Supplemental Environmental Impact Statement

FEBRUARY 1989

FOR

INTERIM HELICOPTER FACILITY
LIHUE AIRPORT COMPLEX
LIHUE, KAUAI, HAWAII

FINAL
PREPARED FOR:
AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

ENVIRONMENTAL CENTER
University of Hawaii
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AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

This Environmental Document is Submitted Pursuant to Chapter 343, HRS

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT
INTERIM HELICOPTER FACILITY
LIHUE AIRPORT COMPLEX
LIHUE, KAUAI, HAWAII
TMK: Fourth Division 3-5-1: Portion 8, 13

PROPOSING AGENCY:
Airports Division
Department of Transportation
Honolulu International Airport
Honolulu, Hawaii 96819

ACCEPTING AGENCY:
Governor, State of Hawaii

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B. Summary of Public Hearing, Wilcox Elementary School, June 16, 1988
C. Comments to Notice of Determination/Environmental Assessment
D. Comments and Responses to Draft Supplemental Environmental Impact Statement
SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

JANUARY 1989

PROJECT: Interim Helicopter Facility
Lihue Airport Complex
State Project No. AK1046-14

PRIOR DOCUMENTS:
1. "Environmental Impact Statement Lihue Airport
   Master Plan Study";
   Proposed by - Department of Transportation;
   Accepted by the Governor, State of Hawaii;
   April 26, 1977

2. "Final Environmental Impact Statement for
   Recommended Development Projects";
   Lihue Airport, Kauai County;
   Prepared by - Federal Aviation Administration,
   Department of Transportation;
   Approved by the Regional Director;
   February 14, 1979

LOCATION:
Lihue District, County of Kauai
Island of Kauai, State of Hawaii

PROPOSING AGENCY:
Airports Division
Department of Transportation
State of Hawaii

ACCEPTING AUTHORITY:
Governor, State of Hawaii

CONSULTANTS:
1. Akinaka & Associates, Ltd.
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   Honolulu, Hawaii 96816
SECTION 1. SUMMARY

PROPOSED PROJECT: Interim Helicopter Facility, Lihue Airport Complex

PROPOSING AGENCY: Airports Division
                  Department of Transportation
                  State of Hawaii

PROJECT LOCATION: TMK: Fourth Division 3-5-1:Portion 8, 13
                  Lihue, Kauai, Hawaii

PROJECT IDENTIFICATION: State Project No. AK1046-14

PROJECT DESCRIPTION: The project will replace the existing helicopter operations area at Lihue Airport, Kauai, Hawaii. The interim helicopter facility will be constructed on existing unused airport property. This interim facility will allow continuation of the development of Lihue Airport and is intended for other uses upon completion of the inland helicopter facility.

The intent of the project is to replace the existing operational area in-kind. Twenty 62.5-foot square asphalt concrete helipads will be constructed for passenger boarding and parking. Two landing/takeoff pads will be used for arrivals and departures. A grassed taxi route will connect the helipads with the landing/takeoff pads. Three fueling pads will be constructed for fuel truck operations.
SECTION 2. INTRODUCTION

2.1 GENERAL

The Lihue Airport Complex is located in Lihue, Kauai, Hawaii (EXHIBIT 2.1: PROJECT LOCATION & VICINITY MAP). Lihue is the seat of the County of Kauai which consists of the Islands of Kauai and Niihau. Within the complex, it is proposed to construct an interim helicopter facility, (EXHIBIT 2.2: SITE MAP) which will be owned and administered by the State of Hawaii, Department of Transportation, Airports Division (DOTA). The Federal Aviation Administration (FAA) will control helicopter ingress/egress at the facility.

The proposed project will be constructed on Lihue Airport property as a relocation for the present helicopter operations area. It will be located on approximately 18 acres of State airport lands that are now mainly vacant.

The facility will provide two landing pads (Final Approach/Takeoff Area) for arrival and departures. A grass surfaced taxi route will lead to twenty 62.5-foot square asphalt concrete passenger boarding pads. When completed, the proposed project will provide helicopter operators with facilities similar to the existing operational area.

This project is a phase of the airport development as established by the 1975 - 1995 Lihue Airport Master Plan Report and its various updates, most recent being the Lihue Airport Development Plan Update: April 1986 (REFERENCE 1). The report established the necessity of coordinated helicopter facilities and the development plan provided its general location.

An environmental impact statement (EIS) for the Lihue Airport Master Plan was prepared by the Airports Division, State Department of Transportation and accepted by the Governor, State of Hawaii in April 1977. Also, an EIS for the recommended projects at the Lihue Airport was prepared by the FAA and approved by the Regional Director in February 1977. These documents addressed the developments expected at Lihue Airport during 1975 - 1995. The helicopter facility is part of the Phase III improvements of the development program.

A supplemental statement is warranted as the scope of the action has been substantially increased. Unchanged material is incorporated by reference to the original EIS (hereinafter called the "accepted EIS" or "approved EIS"). The determination that a supplement EIS is required for the project was concurred by the Office of Environmental Quality Control (OEQC). Notice of the determination and the preparation of the supplemental EIS was published in the May 8, 1987 OEQC Bulletin.
2.2 DEFINITION AND REGULATIONS

The proposed interim helicopter facility is considered a public use heliport which is an identifiable area of land, water, or structure, including any building or facilities thereon, used or intended to be used for the landing and takeoff of helicopters. As a public use heliport, it is available for the takeoff or landing of helicopters without prior authorization being required to use the facility.

Regulations within the following chapters of the Hawaii Administrative Rules, "Title 19 - Department of Transportation, Subtitle 2 - Airports Division" control public airports in Hawaii:

1. Chapter 11 of Title 19, Administrative Rules, entitled "Airport Site Approval, Airport Licensing, and Airport License Renewal" implementing S261-12, Hawaii Revised Statutes.


Administrative rules will be developed to implement the amended rules within Act 397 of the Fourteenth Legislature 1988, Sessions Laws of Hawaii (SLH). The amended rules require that the Director of the Department of Transportation adopt regulations for tour aircraft operations at state controlled airports by permit. Act 397 requires that the permit include:

1. Aircraft identification (type).

2. Schedule of operations.

3. Assessment of the impact to the airport & surrounding area.

4. Routes and altitudes of aerial tours.

5. Noise abatement procedures in vicinity of noise sensitive areas.
6. Penalties for failure to comply with permit conditions.

7. Annual renewal of permits.

Additionally, ACT 397 requires the Department of Transportation to adopt a helicopter master plan for each state airport. An advisory committee for each county shall advise the director in such matters within the master plan as:

1. Extent and timing of helicopter operations and facilities.

2. Maximum number of helicopters at the airport.

3. Extent of emergency services, maintenance, and operations at each airport.

4. Assessment of impact on the surrounding areas.

The Federal Government, through the FAA, exercises full control over the routes and altitudes of helicopters in operation. This field has been federally preempted and there is no room for state or local regulations. Parts 91 and 135 of Title 14 (Federal Aviation Regulations), Code of Federal Regulations are the primary rules for controlling helicopter operations. The local governments power over helicopter operations lies mainly in the area of land use controls as discussed in the following sections.

2.3 HISTORIC OVERVIEW

The need for an separate helicopter facility was identified in the 1975-1995 master plan. Separation of fixed wing and rotary aircraft is a desired operational feature at airports due to their relative flight speeds. The need for the helicopter facility was not a priority item during the 1970's due to the low volume of helicopter traffic at Lihue Airport. The low volume was due to the level of tourism, the relative unknown beauty of Kauai, and the existence of private heliports at Kauai Surf (Lihue), Poipu Beach (Poipu), and Coconut Plantation (Wailua).

Tourism on Kauai increased dramatically in the 1980's due to promotion of the islands beauty and tranquility. The "flight seeing" industry expanded at an even greater rate since the islands' natural beauty is most accessible by helicopter tours. In 1980 there were only three helicopter operators, in 1988 fifteen operators transported approximately 250,000 flightseers over the pristine beaches and canyons.

The large number of tour flights have caused a congestion in the existing helicopter operational area and developed into an
unhealthy mix of fixed wing and rotary aircraft. The congestion and unhealthy mix emphasized the need to implement the new helicopter facility phase of the Lihue Airport development plan.

A heliport including staging and building areas, passenger terminal, underground fueling, and vehicular parking lot was presented to the public during a hearing on June 16, 1988 (See APPENDIX B). Testimonies were greatly in favor of an inland facility away from the Lihue Airport and relief from noise and overflights in the area surrounding the airport. During the hearing, petitions from 267 citizens were received urging the State to close Lihue Airport to tour helicopter operations and permit the construction of the inland facility. The interim facility concept was adopted to allow continuation of the airport development and not hinder the private inland facility.

2.4 PLANNING OVERVIEW

The interim helicopter facility is an integral item within the Lihue Airport development scheme. It will relocate the existing helicopter operations away from Taxiway 'A' allowing the taxiway to be realigned as proposed in the current development plan. This development plan is being updated based on a forecast of air traffic nearly doubling over the next 20 years. There were 2.27 million passengers in 1985 and the forecast is 4.4 million passengers in 2005.

In consideration of the flight congestion and the airport development schemes it is imperative that the helicopters be relocated from the present operations area. Plans to provide a heliport including ground support areas, underground fueling, and vehicular parkings were abandoned in favor of the interim facility upon communication/consultation with the Kauai public, helicopter operators and county government.

Helicopter operations are under examination by several organizations as follows:

1. Airports Division, State Department of Transportation is preparing the Hawaii State Helicopter System Plan (HSHSP) which includes examining the issues of helicopter noise impacts and developing recommendations for needed State policies and regulatory issues. The submittal of the draft HSHSP to the Legislature is expected in January 1989.

2. Airports Division, State Department of Transportation is preparing the 1988 update of the Lihue Airport Master Plan and the FAA Part 150 Noise Compatibility Study. The master plan update will include the proposed facility and long range potential expansion. The noise study will not separate helicopter generated effects from the overall airport noise system.
3. State Helicopter and Tour Aircraft Advisory Council will set-up rules which they feel most of the helicopter operators are committed to comply with. The council will monitor flights on a regular basis. An arbitration panel has been named for resolution of conflicts between the helicopter tour industry and the public.

4. Kauai County helicopter operators have developed flightseeing routes that have the minimum impacts upon the community yet provide scenic tours and safe operations. Several operators are seeking a private inland facility for a new base of operations.

5. Most Kauai helicopter operators have joined to develop a private heliport inland from Lihue. The inland site will be complete with all necessary conveniences as compared with the interim facility which will be a bare minimum heliport. A major landowner has offered several sites for consideration. Upon completion of the inland site, helicopter operations at Lihue Airport will be minimal. Flightseeing helicopter operations will be relocated to the inland facility.

6. Helicopter - Community Relations Planning Board has determined the impact of helicopter tours on the community, the environment and other potentially affected sectors. They have developed recommendations for solutions concerning the issues including the rights of both the tour industry and of the citizen as follows:

   a. Designate areas to be avoided or provided special treatment by tour helicopters by categories.

      1) "Avoidance Areas" should be avoided at any altitude.

      2) "Special Areas" should be overflown at minimum altitudes.

      3) "Coastal Areas" should be flown at 1/4 to 1/2 miles offshore.

   b. Establish inland heliport at suitable site.

      1) Build and operate under County, State and Federal regulations.

      2) Restrict number of pads and lease lots.

      3) Limit hours of operation, type of aircraft and noise generation.
4) Eliminate tour operations out of Lihue and Port Allen airports.

c. Actions by Governor John Waihee, State of Hawaii

1) Petition the Federal Aviation Administration requesting a "Special Rule" for Hawaii to designate and enforce the Avoidance Areas.

2) Include the Avoidance Areas in the administration rules of SB #2681 (helicopter master plan requirements of Act 397, 14th Legislature 1988).

3) Authorize a study of Na Pali Coast as a recreation area and develop a long-range management plan.

d. Appoint a formal helicopter community relation board for Kauai.

1) Comprised of members from the industry, community and relevant organizations appointed by the county.

2) Develop plans and guidelines to improve relations of the helicopter industry and community.

e. Conduct a study of the tour aircraft industry to develop recommendations for the County General Plan.

1) Address with existing sites and problems as well as future needs and proliferation.

2) Develop plans limiting expansion of heliports and/or helistop on Kauai.

Requirements to initiate a helicopter master plan and an advisory committee are included in Act 397 of the Fourteenth Legislature 1988, SLH (approved by the Governor on June 17, 1988). A helicopter master plan must be developed and implemented for each state controlled airport. It is an extension of the airport development plans including identical items as:

1. Helicopter operations
2. Helicopter facilities development
3. Emergency services
4. Airport operations and maintenance
5. Assessment of impact to the surrounding areas.
6. Advisory committee consisting of technical and community representatives.

The extension of the development plans is to determine the maximum number of helicopters that can be supported at each state airport. Presently, this determination is the responsibility of the Director of Transportation and the Federal Aviation Administration. The master plan will be an appendix of the HSHSP and draft submittal to the Legislature is expected in January 1989.
SECTION 3. DESCRIPTION OF PROPOSED PROJECT

3.1 PROJECT LOCATION

Lihue Airport is located on the southeastern coast of the Island of Kauai, Hawaii. Kauai is the northernmost of the major islands and the fourth largest island in the State of Hawaii. It is 33 miles long and 25 miles wide with a land area of 550 square miles. Kauai is commonly referred to as the Garden Island because of its lush vegetation and scenic mountains and valleys.

The airport is approximately 1 mile east of the town of Lihue which is the seat of the county government. Lihue is also the center of major economic activities for the county with a resident population of approximately 4,000 people.

3.2 DESCRIPTION OF PROPOSED ACTION

The facility, See EXHIBIT 3.1: HELICOPTER FACILITY PLAN will conform to the master plan for development of the airport complex. Plans for the facility has been revised many times to address concerns of the administering agencies and expected users. The basic design will be in accordance to the FAA's advisory circulars on Heliport Design and the final decision on safety aspects will be by the FAA's flight standards office.

Helicopters using the facility will arrive and depart from one of two landing pads. Alignment of the flight paths matches the existing conditions. Each landing pad will consist of a 75 foot square area centered upon a 40' X 40' asphalt concrete surface with helicopter landing markings. The aircraft will follow a taxi route to one of twenty 62.5-foot square passenger boarding pads. The landing pad perimeter and the taxi route will be grass surfaced with perimeter concrete markers. Lighting for night operations is not included in this project.

The passenger boarding pads will be constructed of asphalt concrete. Three pads located along the taxi route opposite the parking area will be designated for truck refueling. The twenty pads may be assigned through lease agreements. Rules and regulation must be developed prior to assignments. Four foot wide walkways will provide passenger access to the parking pads from the vehicular access road.

The common access road will service all the helicopter parking pads as shown on EXHIBIT 3.2: TYPICAL SITE SECTION. Traffic will be one-way on the 20 foot wide asphalt pavement. Parking will be provided along the common access road. Each parking pad will be
fronted by two vehicular parking spaces. A three-foot wide asphalt concrete walkway will be the pedestrian route along the access roadway.

Landscaping will be concentrated between the common access road and the present service road. Only ground cover or low shrubs will be considered for the landscaping scheme. Grassing of the taxi route and open space within the heliport constitutes the remaining landscaping expected within the project.

