

Endorsed for presentation
to the City Council



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**City of Watsonville
Community Development Department**

MEMORANDUM



DATE: April 1, 2005

TO: City Council

FROM: City Council Airport Committee
(Councilmembers Doering-Nielsen, Rivas and Skillicorn)

SUBJECT: Recommendations on Revision to the Watsonville Airport Crosswind
Runway (8-26)

AGENDA ITEM: April 12, 2005 City Council

RECOMMENDATION:

It is recommended that the City Council, by motion, receive and file the report of the City Council Airport Committee.

DISCUSSION:

Context. State law requires that each City and County prepare and adopt a General Plan. The General Plan guides the physical development of the City, and includes discussion on issues including land use, housing, open space, safety, and noise among others. The City's current General Plan was adopted in 1994 and was projected to meet the needs of the City until 2005. The plan was recently amended to include voter-approved Measure U provisions. The update of the plan and the environmental document will provide for a fully consistent General Plan.

In 2002, in order to meet these statutory requirements, the City Council authorized preparation of State-mandated revisions to the City's Housing Element. This Element was certified by the State Department of Housing and Community Development (HCD) in 2003, and will be integrated into the overall General Plan. Adoption of an updated General Plan is anticipated by late 2005 or early 2006. The scope of work for the update includes evaluation of the Buena Vista Future Growth Area, as well as consideration of the land-use map and policy revisions to address airport-related compatibility issues throughout the City.

Over the last year, the General Plan Steering Committee has been working with the City's consultant team and community to create land-use scenarios that can be utilized in developing the General Plan and its Land-Use Element. During these discussions, the City's consultant noted that the existing safety compatibility zones for Runway 8 represent potential conflicts to existing residential development, as well as limitations to the development on the areas known as Buena Vista I, II and III. The consultant indicates that without revision to the Runway 8 safety-compatibility zones, there could be a substantial loss in development/housing capacity within the Buena Vista Future Growth Area. While it is possible that a portion of this development/housing capacity could be realized elsewhere within Buena Vista II and III, the resulting design encroaches further toward the Old Adobe Road area, places urban development closer to agricultural lands, and forces urban development away from the least constrained (with the exception of the crosswind runway) lands within the entire Buena Vista area. Any lost development/housing capacity will either have to be absorbed in even higher density infill within the City or be lost in its entirety; the loss of development/housing capacity places the City at risk in meeting future Housing Element goals and in implementing the objectives of Measure U.

Background. The Watsonville Airport was established in 1942 with approval of a local bond and grant from the Civil Aeronautics Authority. The Airport functioned as a Naval Auxiliary Air Station during World War II during which time the main and crosswind runways were constructed. The City has operated the airport continuously since the transfer of the facility in July of 1948. Since the 1970's, the Watsonville Municipal Airport has operated under a Master Plan. On June 24, 2003, the City Council adopted the current Watsonville Municipal Airport Master Plan. This plan addressed State land-use related components, as well as included a development plan for the period of 2001-2020. The Airport Master Plan was developed with the assistance of the California Airport Land Use Planning Handbook (CALUP Handbook). This document is promulgated by the State of California Department of Transportation—Division of Aeronautics and is provided to “support and amplify State Aeronautics Act and provide compatibility planning guidance...” The handbook clearly indicates that it is “intended solely for the purpose of providing general guidance and does not represent Caltrans standards or policy.”

Since adoption of the Master Plan, the City has initiated work on application and environmental materials to provide improvements related to the airport including an 800-foot main runway extension and instrument landing system (ILS).

Following General Plan adoption in 1994, the area now identified as Buena Vista I was included in the LAFCO-adopted City Sphere of Influence; this action provided direction to the City to pursue the Buena Vista Area to meet a portion of its future housing needs. In conjunction with voter approval of the City's Urban Growth Initiative (Measure U), the proposed future growth area was extended to include areas now referred to as Buena Vista II and III. Crosswind Runway 8 has been identified by consultants as a potential development constraint for portions of the Buena Vista Future Growth Areas. Additionally, the Runway Protection Zone (RPZ) for Runway 8 includes existing homes on Manfre Road; this represents risk exposure beyond that desired and is inconsistent with FAA regulations.

Based upon the efforts of the Steering Committee, Staff initiated work on identifying options for addressing the safety compatibility of Crosswind Runway 8. Given the very specialized nature of the analysis, Staff entered into a contract with an airport consultant. Beyond the specialized nature of the task, Staff also recognized the need for objectivity in order to garner the confidence of the City Council, General Plan Steering Committee, community and airport users. Accordingly, the City contracted with Walter E. Gillfillan and Associates, a firm that specializes in airport and Federal Aviation Administration (FAA) issues. On May 27, 2004, the General Plan Steering Committee referred the resulting report to the City Council.

The General Plan Update is not contemplating the closure of the Airport, nor did Measure U. The scope of the study was clearly limited to preserving the airport through elimination/reduction of potential hazards and nuisance issues, while allowing for development opportunity in the Buena Vista Future Growth Area. The report identified options for addressing Crosswind Runway (8-26). Per the adopted Airport Master Plan, Crosswind Runway 8-26 accommodates approximately 12% of the annual flight activity (Runway 8 accommodates 5%; Runway 26 accommodates 7%). Don French, Airport Manager, indicates that the actual percentage split is 2% (Runway 8) and 10% (Runway 26). These revisions are included in the package of proposed text revisions. The report, per the scope of work, included pros and cons of the various available alternatives from an airport operations perspective, and from the perspective of potential conflicts with existing assurances, FAA and Caltrans rules and regulations. The report was intended as a starting point for discussion within the community and stakeholder groups.

On August 10, 2004, Walter Gillfillan made a presentation to the City Council regarding his report of options for the crosswind runway. Recommendations focused solely on modification of the Runway 8 portion of the Crosswind Runway. The list of options was not intended to be exhaustive as variations of the alternatives could result in countless other options. The options were intended to identify and analyze the most straightforward.

Following public comment, then Mayor Doering-Nielsen formed a Committee consisting of Council Member Skillicorn, Council Member Rivas and herself. This committee met on several occasions in late summer/early fall with stakeholder groups to discuss options and general opinion regarding the Runway 8 issue.

On February 25, 2005, Action Pajaro Valley hosted an informational meeting for stakeholders to discuss the Watsonville Airport (in particular Runway 8), Measure U and the Buena Vista Future Growth Area. This meeting was well attended and provided an opportunity for exchange of information and opinion.

Discussion. The Committee met with various stakeholder groups to listen to their concerns and issues, assure the groups of the limited scope of the effort in an attempt to find a possible option to address safety concerns, and to allow reasonable development opportunity for the Buena Vista Future Growth Area. Stakeholder groups included the Watsonville Pilots Association, representatives of the airport business community, developer interest, representatives of the FAA and Caltrans, as well as resident interests (including Friends of Buena Vista).

Caltrans--Division of Aeronautics as well as the FAA confirmed that the City Council retained authority over the operations of the Watsonville Municipal Airport. The FAA indicated that their funding was based on function of the airport and future requests would be evaluated based on the adopted Airport Layout Plan (as may be amended). Caltrans confirmed that the policies in the ALUP Handbook are intended as guidelines and that variations in design, configuration and land use compatibility was available and within the scope of the City Council. Caltrans and the FAA indicated support of Runway 8 modifications that would increase safety such as removal of the Runway Protection Zone (RPZ) from existing homes. There was also extensive discussion and confirmation as to the General Aviation Accident Distribution Contours and the desire to protect those areas immediately extending from the runway terminus.

Airport business interests indicated concern about any change to the Airport on their business and to perceptions about the long-term viability of the airport. Developer interests indicated willingness to compromise toward a runway modification option as opposed to crosswind runway closure. The Friends of Buena Vista indicated their concerns about development scenarios for Buena Vista and the overall General Plan Update. The Watsonville Pilots Association initially indicated a willingness to consider modification, but ultimately indicated that they would oppose any change of Runway 8.

The Committee focused its efforts solely on the crosswind runway, and in particular Runway 8. As part of the process, the Committee further evaluated the function and safety issues related to Runway 8-26, State and Federal regulations and the implications of changes on airport user groups and businesses. The Committee confirmed that Runway 8 was utilized on a very limited basis (per the Airport Master Plan and testimony of Don French, Airport Manager); however, due to unique coastal fog conditions, there were times in which it was highly desirable to have Runway 8 available. The Committee discussed the various options identified in the Gillfillan Report with the stakeholder groups. Through this process, the Committee identified two options: 1) re-designation of Runway 8 to Low Activity (Gillfillan Report, Option 6); and 2) reduction of Runway 8 length by 500-feet (Gillfillan Report, Option 3). Attachment 1 is a synopsis of observations/ considerations of the Committee that led to the recommendation.

