

SONOMA COUNTY AIRPORT LAND USE COMMISSION

2550 Ventura Avenue, Santa Rosa, California 95403
Telephone (707) 565-1900 Fax (707) 565-1103

AGENDA AND STAFF REPORT

Monday, January 25, 2010 7:00 p.m.

Convening in the Hearing Room at the
Permit and Resource Management Department
2550 Ventura Avenue, Santa Rosa, California

Commissioners:

SAM SALMON, chairman DON SMITH, vice-chairman

MARSHALL WHITE / JOHN SAWYER

AL KAPLAN

Staff: Robert Gaiser

If you wish to speak on an item under discussion by the Commission, you may do so upon receiving recognition from the chairman. Please approach the rostrum in the center of the hearing room, sign in, and state your name and address and your comments. Time limits may be imposed at the discretion of the commission.

Call to Order Pledge of Allegiance

Minutes of June 11, 2007 meeting (Attachment A)

Miscellaneous Correspondence

None transmitted with the agenda.

Other Business / Set Agenda

Public Appearances on Non-Agenda Items

1. MEMBERSHIP TERMS AND APPOINTMENTS

Two members are appointed by the cities in Sonoma County, two members are appointed by the County of Sonoma, two members are appointed by the airport managers and a public member is appointed by the other six Commissioners. Membership terms are four years and expire in May, but members may serve until they resign or are replaced by the appointing body.

Recent appointments, changes in membership and related actions include the following:

- 3-07: City Selection Committee appointed John Sawyer of Santa Rosa and reappointed Sam Salmon of Windsor.
- 6-07: Commission reappointed Al Kaplan of Petaluma as public member.
- 9-09: Mike Sass resigned as County-appointed member.
- 10-09: Staff learned that Bob Cass was not able to continue as County-appointed member.
- 10-09: Staff communicated with airport managers regarding the continuation or reappointment of two members representing the six public-use airports. No action taken due to managers' majority support for continuation.
- 12-09: Clerk for Board of Supervisors advertised two vacancies for County-appointed positions.

The current Commission membership terms end as follows:

Member	Appointed Body	Term End
Sam Salmon	Incorporated cities	May 2011
John Sawyer	Incorporated cities	May 2010
vacant	County	May 2009
vacant	County	May 2009
Don Smith	Airport managers	May 2005
Marshall White	Airport managers	May 2009
Al Kaplan	Other Commission members	May 2011

Staff Recommendation:

Direct staff to issue the oath of office as needed to any new members appointed by the Sonoma County Board of Supervisors.

2. PROPOSED HELISTOP FOR NEW SUTTER MEDICAL CENTER OF SANTA ROSA

Project Description: Sutter Medical Center of Santa Rosa ("SMCSR") proposes to construct a helistop as part of its planned new medical center complex adjacent to the Wells Fargo Center for the Arts north of Santa Rosa. California state law requires that a Heliport Permit be obtained from the California Department of Transportation Division of Aeronautics before the helistop can be operated and requires that, before submitting an application to the state for a Heliport Permit, the plan of the proposed facility first be "submitted to ... and acted upon" by the county airport land use commission. Accordingly, the attached submittal (Attachment B) has been prepared by Mead & Hunt on behalf of SMCSR for review by the Sonoma County Airport Land Use Commission ("ALUC"). The following staff analysis incorporates content from that submittal and from sources referenced in the submittal.

The SMCSR project site is located between the Wells Fargo Center for the Arts ("WFC") and Mark West Springs Road on 25 acres currently owned by WFC (AP #058-040-059, -058, -060 and -061). The proposed medical center facility consists of a 70-bed two-story hospital with a possible future expansion to 99 beds, a 25-bed three-story physicians' hospital, a three-story medical office building, a central utilities plant, storage tanks, a well, parking facilities, and the helistop. Discretionary approvals requested from the County include a use permit for the medical center, relocation of some WFC facilities and construction of a sound berm east of SMCSR and WFC and a General Plan Amendment to allow annexation of the property into the local sewer district and connection to public sewer and water.

