27, 1999 letter of a tidal restoration feasibility study that would empirically test the predictions of the earlier bird-strike study. As a result, staff is now recommending the Conservancy contribute funding for this study. In the meantime, the preparation of the enhancement plan for the Goleta Slough Tidal Restoration Project (authorized on June 24, 1999) is on hold until the conclusion of the Feasibility Study.

On January 27, 2000, the Conservancy authorized disbursement of \$70,000 for preparation of planning documents for the Goleta Slough Tidal Restoration Feasibility Study, including a study plan, environmental review document, and permit applications (Exhibit 2). At that time, it was expected that baseline data collection would be conducted as part of the implementation phase of the Tidal Restoration Feasibility Study. Subsequently, the City determined that baseline data on bird activity in the Slough and bird-strike incidents at the airport was needed first, in order to develop a suitable method for assessing the bird-strike hazard and to identify an appropriate location for conducting the Feasibility Study.

PROJECT SUPPORT: The Goleta Slough Tidal Restoration Feasibility Study is being planned by the City of Santa Barbara with oversight from the Conservancy and the Goleta Slough Management Committee, and in close coordination with the FAA. The Management Committee includes representatives from the City, County, Airport, Conservancy, Coastal Commission, Department of Fish and Game, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, U.C. Santa Barbara, and local landowners and environmental organizations. The project has also been selected as a priority by the Southern California Wetlands Recovery Project, a partnership of 17 state and federal agencies.

**CONSISTENCY WITH
CONSERVANCY'S
ENABLING LEGISLATION:**

This section remains consistent with the January 27, 2000 Staff Recommendation (Exhibit 2).

**CONSISTENCY WITH
CONSERVANCY'S
PROGRAM GUIDELINES:**

This section remains consistent with the January 27, 2000 Staff Recommendation (Exhibit 2).

**CONSISTENCY WITH
LOCAL COASTAL PLANS:**

This section remains consistent with the January 27, 2000 Staff Recommendation (Exhibit 2).