Recommended Option. The Committee established their goal to find an alternative that retains the long-term viability of the municipal airport while protecting existing and future adjacent uses particularly in light of the limited use nature of Runway 8. The Committee believes the recommendation meets this goal and is recommending a series of actions to the City Council, a synopsis of which follows (Attachment 2 contains additional detail):

- 1) **Re-Designate Runway 8 as Low Activity Runway.** The Committee is recommending the re-designation of Runway 8 as a Low Activity Runway (evaluated as Option 6 in the Gillfillan Report). Under this scenario, Runway 8 would remain 3,999-feet in length; there would be no change to the threshold. There would be no physical change to the runway and operations would continue as they have historically. The re-designation to Low Activity would result in the removal of the Safety Compatibility Zone 3 (AKA Inner Turning Zone) from the Watsonville Airport Master Plan. Safety Compatibility Zones 1, 2, 4 and 6 would remain as currently depicted.

Analysis: The CALUP Handbook provides discretion to the City Council regarding the Airport operations. The Guidelines identify Low Activity General Aviation Runway as an example of a type of runway that can be considered when addressing local airport conditions and safety compatibility zone designations. The Committee determined that the activity on Runway 8 was low (representing approximately 2-percent of annual flights) and that the activity was driven by meteorological conditions unique to Watsonville and the Central Coast. The Committee further determined that risk exposure for any runway is greatest at the immediate terminus of the runway, but remains greater along an axis extending straight out from the centerline of the runway. The Committee understands that the CALUP Handbook provides “general guidance” to the City. Based upon these factors, the Committee recommended the re-designation of Runway 8 to Low-Activity and the removal of Safety Compatibility Zone 3.

- 2) **Modify Airport Master Plan.** The Committee is recommending a series of modifications of the Airport Master Plan to reflect the revisions to Runway 8, Runway 8-26 annual operations data and Measure U. The Committee is not recommending modification to allowed uses (Table 37) within the Safety Compatibility Zones including Zone 6.

Analysis: The Airport Master Plan must be modified to reflect changes made by the City Council for appropriate public disclosure.

Conclusion. The City Council is faced with a difficult task of solving how best to balance protection of the Airport with implementation of Measure U. Measure U itself seeks to balance the desire to preserve agricultural land, environmentally sensitive land, while providing for needed housing and job creation. The Committee believes that the recommended actions will provide the best means to meet the Measure U objectives while also protecting the interests of the Watsonville Municipal Airport.

ENVIRONMENTAL:

An Environmental Impact Report (titled Final Environmental Impact Report for the Watsonville Municipal Airport Master Plan) was prepared and Certified for the Airport Master Plan on June 24, 2003, by Watsonville City Council Resolution Number 178-03. Staff has determined that the proposed amendment of the Airport Master Plan and Airport Layout Plan is consistent with the Certified EIR for the Airport Master Plan. Based upon review of the proposed revisions in comparison to the current adopted Airport Master Plan, it has been determined that modifications:

- 1) Will result in no change in the Runway Protection Zone (RPZ); resulting in no change to potential risk exposure;
- 2) Will result in no change to operations, thus no change in noise or other risk exposures to properties; and
- 3) Will not result in operational or physical changes to Runway 8 that could pose greater risk exposure or affect the overall operation of the airport.

STRATEGIC PLAN:

The creation of new housing and employment opportunities is consistent with the Strategic Plan. Modification of Runway 8, as recommended, will provide opportunity for both to occur while retaining the long-term viability of the Airport and airport related business.

FINANCIAL IMPACT:

There will be a minor cost to the City either in staff time and/or consultant for technical revision of the Airport Master Plan and related documents. This cost will be borne by the Airport, which is an Enterprise Fund. There will be no impact to the City's General Fund as costs to the General Fund will be in staff time and will be absorbed within existing appropriations.

ATTACHMENTS:

- 1) Principal Observations/Considerations of the Committee formulated from meetings with stakeholder groups
- 2) Matrices of Committee Recommended Option
- 3) Map Depicting Recommended Low Activity Runway

c: City Attorney

ATTACHMENT 1

PRINCIPAL OBSERVATIONS/ CONSIDERATIONS

BASIC PREMISES

- The City will proceed with its plans to annex the Buena Vista (BV) Future Growth Area (BV I, II and III).
- BV I, II and III are intended primarily for residential development.
- The City intends to operate and develop the airport in accordance with the Airport Master Plan adopted in June 2003, as amended.
- The City will continue to apply the provisions of the CALTRANS Handbook as a guideline in establishing land use compatibility between the airport and new development.
- The City intends to comply with the provisions of the Sponsor's Assurances contained in the most recent Grant Agreement with the FAA.
- The City will retain ownership of the Buena Vista Park site.

AIRPORT OPERATING FACTORS

- Runway 2-20 is the primary runway. It is longer, is lighted and has a published, non-precision approach to Runway 2
- There are two published, non-precision, circle-to-land approaches to the airport
- Runway 8-26 is used as a cross-wind runway by small aircraft and for VFR departures during times of low coastal fog
- Departures on Runway 26 are infrequent
- Landings on Runway 8 are also infrequent
- The noise exposure in the Buena Vista area shown as 55-60 CNEL range
- Runway 8-26 has VFR operations only
- Runway 8-26 has no night operations
- Risk exposure as a general rule lessens the further away from the centerline of the runway
- Pilots are trained to, in the event of mechanical problems at takeoff, continue in a straight path from the runway

SELECTING THE PREFERRED OPTION

- The re-designation of Runway 8 reflects actual operational nature of the runway.
- The modification does not change operational characteristics of the Runway 8 or 26.
- The modification would maintain the Runway length at 3,499 feet providing adequate length for commercial/business aircraft on Runway 26.
- Development provided for in the Airport Master Plan is not compromised. The opportunity to lengthen Runway 2-20 and to provide for a precision instrument landing system (ILS) to Runway 2 is preserved.
- The modification would provide maximize flexibility in planning for the Buena Vista Future Growth Area while protecting the long-term viability of the airport and Runway 8-26.

Zone 1: Runway Protection Zone (RPZ):

- Retain As-Is.
- This zone is defined by the FAA and in the CALTRANS ALUP Handbook

- There would be no change to the RPZ. Runway 8-26 would operate in the same manner as it currently functions.
- The risk exposure for people and structures on the ground from landings on Runway 8 would be no different than what exists today.

Zone 2: Inner Approach And Departure Zone

- Retain As-Is.
- This zone is defined in the CALTRANS ALUC Handbook
- The FAA has no specific land use guidelines beyond the RPZ.

- A little less than one-half of Zone 2 that is defined in the ALUP Handbook would be on airport property. The remaining portion would be in the Buena Vista Future Growth Area.
- Most of the area within the Buena Vista Future Growth Area is vacant however there are currently residential land uses along Manfre Road
- Restrict the height of structures within the Approach Area, in accordance with The Federal Aviation Regulations, Part 77.
- New residential uses would be infill to the existing residential area
- Density in the order of one dwelling unit per one acre
- Cluster any new residential uses to the outer edge of the zone
- Utilize the areas near the extended runway centerline for roads and open space
- Prohibit schools, day care center, hospitals and nursing homes
- Prohibit above ground bulk fuel storage

Zone 3: Inner Turning Zone

- Zone 3 would be removed with the re-designation of Runway 8 to Low Activity Runway
- The FAA has no specific land use guidelines beyond the RPZ

- The California ALUP provides guidance to jurisdictions involving airport land use compatibility.
- The ALUP makes provision for the concept of designation of a runway as a "Low Activity General Aviation Runway" and provides the discretion to the jurisdiction to determine the safety compatibility configuration of the runway.
- Runway 8 has been determined to be a low activity runway; with approximately 5-percent of annual flight activities involving Runway 8.

Zone 4: Outer Approach And Departure Zone

- Retain As-Is.
- This zone is defined in the CALTRANS ALUC Handbook
- The FAA has no specific land use guidelines beyond the RPZ

- All but a small part of the outer portion of this zone would be in the Buena Vista Future Growth Area.
- New residential uses to be infill to the existing residential area Density in the order of one dwelling unit per one acre
- Avoid non-residential uses having moderate or higher usage intensities as major shopping centers, fast food restaurants, theater meeting halls buildings with more than three above ground habitable floors
- Create no hazard to air navigation as defined by Part 77 of the Federal Aviation Regulations
- Cluster new residential uses to the outer edges of the zone
- Utilize the areas near the extended runway centerline for roads and open space
- Prohibit schools, day care center, hospitals and nursing homes

Zone 5: Sideline Zone

- Retain As-Is
- Outside Buena Vista annexation area

- No change to this area or allowed densities and uses are proposed. The area is outside of the Buena Vista Future Growth Area.