### 3.3 GOALS AND OBJECTIVES

Construction of the interim helicopter facility implements one component of the Lihue Airport Development Plan Update and completes a phase of the Lihue Airport Master Plan. Upon completion of the helicopter facility, the Lihue Airport will approach the goals established in the Master Plan Report.

The objectives of the new helicopter facility are:

1. Implement a component of the Lihue Airport Development Plan Update.
2. Increase the safety aspects of the airport by providing a facility that separates fixed wing from rotary aircraft.
3. Allow for the realignment of Taxiway 'A' by relocating the helicopter operations away from the taxiway obstacle-free zone.
4. Provide a minimum helicopter facility that conforms to the FAA advisory circular on heliport design. Eliminate the present traffic congestion at the existing helicopter operations area.
5. Consolidate the helicopter operations and provide a facility that can serve the existing operators, to the extent feasible.
6. Occupy a new operational area in the shortest time possible to reduce the period of congested conditions.

### 3.4 PHASING AND FUNDING

The interim helicopter facility is but one phase to complete the Lihue Airport Complex as envisioned by the master plan. The present Lihue Airport Master Plan Update includes a second phase for the helicopter facility. It is expected that the 1988 update of the master plan will not include separate helicopter facilities.
at Lihue Airport since flightseeing operations will be relocated to the inland heliport.

This project will be financed by the State Department of Transportation. The State funding will be obtained from the Airport Revenue Bond Fund:

- Sitework: $ 0.66 million
- Helipads: $ 0.36 million
- Drainage: $ 0.47 million
- Roadway/Parking: $ 0.29 million
- Landscaping: $ 0.32 million
- Utilities: $ 0.02 million
- Fencing: $ 0.13 million
- Miscellaneous: $ 0.28 million

Sub Total: $ 2.53 million

Administration/Inspection: $ 0.18 million
Engineering/Surveying: $ 0.19 million

TOTAL: $ 2.90 million
TYPICAL SITE SECTION

INTERIM HELICOPTER FACILITY
Lihue Airport Complex, Kauai, Hawaii

SEPTEMBER 1988

EXHIBIT 3.2
SECTION 4. EXISTING ENVIRONMENT

4.1 EXISTING FACILITIES

The existing helicopter operations are conducted on the north-easterly area of the airport. The area is shown on EXHIBIT 4.1: EXISTING OPERATIONAL AREA between Taxiway 'A' and Ahukini Road in vicinity of the FAA control tower and the Weather Bureau facility.

Based on the Airport Tenant Map and the Property Detail listings, (see PROPERTY DETAIL - LIHUE AIRPORT), there are 23 existing helipads for operator usage. Two of the pads are used exclusively for refueling by tanker trucks. Some of these pads (northern area) were constructed with private funds following development plans by the Airports Division. In addition to the helipads, three gates are available for passenger loading/unloading and takeoff/landing. Maintenance and administration facilities are scattered through the area as shown on EXHIBIT 4.1. Because of the proposed realignment of Taxiway 'A', the congested activities and the unhealthy mix of aircraft, the helicopter operations will be relocated 1900' westerly of the existing operational area.

4.2 GEOLOGY

The geology of the area is described in the approved EIS. The Lihue Airport site is located on lava flows of the Koloa Volcanic series that erupted 2 million to 6 million years ago. The Koloa Volcanic Series consist of materials that are mostly dense to moderately dense. Lava flows are pahoehoe and aa, the latter being more abundant.

4.3 SOILS

The soils at the project site is described in the approved EIS. The predominant soil covering the area is classified as Lihue silty clay. Test borings for the adjacent service road confirmed the existence of the silty clay. Laboratory test results conducted for the service road are:

1. CBR Values: 25 - 32%
2. Bearing Value: 4,000 lbs/in²
3. Allowable coefficient of friction: 0.4
4. Stable slope gradients: 2:1
<table>
<thead>
<tr>
<th>I.D. No.</th>
<th>Tenant</th>
<th>Area (SF)</th>
<th>Start</th>
</tr>
</thead>
<tbody>
<tr>
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<td>12/84</td>
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<td>08/85</td>
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<td>Kenai Air of Hawaii, Inc</td>
<td>602</td>
<td>04/83</td>
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<td>04/79</td>
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<td>04/80</td>
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<td>03/85</td>
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<td>Kenai Air of Hawaii, Inc</td>
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<td>07/85</td>
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<td>515-104</td>
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<td>06/84</td>
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<td>515-105</td>
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<td>06/84</td>
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<td>515-112</td>
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<td>06/84</td>
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<tr>
<td>515-113</td>
<td>Harter, Jack Helicopters</td>
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<td>06/84</td>
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<td>06/84</td>
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<td>11/80</td>
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<td>N.A.</td>
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<td>515-127</td>
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</tr>
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<td>515-129</td>
<td>ERA Helicopters, Inc</td>
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<td>Esaki, Dennis</td>
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<td>12/87</td>
</tr>
<tr>
<td>515-133</td>
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<td>4,900</td>
<td>04/85</td>
</tr>
<tr>
<td>515-134</td>
<td>Kauai Helicopters</td>
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<td>04/85</td>
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<td>515-135</td>
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<td>09/87</td>
</tr>
<tr>
<td>516-119</td>
<td>Island Helicopters Kauai</td>
<td>200</td>
<td>02/85</td>
</tr>
</tbody>
</table>

NOTE: These properties are under revocable permits.
4.4 **TOPOGRAPHY**

The topography of the Lihue Airport area is described in the approved EIS. The project area has been completely graded for sugar cane cultivation. Topographic survey of the project area shows a general slope of approximately $3\%$ from the southwest to the northeast across the project site.

4.5 **CLIMATE**

The average annual temperatures recorded at the Lihue Plantation range between a high of $77.9^\circ F$ and a low of $65.5^\circ F$. The average annual rainfall is 35 inches and the windspeed varies from 13 to 24 miles per hour from the northeasterly direction. The average relative humidity recorded at Lihue Airport is 67 percent in the middle of the afternoon and 83 percent in the early morning hours.

4.6 **HYDROLOGY**

A. **SURFACE WATER RUNOFF**

The approved EIS describes the surface runoff system in the project's vicinity. Information from the "Storm Drainage Standards," Department of Public Works, County of Kauai, February 1972 indicate that the one hour rainfall for storms with recurrence intervals of ten and fifty years are 3.2 in/hr. and 4.0 in/hr. respectively.

Runoff quantity and quality depends upon land use as well as natural factors of soil type, soil moisture conditions and rainfall characteristics. Present conditions are varied with low quantity (low runoff coefficient), low quality (silt transportation) runoff from the canefields to high quantity (high runoff coefficient), undetermined quality from the improved lease lots.

Lihue Airport is located adjacent to Class A waters as designated by the State of Hawaii. The uses to be protected in this class of water are recreational, including swimming, bathing, and other water-contact sports and aesthetic enjoyment. Several settling ponds have been constructed by Lihue Plantation adjacent to the coast to settle out solid materials before drainage water is discharged into the ocean.

B. **GROUNDWATER**

Groundwater conditions were described in the approved EIS. In the lower elevations, development of the Koloa basal
groundwater is difficult due to the low permeability and resulting low productive yields. There is a seaward hydraulic gradient of the groundwater body as evidenced by monitoring wells.

Basal groundwater in the vicinity of Lihue Airport is of limited quantity and poor quality and cannot be used as a source of potable water for the airport or the surrounding area. The "General Plan for Domestic Water/Island of Kauai" has targeted water development to occur further inland at higher elevations on the eastern slopes of the Kilohana Crater.

The County of Kauai's Lihue Sewage Treatment Plant includes an injection well as an effluent disposal alternative. The E.I.S. for the plant expansion concluded that there would be no chance of affecting the existing groundwater supply nor any future high-elevation groundwater source. The treatment plant is within a mile of the airport terminal complex.

4.7 BIOLOGY

The nature of flora and fauna in the project are described in the approved EIS. Most of the area in vicinity of Lihue Airport has been in intense sugar cultivation for many years. Native flora has been destroyed and replaced by introduced or non-native species. Use of herbicides in agricultural activities has also reduced the native varieties. There are no rare or endangered plant species within the project area.

Native birds and animals have retreated to the mountain forests upon removal of forests in the vicinity of the airport. Exotic birds, goats, horses and cattle have taken their place. Two endangered bird species (Hawaiian Stilt and Hawaiian Loon) are found in the vicinity. These birds are observed at the mill settling pond located at the Ahukini Road/Kapule Highway intersection.

The proposed project is situated further away from the mill pond (L-20 reservoir) then the new terminal and Kapule Highway. Construction of these projects did not affect the birds. Recently, the pond was abandoned and no longer attracts waterfowl. The area proposed for the helicopter facility is mainly vacant and contains no suitable habitat for the endangered water fowl.

4.8 ARCHAEOLOGY

Archaeological information of the project area is contained in the approved EIS. Known historic sites from the Wailua River to
Niulalau are described including their present status. One archaeological site (30-11-100, Ninini Heiau) has been identified in the Lihue Airport property. This site, in vicinity of Ninini Point Lighthouse, contained a heiau which has been completely destroyed. There is another heiau in the vicinity of the Airport (site: 30-11-1011), located near Ahukini Point. This site is also reported as being destroyed. There are no known archaeological or historical values remaining in the project location because of its long agricultural use.

4.9 FLOOD HAZARD

A comprehensive engineering report for the airport complex was completed in September 1982 for "Rough Grading, Realignment of Cane Haul Roads and Irrigation System, Drainage Channel and Major Drains" (REFERENCE 10). The system proposed by the engineering report was initiated and incrementally completed in various airport projects. The major drain consisting of a concrete lined channel was constructed parallel to Taxiway 'A'.

The Flood Insurance Rate Map (FIRM) of March 4, 1987 includes the project site within zone 'X' (areas outside the 500-year flood plain). There are no natural streams or gulleys in the vicinity. Flood information is shown in FIRM Panel No. 150002 0202C (of 225).

4.10 INFRASTRUCTURE

A. WATER SYSTEM

The study of the overall off-site and on-site water system serving Lihue Airport is included in the "Water System Study for the New Lihue Airport Complex" dated August 1982.

Water mains conforming to the standards of the County of Kauai Department of Water were approved for construction within the project Service (Ahukini) Road Realignment project to supply the new helicopter facility.

B. SEWER SYSTEM

Design concepts for collecting and conveying sewage flows from the Lihue Airport to the County's Lihue Sewage Treatment Plant are presented in REFERENCE 9 "Sewage System Study for the New Lihue Airport Complex" August 1982.

Improvements to the system have conformed to the study. Service for the new helicopter facility is included in the Service (Ahukini) Road Realignment project. Laterals as required were sized for forecasted flows and stubbed to the helicopter site.
C. SOLID WASTE
Solid wastes consisting of typical non-industrial business refuse are disposed at the County's Halehaka landfill in Lihue. Collection services are provided by private agencies contracted by the Department of Transportation.

D. TRANSPORTATION
Public mass transit does not service the Lihue Airport area. Vehicular traffic to the airport will be improved upon completion of the on-going construction of the Kapule Highway extension by-passing the town of Hanamaulu. Airport interior traffic will be served by a realigned Ahukini Road for which construction commenced in July 1988.

E. ELECTRICAL/TELEPHONE
Electrical power for residential and commercial use is provided by the Citizens Utilities Company, Kauai Electric Division throughout the proposed service area. High voltage distribution lines connect numerous substations including the Lihue Substation.

Telephone service for the proposed service area, as for the rest of the State, is provided by Hawaiian Telephone Company.

4.11 PUBLIC SERVICES
Fire and police protection provided by the County of Kauai support the airports' "Aircraft Rescue and Fire Fighting" (ARFF) group and security team. The Lihue Fire Station is approximately 1-1/2 miles from the airport. The Lihue Police Station is approximately the same distance away.

Health and emergency care are available at the Wilcox Memorial Hospital which is 2 miles northwesterly of the airport. Annual training simulating an aircraft emergency are practiced by the airport, fire, police, and hospital personnel.

4.12 SOCIO-ECONOMIC CHARACTERISTICS

A. POPULATION
Kauai County had an estimated total resident population of 46,300 as of July 1, 1986. Fewer than 200 of this total lived on Niihau. The projected population provided by State economists is 55,000; 63,900; 69,100 and 72,000 for the years 1990, 1995, 2000 and 2005, respectively.
According to the most recent available figures (1980), the largest towns on Kauai are Kapaa (with 4,467 residents) and Lihue (with 4,000). The median age of the population in Kauai County in 1984 was 31.3 years.

Data on the ethnic makeup of the population of Kauai show these percentages for 1985: Japanese, 20.0; Filipino, 22.8; Caucasian, 21.1; Hawaiian and part-Hawaiian, 23.0; mixed (except part-Hawaiian), 11.0; other, 2.1. Kauai County has no ethnic majority.

B. EMPLOYMENT AND INCOME

The majority of residents within the project area are employed at Lihue which serves as the major commercial, business, and governmental center of Kauai. The per capita personal income for Kauai residents in 1984 was $10,564. Generally, State and Local government positions accounted for 2,500 jobs in Kauai in 1984. The tourist industry provided 2,400 jobs for the same year while other service industries such as health care provided 2,050 jobs.

The annual average unemployment rate for Kauai County, in general, for 1985 was 5.2%.

4.13 NOISE

Existing noise levels are discussed in detail within APPENDIX 'A': ACOUSTICAL STUDY OF POTENTIAL NOISE IMPACTS ASSOCIATED WITH THE PROPOSED NEW HELICOPTER FACILITY AT LIHUE AIRPORT. EXHIBIT 4.2: 1986 AIRPORT NOISE CONTOURS shows the existing ambient noise conditions in vicinity of Lihue Airport. Relatively few noise sensitive areas are enclosed by the 55 Ldn contour (the public health and welfare threshold).

Noise levels from only helicopter operations are shown within EXHIBIT 4.3: 1986 HELICOPTER NOISE CONTOURS. The helicopter noise component is significantly lower than those associated with jet aircraft operations as indicated by comparing EXHIBITS 4.2 and 4.3. The helicopter component of the total aircraft noise levels is generally less than 55 Ldn. For this reason, risks to adverse health and welfare effects from existing noise are considered to be low.

Annoyance from helicopter noise occur at locations near the helicopter egress and ingress routes where helicopter flyby sound levels have been measured in levels range from 65 to 80 dB. Between jet aircraft flights, the background noise levels are not high enough to mask the flyby sound levels.
4.14 HELICOPTER OPERATIONS

A. FLIGHTSEEING

Helicopter flightseeing tours are estimated to generate $50 million in revenues to the State's economy and employ more than 400 people. The demand for flightseeing tours have increased helicopter activities on Kauai from a 3 company operation in 1980 to 15 companies in 1988. At Lihue Airport it is estimated that 250,000 tourists experienced the one-hour tour (approximate $100/person) generating an income to $22 million during 1987. TABLE 4.1 KAUAI HELICOPTER OPERATORS provides a list of helicopter companies operating on Kauai with the number of helicopters in operation.

A graph showing the helicopter tour expansion is presented as EXHIBIT 4.4: AIRCRAFT OPERATIONS. The figures represent total take-offs and landings for the period indicated. The graph includes the total operations at Lihue Airport indicating that the helicopter operations have increased in its percentage of operations throughout the past years.