The proposed helistop is a limited type of heliport where:

- The landing area and the helicopter parking area are usually the same.
- Helicopters generally remain on the ground only as long as needed to load or unload patients.
- No fueling or maintenance are conducted except under emergency circumstances if needed for flight safety.

The volume of helicopter operations at the new helistop is expected to be similar to current levels at the existing Sutter hospital on Chanate Road, approximately 200 flights per year, but, for a worst-case analysis, 240 flights per year or about 4 to 5 flights per week is assumed. Each flight is comprised of one landing and one departure. Most incoming flights bringing in patients are expected to be from hospitals and other points north of SMCSR, and the destinations of most departing flights with patients are expected to be to the south.

The proposed location, design and approach-departure paths for the helistop are shown on the attached "Helistop Plan" (Attachment C). The proposed location is at ground level on the west side of the SMCSR site close to the emergency room entrance to the main hospital building. Alternative sites evaluated included other ground-level sites on the 78-acre property and the roofs of the proposed buildings. A ground level location was chosen due to its relatively minimal impacts on hospital facility needs and parking and the higher costs of developing a roof-top helistop.

Review Criteria: California Public Utilities Code Section 21661.5 requires that a construction plan for a new airport, which includes a new helistop, must be submitted "and acted upon" by the county airport land use commission ("ALUC") before submittal of an application to the state for a Heliport Permit. This section requires the action to be "in accordance with" the other Code provisions for ALUCs, but those provisions do not specify criteria for reviewing new airports and the type of ALUC action expected is not clearly stated. State guidance in such matters is provided by the California Airport Land Use Planning Handbook ("Handbook"), as updated by the Division of Aeronautics in 2002. The Handbook excerpts attached as Attachment D include the following guidance regarding new heliports:

- Compatibility planning around heliports is not specifically addressed by State law, but an ALUC has the authority to develop compatibility plans for new airports and should cite the lack of significant noise and safety concerns as the reason if such a plan is not developed. (Pages 2-4 & 5)
- Very few ALUCs have adopted compatibility plans for heliports because the cumulative noise impacts are limited by the relatively small number of operations and the extent of safety concerns is confined by the steep angles of helicopter approaches and departures. (Page 3-37)
- When an ALUC reviews a plan for a new airport or heliport, the basic issue is how the airport fits into the existing setting and the key related question is would the existing or planned land uses be considered compatible with the airport or heliport if it were already in existence? Specific questions suggested for ALUCs to consider include:

Runway Layout: Does the proposed layout of aircraft landing areas attempt to limit impacts on surrounding land uses to the extent practical?

Flight Tracks: Will the aircraft traffic pattern be limited to a single side of the runway because of land use compatibility or other factors? Are other flight track or operational restrictions

proposed to minimize off-airport impacts?

Aircraft Activity Characteristics: What type and volume of aircraft activity is projected for the facility over the next 20 years or more? Are these characteristics compatible with surrounding land uses?

Property Acquisition: Will fee title and/or easements be acquired on highly impacted property? (Pages 4-19 & 20)

- Since ALUCs do not have the authority to require alterations to the airport plan or the forecasts indicated in the plan, ALUCs can only evaluate the adequacy of the facility design to the extent that the design affects surrounding land use. (Pages 4-19 & 20)
- Federal Aviation Administration (FAA) guidelines address heliport design and the requirements for approach/departure paths and protection zones that do not include buildings, other obstructions or congregations of people. Local agencies and ALUCs should preserve compatible uses in around heliports and prevent obstructions in the FAA approach/departure surface. (Pages 9-50 & 51)

Section 8.7.4 of the Comprehensive Airport Land Use Plan for Sonoma County ("CALUP") adopted by the Sonoma County ALUC in 2001 states that any proposal for a new airport or heliport should be reviewed by ALUC for consistency with the CALUP and that the ALUC action choices are to:

- "1. Approve the proposal as being consistent with the specific review policies listed in Section 2.3 below.
2. Approve the proposal and adopt a compatibility plan for that facility. Adoption of such a plan is required if the airport or heliport will be a public-use facility.
3. Disapprove the proposal on the basis that the noise and safety impacts it would have on surrounding land uses are not adequately mitigated."