Zone 6: Traffic Pattern Zone

- Includes a large area of the City including the Buena Vista Future Growth Area
- This zone is defined in the CALTRANS ALUC handbook
- The FAA has no specific land use guidelines beyond the RPZ

- All of the remaining portions of the Buena Vista annexation area, not in the other five zones, are included and affected by the conditions applied in this zone
- Unrestricted urban development in this area
- Create no hazard to air navigation as defined by Part 77 of the Federal Aviation Regulations
- Schools, day care center, hospitals and nursing homes are allowed, but should be located away from flight paths of all runways to the extent practicable. Prohibit uses with high concentrations of people outside of structures (ie. stadiums)

RESOLUTION NO. _____-05 (CM)

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF WATSONVILLE APPROVING REVISIONS TO THE FINAL WATSONVILLE MUNICIPAL AIRPORT MASTER PLAN 2001-2020 AND RE-DESIGNATION OF RUNWAY 8 OF THE WATSONVILLE MUNICIPAL AIRPORT TO A LOW ACTIVITY RUNWAY, RETAINING SAFETY COMPATIBILITY ZONES 1, 2 AND 4 IN THEIR CURRENT CONFIGURATION AND ELIMINATING SAFETY COMPATIBILITY ZONE 3

WHEREAS, in March 1998, the City commenced work on the Watsonville Municipal Airport Master Plan; and

WHEREAS, the purpose of the Watsonville Airport Master Plan is to facilitate the orderly, flexible, and environmentally sensitive expansion and development of the Watsonville Municipal Airport, and

WHEREAS, a Draft Environmental Impact Report dated August, 2002 was prepared by Denise Duffy and Associates including a technical appendices; and

WHEREAS, on November 5, 2002, the voters of the City of Watsonville approved Measure U, City of Watsonville Urban Limit Line and Development Timing Initiative ("Measure U"); and

WHEREAS, on or about January 2003, Denise Duffy and Associates prepared an amendment to the August, 2002 Draft Environmental Impact Report amendment included all public comments and responses of the City to such public comments including text changes to the August, 2002 Draft Environmental Impact Report; and

WHEREAS, on June 24, 2003, the Watsonville City Council adopted Resolution 178-03 (CM) certifying the Final Environmental Impact report, Statement of Overriding Considerations and Mitigation Monitoring and Reporting Program for the Watsonville Municipal Airport; and

WHEREAS, on June 24, 2003 the Watsonville City Council adopted Resolution 179-03 (CM) approving the Watsonville Airport Master Plan 2001-2020; and; and

WHEREAS, Measure U established the Buena Vista Future Growth Area (Area A) for a range of uses including residential, commercial, parks, and schools; and

WHEREAS, in 2003 the City of Watsonville commenced work on its comprehensive update of the City of Watsonville General Plan as required by State law which work included the formation of a community based General Plan Steering Committee; and

WHEREAS, the General Plan Steering Committee requested that the City evaluate options to use of Runway 8-26 (Crosswind Runway) because of the Buena Vista Future Growth Area and compatibility issues; and

WHEREAS, the City of Watsonville then contracted with Gillfillan and Associates to prepare a report identifying options to address future growth in the Buena Vista Area while limiting risk exposure and functional impact to the Watsonville Municipal Airport; and

WHEREAS, on August 10, 2004, Walt Gillfillan of Gillfillan and Associates reported to the City Council on Runway 8-26; and

WHEREAS, following the presentation, Mayor Doering-Nielsen appointed an ad hoc special committee to further investigate, study and evaluate use and operation of Runway 8-26 on behalf of the City Council and further directed the ad hoc special committee to report back with their finds and recommendations regarding Runway 8-26; and

WHEREAS, the ad hoc committee met with representatives of the Federal Aviation Administration, the Division of Aeronautics of the California Department of Transportation, airport users, community members and other stakeholders to consider changes to the use and operation of Runway 8-26; and

WHEREAS, the ad hoc committee determined that annual flight operations on Runway 8-26 represent approximately two-percent (2%) of all Watsonville Municipal Airport operations which accounts for approximately 2,000 operations annually; and

WHEREAS, based upon the activity level of Runway 8-26, the ad hoc committee recommends that Runway 8-26 be designated a Low Activity General Aviation Runway as that term is used in the California Airport Land Use Compatibility Handbook published by the Division of Aeronautics of the California Department of Transportation CALUP Handbook); and

WHEREAS, the CALUP Handbook provides that risk exposure progressively decreases from an axis extending from the centerline of a runway; and

WHEREAS, based upon a consideration and analysis of risk exposure, the ad hoc sub-committee recommends that Safety Compatibility Zones 1, 2 and 4 remain in their current configuration (extending westerly from the end of Runway 8-26); and

WHEREAS, for these same reasons, the ad hoc sub-committee recommends that Safety Compatibility Zone 3 be removed from Runway 8-26; and

WHEREAS, the ad hoc committee reports that the proposed changes to Runway 8-26 will have no impact upon the operations of the airport and Runway 8-26 will continue to function in a satisfactory manner; and

WHEREAS, future specific plan(s) can address possible land use compatibility issues relative to Runway 8-26 and in particular Safety Compatibility Zones 1, 2 and 4; and

WHEREAS, conceptual planning has identified a need for at least one school within the Buena Vista Future Growth Area and that other uses such as day care centers will likely be needed to serve a new population; and

WHEREAS, Table 37 (Basic Compatibility Standards) of the Master Plan currently identifies schools, day care centers, nursing homes and hospitals as uses to avoid within Safety Compatibility

Zone 6 and allows their establishment only where no feasible alternative exists; and

WHEREAS, Measure U by its express terms significantly limits feasible alternative locations and therefore discussion of options which are inconsistent with Measure U would not be useful or productive; and

WHEREAS, schools, day care centers, nursing homes and hospitals currently exist in Safety Compatibility Zone 6; and

Whereas the ad hoc committee therefore recommends the Watsonville Airport Master Plan be amended by the adoption of replacement pages 7, 8, 28, 30, 40, 45, 46, 51, 74, 75, 78 and Exhibit 13, copies of which are attached hereto, incorporated by this reference and identified as Exhibit A.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF WATSONVILLE, CALIFORNIA, AS FOLLOWS:

1. That the City Council approves the revisions to the Watsonville Municipal Airport Master Plan recommended by the ad hoc sub-committee to re-designate Runway 8-26 to a Low Activity Runway, retain Safety Compatibility Zones 1, 2 and 4 in their current configuration and the eliminate Safety Compatibility Zone 3, make text revisions, revise Table 37 to eliminate schools, day care centers, nursing homes and hospitals as uses to avoid in Safety Compatibility Zone 6, all as set forth and identified in Exhibit A.
2. That the City Council hereby adopts the proposed amendments as set forth in Exhibit A.
3. That the City Council hereby approves the re-designation of Runway 8 to a Low Activity Runway, including the retention of Safety Compatibility Zones 1, 2 and 4 in their current configuration and the elimination of Safety Compatibility Zone 3.

2. INVENTORY

The inventory is prepared to provide a description of the airport location and setting, the climatic and geographic features of the area, and the history of the airport. The on-airport and off-airport land use and facility development is described, including the airfield area, terminal area, and airspace. Pertinent information collected as part of the master plan questionnaires is presented to identify the type and nature of aviation use and to present the needs and concerns of the airport tenants.

LOCATION AND SETTING

Watsonville is located at the southern end of Santa Cruz County in the Pajaro Valley between the Santa Cruz Mountains and the Pacific Ocean. The Pajaro Valley is primarily agricultural with generally flat to rolling topography. The city is four miles east of Monterey Bay, approximately 16 miles southeast of Santa Cruz, the county seat, and approximately 45 road miles south of San Jose. The city occupies an area of 4,121 acres (6.44 square miles) and has a population of over 44,265 (Census 2000). The Watsonville sphere of influence area, which includes adjoining unincorporated areas, is projected by AMBAG (1997 estimates) to be 50,500 in 2005. Exhibit 1 shows the regional location of Watsonville.

Watsonville Municipal Airport is the only public use airport in Santa Cruz County. It is located in the northwestern portion of the city, approximately three miles from the central business district. The unincorporated community of Freedom is located north and east of the airport. Residential land use occurs north and east of the airport around Freedom and in narrow strips along Manfre Road and Buena Vista Drive west and north of the airport, respectively. A more extensive residential area is located to the east, and light industrial development is located south east of the airport. Except for the bands of residential development described above, most of the land uses along the runway approaches to the north, west, and south are agricultural.

The Watsonville 2005 General Plan controls land use and density, and limits high occupancy structures such as schools, hotels, and hospitals in the area of the airport. The General Plan designates the existing agricultural and vacant land north and west of the airport for future residential development. ~~It shows the area of Freedom around the airport eligible for~~

~~annexation, and it also shows the agricultural land west of Freedom eligible for annexation. A projected population of 2,850 is shown for this area west of Freedom by the year 2005. A Specific plans is are proposed to control land use in the Buena Vista I, II, III Future Growth Areas, with potential to accommodate in excess of 2,000 new dwelling units, community facilities, parks, school(s), and neighborhood-service commercial, this "Northwest" area. Land north of Freedom Boulevard and generally south of Highway 1 is not indicated for annexation or residential development in the General Plan. They would remain in the jurisdiction of the County, although they are within the Watsonville Area Planning Boundary.~~

**TABLE 15: EXISTING RUNWAY USE
Watsonville Municipal Airport**

Runway	Annual Use (Percent)
2	3%
20	85%
8	25%
26	107%
	100%

Source: Wadell Engineering Corporation, 1994
Don French, Airport Manager, March 2005

Airspace and Air Traffic Control

Watsonville Municipal Airport is presently equipped with a localizer navaid used for a straight-in approach to Runway 2 and circling approaches to other runways. Current minima for straight-in landing are one-mile visibility and 680 feet MSL decision height. Monterey approach control has been delegated responsibility for control of instrument flight rules (IFR) aircraft within this area. The overall airspace of Watsonville Municipal Airport and its neighboring airports is generally unrestricted. Located at the nearby Salinas Municipal Airport is a VORTAC providing a juncture point for as many as six Victor airways serving lower altitude enroute traffic.