National media coverage by "West 57th Street" discussed the flightseeing operation on Kauai. The program concentrated on alleged unsafe conditions at the operational area. These include:

1. Uncontrolled passengers around the helicopters.
2. Pilots outside of operating helicopters.
3. Refueling in proximity of passengers.
4. Excessive number of helicopters in a confined area.

The program also contained opinions of Kauai helicopter operators and government administrators. Although the language differed, the consensus alluded to a congested operation at the existing helicopter area.
<table>
<thead>
<tr>
<th>NAME</th>
<th>OWNER/OPERATOR</th>
<th>NO. OF HELICOPTERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bali Hai Tours, Inc.</td>
<td>James Lee</td>
<td>1 (Port Allen)</td>
</tr>
<tr>
<td>Inter-Island Helicopters</td>
<td>Ken D'Attilo</td>
<td>2</td>
</tr>
<tr>
<td>Island Helicopters, Kauai</td>
<td>Curt Lofstedt</td>
<td>2</td>
</tr>
<tr>
<td>Kauai Helicopters</td>
<td>Rick Shaw</td>
<td>2</td>
</tr>
<tr>
<td>Menehune Helicopters Ltd.</td>
<td>Robert Templeton</td>
<td>2</td>
</tr>
<tr>
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<td>Ron Williams</td>
<td>6</td>
</tr>
<tr>
<td>Niihau Helicopters</td>
<td>Tom Mishler</td>
<td>1 (Makaweli)</td>
</tr>
<tr>
<td>Ohana Helicopter</td>
<td>Bogart Kealoha</td>
<td>1</td>
</tr>
<tr>
<td>Papillon Helicopters, Ltd.</td>
<td>Mike Patton</td>
<td>6</td>
</tr>
<tr>
<td>South Sea Helicopters</td>
<td>Paul Asmus</td>
<td>2</td>
</tr>
<tr>
<td>Jack Harter Helicopters</td>
<td>Jack Harter</td>
<td>1</td>
</tr>
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<td>Will Squyres Helicopter Services</td>
<td>Will Squyres</td>
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<tr>
<td>ERA Helicopters</td>
<td>Ken Wilder</td>
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<tr>
<td>Bruce Needham Helicopters</td>
<td>Bruce Needham</td>
<td>2 (Port Allen)</td>
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<td>Safari Helicopters</td>
<td>Preston Myers</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>34</strong></td>
</tr>
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</table>
B. ORGANIZATIONS

The Hawaii Helicopter Operators Association was organized to promote aviation safety and noise abatement as they pertain to air routes, altitudes, or any other area of flight operations. The majority of Kauai helicopter operators belong to this organization.

The Kauai helicopter tour operators have joined together and developed a voluntary program to alleviate the noise emitted by helicopters during their island tours. The "Kauai County Voluntary Helicopter Noise Abatement Program" is supported by the majority of operators. The noise abatement operational rules identifies two noise sensitive areas in vicinity of Lihue Airport:

1. Westin Kauai Lagoons ".... proceed over western edge of the lakes on the old Kauai Surf Golf course, remaining clear of the clubhouse ...."
2. City of Lihue "... avoid all flights over Lihue ...

The Kauai helicopter tour operators organized in Aug. 1985 to support a "Helicopter Hotline" to monitor helicopter noise complaints. The program was patterned after the successful Maui hotline which has reduced noise problems and provided an outreach and contact program. Due to lack of financial support and cooperation, the Helicopter Helpline was disbanded in June 1987. In November 1987, the "Helicopter Helpline" was initiated for the same purposes with operators meeting monthly to discuss complaints and concerns.

A non-profit corporation (Lihue Inland Heliport, Ltd.) is under organization by the majority of the helicopter operators. This corporation will develop the private inland heliport. Officers have been elected and an assessment for stock will be made for funds to hire legal and other professional help. The slate of officers are:

Jack Harter (Jack Harter Helicopter): President
Mike Patton (Papillon Helicopters): Vice President
Rudy Park (ERA Helicopters): Secretary
Bogart Kealoha (Ohana Helicopters): Treasurer

C. OTHER FLIGHTS

Kauai helicopter tour companies also provide services which require the unique operational characteristics of the
helicopter. The following tabulation of non-tour events occurred during March 1988

<table>
<thead>
<tr>
<th>EVENT</th>
<th>NO.</th>
</tr>
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<tbody>
<tr>
<td>Equipment Transport</td>
<td>13</td>
</tr>
<tr>
<td>Charter Landings</td>
<td>5</td>
</tr>
<tr>
<td>Photo Charters</td>
<td>4</td>
</tr>
<tr>
<td>Land Examination &amp; Survey</td>
<td>3</td>
</tr>
<tr>
<td>Videotape Commercial Production</td>
<td>2</td>
</tr>
<tr>
<td>Powerline Inspection</td>
<td>1</td>
</tr>
<tr>
<td>Wild Animal Count</td>
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</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>29</strong></td>
</tr>
</tbody>
</table>

D. HELICOPTER INCIDENTS

Statewide, from January 1985 through December 1987, there were 30 incidents involving helicopters. The FAA could not find common links between the accidents, such as mechanical problems or a lack of pilot training. Incidents on Kauai are listed below. No deaths were associated with the incidents.

a - Bell 47G-3 in Waimea Canyon

b - Bell 206B at Princeville Airport

c - Bell 206L at Lihue Airport

In the safety area, the helicopter has two distinct advantages over conventional aircraft. A helicopter is able to auto rotate in the event of a power failure and can maneuver under control to a safe landing. Secondly, helicopters can hover allowing its engine to be checked in flight during near-maximum power application without committing to take off.

E. EXISTING FLIGHT TRACKS

Helicopters once arrived at Lihue Airport along a path over Lihue Town. Due to safety concerns and noise complaints, the arrival track slowly evolved through the Hanamaula saddle. Departures are southerly due to the operators desire for a clockwise island circuit to take advantage of the winds. The southerly departure eliminates conflicts with the Runway 17-35 but the congestion at Runway 3-21 approach occurs during periods of tour fixed-wing aircraft landings. This congestion continues as the route over Nawiliwili Harbor is selected to avoid flights over Lihue Town. EXHIBIT 4.5: EXISTING FLIGHT TRACKS draws the present departure and arrival flight tracks.
For comparison, EXHIBIT 4.6: FUTURE FLIGHT TRACKS is included to show tracks after completion of the project.

Inclement weather paths are stipulated by FAA letter of agreement (Special VFR). The southbound path is over the hardwood factory on the State highway. The northbound path is along Ahukini Highway then over Isenberg Tract. Operators will fly during inclement weather in Lihue knowing that the weather is clear over the Waimea Canyon or Napali coast.
SECTION 5. RELATIONSHIP TO LAND USE

5.1 COUNTY OF KAUAI

A. LIHUE DEVELOPMENT PLAN

The County's Lihue Development Plan was adopted in 1976. It provides physical, social, and economic measures which relate specifically to the Lihue community. The development plan is a tool to implement the goals and objectives of the County's General Plan which provides overall guidance to the future of Kauai.

The Kauai General Plan land use designations of the project area are a mix of urban, agriculture, open, resort, and public facilities. See EXHIBIT 5.1: COUNTY GENERAL PLAN. The General Plan shows that the public facility (airport) is surrounded by agriculture (sugar cane), open lands (Hanamaulu Bay and Shoreline) and touched by resort (Westin Kauai) and urban mixed use (Lihue Town).

The proposed use of the site conforms with the Development Plan and is in harmony with the General Plans' present agricultural designation of the surrounding lands.

B. COUNTY ZONING

The Comprehensive Zoning Ordinance (CZO) for the County of Kauai establishes procedures for the division of the County into land use districts and regulations for the type, size, placement and control of structures within various zoning district classifications. An amended use permit was obtained when the airport boundaries were expanded by acquisition of additional property which was then zoned Agricultural.

The new helicopter facility site is situated outside of the County's Special Management Area.

5.2 State LAND USE

The State Land Use Law regulates the classification and uses of State lands to accommodate growth and development. The law is the instrument that retains the natural resources of the area. All State lands are classified by the State Land Use Commission as either Urban, Rural, Agricultural, or Conservation. The Lihue Airport including the project site is designated as urban lands as shown on EXHIBIT 5.2: STATE LAND USE MAP.
5.3 **EXISTING LAND USE**

The present site is owned by the State and administered by Department of Transportation, Airports Division. The major portion of the site is vacant.

5.4 **REGIONAL USE PROPOSALS**

A. **KAUAI WESTIN RESORT HOTEL**

The Kauai Westin Resort Hotel is located southerly of the airport complex. A proposal to expand the resort to an integrated multiple-attraction visitor destination area is before various government agencies. EXHIBIT 5.3: KAUAI WESTIN LOCATION and EXHIBIT 5.4: KAUAI WESTIN PROPOSAL were obtained from the "Planning and Engineering Report for the Amended Proposed Rezoning at Ninini Point, Lihue, Kauai; Belt, Collins & Assoc., June 1986."

A noise study was conducted for this proposal by Darby and Associates in November 1985. The conclusion of the study is as follows: "The updated 1985 noise contours produced by Darby and Associates indicate that existing noise conditions will have only marginal impact upon the proposed project. Small portions of the eastern and northern part of the project lie within the Ldn 60 and greater contours. The affected areas are mostly areas proposed for golf course and horse stables. The project satisfies the State Land Use Condition that no resort units be located within the noise exposure forecast contour in excess of 25 NEF or roughly Ldn 60. No resort units are proposed in areas in excess of Ldn 60."

In response to comments from the State Department of Transportation, Airports Division, future noise forecasts were projected for the year 1995. As explained in Darby's report, the assumptions necessary for this projection are very difficult to establish. The report states that using conservative assumptions, the results still indicate that even in the 1995 projection, no resort units will be located in excess of the Ldn 60 contour. Portions of the project site in excess of Ldn 60 include portions of the golf course and grounds maintenance area, and perhaps portions of the easternmost commercial areas and restaurant.

In regards to noise complaints, the report states that "...the project will be primarily an action oriented resort and will
1. Future 750-room hotel
2. Restaurant
3. Wedding Chapel
4. Japanese Inn and access road
5. Three commercial areas
6. Portions of golf course, lagoons, etc.

EXHIBIT 5.4
KAUAI WESTIN PROPOSAL
JUNE 1985
generate relatively high background noise levels with extensive water play features. Also, it is understood that the buildings will be air-conditioned and primarily of concrete construction. Thus, it is now not predictable that many individuals will complain about helicopter noise. Such noise may be masked by resort activities and the water features and helicopter overflights may even contribute to the atmosphere intended.

Helicopter noise has affected outdoor activities at the Westin Complex by interfering with athletic award presentations as described by the Mayor of Kauai during the public hearing (APPENDIX B). The same grievance was aired at a previous public informational meeting. Since the meeting was informational, the grievant was informed that the noise level was accepted by the rezoning applicant and made a condition of approval.

The Darby study of November 1985, as discussed above does not agree with noise measurements and projections developed for this study. As shown in EXHIBIT 6.1, this study projects that the Kauai Westin development is within the 60 Ldn noise contours and therefore the expressed complaints are to be expected.

B. AMFAC PROPERTY DEVELOPMENT CORP. (AMFAC)

AMFAC owns a major portion of the lands adjacent to the Lihue Airport and under the existing flight paths. AMFAC has requested a re-examination of the proposed facility site during the projects Public Hearing on June 16, 1988 (See APPENDIX B: SUMMARY OF PUBLIC HEARING). They are preparing a comprehensive master plan for all of their lands in the Lihue region to meet Kauai's mid and long range urban needs. Anticipating expansion of residential development in the Lihue and Hanamaulu areas, AMFAC is concerned about potentially adverse noise and safety impacts.

The accepted EIS includes discussions on compatible land uses. FAA Order 1050.1D, requires the FAA and State to take appropriate action, to the extent reasonable, to ensure that the use of land adjacent to, or in the immediate vicinity of Lihue Airport is restricted to activities and purposes compatible with normal airport operations, including the landing and takeoff of aircraft. Since land use control for lands in vicinity of the Lihue Airport rests with the County of Kauai, the State Department of Transportation, in December 1978, requested that the County retain the compatible land use zoning in the vicinity of the Lihue Airport to ensure the longevity of this important transportation facility.
C. HANAMAULU-WAILUA ELEMENTARY SCHOOL

The Department of Education (DOE) proposes to construct a new elementary school to service the Hanamaulu-Wailua region of east Kauai. A site selection report and EIS (See LIST OF REFERENCES) were developed to discuss potential impacts at five different sites. Impacts from aircraft noise included in the discussion. The former Hanamaulu Elementary School site was selected. The site's environmental characteristic for aircraft noise was considered "good" since the site is outside the 55 Ldn noise contour.
SECTION 6. PROBABLE ENVIRONMENTAL IMPACTS

6.1 GENERAL

The proposed project will generate primary and secondary environmental impacts. Primary impacts are those resulting directly from construction activities and from the uses on the proposed project site. Secondary impacts are those which are anticipated beyond the project area such as population, land use, flightseeing routes, flight elevations and number of tour helicopters. Instead of addressing the off-site helicopter impacts on a piecemeal basis, the Department of Transportation has initiated a comprehensive study of the impacts with the goal of establishing a statewide policy on the management of helicopters. This statewide Helicopter Study, now in the initial stages, will address helicopter operations beyond the airport.

6.2 PRIMARY IMPACTS

A. SHORT TERM IMPACTS

Short-term impacts, beneficial and adverse, generally result from construction-related activities. Consequently, these impacts are of short duration and should not last longer than the duration of the construction.

1. Economic Impacts: Construction of the helicopter facility is expected to take about twelve months. Airport infrastructure servicing the facility including access road, water lines, and sewer system will be constructed within the Service (Ahukini) Road realignment project for which construction was initiated in the summer of 1988. The construction activity associated with the improvements will result in the generation of construction jobs and income during the period of construction. This construction activity in turn, will result in increased government revenues via gross excise, income, and other taxes generated by construction spending. The estimated construction cost for the proposed project is $3.8 million.

2. Air Quality Impacts: During construction of the site work and utilities some dust may be generated. This problem, however, is not anticipated to be significant as the area has been continuously tilled for sugar cane cultivation. If dust is a significant problem, it will be mitigated by the use of appropriate water sprinkling methods, limiting the area being worked at any one time, and immediately seeding of the graded area.
Exhaust emissions from construction equipment are not expected to significantly affect the air quality of the area. The prevailing winds in the area should help to quickly disperse any exhaust gas concentration.

Burning of clearing and grubbing material will not be allowed during construction of the helicopter facility. These materials will be transported to and disposed of at landfills.

3. Water Quality Impacts: During construction, significant erosion and sedimentation problems are not expected to impact the water quality of the area. However, construction activity can contribute to an increased sediment load into the nearby bodies of water especially if a significant storm occurs. Scheduling of construction to implement the perimeter ditch as the initial item of work will mitigate erosion problems. Adverse water quality impacts can be minimized by conformance with State and County erosion control standards.