Since there is no "Section 2.3 below" in the CALUP and no other CALUP section appears to have "specific review policies" for new airports or heliports, the first choice cannot be applied as written but could possibly be interpreted as referencing the CALUP policies for reviewing development proposals. The second choice, adopting a compatibility plan, is not required and has not been proposed in this case because the proposed heliport is not a "public-use facility" open to general aviation use by the public.

Staff believes that the review criteria provided by the State and the CALUP indicate that approval of the proposed SMCSR heliport by the Sonoma County ALUC should be based on the questions on page 4-20 of the Handbook and the lack of significant noise and safety concerns due to adequate mitigation for the potential noise and safety impacts on surrounding land uses and the prevention of significant obstructions to helicopter operations. The following analysis of these subjects is guided by the submittal by Mead & Hunt and by the pertinent sections of the enclosed Draft Environmental Impact Report ("DEIR") for the project.

Noise Impacts: The locations of residential areas and other potentially noise-sensitive land uses were considered in the location and design of the helistop and approach-departure paths. The proposed location of the helistop is close to Highway 101. This location and the proposed approach-

departure paths shown on Attachment C allow landings and takeoffs to be over the Highway right-of-way and into the preferred directions into the prevailing winds from either the south-southeast or the north-northwest that parallel the Highway. This alignment of the proposed approach-departure paths is designed to minimize noise impacts on residential uses to the north and east of the site.

The CALUP indicates land use compatibility should be evaluated in terms of the Community Noise Equivalent Level (CNEL), a cumulative noise metric that takes into account not just the noise level of individual events, but also the number of events and the time of day when they occur. The CALUP indicates that the maximum CNEL considered acceptable for residential uses in the vicinity of airports and heliports is CNEL 55 dB and that exposures between CNEL 55 dB and 65 dB may be conditioned to be acceptable (page 8-5).

The noise contours for helicopter operations were calculated using the expected number of operations of the design helicopter, the Bell 222, and the assumption that 13% of the operations will occur during the evening hours (7:00 p.m. to 10:00 p.m.), and 37% during nighttime hours (10:00 p.m. to 7:00 a.m.). This time distribution is based on the usage of the helistop at the existing SMCSR Chanate Road site. Based on prevailing wind direction, helicopters are expected to approach from the northwest and depart to the southeast 75% of the time.

As shown in Attachment B, the calculated CNEL 65 dB contour for the proposed helistop would not extend beyond the SMCSR property boundary. The 60 dB contour would extend beyond SMCSR property onto the right-of-way of Highway 101 but would not expose any non-project site land uses or residential structures to a CNEL of 60 dB or greater. The CNEL 55 dB contour is not illustrated on the graphic but reportedly would remain within the confines of the SMCSR property and Highway 101 right-of-way and would not affect surrounding land uses.

Although not defined as a noise impact criterion in the CALUP, single-event noise levels were addressed in DEIR Section 3.11. A Sound Exposure Level (SEL) of 90 dBA was used in the DEIR as the threshold of significant impact for residences. The SEL is a measure of the total noise energy of an event, compressed as if the event had a 1-second duration, meaning that any event lasting longer than 1 second would have an SEL greater than the actual maximum noise level experienced. The DEIR analysis indicates that some residences north of the SMCSR site and Mark West Springs Road could be exposed to a noise level slightly above SEL 90 dBA during helicopter operations, a level that could result in sleep disturbance of some residents. (see Attachment B). Mead & Hunt states that this analysis does not take into account the shielding effect of the hospital building located between the helistop and the residences. Since Public Utilities Code Section 21662.4 exempts emergency aircraft flights for medical purposes from direct local control over hours or routes, the mitigation recommended in the DEIR on page 3-11-34 utilizes other approaches, as follows:

Mitigation NOI-5a: Adopt preferential directional approach and departure profiles, including approaching from the south and departing to the north as much as conditions are favorable. (Note: Mead & Hunt has stated that this measure does not appear to be needed, given the negligible differences in SEL noise impacts of the north-south and south-north operations on the residences north of Mark West Springs Road.)