It is assumed that current air traffic control procedures will continue throughout the planning period to 2020. Ongoing FAA research may lead to new standards in the future. The benefits from this research will be realized primarily under IFR conditions, which is an important factor at Watsonville Municipal Airport. The Watsonville Municipal Airport should be planned for a precision approach system by adding a glide slope antenna for instrument descent enhancements. Watsonville Airport does not expect to commission an FAA-funded air traffic control tower during the planning period, since entry-level traffic demand criteria must be over 200,000 annual operations.

Ceiling and Visibility Conditions

Ceiling and visibility have an important impact on airfield operations and runway capacity because spacing between aircraft is often less with high ceilings and good visibility than when conditions are less favorable. The two types of flight rules for specific weather conditions are visual flight rules (VFR) and instrument flight rules (IFR).

There is no weather data to establish the percentage of VFR versus IFR conditions. It is assumed that VFR conditions occur approximately 90 percent of the time and IFR conditions occur approximately 10 percent of the time. Occasionally IFR conditions continue throughout a full day; however, low ceilings and fog usually dissipate by mid-day. During the summer, IFR conditions typically exist part of every day.

**TABLE 17: HOURLY RUNWAY CAPACITY
Watsonville Municipal Airport**

	Planning Period			
	1990	2000	2010	2020
VFR peak hourly demand	62	77	95	119
VFR peak hourly capacities	97-148	97-148	97-148	97-148
IFR peak hourly demand	15	19	24	30
IFR peak hourly capacities	30	30	30	30

Source: Wadell Engineering Corporation; City of Watsonville

Under VFR conditions, the hourly runway capacities have a range depending on airfield operations. Under IFR conditions, the hourly runway capacities are slightly above peak hour demand through the 20-year-planning period. The fact that IFR departures climb and turn to the Pajar NDB, which is also on the localizer final approach results in reduced IFR capacity. It is estimated that IFR conditions occur approximately 10 percent of the year and do not continue over a long period of time.

Annual Service Volume

Annual service volume is based on hourly capacities for the airfield operating conditions that occur throughout the year and on monthly, daily, and hourly variations in aircraft operations.

The estimated annual service volume of aircraft operations and the forecast annual aircraft operational demand levels are listed in Table 18, below.

**TABLE 18: ANNUAL SERVICE VOLUME
Watsonville Municipal Airport**

Year	Annual Service Volume	Annual Demand (1)
1990	215,000	129,050
2000	215,000	122,890
2010	215,000	130,190
2020	215,000	144,503

Source: Wadell Engineering Corporation; AMBAG Regional Airport System Plan (RASP), 1995

(1) 2004-05 annual demand is approximately 100,000 per Don French, Airport Manager (March 2005)

On the basis of the analyses of the existing airfield, it is concluded that Watsonville Municipal Airport capacity exceeds aviation demand throughout the planning period. The addition of an air traffic control tower would increase capacity by improving utilization of the intersecting runway system.

**TABLE 23: GENERAL AVIATION FACILITY REQUIREMENTS SUMMARY
Watsonville Municipal Airport**

Demand	1995	2000	2005	2010	2015	2020
Based Aircraft	312	326	327	345	363	381
Aircraft Operations	126,530	122,890	123,890 (1)	130,190	137,160	144,503
Airfield Facilities						
Runways - Number	2	2	2	2	2	2
Length (Feet)	4,501	4,501	5,300	5,300	5,300	5,300
Width (Feet)	150	150	150	150	150	150
Strength (Lbs)	30,000	30,000	30,000	30,000	30,000	30,000
Terminal Facilities						
Airport Business Tenants	5	5	6	7	7	7
Acres	5.0	5.0	6.0	7.0	7.0	7.0
Auto Parking						
Spaces	137	137	137	137	137	137
Acres	1.1	1.1	1.1	1.1	1.1	1.1
Hangars						
Spaces	150	223	223	323	323	323
Acres	19.5	24.0	24.0	24.0	24.0	24.0
Open Tiedown Spaces						
Based	145	168	168	168	168	168
Transient	34	34	34	34	34	34
Open Tiedown Acres						
Based	7	7	7	7	7	7
Transient	2	2	2	2	2	2
Total Terminal Area Acres	40.6	44.6	44.6	44.6	44.6	44.6
Access Road Lanes						
Daily Vehicle Trips	1,275	1,238	1,248	1,311	1,377	1,446
Peak Hour Trips	191	186	187	197	206	217

Note: Acreage requirements will vary depending on specific layout and geometrics.
 (1) Actual operations is approximately 100,000 annually per Don French, Airport Manager
 Source: Watsonville Municipal Airport

Additional support facilities may include an FAA air traffic control tower (ATCT), an FAA Flight Service Station (FSS) for pilot weather briefings, an airport fire station, and airport maintenance building. Watsonville Municipal Airport has most of these additional support facilities, except for an Air Traffic Control tower, and FSS, which is no longer being developed by the FAA. The fire station is located on-airport adjacent to Airport Boulevard.

5. AIRPORT PLANS

This chapter presents plans for the continued operation and development of Watsonville Municipal Airport. The first section contains the Land Use Plan, which addresses development and use of airport lands and sets forth a comprehensive list of improvement projects. The second section contains the Airspace Protection Plan, which addresses the design of airspace in the vicinity of the airport. The third section contains the Terminal Area Plan, which addresses specific improvements to the airport terminal area. The fourth section contains the Access Plan, which addresses access, parking, and circulation on airport property. The fifth section contains the Airport Layout Plan, which addresses the technical design and layout of the airport. Finally, the sixth section discusses land used planning for areas adjacent to the airport and contains an analysis of aircraft noise, safety, and land use control strategies.

The specific objectives of the following plans are to provide:

- Support the development of an efficient public use airport as set forth in this chapter. This will be accomplished by:
 - ✓ Remedying existing operational deficiencies by lengthening and improving the primary runway to more fully accommodate turbine-powered aircraft (75 percent fleet with 60 percent load).
 - ✓ Remedying existing operational and safety deficiencies by installing a precision instrument landing system (ILS) to increase the number of hours each day that aircraft may operate in foggy conditions and to increase the overall safety of landings in all conditions.
 - ✓ Remedying existing space deficiencies by providing for the expansion and enhancement of the terminal and hangar facilities, plus providing new and improved access to accommodate new facilities.
 - ✓ Maintaining and enhancing natural resources on the site.
 - ✓ Facilitating the development of complementary light industrial and general commercial uses for affiliates of the airport.
 - ✓ Remedying existing encroachment of the Runway Protection Zone (RPZ) on existing residences at Runway 8.

- ✓ Providing for reasonable accommodation of housing within the City limits, while protecting the long-term viability of the airport.
 - ✓ Providing a fiscally responsible financial plan that will provide suitable facilities and generate revenues necessary for proper operation, management and development of the airport.
- Provide for the development of the Watsonville Municipal Airport consistent with the Master Plan while minimizing adverse effects on the natural physical setting. This will be accomplished by:
 - ✓ Providing for development consistent with the resource protection regulations administered by the United States Army Corps of Engineers, United States Fish and Wildlife Service, the California Coastal Commission and other agencies.
 - ✓ Protecting and enhancing wetlands and sensitive habitat areas.
 - Provide for the development of the Watsonville Municipal Airport consistent with the Master Plan while minimizing adverse effects on adjacent land uses, the local community and the region. This will be accomplished by:
 - ✓ Providing the basis for creation of a noise mitigation plan that ensures neighboring properties are not significantly affected by airport-generated noise.
 - ✓ Developing ancillary uses on the site that are designed to be compatible with existing and planned development in the area.

The Airport Plan for the Watsonville Municipal Airport has been prepared in technical graphic format to meet FAA requirements for processing and approving final master plan drawings (see Appendix A).

LAND USE PLAN

Identifying existing and recommended land uses within the ultimate airport boundary is necessary to provide the adequate control and management of the airport facility. The development of land use plans for an airport can ensure the compatibility among the airport users and the efficient development of airport property. This land use plan is intended to serve as a broad guideline to assist in fulfilling the primary aviation needs of the airport. As future needs arise, an airport can apply the provisions of the master plan and its land use plan to each phase of development. If necessary, consideration should be given to determine the need to revise the master plan and land use plan as more information regarding actual airport use becomes available.

For the purposes of the *Watsonville Municipal Airport Master Plan*, several land use designations have been defined. These land use categories and the improvement projects that fall within them are discussed below.

Airfield

The purpose of this land use designation is to provide area for aircraft arrival and departure, including open space areas needed for safe operations. Typical uses include runways, taxiways, runway protection zones, approach areas, drainage facilities, and open space land within the building restriction lines. There are six (6) "Airfield" improvement projects anticipated for

Watsonville 2005, General Plan designates all of these areas as "Transportation, Communications & Utilities" and allows development intensity for these areas to be determined "based on the appropriateness of the location, accessibility, traffic impacts, existing site conditions, design compatibility with adjacent land uses, natural and built constraints, and community impacts." The City of Watsonville Zoning Ordinance zones these same areas "TCU, Transportation, Communication, and Utilities District." Public Facilities. Uses allowed in the development areas include light industry, office, and research and development that can be demonstrated to be compatible with on-going airport operations.