4. Traffic Impacts: During construction of improvements at the site, the construction work force will add to the traffic load during the morning and afternoon peak hours. Additional traffic will be generated throughout the working day as machinery and materials are transported to the site. The impacts of increased traffic due to construction activities will be minor because of the high capacity roads leading to the airport. Local traffic in the area are airport related and should not experience delays as the site construction will not significantly affect existing roads.

5. Noise Impacts: During site preparation, clearing, and construction activities, an increase of ambient noise is inevitable. Construction-related noise will be intermittent rather than continuous throughout the construction period and will cease upon completion of the project. Impact to the adjacent areas will be insignificant as they are agricultural lands (sugar cane), the maintenance baseyard, and the proposed apron area (presently vacant).
6. Biological Impacts: There are no known rare or endangered species of flora or fauna at the project site. The site has been cultivated in sugar cane for many years.

7. Archaeological Impacts: There are no known archaeological sites within or near the project site.

The project area has been previously impacted by commercial agriculture activities and construction associated with existing rental car facilities. If historic remains such as artifacts, shell or charcoal deposits, burials, and stone platforms, pavings, or walls are found during construction, the contractor will be directed to stop work and the State Historic Sites Office will be contacted to assess the situation and make recommendations for mitigative actions, if needed.

B. LONG-TERM IMPACTS

Long-term impacts, beneficial and adverse, result from the implementation and operation of the helicopter facility. The impacts associated with these actions are identified and discussed in this section.

1. Economic Impacts: The new facility is intended to replace the existing operational area and not to generate additional traffic.

The facility, in itself, will not create meaningful long term employment opportunities as it is expected that present employees stationed off-airport will remain off-airport. There will be no savings of operational funds since activities will be unchanged.

There will be no long-term economic impact from the proposed facility as its function will be replaced by the inland facility.

2. Air Quality Impacts: The long-term environmental impacts on the ambient air quality are not anticipated to be significant. Odors and airborne particles from helicopter activities will be relocated close to the airport boundary. The adjacent cane fields are compatible uses and should not be affected by the helicopter activities.

The helicopter facility will experience dust from the cane fields during harvesting and planting periods. Also,
smoke from cane fires may be experienced during non-typical wind days. The prevailing tradewinds will carry dust and smoke away from the proposed facility.

Cane harvesting should be scheduled for no-burning during non-typical wind days as practiced wherever canefields abut residential areas.

Maintenance of the grassed taxi routes, turfed areas, and landscaping by use of EPA approved herbicides should not present a significant problem if applied according to prescribed methods. Burning will not be allowed as a method of maintenance.

Air quality impacts will be significantly reduced when the majority of the helicopter operations are transferred to the inland facility.

3. Water Quality Impacts

a. Surface: No significant impact on the quality of off-shore waters is anticipated as a result of the proposed project. A potential source of degradation is storm water runoff to the ocean. Facilities for helicopter wash-downs will not be provided. If the operator wish to conduct maintenance at the parking pads, the operator will be responsible for the installation of the required oil/water separator and appurtenances.

The storm water runoff will be conveyed by the existing drainage system. Water borne particles will be minimized by ground cover.

b. Ground Water: Degradation of the ground water system will not occur due to this project. Cesspools or injection wells are not part of this project. The limits of the Underground Injection Control (U.I.C.) is inland (at higher elevation) than the project site.

4. Biological Impacts: The project area is not considered to be a sensitive wildlife habitat area, nor does the site contain any endangered species of plants or animals. The project site and surrounding area has been cultivated for sugar cane for the past decade. Therefore, long-term adverse impacts are not anticipated from the proposed action.

5. Noise Impacts: Noise impacts associated with the new helicopter facility were investigated within APPENDIX A. The impact to the areas adjacent to Lihue Airport was based on helicopter flight forecasts for the year 2005.
Helicopter arrival and departure routes to Lihue Airport with the new facility in place are expected to remain the same as existing routes.

The findings indicate that there will be minimal risk of adverse health and welfare impacts from helicopter noise in the immediate vicinity of Lihue Airport after completion of the proposed helicopter facility at the year 2005 flight forecast. The reasons are that the arrival and departure routes remain unchanged and the year 2005 helicopter operations result in only a 1.5 Ldn increase in cumulative noise exposure from helicopter operations. It should be noted that the increase in helicopter operations may occur independent of the interim helicopter facility.

Annoyance reactions cannot be quantified as the complaint threshold for helicopter noise can be lower than the public health and welfare threshold. There will always be a risk of annoyance reactions from existing and future Lihue residents.

The noise contours from helicopters forecasted for 2005 will be affected by the relocation of most helicopter operations to the inland facility. The noise contours for the entire airport will not be significantly affected as jet noise is the primary agent.

6. Displacement: The helicopter tour agencies that are tenants of lease lots by revocable permits affected by the project will relocate to the new facility. No other tenants will be displaced.

7. Utilities/Infrastructure

a. Water Supply: The demand for potable water for the new facility was addressed in the Realigned Service (Ahukini) Road Project. A 16-inch water main was extended from the new terminal area to service the airport service area which includes the helicopter facility.

b. Sewage Disposal: There will be no impact due to increase sewage flows. Toilets and other wastewater flow generators will not be included in this project.

c. Drainage: The proposed project will include a perimeter drain to control off-site flood flows.

6-5
The perimeter drain will join the airports major drain system in vicinity of Taxiway 'A'.

Interior drainage will be handled by extension of the existing storm drain system. There should be no impacts concerning storm drainage to the interim facility or due to the interim facility.

d. Electrical/Telephone: Electrical and telephone demands are anticipated to be minimal to non-existent. The previously mentioned Service (Ahukini) Road realignment project included sufficient power supply for the facility.

e. Vehicular Traffic: There will be no increase of traffic due to the change in land transportation modes. The present system of transporting groups by vans from offices in Lihue will continue.

8. Public Services

a. Fire Service: The facility and activities will fit into the normal airport operations. The aircraft rescue and fire fighting (ARFF) team is stationed at the airport and trained as primary responders to aircraft incidents. The County's Lihue Fire Station is two miles away and serves as a support group.

There will be a minimal impact to the fire service requirements as the interim facilities are several hundred yards farther from the ARFF station. Response time will meet FAA certification requirements. A balancing of requirements will be experienced as older structures are replaced by modern buildings during taxiway and apron construction projects.

The interim facility project design includes remote gate controls for no-delay responses. The perimeter drain ditch and fence line will include features to allow the rescue team to leave the airport premises if an incident occurs on the adjacent lands.

b. Security: The impact of the new project will be insignificant to public security services. Lihue Airport contracts with a private organization for maintenance of airport security and traffic control. The existing security system will be expanded as necessary for the new project needs. For incidents beyond the scope of the airport security system, the Kauai Police Department is within two miles of the airport.
c. Health Services: The new project will not impact present health services. Activities at the new facility will conform to present operations such that any incident is within the emergency preparedness plan of the airport. Annual practices include a contrived aircraft incident which involves emergency health care at Wilcox Memorial Hospital located two miles north west of the airport.

6.3 SECONDARY IMPACTS

A. LAND USE

Land use relationships of the proposed facility with its surrounding lands are a critical item. During the development of the Lihue Airport Master Plan Study and the disclosures within its accepted EIS, land use compatibility was a major topic. Present usage of the surrounding lands are compatible with the proposed project as disclosed in the accepted EIS. It is expected that when land use of the surrounding areas are converted from agriculture and open designations, suggestions to alter the master planned facilities and activities will be experienced.

The State Department of Education (DOE) proposes a new elementary school to service the Hanamaulu - Wailua region of east Kauai. A site selection report and EIS were developed to discuss potential environmental impacts at five candidate school sites. Environmental characteristics included aircraft noise as well as the typical items. The former Hanamaulu Elementary School Site shown on EXHIBIT 6.1: PROPOSED DEVELOPMENTS had the highest evaluation and has been selected by the DOE. Since the site is outside the 55 Ldn Noise Contour, its environmental characteristic of aircraft noise was rated good.

B. HELICOPTER ACTIVITY:

Growth of helicopter activity is not promoted or restricted by this project. The interim helicopter facility will not be constructed because of a need to provide additional capacity to accommodate forecast increased demands. Rather, the facility will be constructed to reduce the congestion at the existing operational area, allow for the improvements of Taxiway 'A'. The goal to separate fixed wing and rotary aircraft in the air cannot be achieved due to maintenance of existing approach and departure paths.

Helicopter operational use have been requested for unused airfield areas at Lihue Airport...adjacent to the old terminal, the vacant general aviation apron, and the vacant
ground transportation facilities. These unused airfield areas show that the capacity for increased helicopter activities already exists. This discussion is intended to show that the project will be constructed for safety and operational control and not spatial requirements.

The helicopter facility will function as a service entity. It will not automatically attract increased helicopter activity. New activities will not be experienced unless the demand warrants it due to the costs involved. The demand will be a function of the tourist industry which depends on the following:

1) Attractiveness of Kauai as a visitor destination area
2) Visitor accommodations available on the island, and
3) Promotion of the attractiveness of Kauai and the available accommodations.

The interim helicopter facility will not contribute or detract from the growth of helicopter activity on Kauai. The secondary impacts of increased helicopter activity is associated with the growth of tourism which will be determined elsewhere.

C. POPULATION

There will be no on-site population impact due to this project as the facilities are replacements to house present activities. Off-site population impacts will be caused only by short-term employment generated through the construction phase. Since most of the construction employees will probably be from Kauai, there should be negligible impact on the population growth of Kauai County.

The facility will not contribute to the growth on Kauai. The secondary impacts associated with growth including the impact on water supply, land values, existing lifestyle and public utilities will be determined by other entities.

D. OFF-SITE IMPACTS

Helicopter impacts extend well beyond the air space under jurisdiction of the Lihue Airport control tower. These impacts concern visual and noise intrusions into the Kauai lifestyle. Results of the intrusions are complaints and proclamations to restrict flightseeing routes and control helicopter numbers.
The Kauai Helicopter industry has reacted to the complaints by developing a route through the island of least impact which is the basis of the "Kauai County Voluntary Helicopter Noise Abatement Program". Although most Kauai tour companies have accepted the routes by signature, complaints still persist due to individual pilots not conforming to the routes and non-tour flights which do not adhere to the agreement.

Complaints regarding helicopter operations are not unique to Kauai. The concerns of the activities by tour helicopters are similar for the rest of the state. The Department of Transportation has initiated a comprehensive study (State Helicopter System Planning Study) of the problem with the goal of establishing a statewide policy on the management of helicopters. The Kauai portion of the study has been initiated with a public information meeting in May and September 1988.

At the present time, except for safety considerations, there are no administrative or regulatory methods for limiting growth of tour helicopters at public use facilities. Controls for flight routes are based on safety but in every situation, the pilot has the ultimate decision on route and elevation for aircraft safety. The State Helicopter System Planning Study will evaluate the compatibility of helicopter operation and the desired lifestyles. Under Act 397, the state will prepare helicopter master plans, and formulate rules to regulate tour aircraft operations at public airports.
SECTION 7. ADVERSE ENVIRONMENTAL IMPACTS WHICH CANNOT BE AVOIDED

7.1 INTRODUCTION

This section briefly discusses probable adverse environmental impacts which cannot be avoided, and mitigation measures that would reduce unavoidable adverse effects.

7.2 PRIMARY SHORT-TERM IMPACTS

Short-term impacts are those associated with construction activities such as grading, utility installation, and landscaping. The significance of short-term impacts for the project site is minimal as the site abuts the State maintenance baseyard, vacant airport land (future lease lots and apron) and cane fields.

A. AIR QUALITY

Ambient air quality will temporarily decrease as a result of dust generated from clearing, grading, and other construction activities. The contractor will be required to minimize dust problems by conformance to State Department of Health regulations and County of Kauai rules and ordinances. Dust problems can be mitigated to a large extent by water sprinkling, limiting the area being worked at any one time, and immediate seeding of the graded area.

Exhaust emissions from construction equipment will also degrade the ambient air quality. Prevailing winds in the area should help to quickly dilute and disperse concentrations of exhaust emissions. The direction of the prevailing winds is away from the existing maintenance yard. Air quality of the area should therefore, not be significantly affected.

B. NOISE

The noise level will increase during the construction period. This effect will be of short duration, lasting only for the construction phase with the peak occurring during grading operations. The noise level can be reduced by the contractor by ensuring proper functioning of mufflers on all equipment, and conducting construction activities only during daylight hours, between 7:30 a.m. to 5:00 p.m.

C. WATER QUALITY

Construction of the interim helicopter facility should not adversely affect the water quality of the area. The impact of
construction activities can be mitigated by implementing erosion control measures such as interceptor ditches and sediment ponds. Grading in accordance to County erosion control standards and State water quality standards should minimize the adverse water quality impacts.

D. TRAFFIC

Local traffic may experience momentary delays when construction-related vehicles use existing roads to transport material and equipment. Additional traffic impacts will occur when the facility's roadway joins the existing service road. The problem will be mitigated by providing traffic controls and traffic safety precautions.

E. PUBLIC HEALTH AND SAFETY

Measures to assure public health and safety will be provided throughout all phases of construction. During non-work hours the construction work areas will be secured with safety signs and safety devices as required by State and County regulations.

7.3 PRIMARY LONG-TERM IMPACTS

Long-term impacts are the result of operating the helicopter facility. These impacts are critical as proper planning is required to minimize disruptions to the desired lifestyle and avoid burdens on the existing environment.

A. DISPLACEMENT

The loss of productive agricultural lands to develop the facility was discussed in the approved EIS, which addressed all cane lands affected by the airport, as follows:

"The loss of 570 acres of cane land represent's an adverse impact that would reduce the Island's cane lands by about 1%. If agriculture is diversified as planned, any loss of cane production jobs could be offset by new jobs elsewhere on the Island. The most direct impact will be felt by the Lihue Plantation Company, which could lose approximately 3% to 4% of its present land in cane production on Kauai."

This project will occupy about 20 acres of the 570 acres of cane land discussed above.
**B. AIR QUALITY**

Although the site is part of the airport complex and subject to the vehicular and aircraft emissions normally associated with airport operations and support activities, relocation of helicopter activities may transport the emissions to areas which did not experience the same level of pollutants. The prevalent winds will direct the emissions away from inhabited structures. The approved EIS examined air quality impact due to 1995 forecasted helicopter activities. Emissions from helicopters would reach the terminal building only under wind conditions that would direct pollutants from other aircraft away from the terminal. Carbon monoxide concentrations at the terminal building due to 1995 helicopter activity is predicted at 0.6 mg/m³ which is well below the State standard of 10 mg/m³. For receptor sites outside the airport, pollutant concentrations from helicopter operations will be insignificant.