Mitigation NOI-5b: Implement adaptive management program that includes:

- Inform helicopter ambulance companies and pilots of preferred flight paths.
- Maintain a helistop log that includes arrival and departure times, the approach route taken, and any deviation from designated flight paths.
- Identify noise disturbance coordinator to record citizen complaints and review the helistop log.

- Communicate any helicopter noise complaints to the pilots and request modifying flight approach whenever possible.

The DEIR analysis concludes that, although the recommended mitigation will help to minimize noise disturbance, it is not possible to completely avoid this impact and it must therefore be considered unavoidably significant.

The DEIR also addresses the noise effects of proposed helistop operations on other facilities on the SMCSR and WFC property. Since maximum noise levels produced by helicopters at the helistop may result in daytime disturbance and nighttime sleep awakening within hospital patient rooms, the DEIR recommends in Mitigation NOI-6 an acoustical analysis to detail the window and wall design and other noise mitigation required for patient rooms and other sensitive hospital use areas to meet an interior SEL of 65 dBA and/or maximum noise level (Lmax) of 55 dBA during helicopter operations. The DEIR concludes that this mitigation would be sufficient to reduce this impact to less than significant. The implementation of Mitigation NOI-6 should ensure that indoor noise levels during helicopter operations do not result in disturbances to hospital patients.

The DEIR analysis also addresses a school located at the Wells Fargo Center. Schools are considered to be noise-sensitive and unacceptable in areas exposed to noise above 60 CNEL. Due to the distance from the proposed helistop, the school will be well outside the 60 dBA Ldn contour due to helicopter operations and thus will not be significantly impacted. The school is also outside the projected 90 dbA SEL contour described in the above discussion of impacts on residences.

Safety Impacts: The proposed SMCSR helistop will comply with FAA design standards for heliports that emphasize safety and are used by the Division of Aeronautics when reviewing heliport plans and issuing permits. Required dimensions for heliports vary depending upon the size of the largest helicopter expected to use the facility. For the SMCSR helistop, the design helicopter, the Bell 222, will require an overall clear radius area of 51.5 feet as measured from the center of the landing pad.

Other than these design standards and the requirements for clearance over obstacles that are discussed in the next section, the FAA does not establish safety requirements for the areas around heliports. The Sonoma County CALUP does not define safety areas specifically for heliports. For the six public-use airports in Sonoma County, the CALUP establishes limits on the population density of nonresidential uses and the dwelling unit density of residential uses in the areas near runway ends where the risks of aircraft accidents are greatest. In the Runway Protection Zone, the safety zone closest to the runway, no new structures are allowed. This zone extends 1,200 feet from the runway end for the four small, low-activity public use airports in the county. The next CALUP safety zone, the Inner Safety Zone, extends another 1,500 feet out from the runway and allows no more than 40 persons per acre in structures, 80 persons per acre outside of structures, and only one dwelling unit per five acres. Because helicopters climb and descent more steeply than airplanes, the equivalent safety zones that might be applied to a heliport would be expected to be shorter. However, even if safety zones of the size used by the CALUP for small airports were applied to the approach-departure paths for the proposed SMCSR helistop, no existing uses would exceed these standards.

The preferred approach-departure paths avoid going over the SMCSR buildings, WFC buildings and nearby residential uses, but the proximity of the proposed helistop and helicopter operations to Highway 101 traffic raises the concern that helicopters approaching and departing the helistop could be a distraction to motorists and cause traffic accidents. Research conducted for the DEIR found no data or other recorded evidence that this is a significant concern. Division of Aeronautics and California Highway Patrol staff who were contacted during the research responded that they had not

heard of any problems caused by heliports located near highways. Pilots for REACH, the primary helicopter emergency medical services operator in Sonoma County, and the Sonoma County Sheriff's Helicopter Unit acknowledged that motorists may glance at a helicopter as it lands or takes off from near a highway but could not cite any specific incidents that resulted. Heliports associated with several medical facilities elsewhere in the state are situated within 500 feet of a major highway (see Attachment B photos) and no accident issues are known. For the SMCSR helistop, it is estimated that approaching and departing helicopters will be in view of motorists for less than a minute. This factor, combined with the low number of flights and the plans calling for landscaping to screen the view between the highway and helicopters on the landing pad will greatly diminish the safety concern.