The typical development intensity for these commercial areas is 0.25 square feet of floor area per each one (1) square foot of net lot area (i.e., floor area ratio = .25). Maximum height allowed in these areas is 42 feet. This plan assumes that 80 percent of the available area will be built out in the planning horizon (i.e., 2001 to 2020). Table 30 summarizes typical potential industrial/commercial development at Watsonville Municipal Airport.

**TABLE 30: TYPICAL INDUSTRIAL/COMMERCIAL DEVELOPMENT POTENTIAL
Watsonville Municipal Airport**

No.	Development Area	Net Area (Acres)	Net Area* (Square Feet)	Typical Floor Area Ratio	Typical Floor Area Potential
15A	Area A (TE-A)	11.2 ac.	490,000 s.f.	.25	122,500 s.f.
15B	Area B	3.4 ac.	150,000 s.f.	.25	37,500 s.f.
15C	Area C (TE-C)	9.2 ac.	400,000 s.f.	.25	100,000 s.f.
15D	Area D	2.3 ac.	100,000 s.f.	.25	25,000 s.f.
15E	Area E (TE-A1)	2.5 ac.	107,000 s.f.	.25	26,750 s.f.
	Total	28.6 ac.	1,247,000 s.f.		311,750 s.f.
Assume 80 percent build out		22.9 ac.	997,000 s.f.		249,400 s.f.

Note: *These numbers are rounded to the nearest 1,000 square feet.
Source: Coastplans.com

Habitat Protection, Open Space

The purpose of this land use designation is to provide area for habitat protection and open space. Typical uses include land that has been set aside for Santa Cruz tarplant protection or acquired by Watsonville Municipal Airport for use as clear zone. Land uses in the clear zone are limited to low-density land uses involving few people, uses that are noisy or are not sensitive to noise, and airport-related uses. Uses that are prohibited in the clear zone include:

- Fuel handling and storage facilities
- Uses that generate smoke and/or dust
- Uses that have misleading lights and/or glare
- Uses that create electrical interference with radio communication between the airport and aircraft
- Uses that attract wildlife
- Residential uses
- Places of public assembly, including churches, schools, hospitals, office buildings, and shopping centers

which is responsible for the development and operation of educational facilities in the area, adheres to standards upheld by the Office of the State Architect.

Six safety compatibility zones are incorporated into this Master Plan to regulate land use at Watsonville Municipal Airport and to provide guidance to local jurisdictions and the school district for land use decision in the airport environs. These zones are as follows:

- Zone 1: Runway Protection Zone,
- Zone 2: Inner Approach/Departure Zone,
- Zone 3: Inner Turning Zone,
- Zone 4: Outer Approach/Departure Zone,
- Zone 5: Sideline Zone, and
- Zone 6: Traffic Pattern Zone.

Table 37 sets forth basic generalized compatibility standards-guidelines, as promulgated by the California Airport Land Use Compatibility Handbook for each safety compatibility zone, and Table 38 sets forth maximum development intensities for residential and non-residential use. Exhibit 13 depicts the location of the six safety compatibility zones for Watsonville Municipal Airport.

TABLE 37: BASIC COMPATIBILITY STANDARDS **TABLE 37: BASIC COMPATIBILITY GUIDELINES**
Safety Compatibility Zones

Zone 1: Runway Protection Zone

- Airport ownership of property encouraged
- All new structures prohibited
- Residential land uses prohibited
- Avoid nonresidential uses except if very low intensity in character and confined to the sides and outer end of the area

Zone 2: Inner Approach/Departure Zone

- Residential uses, except on large agricultural parcels, prohibited
- Nonresidential uses limited to activities which attract few people (uses such as shopping centers, most eating establishments, theaters, meeting halls, multi-story office buildings, and labor-intensive manufacturing plants unacceptable)
- Children's schools, day care centers, hospitals, and nursing homes prohibited
- Hazardous uses (e.g. aboveground bulk fuel storage) prohibited

Zone 3: Inner Turning Zone

- Residential uses limited to very low densities (if not deemed unacceptable because of noise) †
- Avoid nonresidential uses having moderate or higher usage intensities (e.g., major shopping centers, fast food restaurants, theaters, meeting halls, buildings with more than three aboveground habitable floors are generally unacceptable)
- Children's schools, large day care centers, hospitals, nursing homes prohibited
- Avoid hazardous uses (e.g. aboveground bulk fuel storage)

Zone 4: Outer Approach/Departure Zone

- In undeveloped areas, residential uses limited to very low densities (if not deemed unacceptable because of noise); if alternative uses are impractical, higher densities allowed as infill in urban areas
- Nonresidential uses limited as in Zone 3
- Children's schools, large day care centers, hospitals, and nursing homes prohibited

Zone 5: Sideline Zone

- Avoid residential uses unless airport related (noise usually also a factor)
- All common aviation-related activities allowed provided that height-limit criteria are met
- Other nonresidential uses limited similarly to Zone 3, but with slightly higher usage intensities
- Children's schools, large day care centers, hospitals, and nursing homes prohibited

Zone 6: Traffic Pattern Zone

- Residential uses allowed
- Most nonresidential uses allowed; prohibit outdoor stadiums and similar uses with very high intensities
- ~~Avoid children's schools, large day care centers, hospitals and nursing homes~~

Definitions: As used in this table, the follow meanings are intended:

- Allowed: Use is acceptable
- Limited: Use is acceptable only if density/intensity restrictions are met
- Avoid: Use generally should not be permitted unless no feasible alternative is available
- Prohibited: Use will not be permitted under any circumstances
- Children's Schools: Through grade 12
- Large Day Care Centers: Commercial facilities as defined in accordance with state law; for the purposes here, family day care homes and noncommercial facilities ancillary to a place of business are generally allowed.
- Aboveground Bulk Storage of Fuel: Tank size greater than 6,000 gallons (this suggested criterion is based on Uniform Fire Code criteria which are more stringent for larger tank sizes)

Source: California Airport Land Use Planning Handbook (January 2002), Modified by City Council on April 12, 2005

It should be pointed out that much of the area surrounding the airport is not within the boundaries of the City of Watsonville, although it is within the Watsonville Planning Area and is shown in the General Plan. Land to the west and north is under the jurisdiction of the County of Santa Cruz.

~~The General Plan designates an area northwest of the airport along Calabasas Road, and Buena Vista Drive as a Specific Plan area which would accommodate new housing units (Implementation Measure 4.A.5 of the General Plan). New units are indicated in the area along Manfre Road west of the southern end of Runway 2. Careful attention to airport land use compatibility must be given in the development of these areas.~~

Buena Vista I, II, and III are designated future growth areas to the north and west of the airport. Attention to compatibility with future development is a given, and part of the specific plan process.

~~In addition, the land south of State Highway 1 is within the coastal zone and is subject to the jurisdiction of the California Coastal Commission. The coastal plan for the area provides for a combination of agricultural, institutional, and visitor serving commercial uses. A new 100-unit motel and conference center, The Pajaro Valley Inn, is being proposed south of the airport across Highway 1, and the Pajaro Valley Unified School District is building a new high school on Buena Vista Road immediately west of Highway 1. Careful attention must be given to the compatibility of these uses with airport operations. Pajaro Valley High School is being constructed on Harkins Slough Road, just west of Highway 1~~

It should also be noted that Santa Cruz County does not have an Airport Land Use Commission (ALUC), which is the usual vehicle for reconciling the overlapping interests of city agencies and land use designations with those of the county. No formal Airport Land Use Plan (ALUP) has been formulated for Watsonville Municipal Airport. Because Watsonville is the only public use airport in the county, it is not required to formally establish an ALUC.

*Endorsed for presentation
to the City Council*



Carlos J. Palacios


**City of Watsonville
Community Development Department**

MEMORANDUM



DATE: March 31, 2005

TO: Carlos J. Palacios, City Manager

FROM:  John T. Doughty, Community Development Director

SUBJECT: Revision to the Watsonville Airport Crosswind Runway (8-26)

AGENDA ITEM: April 12, 2005 City Council

RECOMMENDATION:

It is recommended that the City Council:

- 1) Adopt a resolution re-designating Runway 8 as a Low Activity Runway, retaining the limits of Safety Compatibility Zones 1, 2 and 4 and eliminating Safety Compatibility Zone 3; and
- 2) Adopt a resolution approving an amendment of the Watsonville Municipal Airport Master Plan:
 - a. Designating Runway 8 as a Low Activity Runway, retaining the limits of Safety Compatibility Zones 1, 2 and 4 and eliminating Safety Compatibility Zone 3;
 - b. Amending all references to Runway 8 within the text, tables and diagrams of the document to reflect the Low Activity designation;
 - c. Incorporating minor text revisions to reflect Measure U; and
 - d. Amending Table 37: Basic Compatibility Standards to permit children's schools, day care centers, hospitals and nursing homes within Safety Compatibility Zone 6 (Traffic Pattern Zone).