**C. NOISE**

As discussed in detail within APPENDIX A, the proposed facility will expand the 55 Ldn airport noise contours by approximately 1,250 feet toward Lihue. Increase in the airport noise contours are limited to lands currently in agriculture. The projected operations at the airport should result in helicopter noise levels no higher than 54 Ldn at existing residences and noise sensitive properties. The predicted 55 Ldn contours associated with the proposed helicopter facility are not expected to enclose adjoining noise sensitive properties, as shown on EXHIBIT 7.1: 2005 HELICOPTER NOISE CONTOURS, noise impacts should be minimal with near zero risks of adverse health and welfare impacts. Although health and welfare impacts are minimal, the complaint risks from helicopter operations will increase if operators are not cognizant of the sensitivity of the community. Primary mitigation measures is to avoid overflights of inhabited areas and if necessary, fly at higher altitudes. The Kauai helicopter industry has identified the noise sensitive areas of Kauai and have prescribed routes away from these areas. Noise mitigation includes a voluntary "Fly Neighborly Program" developed by the Helicopter Association International. Methods within the program to reduce helicopter noise during landing and departure procedures are as follows:

7-3
"Noise-Abatement Approach and Landing"

1. When commencing approach, follow one of these two procedures:
   - Establish a rate-of-descent of at least 500 fpm before reducing airspeed, then reduce airspeed while increasing rate-of-descent to at least 800 fpm, or
   - Hold rate-of-descent to less than 200 fpm while reducing airspeed to about 65 mph, then increase rate-of-descent to at least 800 fpm.

2. At a convenient airspeed between 60 and 90 mph, set up approach glide slope while maintaining the 800-fpm or more rate-of-descent.

3. Increase rate-of-descent if the main rotor tends to slap, or if you want a steeper glide slope.

4. Approaching the flare, reduce airspeed to below 70 mph before decreasing rate-of-descent.

5. Execute normal flare and landing, decreasing rate-of-descent and airspeed appropriately.

The basic difference between this approach technique and a normal one is that this one avoids the slap regime. Both procedures give approximately the same airspeed during the approach, with the quieter technique using a glide slope which is a few degrees steeper. Once the pilot has transitioned from cruise to the approach glide slope, he can tailor his airspeed and rate of descent to fit local conditions, avoid unsafe regimes, and still guarantee minimum noise.

Departure

Takeoffs are reasonably quiet operations, the total ground area exposed to helicopter sound can be limited by using a high rate-of-climb and making a very smooth transition to forward flight. The departure route should traverse over areas which are the least sensitive to noise.

These procedures will mitigate noise impacts in the vicinity of the airport. The helicopter pilot must be aware of the environment in which he operates. The background noise level of Kauai County is low, particularly in the evenings, and citizens are conscious and resentful of noise intrusions. Therefore it would behoove helicopter operators to follow the noise abatement procedure."
Noise mitigation measures may be promoted and prescribed but the final action is the helicopters pilot responsibility. The pilot must determine the correct flight procedure dependent on wind conditions, air traffic, aircraft performance, and passenger load.

D. DURATION

The duration of the primary long-term impacts is dependent on the implementation schedule of the private inland helicopter facility. Upon completion of the inland facility and relocation of most of the helicopters, the long-term impacts will be nullified and it can be expected that the noise impacts will be reduced.

7.4 SECONDARY IMPACTS

A. LAND USE

Impacts from helicopter operations have been shown to be minimal if land uses remain constant. Land uses are affected by perceived needs and several sites within the Lihue area are targeted for higher uses. Residential subdivisions are planned in Hanamaulu (Wiliko Expansion) and Lihue (Molokoa Expansion). These sites are within the 55 Ldn contour and may be impacted by aircraft noise if implemented as planned. As shown on EXHIBIT 7.2: 2005 AIRPORT NOISE CONTOURS the sites are within the 55 Ldn contour with and without the affects of the new helicopter facility.

EXHIBIT 7.2 also identifies a future resort hotel within the Kauai Westin Complex. This site is shown within the 60 Ldn noise contour. Low level helicopter flights may be unavoidable. The "Planning and Engineering Report for the Amended Proposed Rezoning at Ninini Point, Lihue, Kauai" includes investigations of effects of the helicopter overflights. As a minimum, disclosure of the relatively high risks of complaints regarding helicopter operations should be provided to the future users and occupants of the planned development.

The proposed helicopter facility will have minimal impact to these proposed developments. The threshold of health and welfare noise levels (55 Ldn) will affect the site with or without the helicopter facility. Current land uses along the helicopter arrival and departure routes are clear of noise sensitive activities and compatible with helicopter operations. Proper land use controls could be a mitigating measure and should be exercised to maintain the current noise compatibility of land uses along these routes and prevent
encroachment of noise sensitive uses into airport noise contours.

Additional noise mitigation measures are not considered necessary prior to completion of the proposed helicopter facility because the 55 Ldn contours associated with helicopter operations are not expected to encompass existing noise sensitive properties, and are equal to or less than existing background ambient noise levels.

B. OFF-SITE IMPACTS

The forecasted growth in tour helicopter operations may require mitigation measures to minimize their impact along the tour routes. Kauai helicopter operators have voluntarily developed a route of least impact by avoiding noise sensitive areas as a step to mitigate complaint risks. Other mitigating measures such as limiting the number of tour helicopters, revised tour routes, and noise abatement programs are being addressed in the State Helicopter System Plan now being formulated.

The State Helicopter System plan is scheduled for completion in February 1989. Formulation of the plan includes inventory of facilities, demand forecasts, facility needs, advisory committees, public meetings, and public review. The objectives of the plan are:

1. Identify the problems and assess the impacts of helicopter operations.
2. Plan for the future accommodation of helicopter's within the State Airport System.
3. Seek to improve the compatibility of helicopter operations within the community.

Off-site impacts can be mitigated by promotion of the Helicopter Helpline. Community complaints can be received, monitored, and handled. The Helpline can also identify offending operators and formulate voluntary solutions before the problem expands. Voluntary mitigation actions would be preferable to governmental regulations and enforcement.

C. DURATION

Secondary impacts from helicopter operations in the Lihue vicinity will be largely eliminated upon the commencement of operations at the inland helicopter facility. Noise and visual impacts will be reduced to a pre-1980 level when only three companies operated from Lihue Airport.
SECTION 8. ALTERNATIVES TO THE PROPOSED ACTION

8.1 INTRODUCTION

This section briefly explores and evaluates known alternatives to the proposed action.

8.2 NO ACTION ALTERNATIVE

The no action alternative would be the least desirable as the existing operational area has been identified as extremely congested. Reports on helicopter operations at the existing site and remarks within national media coverage commented on unsafe conditions. The FAA reports that the Lihue situation continues to be a concern and that inspectors are keeping watch over efforts to improve operations.

Additionally, the no action alternative will continue the undesirable mix of helicopters and fixed wing aircraft. The helicopters account for 50 percent of the air traffic at Lihue Airport. This high proportion and the relative difference in airspeeds makes for an unhealthy mix.

Finally, the no action alternative will also prevent the State from attaining the goals of the airport master plan. If the helicopter area remains in its present location, Taxiway A cannot be realigned for proper airport operations.

8.3 ALTERNATIVE SITES

A. ALTERNATIVES FOR LOCATION SELECTION

The following is a statement from the accepted EIS.

"Many alternatives were considered during the Lihue Airport Master Planning Study before the recommended Master Plan was developed. Among the alternatives analyzed were the possible use of other modes of transportation; other existing airports; alternative airport locations; the existing Airport without improvement ("do-nothing" alternative); and the Airport with alternative airfield and terminal area locations and configurations that might alleviate present and potential adverse environmental impacts on the Airport environs."

Alternative airport locations were Port Allen, Kilauea Bay - Mala, Barking Sands, and Poi. These locations were rejected in favor of the present location. The use of Port Allen for concentrated helicopter operations is an alternative which has received negative reactions during public meetings convened by State legislative committees.
B. ALTERNATIVES FOR SITE SELECTION:

The LIHUE AIRPORT DEVELOPMENT PLAN UPDATE OF APRIL 1986 considered several alternatives for the helicopter facility site to execute the master plan.

These alternatives as shown on EXHIBIT 8.1: SITE SELECTION ALTERNATIVES are:

1. **New Area West of Ahukini Road:**

   Selection of the New Area West of Ahukini Road allows for helicopter approach and departure routes that avoid the standard flow of aircraft traffic. Helicopter activities then are essentially independent of fixed-wing operations on Runway 3-21. Sight lines from the control tower would be good. Space for parking up to 200 automobiles is available. Also, a hydrant fueling system can be efficiently provided to minimize the need for hover taxiing.

2. **Present Helicopter Area:**

   The present Helicopter Area alternative was not recommended for the long range site. Using this alternative would require additional land acquisition and interaction with fixed-wing aircraft operations on Runway 3-21 would continue. Relocating the helicopter landing and take-off strip to eliminate the interaction results with poor sight lines from the control tower.

3. **Old Passenger Terminal:**

   The existing Passenger Terminal alternative was eliminated since it could not fit into the long range objectives. More importantly, use of the existing passenger terminal would increase the interactions with fixed-wing operations on Runway 3-21. The terminal is within the building restriction line and required clear zone from the runway.

C. INLAND FACILITY

This concept is proposed by private individuals and has been presented at the informational meeting for the airport master plan and has had written media coverage on Kauai. Proponents of this concept have developed schematics and have approached government agencies for support. The approach used by the proponents is for permitted use as funding and regulation will
ALTERNATIVE SITES

① = NEW AREA WEST OF AHUKINI ROAD

② = PRESENT HELICOPTER AREA

③ = EXISTING PASSENGER TERMINAL

SCALE: 1" = 1,000'

EXHIBIT 8.1
SITE SELECTION ALTERNATIVES
be private. At this time, the request for permitted use has not included any formal application. Media coverage indicates support from the land owners, Grove Farm (Halfway Bridge Site) and AMFAC (Wailua Site), where the inland facility is proposed. Discussions with representatives of the owners confirm that they are willing to work toward a long term solution but nothing definite has been resolved.

The inland facility will be a "quasi-public airport" in that the airport will be privately owned and used by paying passengers carried in privately owned aircraft operated for hire. Several layout configurations are under investigation. Staging and building areas will be dependent on land availability as the project sites are open and unrestricted. Air space control has not been resolved but initial discussions with FAA indicate that they will not staff a control tower at the inland facility. The Westin Resort, Nawiliwili Harbor, and Hanamaulu areas will experience reduced noise impacts due to helicopter operations.

The Department of Transportation, Airports Division has declared their support for the inland facility concept in terms of traffic reduction at Lihue Airport. Their immediate concerns are to relieve the present congestion, claims of unsafe operations and allow for taxiway construction as soon as possible. The initiation of the inland facility may be prolonged due to funding, governmental regulations as discussed in Section 2.2, and environmental concerns.

Land use controls for this facility lies mainly with the County of Kauai. The proposed facility would be subject to the procedural requirements of a Use Permit, Special Permit and Class IV Zoning Permit before the Kauai Planning Commission. A General Plan and/or Zoning Amendment does not apply in this instance. The petition must be transmitted to the State Land Use Commission for final review and action pursuant to their rules and regulations. (If the project site is greater than 15 acres, the procedural requirements of the State's Land Use Commission's Rules of Practice and Procedure and District Regulations are applicable). It can be expected that the inland facility will have difficulties in acquiring all permits if the Lihue Airport continues to accommodate tour helicopters without restrictions. During the planning phases of the inland facility, several issues relating to island-wide helicopter activities must be addressed. These issues include:

1. Has Kauai reached the saturation point in terms of helicopter flightseeing activities?
2. Can helicopters be limited to their use of Lihue Airport after the inland facility is constructed?

3. How will safety and flight paths be regulated?

During the June 16, 1988 public hearing (See APPENDIX B: SUMMARY OF PUBLIC HEARING), nine testimonies were received of which the majority, including a strong advocacy from the County, supported the inland facility. Also, petitions from citizens (See APPENDIX B) were received urging the State to close Lihue Airport to all scenic tour operations and to permit the immediate construction of a private sector facility away from all noise sensitive areas.

D. SEGREGATED SITES

Helicopter facilities supporting single helicopter operators were the typical situation prior to aggregation at the Lihue Airport. Previous heliports have been located at Kauai Surf, Poipu Beach, and Coconut Plantation. Proposals for new heliports at Omao and Koloa did not receive sufficient support to commence construction and operations.

Other helicopter operational or landing sites exist at Princeville, Wilcox Hospital, Port Allen, and Makaweli. Princeville and Port Allen also support fixed winged aircraft. The Wilcox Hospital helipad is normally used only for medical emergency situations. The Makaweli site (private ownership) was recently initiated to support west-side tours and access to the island of Niihau.

Proliferation of segregated sites is not advocated by the Kauai public or county planners. Objections to noise and possible safety hazards have impeded construction of new segregated helipads sites.

8.4 ALTERNATE FLIGHT PATHS

Alternative helicopter flight paths arriving and departing the new facility at the Lihue Airport have been promoted by the FAA and State officials. The FAA criteria for flight paths include:

a. Minimum aircraft mixing (by type).

b. No noise complaints

c. Pilot acceptance, as pilots have final word on safety.

Alternative routing, their conflicts, and controls were discussed with the Kauai helicopter operators. The routes will be test flown
by the FAA for final acceptance. The alternative routings and discussions are:

a. Ingress/egress through Hanamaulu (Kalepa Ridge) Saddle: All helicopter traffic would fly through a "channel" about 2,000' wide and less than 1,000' altitude. The route skirts the existing Hanamaulu subdivision. The route will bring helicopter closer to the ground producing greater noise annoyance.

b. Status Quo Route with Radar Support: The addition of radar facilities would not help in eliminating the conflicts associated with the helicopter plus fixed wing mix at the airport. The reason is that the conflicts are occurring close-in near Runway 03/21, where the radar display would not be effective.

c. Status Quo w/Additional Tower Manpower: Increased controls by providing additional manpower is not feasible as two separate controllers should not manage the same air space. Helicopter crossing at runway 3/21 is very critical but directing general aviation (60 flights/day) to runway 17/35 during peak traffic is not recommended, due to crosswinds.

d. Status Quo: If the current entry/Departure routes are maintained during operation of the interim helicopter facility, the most desirable runway crossing point would be in the general vicinity of the existing helicopter facilities. Maintaining the current entry/Departure routes, while not the most desirable situation, is possible.

e. Transfer all Fixed Wing arrivals to Runway 35: It may be possible to reduce the RWY 03/21 crossing delays during departures by transferring all fixed wing arrivals to RWY 35, and by having the helicopters cross the runway centerline to the south. Primary difficulties to light aircraft would occur from high crosswind components on RWY 35.

f. On-site Adjustments: It is possible that two runway crossing points could be used. When aircraft are on approach to RWY 03, the existing crossing point could be used, with helicopters held back if a RWY 03 departure is also in progress. When aircraft are not on approach to RWY 03, the area to the south of the runway could be used as the crossing point. The primary problem with these procedures is that it may require too much coordination and may be too complex.

g. Counter-clockwise Tour Routes: Operators claim that the Kauai scenery is made for clockwise routes. The operators consider
flying along the Napili Cliffs in a counter-clockwise direction difficult. The preferential route is to fly clockwise into the wind along the cliffs. A southern arrival route would make the tour 5 minutes longer adding considerable cost to operations. Pilots would rather have conflicting traffic head-on (see to avoid) and not have aircraft overtaking helicopters during the descending pattern.

The status quo routes were considered to be the most feasible routes following meetings with State DOT, FAA and the helicopter operators. The routes will be maintained to continue the current southerly flow of helicopter departures toward Nawiliwili Harbor and arrivals from the Hanamaulu (Kalepa Ridge) saddle. Maintenance of the status quo routes means that the goal of in-flight separation of fixed wing and rotary aircraft will not be attained.