The DEIR discusses possible helicopter accidents and effects on Highway traffic as part of Impact HAZ-5 and concludes that the risks to motorists and other third parties are less than significant.

Airspace Protection: Although helicopters are much more maneuverable than airplanes and theoretically could approach and depart a heliport in any direction, the state's permitting process requires that specific approach-departure paths that are clear of obstructions. The criteria used for defining obstructions are set forth in Part 77 of the Federal Aviation Regulations (FAR Part 77). The Sonoma County CALUP policies also rely upon FAR Part 77 criteria.

As applied to the SMCSR helistop, the proposed approach-departure paths begin along the edge of the landing pad, 37.5 feet from the center of the pad, and slope upward by one foot per eight feet horizontally (8:1). The length of the approach-departure path is 4,000 feet. To the sides of the pad and the approach-departure path, transitional surfaces slope upward at a 2:1 ratio. The surfaces for the SMCSR helistop are depicted on Attachment C.

The presence of obstacles near the proposed helistop was considered in locating the facility within the medical center campus and defining the approach-departure paths. These obstacles include the proposed hospital building, landscaping and light fixtures within the planned parking lot, light fixtures in the Highway 101 right-of-way, redwood trees along the Highway and around the Mark West Springs / River Road on- and off-ramps, and the high-voltage power lines 600 feet north of the site. The hospital building will slightly penetrate the helistop transitional surfaces, but it will be obstruction lighted and is not considered to be a hazard. Parking lot landscaping and lighting will be kept low, and some fixtures will be obstruction lighted. Within the Highway 101 right-of-way, one nearby lighting fixture will be moved from its initially planned location because project construction will require widening of the northbound off-ramp.

The greatest concerns in terms of approach-departure path obstacles are the tallest redwood trees and the power lines. The alignment of the approach-departure path to the northwest is designed to avoid passing directly over the tallest trees. To avoid running between the trees around the on- and off-ramp loops on each side of the Highway, the northwesterly path swings slightly west and over the PG&E power substation before then paralleling the Highway. This route provides greater clearance over the power lines than one directly over the Highway or one continuing west-northwest along River Road. The 8:1 approach-departure path surface clears all power lines and transmission towers by at least 150 feet. Approach-departure surface clearance over most trees is at least 100 feet; clearance over trees beneath the transitional surfaces on each side of the approach-departure surface is less. One tree adjacent to the northbound on-ramp loop slightly penetrates the transitional surface and will require a waiver from the state. According to Mead & Hunt, such waivers are generally not an issue provided that they only occur on one side of the approach-departure path.

In the analysis of Impact HAZ-5, the DEIR reports that the Sonoma County Sheriff Helicopter Unit identified high-voltage power lines that cross Highway 101 in an east-west direction from the power substation as a potential hazard to helicopter operations. DEIR Mitigation Measure HAZ-5 recommends that "Lighting shall be placed on the power poles crossing US 101 at the project site in a manner that will make the poles readily visible from air by helicopter pilots at night and in such a manner as to not distract drivers on US 101."

The Mead & Hunt submittal states that this recommendation is not currently part of the proposed project for several reasons. Installing obstruction lights on high-voltage transmission line towers is not an easy task because separate low-voltage power must be extended to the towers at significant cost. PG&E, the owner of the facilities, is usually reluctant to agree to obstruction lighting unless clearly required. This matter has been discussed with the Division of Aeronautics, and their preliminary conclusion is that they would not require or recommend obstruction lighting of these towers. Mead & Hunt recommends that Mitigation HAZ-5 either be removed from the EIR or rewritten to defer to the final decision of the Division of Aeronautics.