DISCUSSION:

Context. State law requires that each City and County prepare and adopt a General Plan. The General Plan guides the physical development of the City, and includes discussion on issues including land use, housing, open space, safety, and noise among others. The City's current General Plan was adopted in 1994 and was projected to meet the needs of the City until 2005. The plan was recently amended to include voter-approved Measure U provisions. The update of the plan and the environmental document will provide for a fully consistent General Plan.

In 2002, in order to meet these statutory requirements, the City Council authorized preparation of State-mandated revisions to the City's Housing Element. This Element was certified by the State Department of Housing and Community Development (HCD) in 2003, and will be integrated into the overall General Plan. Adoption of an updated General Plan is anticipated by late 2005 or early 2006. The scope of work for the update includes evaluation of the Buena Vista Future Growth Area, as well as consideration of the land-use map and policy revisions to address airport-related compatibility issues throughout the City.

Over the last year, the General Plan Steering Committee has been working with the City's consultant team and community to create land-use scenarios that can be utilized in developing the General Plan and its Land-Use Element. During these discussions, the City's consultant noted that the existing safety compatibility zones for Crosswind Runway 8 represent potential conflicts to existing residential development, as well as limitations to the development on the areas known as Buena Vista I, II and III. The consultant indicates that without revision to the Runway 8 safety-compatibility zones, there could be a substantial loss in development/housing capacity within the Buena Vista Future Growth Area. While it is possible that a portion of this development/housing capacity could be realized elsewhere within Buena Vista II and III, the resulting design encroaches further toward the Old Adobe Road area, places urban development closer to agricultural lands, and forces urban development away from the least constrained (with the exception of the crosswind runway) lands within the entire Buena Vista area. Any lost development/housing capacity will either have to be absorbed in even higher density infill within the City or be lost in its entirety; the loss of development/housing capacity places the City at risk in meeting future Housing Element goals and in implementing the objectives of Measure U.

Background. The Watsonville Airport was established in 1942 with approval of a local bond and grant from the Civil Aeronautics Authority. The Airport functioned as a Naval Auxiliary Air Station during World War II during which time the main and crosswind runways were constructed. The City has operated the Airport continuously since the transfer of the facility in July of 1948. Since the 1970's, the Watsonville Municipal Airport has operated under a Master Plan. On June 24, 2003, the City Council adopted the current Watsonville Municipal Airport Master Plan. This plan addressed State land-use related components, as well as included a development plan for the period of 2001-2020. The Airport Master Plan was developed with the assistance of the California Airport Land Use Planning Handbook (CALUP Handbook). This document is promulgated by the State of California Department of Transportation—Division of Aeronautics and is provided to "support and amplify State Aeronautics Act and provide compatibility planning guidance..." The handbook clearly indicates that it is "intended solely

for the purpose of providing general guidance and does not represent Caltrans standards or policy.”

Since adoption of the Master Plan, the City has initiated work on application and environmental materials to provide improvements related to the Airport including an 800-foot main runway extension and instrument landing system (ILS).

Following General Plan adoption in 1994, the area now identified as Buena Vista I was included in the LAFCO-adopted City Sphere of Influence; this action provided direction to the City to pursue the Buena Vista Area to meet a portion of its future housing needs. In conjunction with voter approval of the City’s Urban Growth Initiative (Measure U), the proposed future growth area was extended to include areas now referred to as Buena Vista II and III. Crosswind Runway 8 has long been recognized as a potential development constraint for portions of the Buena Vista Future Growth Areas. Additionally, the Runway Protection Zone (RPZ) for Runway 8 includes existing homes on Manfre Road; this represents risk exposure beyond that desired and is inconsistent with FAA regulations.

Based upon the efforts of the Steering Committee, Staff initiated work on identifying options for addressing the safety compatibility of Crosswind Runway 8. Given the very specialized nature of the analysis, Staff entered into a contract with an airport consultant. Beyond the specialized nature of the task, Staff also recognized the need for objectivity in order to garner the confidence of the City Council, General Plan Steering Committee, community and airport users. Accordingly, the City contracted with Walter E. Gillfillan and Associates, a firm that specializes in airport and Federal Aviation Administration (FAA) issues. On May 27, 2004, the General Plan Steering Committee referred the resulting report to the City Council.

The General Plan Update is not contemplating the closure of the Airport, nor did Measure U. The scope of the study was clearly limited to preserving the Airport through elimination/reduction of potential hazards and nuisance issues, while allowing for development opportunity in the Buena Vista Future Growth Area. The report identified options for addressing Crosswind Runway (8-26). Per the adopted Airport Master Plan, Crosswind Runway 8-26 accommodates approximately 12% of the annual flight activity (Runway 8 accommodates 5%; Runway 26 accommodates 7%). Don French, Airport Manager, indicates that the actual percentage split is 2% (Runway 8) and 10% (Runway 26). These revisions are included in the package of proposed text revisions. The report, per the scope of work, included pros and cons of the various available alternatives from an airport operations perspective, and from the perspective of potential conflicts with existing assurances, FAA and Caltrans rules and regulations. The report was intended as a starting point for discussion within the community and stakeholder groups.

On August 10, 2004, Walter Gillfillan made a presentation to the City Council regarding his report of options for the crosswind runway. Recommendations focused solely on modification of the Runway 8 portion of the Crosswind Runway. The list of options was not intended to be exhaustive as variations of the alternatives could result in countless other options. The options were intended to identify and analyze the most straightforward.



Following public comment, then Mayor Doering-Nielsen formed a Committee consisting of Council Member Skillicorn, Council Member Rivas and herself. This committee met on several occasions in late summer/early fall with stakeholder groups to discuss options and general opinion regarding the Runway 8 issue.

On February 25, 2005, Action Pajaro Valley hosted an informational meeting for stakeholders to discuss the Watsonville Airport (in particular Runway 8), Measure U and the Buena Vista Future Growth Area. This meeting was well attended and provided an opportunity for exchange of information and opinion.

Discussion. The Airport Committee met with various stakeholder groups to listen to their concerns and issues, assure the groups of the limited scope of the effort in an attempt to find a possible option to address safety concerns, and to allow reasonable development opportunity for the Buena Vista Future Growth Area. Stakeholder groups included the Watsonville Pilots Association, representatives of the airport business community, developer interest, representatives of the FAA and Caltrans, as well as resident interests (including Friends of Buena Vista).

Caltrans--Division of Aeronautics as well as the FAA confirmed that the City Council retained authority over the operations of the Watsonville Municipal Airport. The FAA indicated that their funding was based on function of the Airport and future requests would be evaluated based on the adopted Airport Layout Plan (as may be amended). Caltrans confirmed that the policies in the ALUP Handbook are intended as guidelines and that variations in design, configuration and land use compatibility was available and within the scope of the City Council. Caltrans and the FAA indicated support of Runway 8 modifications that would increase safety such as removal of the Runway Protection Zone (RPZ) from existing homes. There was also extensive discussion and confirmation as to the General Aviation Accident Distribution Contours and the desire to protect those areas immediately extending from the runway terminus.

Airport business interests indicated concern about any change to the airport on their business and to perceptions about the long-term viability of the airport. Developer interests indicated willingness to compromise toward a runway modification option as opposed to crosswind runway closure. The Friends of Buena Vista indicated their concerns about development scenarios for Buena Vista and the overall General Plan Update. The Watsonville Pilots Association initially indicated a willingness to consider modification, but ultimately indicated that they would oppose any change of Runway 8.

The Committee focused its efforts solely on the crosswind runway, and in particular Runway 8. As part of the process, the Committee further evaluated the function and safety issues related to Runway 8-26, State and Federal regulations and the implications of changes on airport user groups and businesses. The Committee confirmed that Runway 8 was utilized on a very limited basis (per the Airport Master Plan and testimony of Don French, Airport Manager); however, due to unique coastal fog conditions, there were times in which it was highly desirable to have Runway 8 available. The Committee discussed the various options identified in the Gillfillan Report with the stakeholder groups. Through this process, the Committee identified two options:

1) re-designation of Runway 8 to Low Activity (Gillfillan Report, Option 6); and 2) reduction of Runway 8 length by 500-feet (Gillfillan Report, Option 3).

There are approximately 100,000 annual flight operations at the Watsonville Municipal Airport. Runway 8-26 (Crosswind Runway) is utilized for approximately 12-percent of these activities. Per Don French, Airport Manager, the percentage split for Runway 8-26 is 10-percent (Runway 26) and 2-percent (Runway 8). Based upon these percentages, Runway 8 handles approximately 2,000 annual flight operations.

As indicated previously, the CALUP Handbook provides guidance relative to airport land use compatibility. The Handbook indicates that a typical Low Activity Runway has flight operations of around 2,000 annually. While the Handbook clearly indicates that they are intended as guidance and not as a standard, nevertheless, the number of annual operations utilizing Runway 8 fall within the indicated activity level offered by the Handbook.