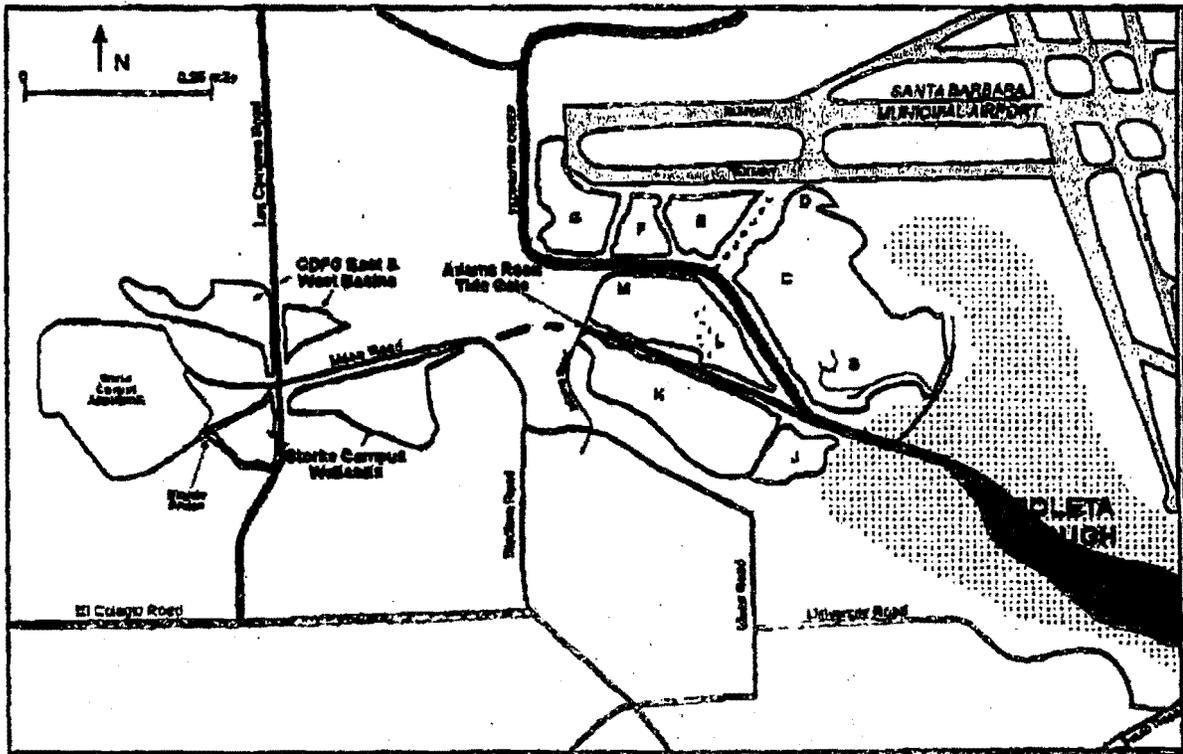
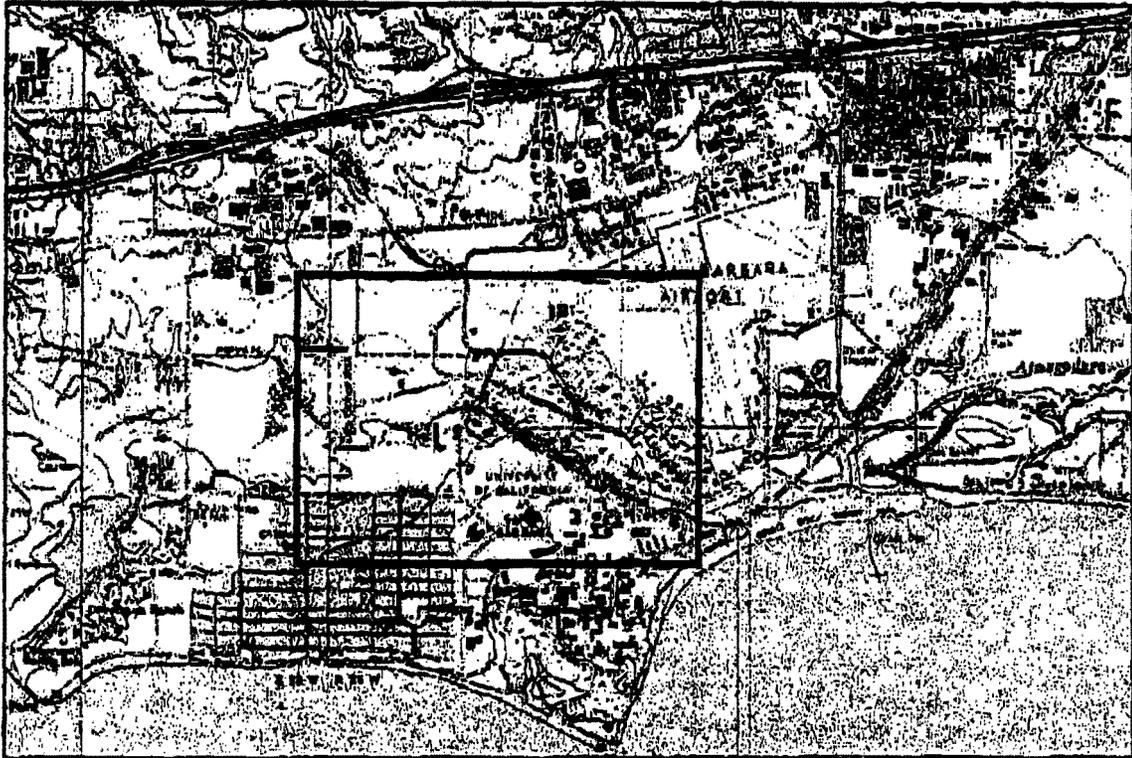
**CONSISTENCY WITH
THE COASTAL ACT:**

This section remains consistent with the January 27, 2000 Staff Recommendation (Exhibit 2).

**COMPLIANCE
WITH CEQA:**

Preparation of the Feasibility Study planning documents will only involve planning studies and data collection and is therefore exempt from the provisions of the California Environmental Quality Act, pursuant to 14 California Code of Regulations Sections 15262 and 15306. Consistent with Section 15262, the study plan for the Feasibility Study will consider environmental factors. Upon approval, staff will file a Notice of Exemption for this project.