8.5 ALTERNATIVE SITE IMPROVEMENTS

The proposed plans for the helicopter facility have been revised many times to address concerns of the administering agencies and expected users. FIGURE 8.2: ALTERNATIVE SITE IMPROVEMENTS shows how the site could be developed to provide the total needs for the helicopter operators. Improvements include underground fueling, flight staging areas, building areas for maintenance and administration functions, spacious vehicular parking lot, and a helicopter terminal. This alternative was abandoned when the inland facility received the support of the majority of the operators, the land owner of the proposed inland site, and the County of Kauai. Pursuing this alternative would have meant securing solutions for fuel dispensing and controls, tower line-of-sight requirements, and lease lot rules and regulations.

It is expected that the inland facility will be constructed and reduce the need for the helicopter facility at the Lihue Airport. Should construction of the inland facility be immediate, the size of the interim helicopter facility can be scaled-down to handle the reduced traffic. Should the inland facility be constructed after the Lihue facility, the pads can be used for other purposes, such as ground transportation operations or airport support/fixed based operations.

A further scaled-down facility will be adequate if lease documents for the inland site include a clause stating that leasing of land at the inland site precludes use of Lihue Airport. Lihue Airport would then be limited to transient operations only and not for loading/unloading of passengers.
The construction and operation of the proposed project would involve the irretrievable commitment of certain natural and fiscal resources. Major resource commitments include land, construction materials, manpower and energy. The impacts of using these resources should, however, be weighed against the safety benefits and the consequences resulting from taking no action.

The commitment of construction materials, manpower, and energy are mostly unrenewable and irretrievable. Benefits to the State's tourism industry will be insignificant as the interim facility is an equivalent to the existing helicopter operational area. The operation of the project will not include the consumption of potable water and electricity.
SECTION 10. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND MAINTENANCE/ENHANCEMENT OF LONG-TERM PRODUCTIVITY

A. SHORT-TERM USES

The development of the interim helicopter facility will include local short-term uses of man's environment during the construction phase of the project. Minor disruptions and nuisances in the vicinity of the project site should be expected. Temporary economic benefits will result from construction expenditure and employment opportunities.

The development of the helicopter facility will relieve the congestion experienced at the existing operational area and separate on-ground fixed wing aircraft from helicopter operations. The operations will be efficient considering dedicated fueling pads.

B. LONG-TERM PRODUCTIVITY

The interim helicopter facility will meet the existing operational space needs for flightseeing tours. Increase in long-term productivity and its economic benefits are not items promoted by the interim facility. The intent of the facility is to replace the existing operational area and not to expand tour activities.

The long-term productivity of this facility can occur at other locations on the island. It is possible that all tours will be generated from the new inland facility. The interim helicopter facility can be easily modified for use as a ground transportation support entity.
SECTION 11. LIST NECESSARY APPROVALS

The project site is designated as "Urban" (EXHIBIT 5.2) by the State Land Use Commission. Boundary amendment from agriculture was included in LUC Interp ZM-400-H and ZM-400-H-I concerning the Lihue Airport Complex.

The County of Kauai General Plan designation of the project site is "Public Facilities" as shown in EXHIBIT 5.1. Use of the site for a helicopter facility is consistent to the designation. The basis of the planned use is for an airport complex.

Prior to proceeding with the development at the helicopter facility, the Department of Transportation will request approval and permits from the following agencies:

1. Federal Aviation Administration (Environmental, Article 14 of the Federal Regulations, Airport Layout Plan)
2. Governor, State of Hawaii (Environmental)
3. State Department of Health (Dust Control)
4. Kauai County Planning (Construction plans)
5. Kauai County Public Works (Sewage, Grading)
6. Kauai County Department of Water (Water Connection)
7. Kauai County Fire Department (Fire Protection)
8. Hawaiian Electric Company (Electrical)
9. Hawaiian Telephone Company (Telephone)
SECTION 12. LIST OF AGENCIES, ORGANIZATIONS, AND INDIVIDUALS CONSULTED IN THE PREPARATION OF THE EA AND SEIS

A. NOTICE OF DETERMINATION/ENVIRONMENTAL ASSESSMENT

1. The following list of agencies and organizations were contacted on an initial attempt to identify interests in regards to the proposed actions. The intent was to make those who may be affected aware of the proposed project. Responses received regarding the EA determined which of the potential impacts are the major issues.

   a. Federal Agencies

      1) Federal Aviation Administration
      2) Soil Conservation Services
      3) Fish and Wildlife Service
      4) Army Engineer District, Honolulu
      5) Headquarters 15th Air Base Wing (PACAF)

   b. State Agencies

      1) Department of Planning & Economic Development
      2) Department of Land & Natural Resources
      3) Office of Environmental Quality Control
      4) Department of Health
      5) Department of Agriculture
      6) Water Resources Research Center, UHM

   c. County Agencies

      1) Planning Department
      2) Fire Department
      3) Department of Public Works
      4) Department of Water
      5) Office of Economic Development
d. Organizations & Individuals

1) American Lung Association of Hawaii
2) Hawaii Visitors Bureau
3) Kauai Chamber of Commerce
4) Sierra Club, Life of the Land
5) Lihue Plantation Company
6) Hawaiian Airlines
7) Aloha Airlines
8) Hemmeter Aviation
9) League of Women Voters
10) Kauai Citizen Helicopter Advisory Board
11 - 24) Helicopter Operators at Lihue Airport
25) Helicopter - Community Relations Planning Board
26) William Sollner

2. The following agencies, organizations provided comments in reviewing the EA. A total of 14 comments were received and are reproduced in APPENDIX C: COMMENTS TO NOTICE OF DETERMINATION/ENVIRONMENTAL ASSESSMENT. Comments were not responded to directly but addressed in the Draft Supplemental Environmental Impact Statement.

a. Federal Agencies

1) U.S. Army Engineer District, Honolulu
2) Fish and Wildlife Service

b. State Agencies

1) Environmental Center, U of H Manoa
2) Department of Health
3) Department of Agriculture
4) Department of Land & Natural Resources

c. County Agencies
1) Department of Public Works
2) Department of Water
3) Fire Department
4) Planning Department

d. Organizations & Individuals
1) Kauai Citizens Helicopter Advisory Board
2) AMFAC Properties
3) Jack Harter Helicopters
4) Sierra Club, Kauai Group

B. SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT
1. The following agencies, organizations and individuals were provided copies of the Draft Supplemental Environmental Impact Statement.

a) FEDERAL AGENCIES

1) Department of the Army
   U. S. Army Engineer District, Honolulu
   Building 230
   Fort Shafter, Hawaii 96858

2) Soil Conservation Service
   U. S. Department of Agriculture
   P. O. Box 50004
   Honolulu, Hawaii 96850

3) Fish and Wildlife Service
   U. S. Department of the Interior
   P. O. Box 50167
   Honolulu, Hawaii 96850

4) Commander, Naval Facility
   Command Pacific Division
   U. S. Department of the Navy
   Pearl Harbor, Hawaii 96860
5) Federal Aviation Administration
Honolulu Airports District Office
P.O. Box 50244
Honolulu, Hawaii 96850

6) District Planning Office
U. S. Department of Transportation
United States Coast Guard
Commander, Fourteenth Coast Guard District
300 Ala Moana Boulevard
Honolulu, Hawaii 96850

7) U.S. Army Support Command Hawaii
Attention: Environmental Management Office
Fort Shafter, Hawaii 96850-5000

b. STATE AGENCIES

1) Department of Agriculture
State of Hawaii
1428 South King Street
Honolulu, Hawaii 96814

2) Department of Defense
Office of the Adjutant General
State of Hawaii
3949 Diamond Head Road
Honolulu, Hawaii 96816-4495

3) Department of Health
State of Hawaii
1250 Punchbowl Street
Honolulu, Hawaii 96813

4) Department of Land & Natural Resources
State of Hawaii
1151 Punchbowl Street
Honolulu, Hawaii 96813

5) Department of Planning & Economic Development
State of Hawaii
250 South King Street
Honolulu, Hawaii 96813

6) Department of Social Services and Housing
State of Hawaii
1390 Miller Street, #209
Honolulu, Hawaii 96813

7) Office of Environmental Quality Control
State of Hawaii
465 South King Street, #115
Honolulu, Hawaii 96813
8) Environmental Center
University of Hawaii
Crawford 317
2250 Campus Road
Honolulu, Hawaii 96822

9) Water Resources Research Center
University of Hawaii
Holmes Hall 203
2540 Dole Street
Honolulu, Hawaii 96822

c. COUNTY AGENCIES

1) Kauai County
Planning Department
4280 Rice Street
Lihue, Hawaii 96766

2) County of Kauai
Department of Public Works
3021 Umi Street
Lihue, Kauai, Hawaii 96766

3) County of Kauai
Department of Water Supply
4938 Pua Lake Street
Lihue, Kauai, Hawaii 96766

4) Kauai Community College
Puhi
Lihue, Kauai, Hawaii 96766

d. UTILITY COMPANIES

1) Kauai Electric Division
Citizens Utilities Company
P.O. Box 278
Elelele, Kauai, Hawaii 96705

2) Hawaiian Telephone Company
P.O. Box 2200
Honolulu, Hawaii 96841

e. ORGANIZATIONS

1) The Sierra Club, Hawaii Chapter
P.O. Box 111070
Honolulu, Hawaii 96828
2) Life of the Land
250 South Hotel Street, Suite 211
Honolulu, Hawaii 96813

3) American Lung Association
245 North Kukui Street
Honolulu, Hawaii 96817

4) Hawaii Helicopters Operators Association
228 Lagoon Drive, Suite 207
Honolulu, Hawaii 96819

5) Kauai Citizens Helicopter Advisory Board
P.O. Box 1071
Lawai, Kauai, Hawaii 96765

6) State Helicopter & Tour Aircraft Advisory Board

f. GOVERNMENT OFFICIALS

1) Honorable Lehua Fernandes Salling
Senator
State Capitol, Room 218
Honolulu, Hawaii

2) Honorable Ezra Kanoho
Representative
State Capitol, Room 315
Honolulu, Hawaii

3) Honorable Bertha Kawakami
Representative
State Capitol, Room 318
Honolulu, Hawaii

4) Honorable Tony Kunimura
Mayor
Kauai County
4396 Rice Street
Lihue, Kauai, Hawaii 96766

5) Honorable Ronald Kouchi
Chairman
Kauai County Council
4396 Rice Street
Lihue, Kauai, Hawaii 96766
g. **INDIVIDUALS**

1) **Kauai Helicopter Operators (Separate copies)**
   a) Bali Hai Tours
   b) Inter-Island Helicopters
   c) Island Helicopters, Kauai
   d) Kauai Helicopters
   e) Menehune Helicopters, Ltd.
   f) Kenai Air of Hawaii, Inc.
   g) Niihau Helicopters
   h) Ohana Helicopters
   i) Papillon Helicopters, Ltd.
   j) South Sea Helicopters
   k) Jack Harter Helicopters
   l) Will Squyres Helicopter Service
   m) ERA Helicopters
   n) Safari Helicopters

2) **AMFAC Properties**
   P.O. Box 3140
   Honolulu, Hawaii 96802

3) **William Sollner**
   Garden Isles Newspaper
   P.O. Box 231
   Lihue, Kauai, Hawaii 96766

4) **Gary Blaich**
   P.O. Box 404
   Kilauea, Kauai, Hawaii 96754
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LIST OF REFERENCES

1. "Lihue Airport Development Plan Update" by Airports Division, Department of Transportation, State of Hawaii, April 1986.


APPENDIX A

ACOUSTIC STUDY OF
POTENTIAL NOISE IMPACTS ASSOCIATED WITH
THE INTERIM HELICOPTER FACILITY AT
LIHUE AIRPORT
LIHUE, KAUAI

PREPARED FOR
AKINAKA & ASSOCIATES, LTD.

BY
Y. EBISU & ASSOCIATES

MAY, 1988
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I. PURPOSE AND SUMMARY

The purpose of this study was to determine if the proposed new helicopter facility at Lihue Airport and the forecasted landings and takeoffs from the new facility would generate adverse noise impacts on surrounding noise sensitive properties. The proposed improvements involve a consolidation and relocation of existing helicopter parking positions and refueling facilities. The new facility will be located northwest (mauka) of Runway 03-21 at Lihue Airport. Helicopter ingress and egress routes in the areas surrounding Lihue Airport with the new facility in place are expected to remain the same as existing routes.

This study does not evaluate the possible increase in secondary noise impacts associated with forecasted increases in tour helicopter operations which would originate from the proposed facility at Lihue Airport. Because there is currently no regulatory method of limiting helicopter operations at a public use facility such as Lihue Airport, the CY 2005 forecasts for helicopter operations at Lihue Airport were used to evaluate the future noise impacts with or without completion of the proposed facility. The secondary noise impact implications of the forecasted growth in tour helicopter operations on Kauai were discussed in respect to projected increases in noise levels along the tour routes. However, a causal relationship between the construction of the new helicopter facility and the forecasted growth in tour helicopter operations on Kauai was not assumed.

The findings from the sound measurements which were performed and the helicopter noise contours which were developed indicate that there will be minimal risk of adverse health and welfare impacts from helicopter noise in the immediate environs of Lihue Airport following completion of the proposed helicopter facility at the forecasted annual level of 90,000 operations per year. The reasons for this is that the helicopter ingress and egress routes to and from the new facility will remain essentially the same as existing routes, and the forecasted growth in helicopter opera-
tions are predicted to result in only a 1.5 Ldn increase in cumulative noise exposure from helicopters.

However, because the complaint threshold for helicopter noise can be lower than the most conservative 55 Ldn public health and welfare threshold, there will always be a risk of annoyance reactions from existing and future Lihue residents. This is particularly true for those noise sensitive receptors who are located directly under or near the helicopter flight tracks to and from the proposed facility, or along the tour routes. Recommendations for minimizing risks of adverse annoyance reactions from existing and future residents are provided.
II. NOISE DESCRIPTORS AND THEIR RELATIONSHIP TO LAND USE COMPATIBILITY*

A general consensus has developed for using the Day-Night Sound Level (Ldn) in describing environmental noise in general, and for relating the acceptability of the noise environment for various land uses. The Day-Night Sound Level represents the 24-Hour average sound level for a typical day, with nighttime noise levels (10:00 P.M. to 7:00 A.M.) increased by 10 decibels prior to computation of the 24-Hour average. Annual aircraft operations are divided by 365 days to obtain the 24-Hour average used in Ldn computations.

The Ldn descriptor employs a process of averaging instantaneous A-Weighted sound levels as read on a standard Sound Level Meter, which are normally referred to as meter readings in dBA. The maximum A-Weighted sound level occurring during an aircraft flyby event (or single event) is referred to as the Lmax value. The mathematical product (or integral) of the instantaneous sound level times the duration of the event is known as the Sound Exposure Level, or Lse, and is analogous to the energy of the time varying sound levels associated with an aircraft flyby event. Current noise standards and criteria which associate land use compatibility or adverse health and welfare effects with various levels of environmental noise are normally described in terms of Ldn rather than the single event (Lmax or Lse) noise descriptors. The reasons for this are based on the relatively good correlation between the cumulative Ldn descriptor and annoyance reactions of the exposed population. However, at very low levels of environmental noise (55 Ldn or less), other attitudinal variables and biases (besides noise) of the exposed population tend to influence annoyance reactions, and the correlation between annoyance reactions and Ldn levels deteriorates.