Staff is recommending the following (Attachment 2 contains additional detail):

- 1) **Designate Runway 8 as Low Activity Runway.** Re-designation of Runway 8 as a Low Activity Runway (evaluated as Option 6 in the Gillfillan Report). Under this scenario, Runway 8 would remain 3,999-feet in length; there would be no change to the threshold. There would be no physical change to the runway and operations would continue as they have historically. The re-designation to Low Activity would result in the removal of the Safety Compatibility Zone 3 (AKA Inner Turning Zone) from the Watsonville Airport Master Plan. Safety Compatibility Zones 1, 2, 4 and 6 would remain as currently depicted.

Analysis: The CALUP Handbook provides discretion to the City Council regarding the Airport operations. The Guidelines identify Low Activity General Aviation Runway as an example of a type of runway that can be considered when addressing local airport conditions and safety compatibility zone designations. The Airport Committee determined that the activity on Runway 8 was low (representing approximately 2-percent of annual flights) and that the activity was driven by meteorological conditions unique to Watsonville and the Central Coast. The Committee further determined that risk exposure for any runway is greatest at the immediate terminus of the runway, but remains greater along an axis extending straight out from the centerline of the runway. The CALUP Handbook provides "general guidance" to the City and current activity as well as anticipated future activity is consistent with the guidance relative to Low Activity General Aviation Runways. Based upon these factors, it is recommended that the City Council re-designate Runway 8 to a Low-Activity Runway and remove Safety Compatibility Zone 3.

- 2) **Modify Airport Master Plan.** Staff is recommending a series of modifications of the Airport Master Plan to reflect the revisions to Runway 8. In light of actual land uses within the existing City, limited land availability, limited risk potential and those anticipated within the Buena Vista Future Growth Area, Staff is recommending minor

changes to allowed uses (Table 37) within Safety Compatibility Zone 6 (Traffic Pattern Zone).

Analysis: The Airport Master Plan must be modified to reflect changes made by the City Council for appropriate public disclosure. Zone 6 (Table 37) modifications addresses existing land use compatibility while providing flexibility for future land use planning under the Specific Plan process. The Airport Committee chose not to recommend the revision of Table 37 and Zone 6 allowed uses preferring to leave the Table “as-is” with schools, daycare centers, nursing homes and hospitals as uses to be “avoided”. Staff is recommending the revision to eliminate future challenges regarding feasible alternatives. This recommendation is based upon two principals: 1) development of Buena Vista is likely to include at least two of the uses (PVUSD has indicated a need for at least 1 new elementary school); and 2) these specific uses exist throughout Zone 6 within the existing current City limits.

Alternative Option. The Committee also considered Option 3 of the Gillfillan Report. Option 3 called for moving the landing threshold of Runway 8, 500-feet easterly. This action would change the published runway length from 3,999-feet to 3,499-feet and affect activity from both Runway 8 and Runway 26 (shortening take-off and landing length for Runway 26). The action would result in the relocation of the Runway Protection Zone (RPZ) from existing residences on Manfre Road to airport-owned property, consistent with FAA regulations. The action would pull back Safety Compatibility Zones 2, 3 and 4 by 500-feet as well. Pavement would be retained and available for emergency use.

Analysis: Relocation of the threshold would result in relocation of the RPZ onto Airport owned property consistent with FAA regulations, arguably retain a runway of adequate length to accommodate traffic, and retain the additional 500-feet of pavement for emergency purposes. Airport users have consistently argued that the 500-foot reduction would be unsafe and is necessary to limit risk exposure, particularly relative to Runway 26. Commercial/Business aircraft operators indicate that Runway 26 (at its current length) is vital for their safe and efficient operation. The Option fails to recognize the limited use of Runway 8 and because of the retention of Safety Compatibility Zone 3, results in greater constraints to the Buena Vista Future Growth Area. To address these compatibility issues, a more significant modification of land-use compatibility guidelines (Tables 37 and 38) to allow an increase in density within the northerly Inner Turning Zone (Zone 3) of Runway 8 would be necessary in addition to those proposed for Zone 6 (Traffic Pattern Zone). For these reasons, the Committee did not recommending adoption and implementation of this option. Staff is in concurrence with the Committee’s recommendation.

Conclusion. The City Council is faced with a difficult task of solving how best to balance protection of the Airport with implementation of Measure U. Measure U itself seeks to balance the desire to preserve agricultural land, environmentally sensitive land, while providing for needed housing and job creation. Staff believes that the recommended actions including re-designation of Runway 8 to Low Activity will provide the best means to meet the Measure U objectives while also protecting the interests of the Watsonville Municipal Airport.

ENVIRONMENTAL:

An Environmental Impact Report (titled Final Environmental Impact Report for the Watsonville Municipal Airport Master Plan) was prepared and Certified for the Airport Master Plan on June 24, 2003, by Watsonville City Council Resolution Number 178-03. Staff has determined that the proposed amendment of the Airport Master Plan and Airport Layout Plan is consistent with the Certified EIR for the Airport Master Plan. Based upon review of the proposed revisions in comparison to the current adopted Airport Master Plan, it has been determined that modifications:

- 1) Will result in no change in the Runway Protection Zone (RPZ); resulting in no change to potential risk exposure;
- 2) Will result in no change to operations, thus no change in noise or other risk exposures to properties; and
- 3) Will not result in operational or physical changes to Runway 8 that could pose greater risk exposure or affect the overall operation of the Airport.

STRATEGIC PLAN:

The creation of new housing and employment opportunities is consistent with the Strategic Plan. Modification of Runway 8, as recommended, will provide opportunity for both to occur while retaining the long-term viability of the Airport and airport related business.

FINANCIAL IMPACT:

There will be minor cost to the City either in staff time and/or consultant for technical revision of the Airport Master Plan and other related documents. This cost will be borne by the Airport, which is an Enterprise Fund, and the General Fund. There will be no impact to the City's General Fund as costs to the General Fund will be in staff time and will be absorbed within existing appropriations.

ADDITIONAL ALTERNATIVES:

- 1) Choose Alternative Option identified in this report (Gillfillan Option 3) and direct staff accordingly;
- 2) Choose one of the remaining options (or variation) provided in the Gillfillan Report; or
- 3) Refer the issue to Committee for further review.

ATTACHMENTS:

- 1) Principal Observations/Considerations of the Committee formulated from meetings with stakeholder groups
- 2) Matrices of Committee Recommended Option
- 3) Principal Observations/Considerations Relative to Alternative Option
- 4) Matrices of Committee Alternative Option
- 5) Map Depicting Recommended Low Activity Runway

c: City Attorney



ATTACHMENT 1

PRINCIPAL OBSERVATIONS/ CONSIDERATIONS

BASIC PREMISES

- The City will proceed with its plans to annex the Buena Vista (BV) Future Growth Area (BV I, II and III).
- BV I, II and III are intended primarily for residential development.
- The City intends to operate and develop the airport in accordance with the Airport Master Plan adopted in June 2003, as amended.
- The City will continue to apply the provisions of the CALTRANS Handbook as a guideline in establishing land use compatibility between the airport and new development.
- The City intends to comply with the provisions of the Sponsor's Assurances contained in the most recent Grant Agreement with the FAA.
- The City will retain ownership of the Buena Vista Park site.

AIRPORT OPERATING FACTORS

- Runway 2-20 is the primary runway. It is longer, is lighted and has a published, non-precision approach to Runway 2
- There are two published, non-precision, circle-to-land approaches to the airport
- Runway 8-26 is used as a cross-wind runway by small aircraft and for VFR departures during times of low coastal fog
- Departures on Runway 26 are infrequent
- Landings on Runway 8 are also infrequent
- The noise exposure in the Buena Vista area shown as 55-60 CNEL range
- Runway 8-26 has VFR operations only
- Runway 8-26 has no night operations
- Risk exposure as a general rule lessens the further away from the centerline of the runway
- Pilots are trained to, in the event of mechanical problems at takeoff, continue in a straight path from the runway

SELECTING THE PREFERRED OPTION

- The re-designation of Runway 8 reflects actual operational nature of the runway.
- The modification does not change operational characteristics of the Runway 8 or 26.
- The modification would maintain the Runway length at 3,499 feet providing adequate length for commercial/business aircraft on Runway 26.
- Development provided for in the Airport Master Plan is not compromised. The opportunity to lengthen Runway 2-20 and to provide for a precision instrument landing system (ILS) to Runway 2 is preserved.
- The modification would provide maximize flexibility in planning for the Buena Vista Future Growth Area while protecting the long-term viability of the airport and Runway 8-26.

ACTIONS

SPECIFICS

Recommendations

Zone 1: Runway Protection Zone (RPZ):

- Retain As-Is.
- This zone is defined by the FAA and in the CALTRANS ALUP Handbook

- There would be no change to the RPZ. Runway 8-26 would operate in the same manner as it currently functions.
- The risk exposure for people and structures on the ground from landings on Runway 8 would be no different than what exists today.

Zone 2: Inner Approach And Departure Zone

- Retain As-Is.
- This zone is defined in the CALTRANS ALUC Handbook
- The FAA has no specific land use guidelines beyond the RPZ.