Exhibit 1 - Project Map



CALIFORNIA COASTAL COMMISSION

45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200



RECORD PACKET COPY

M 11a

December 28, 2001

TO: Commissioners
From: Peter Douglas, Executive Director
Kathleen Stycket, Federal Consistency Staff

RE: CC-058-01 construction of two 1,000 foot runway safety areas, extension of the runway protection zone, a taxiway, a 15,000 square foot air cargo facility, service road, a 3-story parking structure, taxiway widening, 75 T-hangers, a 49,700 square foot airline terminal expansion, and the demolition of several existing terminal buildings.

The attached letter to Commission Chair Sara Wan, and a recent article from the Santa Barbara News-Press were received by the Commission staff on December 27, 2001. Mr. Drew Bohan, Executive Director of the Santa Barbara Channel Keeper has requested that these items be forwarded to the Commission for review.



SANTA BARBARA CHANNELKEEPER

120 WEST MISSION ST. SANTA BARBARA, CA 93101
 PHONE (805) 563-3377 OR 563-3399 FAX (805) 687-5635
 INTERNET ADDRESS: WWW.SBCK.ORG



December 21, 2001

The Honorable Sara Wan
 California Coastal Commission
 45 Fremont Street, Suite 2000
 San Francisco, CA 94105-2219

Re: Consistency Certification CC-058-01 (Santa Barbara City Airport)

Dear Madame Chair:

Santa Barbara ChannelKeeper is a non-profit organization dedicated to the protection and preservation of the Santa Barbara Channel and its watersheds. We write to urge the Commission to deny consistency for item CC-058-01, the Santa Barbara City Airport project (the "Project").

The Project proposes to fill in a substantial portion of what remains of the Goleta Slough. Over 90% of California's historic wetlands have been filled in or paved over. The Goleta Slough, a designated Ecological Reserve, represents one of the last remaining coastal wetlands in our region.

The EIS/EIR itself states that the Goleta Slough "is considered the major environmentally sensitive habitat area in the Goleta Valley's coastal zone." Seven major creeks and several minor creeks flow from the Santa Ynez Mountains into the 430-acre Slough. The Goleta Slough was recently designated a "Globally Important Bird Area." The Slough's critical bird habitat supports an amazing assemblage of birds - an estimated 279 species have been reported.

The bad news is that the Slough's continued existence is threatened. The good news is that all parties agree on what is the best possible mitigation: restoring tidal circulation. The City, however, refuses to do this mitigation because of a vague concern about bird strikes. The City concedes that current evidence suggests that increasing tidal circulation will actually *reduce* the risk of bird strikes. Moreover, the first phase of a comprehensive *Tidal Circulation and Bird Strike Study* will be completed in early 2002. We urge the Commission to postpone a decision on consistency until April 2002, when the Commission will be in Santa Barbara and residents have a chance to participate. By that time the first phase of the Bird Strike Study should be complete.

The Project Violates the Coastal Act

Section 30236 - Section 30236 of the Coastal Act provides as follows:

"Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat."

The Project would fill in several acres of two major streams and re-route them. The purpose of the Project is not for (1) water supply, (2) flood control, or (3) the improvement of fish and wildlife habitat. The Project therefore clearly violates the plain language of Section 30236.

RESTORING THE QUALITY OF THE CHANNEL'S WATERS THROUGH ACTION, ADVOCACY, EDUCATION, AND ENFORCEMENT

PRINTED ON 100% POST-CONSUMER RECYCLED PAPER

The Honorable Sara Wan

December 21, 2001

Page 2

Section 30233 - Section 30233 of the Act only allows wetlands to be filled, diked or dredged for a very limited number water-dependent projects such as navigational channels, boat facilities, and piers. There is also an exception for "incidental public service purposes." However, the Commission's own guidelines state that the only allowable "incidental public service" activities are those that "temporarily impact the resources of the area." Filling in two creeks with concrete is not temporary. The "incidental public service" exception therefore does not apply in this case.