*A brief description of the acoustic terminology and symbols used are provided in APPENDIX B.
TABLE 1, extracted from REFERENCE 1, categorizes the various Ldn levels of outdoor noise exposure with severity classifications. TABLE 2, also extracted from REFERENCE 1, presents the general effects of noise on people in residential use situations. FIGURE 1, extracted from REFERENCE 2, presents suggested land use compatibility guidelines for residential and nonresidential land uses. A general consensus among federal agencies has developed whereby residential housing development is considered acceptable in areas where exterior noise does not exceed 65 Ldn. This value of 65 Ldn is used as a federal regulatory threshold for determining the necessity for special noise abatement measures when federal funding assistance is applied for.

Federal agencies (HUD and EPA) recognize 55 Ldn as a desirable goal for exterior noise in residential areas for protecting the public health and welfare with an adequate margin of safety (REFERENCES 3 and 4). Although 55 Ldn is significantly quieter than 65 Ldn, the lower level has not been adopted for regulatory purposes by federal agencies due to economic and technical feasibility considerations.

In Hawaii, where open living conditions prevail throughout the year, and where natural ventilation is a prevalent characteristic of residential housing, the more conservative level of 55 Ldn should be used to evaluate potential noise impacts. This is particularly true whenever relatively quiet areas are under evaluation. Also, at an exterior noise level of 55 Ldn, the noise attenuation characteristics of typical naturally ventilated dwellings produce acceptable noise levels within the dwelling (approximately 45 Ldn). Naturally ventilated residential units outside the 55 Ldn contour were considered to be "Unconditionally Acceptable" in respect to adverse health and welfare effects.

For commercial, industrial, and other non-noise sensitive land uses, exterior noise levels as high as 75 Ldn are generally considered acceptable. Exceptions to this occur when naturally ventilated office and other commercial establishments are exposed to exterior levels which exceed 65 Ldn.
TABLE 1

EXTERIOR NOISE EXPOSURE CLASSIFICATION
(RESIDENTIAL LAND USE)

<table>
<thead>
<tr>
<th>Noise Exposure Class</th>
<th>Day-Night Sound Level</th>
<th>Equivalent Sound Level</th>
<th>Federal Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal Exposure</td>
<td>Not Exceeding 55 Ldn</td>
<td>Not Exceeding 55 Leq</td>
<td>Unconditionally</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acceptable</td>
</tr>
<tr>
<td>Moderate Exposure</td>
<td>Above 55 Ldn</td>
<td>Above 55 Leq</td>
<td>Acceptable</td>
</tr>
<tr>
<td></td>
<td>But Not Above 65 Ldn</td>
<td>But Not Above 65 Leq</td>
<td></td>
</tr>
<tr>
<td>Significant Exposure</td>
<td>Above 65 Ldn</td>
<td>Above 65 Leq</td>
<td>Normally Unacceptable</td>
</tr>
<tr>
<td></td>
<td>But Not Above 75 Ldn</td>
<td>But Not Above 75 Leq</td>
<td></td>
</tr>
<tr>
<td>Severe Exposure</td>
<td>Above 75 Ldn</td>
<td>Above 75 Leq</td>
<td>Unacceptable</td>
</tr>
</tbody>
</table>

Note: (1) Federal Housing Administration, Veterans Administration, Department of Defense, and Department of Transportation. (2) FHWA uses the Leq instead of the Ldn descriptor. For planning purposes, both are equivalent if: (a) heavy trucks do not exceed 10 percent of total traffic flow in vehicles per 24 hours, and (b) traffic between 10:00 PM and 7:00 AM does not exceed 15 percent of average daily traffic flow in vehicles per 24 hours.

Source: Reference 1.
TABLE 2
EFFECTS OF NOISE ON PEOPLE
(Residential Land Uses Only)

<table>
<thead>
<tr>
<th>Day-Night Average Sound Level in Decibels</th>
<th>Effects 1</th>
<th>Hearing Loss</th>
<th>Speech Interference</th>
<th>Annoyance 2</th>
<th>Average Community Reaction 3</th>
<th>General Community Attitude Towards Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Qualitative Description</td>
<td>Indoor</td>
<td>Outdoor</td>
<td>% Sentence Intelligibility</td>
<td>Distance in Meters for 95% Sentence Intelligibility</td>
</tr>
<tr>
<td>75 and above</td>
<td>May Begin to Occur</td>
<td>98%</td>
<td>0.5</td>
<td>37%</td>
<td>Very Severe</td>
<td>Noise is likely to be the most important of all adverse aspects of the community environment.</td>
</tr>
<tr>
<td>70</td>
<td>Will Not Likely Occur</td>
<td>99%</td>
<td>0.9</td>
<td>25%</td>
<td>Severe</td>
<td>Noise is one of the most important adverse aspects of the community environment.</td>
</tr>
<tr>
<td>65</td>
<td>Will Not Occur</td>
<td>100%</td>
<td>1.5</td>
<td>15%</td>
<td>Significant</td>
<td>Noise is one of the important adverse aspects of the community environment.</td>
</tr>
<tr>
<td>60</td>
<td>Will Not Occur</td>
<td>100%</td>
<td>2.0</td>
<td>9%</td>
<td>Moderate</td>
<td>Noise may be considered an adverse aspect of the community environment.</td>
</tr>
<tr>
<td>55 and below</td>
<td>Will Not Occur</td>
<td>100%</td>
<td>3.5</td>
<td>4%</td>
<td>Slight</td>
<td>Noise considered no more important than various other environmental factors.</td>
</tr>
</tbody>
</table>

1. "Speech Interference" data are drawn from the following tables in EPA's "Levels Document": Table 3, Fig. D-1, Fig. D-2, Fig. D-3. All other data from National Academy of Science 1977 report "Guidelines for Preparing Environmental Impact Statements on Noise, Report of Working Group 69 on Evaluation of Environmental Impact of Noise."

2. Depends on attitudes and other factors.

3. The percentages of people reporting annoyance in lesser extents are higher in each case. An unknown small percentage of people will report being "highly annoyed" even in the quietest surroundings. One reason is the difficulty all people have in integrating annoyance over a very long time.

4. Attitudes or other non-acoustic factors can modify this. Noise at low levels can still be an important problem, particularly when it intrudes into a quiet environment.

NOTE: Research implicates noise as a factor producing stress-related health effects such as heart disease, high-blood pressure and stroke, ulcers and other digestive disorders. The relationships between noise and these effects, however, have not as yet been quantified.
<table>
<thead>
<tr>
<th>LAND USE</th>
<th>YEARLY DAY-NIGHT AVERAGE SOUND LEVEL IN DECIBELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential - Single Family, Extensive Outdoor Use</td>
<td>![Compatible]</td>
</tr>
<tr>
<td>Residential - Multiple Family, Moderate Outdoor Use</td>
<td>![Compatible]</td>
</tr>
<tr>
<td>Residential - Multi Story Limited Outdoor Use</td>
<td>![Compatible]</td>
</tr>
<tr>
<td>Transient Lodging</td>
<td>![Compatible]</td>
</tr>
<tr>
<td>School Classrooms, Libraries, Religious Facilities</td>
<td>![Compatible]</td>
</tr>
<tr>
<td>Hospitals, Clinics, Nursing Homes, Health Related Facilities</td>
<td>![Compatible]</td>
</tr>
<tr>
<td>Auditoriums, Concert Halls</td>
<td>![Compatible]</td>
</tr>
<tr>
<td>Music Shells</td>
<td>![Compatible]</td>
</tr>
<tr>
<td>Sports Arenas, Outdoor Spectator Sports</td>
<td>![Compatible]</td>
</tr>
<tr>
<td>Neighborhood Parks</td>
<td>![Compatible]</td>
</tr>
<tr>
<td>Playgrounds, Golf Courses, Riding Stables, Water Rec., Cemeteries</td>
<td>![Compatible]</td>
</tr>
<tr>
<td>Office Buildings, Personal Services, Business and Professional</td>
<td>![Compatible]</td>
</tr>
<tr>
<td>Commercial - Retail, Movie Theaters, Restaurants</td>
<td>![Compatible]</td>
</tr>
<tr>
<td>Commercial - Wholesale, Some Retail, Ind., Mfg., Utilities</td>
<td>![Compatible]</td>
</tr>
<tr>
<td>Livestock Farming, Animal Breeding</td>
<td>![Compatible]</td>
</tr>
<tr>
<td>Agriculture (Except Livestock)</td>
<td>![Compatible]</td>
</tr>
<tr>
<td>Extensive Natural Wildlife and Recreation Areas</td>
<td>![Compatible]</td>
</tr>
</tbody>
</table>

- [ ] Compatible
- [ ] Marginal Compatibility
- [ ] Incompatible
- [ ] With Insulation per Section A.3

FIG. 1. Land use compatibility with yearly day-night average sound level at a site for buildings as commonly constructed. [For information only; not a part of American National Standard for Sound Level Descriptors for Determination of Compatible Land Use S3.23-1980.]
It is of interest to note from FIGURE 1 that noise levels below 60 Ldn are considered "Compatible" for lands with "Extensive Natural Wildlife and Recreation Areas." However, for designated wilderness areas, where preservation of the natural quiet and experience of the wilderness area is a desired goal, cumulative helicopter noise exposure levels must be as low as 30 to 40 Ldn (or below background ambient noise levels) in order to achieve that goal.
III. GENERAL STUDY METHODOLOGY

The noise analysis procedures delineated in REFERENCE 5 were used in this study. The recently released FAA Heliport Noise Model (FAA HNM), Version 1.1, was not available in time for use in this study. Ldn noise contours for CY 1986, 1991, and 2005 were developed with the FAA Integrated Noise Model (FAA INM). A user generated data base of helicopter noise curves and flight profiles were included in the FAA INM to reflect the noise monitoring data and operating conditions at Lihue Airport. The FAA INM is normally used to develop fixed wing aircraft noise contours, because it does not have provisions for stationary (e.g. hover) operations, and was used to develop the Ldn contours for the Lihue Airport Part 150 Noise Study (REFERENCE 6). The results from the FAA INM should produce reasonably accurate results near the helicopter egress and ingress routes at Lihue Airport. At locations in the immediate vicinity of the proposed facility, the HNM results should be more accurate than the INM results due to the inclusion of hover operations by the HNM.

The Day-Night Sound Level (Ldn) noise descriptor was used to describe the existing and projected aircraft noise surrounding the proposed helicopter facility at Lihue Airport. Existing (or Base Year) helicopter noise contours were developed for annually averaged conditions which occurred during CY 1986 for comparison with total (fixed wing plus helicopter) noise contours developed for the current FAR Part 150 Noise Compatibility Study for Lihue Airport (REFERENCE 6). Forecasts of future helicopter operations at Lihue Airport were obtained from REFERENCE 7. Using these forecasts, helicopter noise contours were then developed for the CY 1991 and CY 2005 time periods for conditions with and without the new facility in place.

Operational assumptions and aircraft flight tracks developed during the FAR Part 150 effort were also used in this study of the new helicopter facility. FIGURE 2 depicts the location of the existing runways at Lihue Airport, as well as the helicopter
flight tracks to and from the airport. TABLE 3 presents a summary of the daily operational assumptions used to generate the Ldn contours for the Base Year (CY 1986) conditions at Lihue Airport.

The proposed helicopter facility location and assumed helicopter flight tracks following completion of the facility are depicted in FIGURE 3. TABLES 4 and 5 present summaries of the daily operational assumptions used to generate the helicopter Ldn contours for CY 1991 and CY 2005, respectively. A very small (4 percent) increase in helicopter operations is projected to occur from CY 1986 to CY 1991, and a larger increase (40 percent) is projected to occur from CY 1986 to CY 2005. It was assumed that the future mix of helicopter traffic would not change significantly from the Base Year mix of predominantly Bell 206 helicopters, and that the future mix would be acoustically similar to the current mix of helicopters operating at Lihue Airport.

Helicopter noise level assumptions, in Lre (Sound Exposure Level), were developed for takeoff, level flight, and approach flight conditions from published noise characteristics for the Bell 206 and Aerospatiale 350D (REFERENCES 8 and 9), plus measured helicopter sound level data obtained in 1984 and 1987 at Lihue Airport. The results of these helicopter noise measurements are shown in TABLE 6, with the locations of the measurement sites shown in FIGURE 2. Comparisons of measured helicopter Sound Exposure Level vs. FAA INM predictions are included in TABLE 6 to indicate the relative consistency between the model outputs and the noise measurement results. These efforts were necessary and were previously performed during the Lihue Airport Part 150 study since the FAA INM does not contain a built-in helicopter noise data base.