One other airspace protection issue of possible interest to the ALUC is the interaction between the proposed helistop and air traffic at Sonoma County Airport three miles to the northwest. Discussions with the air traffic control tower in summer of 2009 indicated that the forecasted helicopter operations at the proposed helistop would not interfere with air traffic at the Airport. The helistop will be within the tower's control area, thus requiring use of two-way communications between the tower and helicopters. The Highway 101 corridor is already used by helicopters transiting the area or headed to or from the airport. Helicopters typically fly at 500 feet above the ground through this area. Fixed-wing airplanes are at an altitude of at least 1,000 feet above ground level.

Recommendations: Staff recommends that the Commission determine that the proposed helistop for the Sutter Medical Center of Santa Rosa is consistent with the related policies and standards of the California Public Utilities Code, the California Airport Land Use Planning Airport Handbook and the Comprehensive Airport Land Use Plan for Sonoma County, based on the following specific findings:

Helistop Layout: The proposed location and design of the helistop is intended to limit impacts on surrounding land uses to the extent practical.

Flight Tracks: The proposed location of the approach-departure paths over Highway 101 will minimize the effects of helicopter operations on surrounding land uses.

Aircraft Activity Characteristics: The volume of helicopter operations at the new helistop may be as much as 240 flights landing and departing per year or about 4 to 5 flights per week or less than one per day.

Property Acquisition: The property most impacted by proposed helicopter operations will be either owned by Sutter Medical Center of Santa Rosa or is in the State-owned right-of-way of Highway 101.

Compatibility Plan: Adopting a compatibility plan for the heliport is not required because the proposed heliport is not a "public-use facility" and the noise and safety concerns have been adequately mitigated.

Noise Impacts: The calculated CNEL contours for the proposed helistop would affect surrounding land uses beyond the confines of the SMCSR property and Highway 101 right-of-way. Some residences north of the SMCSR site on the north side of Mark West Springs Road could be exposed to an SEL contour slightly above 90 dBA during helicopter operations, a level that could result in sleep disturbance of some residents. This impact will be mitigated by the preferential approach-departure paths and an adaptive management program to inform operators of those paths and monitor helicopter operations and complaints, but it is not possible to completely avoid this impact since the Public Utilities Code exempts emergency aircraft flights for medical purposes from direct local control over hours or routes.

Safety Impacts: The proposed SMCSR helistop will comply with FAA design standards for heliport size and clearance, and the preferred approach-departure paths avoid going over the SMCSR buildings, WFC buildings and nearby residential uses. If the safety zones established for small airports by the CALUP were applied to the approach-departure paths for the proposed SMCSR helistop, no existing uses would exceed the CALUP standards for those zones. The DEIR analysis of possible effects on Highway 101 traffic concludes that the risks to motorists are less than significant due to the brevity and infrequency of helicopter flights and plans calling for landscaping to screen the view between the highway and helicopters on the landing pad.

Airspace Protection: Since the Division of Aeronautics requires that specific approach-departure paths be defined that are clear of obstructions, the presence of potential obstacles was considered in locating the heliport and defining the approach-departure paths. The hospital building will slightly penetrate the helistop transitional surfaces, but it will be obstruction lighted and is not considered to be a hazard. Landscaping and lighting near the heliport will be kept low and some fixtures will be obstruction lighted. The alignment of the approach-departure path to the northwest is designed to avoid passing directly over the tallest trees and to provide the greatest clearance over power lines. One tree adjacent to the northbound on-ramp loop slightly penetrates the transitional surface and will require a waiver from the state. The DEIR recommends lighting be placed on the power poles crossing Highway 101 to make more them visible by helicopter, but Mead & Hunt recommends this measure either be removed from the EIR or rewritten to defer to the final decision of the Division of Aeronautics because the Division has indicated that they would not require obstruction lighting. The forecasted helicopter operations at the proposed helistop are not expected to interfere with aircraft operations at the Sonoma County Airport.

ADJOURNMENT

Attachments

- A. Minutes for June 11, 2007 the lack of significant noise and safety concerns as the reason
- B. Mead & Hunt Submittal
- C. Helistop Plan
- D. California Airport Land Use Planning Handbook Excerpts
- E. Draft Resolution
- F. Staff Comments on DEIR

Enclosure: DEIR Excerpts Regarding Helicopter Operations