The City claims that the increase in runway length will not increase "capacity" at the airport, and for that reason, the Project should fit under the "incidental public service" exception. The evidence shows, however, that the runway extension *will* increase capacity at the airport, by allowing larger and heavier planes to use the airport.

The City has Failed to Demonstrate that the Most Important Mitigation Measure is Infeasible

All of the experts who have looked at this issue agree that restoring tidal function is the most important mitigation measure that could be taken to ensure the Slough's long-term survival. The City's LCP notes that "two of the major threats to the slough's continued existence as a wildlife habitat are sedimentation and tidal circulation."

Noted UCSB wetlands experts Wayne Ferren and David Hubbard, in a July 2001 letter to the City, state that the City's "proposed mitigation does not directly address the fundamental estuarine processes. The ecological integrity of the Goleta Slough Ecological Reserve and the whole estuary is dependent on tidal circulation. Some rare species are tide dependent including California listed species Belding's Savanna Sparrow."

Moreover, the Commission's own Staff Recommendation notes that "the National Marine Fisheries Service, the Santa Barbara Audubon Society, and the Goleta Slough Management Committee have urged the City to consider tidal restoration." Even the City agrees that tidal restoration is critical. (See EIS/EIR, p. 3-191.) The City nevertheless refuses to perform what everyone agrees is the most important type of mitigation because of a vague concern about bird strikes. Prior restoration efforts in other portions of the Slough have restored tidal flow without increasing bird strike hazards, thus illustrating that this mitigation measure is feasible and effective. Moreover, a City-commissioned study concluded that increased tidal function would likely decrease the risk of bird strikes. (EIS/EIR, p. 3-191.)

The City has failed to meet its burden to show that the restoration of tidal circulation is infeasible. Accordingly, the Commission should deny consistency or, at a minimum, withhold its determination until the *Bird Strike Study* is completed in early 2002. The Commission will can revisit this issue when it meets in Santa Barbara in April.

Cordially,



for Drew Bohan
Executive Director

SANTA BARBARA NEWS-PRESS

"WITHOUT FEAR OR FAVOR OF FRIEND OR FOE"

Wendy McCaw *Chief Executive Officer*
Joe Cole *Publisher*
William Fleet *General Manager*
Jesse Chavarria *Managing Editor*



OUR OPINION

Coastal wetlands taking flight

Despite strong community objection, the City Council unanimously approved a \$56 million airport expansion plan this week. This approval comes with many questions about potential environmental impacts to the Goleta Slough and at a troubling time in the air travel industry.

"This is the type of issue that defines the future of Santa Barbara," Councilman Tom Roberts said in a recent news report about planned airport expansion. We couldn't have said it better.

At the heart of the issue is whether renovation and expansion justify the environmental damage to coastal wetlands.

Expansion plans call for shifting a runway 800 feet, reconfiguring Tecolotito Creek to flow around it and creating 1,000-yard dirt safety-zone runways. Sensitive wetlands would be replaced with an Airport Approach and Operations Zone and Airport Facilities Zone.

Collateral damage sounds more appropriate.

Airport officials forecast an increase in air passenger traffic. We haven't seen it. Our Sept. 2 editorial questioned the merits of such expansion with a declining passenger count experienced over the last three years. This was even

before Sept. 11 and the devastating repercussions to the air travel industry.

Were these optimistic projections not shared with United Airlines before they hurriedly left town?

A new, larger airport comes with a high price and may be based on dubious travel projections. One local environmental organization, Santa Barbara Channel Keeper, a nonprofit group, has expressed some very serious concerns regarding the airport plan and Coastal Act protections.

"We think it violates the law," said Channel Keeper Executive Director Drew Bonham. The City Council disagrees. The proposed plan now moves forward to the state Coastal Commission.

The issue of airport expansion is comparable to other current industry-vs.-environment debates. The establishment of large no-fishing zones for the Channel Island National Marine Sanctuary is one prime example. These decisions carry permanent consequences. There will be no turning back the negative environmental impacts if we don't protect our valuable natural resources.

These are, indeed, the types of issues that define the future of our community.

Sunday,
December 16, 2001