- A little less than one-half of Zone 2 that is defined in the ALUP Handbook would be on airport property. The remaining portion would be in the Buena Vista Future Growth Area.
- Most of the area within the Buena Vista Future Growth Area is vacant however there are currently residential land uses along Manfre Road
- Restrict the height of structures within the Approach Area, in accordance with The Federal Aviation Regulations, Part 77.
- New residential uses would be infill to the existing residential area
- Density in the order of one dwelling unit per one acre
- Cluster any new residential uses to the outer edge of the zone
- Utilize the areas near the extended runway centerline for roads and open space
- Prohibit schools, day care center, hospitals and nursing homes
- Prohibit above ground bulk fuel storage

Zone 3: Inner Turning Zone

- Zone 3 would be removed with the re-designation of Runway 8 to Low Activity Runway
- The FAA has no specific land use guidelines beyond the RPZ

- The California ALUP provides guidance to jurisdictions involving airport land use compatibility.
- The ALUP makes provision for the concept of designation of a runway as a "Low Activity General Aviation Runway" and provides the discretion to the jurisdiction to determine the safety compatibility configuration of the runway.
- Runway 8 has been determined to be a low activity runway; with approximately 5-percent of annual flight activities involving Runway 8.

Zone 4: Outer Approach And Departure Zone

- Retain As-Is.
- This zone is defined in the CALTRANS ALUC Handbook
- The FAA has no specific land use guidelines beyond the RPZ

- All but a small part of the outer portion of this zone would be in the Buena Vista Future Growth Area.
- New residential uses to be infill to the existing residential area Density in the order of one dwelling unit per one acre
- Avoid non-residential uses having moderate or higher usage intensities as major shopping centers, fast food restaurants, theater meeting halls buildings with more than three above ground habitable floors
- Create no hazard to air navigation as defined by Part 77 of the Federal Aviation Regulations
- Cluster new residential uses to the outer edges of the zone
- Utilize the areas near the extended runway centerline for roads and open space
- Prohibit schools, day care center, hospitals and nursing homes

Zone 5: Sideline Zone

- Retain As-Is
- Outside Buena Vista annexation area

- No change to this area or allowed densities and uses are proposed. The area is outside of the Buena Vista Future Growth Area.

Zone 6: Traffic Pattern Zone

- Includes a large area of the City including the Buena Vista Future Growth Area
- This zone is defined in the CALTRANS ALUC handbook
- The FAA has no specific land use guidelines beyond the RPZ

- All of the remaining portions of the Buena Vista annexation area, not in the other five zones, are included and affected by the conditions applied in this zone
- Unrestricted urban development in this area
- Create no hazard to air navigation as defined by Part 77 of the Federal Aviation Regulations
- Schools, day care center, hospitals and nursing homes are allowed, but should be located away from flight paths of all runways to the extent practicable. Prohibit uses with high concentrations of people outside of structures (ie. stadiums)

ATTACHMENT 3

PRINCIPAL OBSERVATIONS/ CONSIDERATIONS

ALTERNATIVE OPTION

BASIC PREMISES

- The City will proceed with its plans to annex the Buena Vista (BV) Future Growth Area
- BV I, II and III are intended primarily for residential development.
- The City intends to operate and develop the airport in accordance with the Airport Master Plan adopted in June 2003, as amended.
- The City will continue to apply the provisions of the CALTRANS Handbook as a guideline in establishing land use compatibility between the airport and new development.
- The City intends to comply with the provisions of the Sponsor's Assurances contained in the most recent Grant Agreement with the FAA.
- The City will retain ownership of the Buena Vista Park site.

AIRPORT OPERATING FACTORS

- Runway 2-20 is the primary runway. It is longer, is lighted and has a published, non-precision approach to Runway 2
- There are two published, non-precision, circle-to-land approaches to the airport
- Runway 8-26 is used as a cross-wind runway by small aircraft and for VFR departures during times of low coastal fog
- Departures on Runway 26 are infrequent
- Landings on Runway 8 are also infrequent
- The noise exposure in the Buena Vista area shown as 55-60 CNEL range
- Runway 8-26 has VFR operations only
- Runway 8-26 has no night operations
- Risk exposure as a general rule lessens the further away from the centerline of the runway
- Pilots are trained to, in the event of mechanical problems at takeoff, continue in a straight path from the runway

SELECTING THE PREFERRED OPTION

- There is an opportunity to remove incompatible residential land uses from the Runway 8 Runway Protection Zone (RPZ).
- The shortening of Runway 8-26 does not significantly compromise its current use, yet provides for a RPZ that meets FAA and CALTRANS requirements
- The 500 feet of pavement would be retained. While not operationally useable, it is available as an extended Runway Safety Area.
- The current obstruction slope on the Runway 8 approach is improved to FAA, Part 77 standards
- Development provided for in the Airport Master Plan is not compromised. The opportunity to lengthen Runway 2-20 and to provide for a precision instrument landing system (ILS) to Runway 2 is preserved.

ACTIONS

SPECIFICS

Recommendations

Zone 1: Runway Protection Zone (RPZ):

- To improve safety, relocate the Runway 8 landing threshold 500 feet to the east
- Leave the existing runway pavement in place
- Mark pavement in accordance with FAA Advisory Circular 150/5340-1H
- This zone is defined by the FAA and in the CALTRANS ALUC Handbook

- Compliance with both the CALTRANS and FAA guidelines for RPZ. Existing residential land uses on Manfre Road would no longer be in the RPZ.
- All but a portion of the RPZ would be on airport property. The remaining portion is an area noted in the Airport Master Plan for future acquisition.
- Compliance with Part 77 of the Federal Aviation Regulations. The present 14:1 obstruction limit on the Runway 8 approach would be improved to 22:1
- The available runway length for landing and takeoff on Runways 8 and 26 would be 3,499 feet.
- There would be an enlarged Runway Safety Area (RSA) marked in accordance with the Advisory Circular at the approach end of Runway 8 that could serve both Runway 8 short landings and Runway 26 takeoff overruns.
- The risk exposure for people and structures on the ground from landings on Runway 8 would be reduced in the existing residential area and remain unchanged for departures on Runway 26

Zone 2: Inner Approach And Departure Zone

- This zone also would be moved to the east by 500 feet.
- This zone is defined in the CALTRANS ALUC Handbook
- The FAA has no specific land use guidelines beyond the RPZ.

- Approximately one-half of this zone that is defined in the ALUC Handbook would be on airport property. The remaining one-half would be in the Buena Vista Future Growth Area.
- Most of the area within the Buena Vista Future Growth Area is vacant however there are currently residential land uses along Manfre Road
- Restrict the height of structures within the Approach Area, in accordance with The Federal Aviation Regulations, Part 77.

- New residential uses would be infill to the existing residential area
- Density in the order of one dwelling unit per one acre
- Cluster any new residential uses to the outer edge of the zone
- Utilize the areas near the extended runway centerline for roads and open space
- Prohibit schools, day care center, hospitals and nursing homes
- Prohibit above ground bulk fuel storage

Zone 3: Inner Turning Zone

- The reference point for this zone also would be moved to the east by 500 feet.
- This zone is defined in the CALTRANS ALUC Handbook
- The FAA has no specific land use guidelines beyond the RPZ

- Approximately one-third of this zone is in the developed unincorporated area of Freedom. The remaining two-thirds of the zone is in the Buena Vista Future Growth Area and is generally undeveloped
- The Freedom area is currently developed in a mixed use.
- Within the northerly Zone 3, residential densities permitted up to 12 dwelling units per acre; comply with ALUC Handbook for maximum residential densities on the southerly Zone 3
- Non-residential development with the average number of people per gross acre ranging from 60 to 80
- With clustering, occupancy averaging and building types, the average occupancy could be as high as 180 to 240 per acre.
- Create no hazard to air navigation as defined by Part 77 of the Federal Aviation Regulations
- Prohibit schools, day care center, hospitals and nursing homes
- Prohibit above ground bulk fuel storage

Zone 4: Outer Approach And Departure Zone

- This zone also would be moved to the east by 500 feet
- This zone is defined in the CALTRANS ALUC Handbook
- The FAA has no specific land use guidelines beyond the RPZ

- All but a small part of the outer portion of this zone would be in the Buena Vista Future Growth Area.
- New residential uses to be infill to the existing residential area Density in the order of one dwelling unit per one acre
- Avoid non-residential uses having moderate or higher usage intensities as major shopping centers, fast food restaurants, theater meeting halls buildings with more than three above ground habitable floors
- Create no hazard to air navigation as defined by Part 77 of the Federal Aviation Regulations
- Cluster new residential uses to the outer edges of the zone
- Utilize the areas near the extended runway centerline for roads and open space
- Prohibit schools, day care center, hospitals and nursing homes

Zone 5: Sideline Zone

Outside Buena Vista annexation area

- Not applicable

Zone 6: Traffic Pattern Zone

- Includes the Buena Vista annexation area
- This zone is defined in the CALTRANS ALUC handbook
- The FAA has no specific land use guidelines beyond the RPZ

- All of the remaining portions of the Buena Vista annexation area, not in the other five zones, are included and affected by the conditions applied in this zone
- Unrestricted urban development in this area
- Create no hazard to air navigation as defined by Part 77 of the Federal Aviation Regulations
- Schools, day care center, hospitals and nursing homes are allowed, but should be located away from flight paths of all runways to the extent practicable
- Prohibit uses with high concentrations of people outside of structures (ie. stadiums)