Existing Ldn contours for 60, 55, and 50 Ldn were generated using the Federal Aviation Administration Integrated Noise Model (FAA INM). Although FAA (REFERENCE 5) does not require the development of noise contours below the 65 Ldn level, the development of the lower level contours were considered necessary to depict the changes of the possible helicopter noise impact.
<table>
<thead>
<tr>
<th>A/C</th>
<th>TOTAL DAILY LANDINGS</th>
<th>RWY 03 (TR10)</th>
<th>RWY 03 (TR15)</th>
<th>RWY 21 (TR14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BELL 206</td>
<td>86.66 7.59 68.32</td>
<td>10.75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HUGH 300</td>
<td>0.00 0.00 0.00</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HUGH 500</td>
<td>0.00 0.00 0.00</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASTAR</td>
<td>1.62 0.14 1.28</td>
<td>0.20</td>
<td></td>
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<tr>
<td>Sub-total (Day):</td>
<td>88.28 7.73 69.60</td>
<td>10.95</td>
<td></td>
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</tr>
<tr>
<td>Sub-total (Night):</td>
<td>0.00 0.00 0.00</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A/C</th>
<th>TOTAL DAILY DEPART'S</th>
<th>RWY 03 (TR12)</th>
<th>RWY 03 (TR13)</th>
<th>RWY 21 (TR14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BELL 206</td>
<td>86.66 77.99 1.73</td>
<td>6.93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HUGH 300</td>
<td>0.00 0.00 0.00</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HUGH 500</td>
<td>0.00 0.00 0.00</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASTAR</td>
<td>1.62 1.46 0.03</td>
<td>0.13</td>
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<tr>
<td>Sub-total (Day):</td>
<td>85.63 76.81 1.77</td>
<td>7.06</td>
<td></td>
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</tr>
<tr>
<td>Sub-total (Night):</td>
<td>2.65 2.65 0.00</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A/C</td>
<td>TOTAL LANDINGS</td>
<td>Rwy 03H (TR10)</td>
<td>Rwy 03H (TR16)</td>
<td>Rwy 21H (TR15)</td>
</tr>
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<td>------------</td>
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<tr>
<td>BELL 206</td>
<td>90.09</td>
<td>7.89</td>
<td>71.03</td>
<td>11.17</td>
</tr>
<tr>
<td>HUGH 300</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>HUGH 500</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ASTAR</td>
<td>1.68</td>
<td>0.15</td>
<td>1.33</td>
<td>0.21</td>
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<td>Sub-total (Day):</td>
<td>91.77</td>
<td>8.04</td>
<td>72.36</td>
<td>11.38</td>
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<td>Sub-total (Nite):</td>
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<td>0.00</td>
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</tbody>
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<table>
<thead>
<tr>
<th>A/C</th>
<th>TOTAL DEPART'S</th>
<th>Rwy 03 (TR12)</th>
<th>Rwy 03H (TR13)</th>
<th>Rwy 21H (TR14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BELL 206</td>
<td>90.09</td>
<td>81.08</td>
<td>1.80</td>
<td>7.21</td>
</tr>
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<tr>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ASTAR</td>
<td>1.68</td>
<td>1.52</td>
<td>0.03</td>
<td>0.13</td>
</tr>
<tr>
<td>Sub-total (Day):</td>
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<tr>
<td>A/C</td>
<td>TOTAL LANDINGS</td>
<td>DAILY RWY 03H (TR10)</td>
<td>DAILY RWY 03H (TR16)</td>
<td>DAILY RWY 21H (TR15)</td>
</tr>
<tr>
<td>--------</td>
<td>----------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>BELL 206</td>
<td>121.02</td>
<td>10.60</td>
<td>95.41</td>
<td>15.01</td>
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<tr>
<td>HUGH 300</td>
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<td>0.01</td>
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<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ASTAR</td>
<td>2.26</td>
<td>0.20</td>
<td>1.78</td>
<td>0.28</td>
</tr>
<tr>
<td>Sub-total (Day):</td>
<td>123.29</td>
<td>10.80</td>
<td>97.20</td>
<td>15.29</td>
</tr>
<tr>
<td>Sub-total (Nite):</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>A/C</th>
<th>TOTAL DEPART'S</th>
<th>DAILY RWY 03 (TR12)</th>
<th>DAILY RWY 03H (TR13)</th>
<th>DAILY RWY 21H (TR14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BELL 206</td>
<td>121.02</td>
<td>108.92</td>
<td>2.42</td>
<td>9.68</td>
</tr>
<tr>
<td>HUGH 300</td>
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<td>0.00</td>
</tr>
<tr>
<td>HUGH 500</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>ASTAR</td>
<td>2.26</td>
<td>2.04</td>
<td>0.05</td>
<td>0.18</td>
</tr>
<tr>
<td>Sub-total (Day):</td>
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<td>107.26</td>
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</tr>
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<td>0.00</td>
</tr>
<tr>
<td>ROTARY WING AIRCRAFT (TRACK)</td>
<td>B</td>
<td>B2</td>
<td>SUSP</td>
<td>STADIUM</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td>B-200L (TR 10)</td>
<td>73.1</td>
<td>75.7</td>
<td>72.4</td>
<td>73.2</td>
</tr>
<tr>
<td>B-200L (TR 12)</td>
<td>68.8</td>
<td>67.3</td>
<td>71.7</td>
<td>63.7</td>
</tr>
<tr>
<td>B-200L (TR 13)</td>
<td>79.8</td>
<td>80.2</td>
<td>54.8</td>
<td>54.6</td>
</tr>
<tr>
<td>B-200L (TR 14)</td>
<td>68.9</td>
<td>67.8</td>
<td>69.9</td>
<td>63.9</td>
</tr>
<tr>
<td>B-200L (TR 15)</td>
<td>82.0</td>
<td>81.9</td>
<td>53.8</td>
<td>54.4</td>
</tr>
<tr>
<td>B-200L (TR 16)</td>
<td>71.2</td>
<td>73.9</td>
<td>62.0</td>
<td>61.6</td>
</tr>
</tbody>
</table>

**NOTE:**
- LII noise measurement data in dB
- IMM version 3 calibration results in dB
zones with the addition of the new facility. Additionally, REFERENCE 10 recommends that more conservative noise criteria be used in evaluating the noise compatibility of new heliports.

Noise exposure contours were developed for the CY 1991 and CY 2005 periods to depict the projected helicopter noise levels with and without the proposed facility in place. The helicopter ingress and egress routes were maintained to continue the current southerly flow of helicopter departures toward Nawiliwili Harbor and with arrivals from the saddle (or Kalepa Ridge). The helicopter egress and ingress routes to the proposed facility, were considered to be the only feasible routes following meetings with State DOT, FAA, and the helicopter operators.

The future noise contours were compared to existing conditions to evaluate the potential noise impacts associated with the forecasted growth in helicopter operations at Lihue Airport, as well as those associated with the new helicopter facility. Using the Ldn noise contour results and the results of the single event sound level measurements, evaluations were made of potential noise impacts in the health and welfare category, and of potential annoyance responses from nearby residences. Based on the above evaluations, recommendations for mitigation measures which would minimize risks of health and welfare impacts, as well as risks of annoyance responses from nearby residences were provided.
IV. EXISTING AMBIENT NOISE LEVELS

The existing background ambient noise levels in the vicinity of the proposed new helicopter facility are controlled by fixed wing and rotary wing aircraft operations at Lihue Airport. The dominant contributors to ambient noise levels in the area are the interisland jet aircraft which depart on Lihue Airport's RWY 03 during trade wind (north flow) conditions. The Base Year (CY 1986) noise contours, which were developed during the Part 150 study at Lihue Airport, are shown in FIGURE 4. The contours are representative of the existing ambient noise conditions in the environs of Lihue Airport, with relatively few noise sensitive areas enclosed by the 55 Ldn contour. A residence near Ahukini Landing, residences at Hanamaulu Bay, residences at the eastern edge of Hanamaulu town, and the Westin Kauai Resort are enclosed by the Base Year 55 Ldn contour. The Ahukini Landing area is in the "Significant Exposure, Normally Unacceptable" category of noise exposure, while the Hanamaulu and Westin Kauai areas are in the "Moderate Exposure, Acceptable" category.

At locations near the helicopter egress and ingress routes, helicopter flyby sound levels range from 65 to 80 dB (Lmax), with measured and predicted sound exposure levels (Lse) as indicated in TABLE 6. Between aircraft flights, background noise levels are in the order of 45 dB (Leq or average), and are not high enough to mask the aircraft sound levels during flyby events. The present background ambient noise environment in the vicinity of the proposed helicopter facility is characterized by relatively quiet background noise levels, with periodic aircraft noise events audible above the background noise.

The Base Year (CY 1986), 60, 55, and 50 Ldn contours, which represent the noise from only helicopter operations at Lihue Airport, were generated using the FAA Integrated Noise Model (FAA INM) and are depicted in FIGURE 5. The helicopter noise component of the total Base Year noise contours (FIGURE 4) is significantly lower than those associated with the jet aircraft operations at
Lihue Airport. The existing helicopter component of total aircraft noise levels in the surrounding communities are in the "Minimal Exposure, Unconditionally Acceptable" category, with levels generally less than 55 Ldn. For this reason, risks of adverse health and welfare effects from existing helicopter noise are considered to be low.
V. FUTURE HELICOPTER NOISE LEVELS

FIGURES 6 thru 9 present the forecasted helicopter noise contours for Lihue Airport under the "No Build" and "Build" Alternatives for CY 1991 and 2005. TABLE 7 summarizes the helicopter operation forecasts used, and their relationship to historical operations data from FAA and State DOT sources. The noise contours shown for 60, 55, and 50 Ldn represent the helicopter noise exposure resulting from an average day of flight operations, and are applicable for the CY 1991 and 2005 periods. As indicated in FIGURES 7 and 9, residential or other urban areas are not expected to be exposed to helicopter noise above 55 Ldn, and as such, the proposed helicopter facility should not alter the existing land use compatibility conditions in the airport environs, and should not pose significant risks of adverse health and welfare effects. EPA's most stringent recommendation of 55 Ldn for residential land uses will be met even if helicopter operations increase from the present level to 90,000 operations per year as forecasted for CY 2005.

The forecasted helicopter noise contours shown in FIGURES 6 thru 9 were developed under the assumption that helicopter ingress and egress routes will not change from existing routes. These existing and future routes are depicted in FIGURES 2 and 3. Because of the operational desirability of separating the fixed wing operations from rotary wing operations at Lihue Airport, the possibility of locating both the ingress and egress routes to the north was evaluated. The noise contours associated with the proposed location of the ingress and egress routes over Kalepa Ridge were also developed. FIGURE 10 depicts the forecasted CY 2005 noise contours for the condition with both ingress and egress routes located north of the airport. Helicopter noise levels north of the airport would increase by 5 to 10 Ldn units due to the doubling of helicopter flights over the area, and due to the lower helicopter altitudes required to maintain separation between arriving and departing helicopters. Existing residences along the
FIGURE 7
LDH CONTOURS, HELICOPTER OPERATIONS, WITH NEW FACILITY, LIHUE AIRPORT, CY 1991
SCALE
0 1000'  2000'
-24-
FIGURE 8
LDN CONTOURS, HELICOPTER OPERATIONS, EXISTING FACILITY, LIMUE AIRPORT, CT 2005

SCALE
0 1000' 2000'
### TABLE 7
COMPARISON OF ANNUAL STATE AND FAA OPERATIONAL DATA WITH HELICOPTER OPERATIONS FORECASTS

<table>
<thead>
<tr>
<th>YEAR</th>
<th>STATE LANDINGS</th>
<th>STATE OPERATIONS</th>
<th>FAA OPERATIONS</th>
<th>SASP FORECAST</th>
<th>PART 150</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>2,310</td>
<td>4,620</td>
<td>6,002</td>
<td>4,043</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3,001</td>
<td>6,002</td>
<td></td>
<td>10,615</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4,043</td>
<td>8,086</td>
<td></td>
<td>17,306</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10,615</td>
<td>21,230</td>
<td></td>
<td>24,772</td>
<td></td>
</tr>
<tr>
<td>1985</td>
<td></td>
<td></td>
<td>47,935</td>
<td>49,544</td>
<td>64,444</td>
</tr>
<tr>
<td>1986</td>
<td>24,467</td>
<td>48,934</td>
<td>67,838</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td></td>
<td></td>
<td>58,845</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1990</td>
<td></td>
<td></td>
<td>65,000</td>
<td>67,000</td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>73,333</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td>81,667</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>90,000</td>
<td></td>
<td>90,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
access road to Hanamaulu Beach Park would be exposed to helicopter noise levels between 55 and 60 Ldn if both ingress and egress routes are located north of the airport. For noise impact and other operational reasons, the alternative of locating both routes north of the airport was not adopted.

Because the Ldn noise descriptor represents a highly averaged measure of time-varying sound levels, the maximum A-weighted sound level (Lmax) during an aircraft flyby event will generally be greater than the Ldn contour values shown. Because the existing helicopter egress and ingress routes are not expected to be changed following completion of the new facility, helicopter flyby sound levels are expected to remain the same as existing levels and range from 65 to 80 dB (Lmax), with sound exposure levels (Lse) as shown in TABLE 6.
VI. POSSIBLE NOISE IMPACTS FROM THE NEW HELICOPTER FACILITY

Based upon the most stringent criteria and guidelines developed for the assessment of aircraft noise impacts on residential lands, the proposed helicopter facility at Lihue Airport should generate minimal risks of adverse health and welfare impacts on surrounding noise sensitive communities. Because the predicted 55 Ldn contours associated with the proposed helicopter facility are not expected to enclose adjoining noise sensitive properties, noise impacts should be minimal with near zero risks of adverse health and welfare impacts. The projected operations at the airport for the CY 1991 and 2005 periods should result in helicopter noise levels no higher than 54 Ldn at existing residences and noise sensitive properties in the airport environs. This compares favorably with the "Minimal Exposure, Unconditionally Acceptable" level of 55 Ldn; currently the most stringent noise impact criteria and long range goal of federal agencies. For these reasons, helicopter noise impacts associated with the completion of the proposed helicopter facility are expected to be minimal.

The proposed facility will expand the 55 Ldn airport noise contours by approximately 1,000 FT toward Lihue proper, but will not increase the amount of incompatible land uses presently in the airport environs. The anticipated changes in the future CY 2005 noise contours for the entire Lihue Airport and attributable to the proposed helicopter facility are shown in FIGURE 11. Because increases in the airport noise contours are limited to lands which are currently in agriculture, noise impacts associated with the new facility construction are expected to be minimal.

Future residential subdivisions and a resort hotel are planned within the Lihue Airport noise contours, and may be impacted by aircraft noise if they are implemented where planned. The general locations of these planned noise sensitive developments are indicated in FIGURE 11. Aircraft arrivals and departures to/from the proposed helicopter facility will probably be
audible at these locations, and may annoy noise sensitive individuals. Low level helicopter overflights of the planned Molokoa Subdivision and Kauai Westin Resort expansion may be unavoidable, and these factors should be considered prior to implementation of these developments. As a minimum, complete disclosure of the relatively high risks of complaints regarding helicopter operations should be provided to the future occupants of these planned developments.

The past history of community complaints and annoyance responses regarding helicopter noise suggest that the "no reaction" response threshold for helicopter noise can be less than 55 Ldn. Based on information reported in REFERENCE 4, the average "no reaction" response threshold to aircraft noise is approximately 5 Ldn units less than the Ldn associated with other background ambient noise, as long as the exposed population do not have attitudinal biases regarding the source of the noise. Variations in this "no reaction" response threshold are possible due to attitudinal biases (favorable and unfavorable) of the exposed population. For background ambient noise levels of 45 to 55 Ldn, which are believed to be characteristic of the project environs, the "no reaction" response threshold is estimated to be between 40 and 50 Ldn. Stated in a different way—If the annually averaged Ldn from the noise of helicopters operating at the proposed facility exceeds 40 to 50 Ldn when the non-helicopter ambient noise components are in the range of 45 to 50 Ldn, the noise from the helicopter operations may cause annoyance reactions from the exposed community. These observations are particularly applicable to the proposed Molokoa Subdivision and the proposed expansion of the Kauai Westin Resort.

If helicopter operations at Lihue Airport increase to the levels forecasted for CY 2005, a 40 percent increase in total tour flights can be expected from Base Year conditions, unless additional helicopter facilities are constructed at other locations on Kauai. A 40 percent increase in helicopter operations at Lihue Airport will produce a moderate 1.5 Ldn increase in
noise average levels along the helicopter tour routes, assuming other operational conditions and helicopter sound levels remain the same. It is not known if the construction of the proposed helicopter facility will stimulate further growth in tour helicopter operations on Kauai, and possibly cause additional secondary noise impacts in areas removed from Lihue Airport. It is also not known if future growth in helicopter tour operations on Kauai can be influenced by placing limits on facility improvements at Lihue Airport. At the present time, there are no administrative or regulatory methods for limiting growth of tour helicopter operations at public use facilities, but the issues related to the future compatibility of helicopter operations on Kauai and across the state are being evaluated by the State DOT within the context of a State Helicopter System Planning Study.
VII. RECOMMENDED NOISE MITIGATION MEASURES

The noise mitigation measures recommended for implementation following completion of the proposed helicopter facility are those operational procedures which minimize complaint risks from surrounding noise sensitive properties and which are possible within the operating constraints at Lihue Airport. One of the primary mitigation measures for reducing risks of complaints from noise sensitive properties is to avoid overflights of these properties, particularly at low altitudes. This mitigation measure is being implemented at Lihue Airport since two helicopter ingress and egress routes are available and are currently clear of noise sensitive properties. These routes will probably be maintained as helicopter ingress and egress routes into the indefinite future, since there are no other acceptable operational or noise abatement alternatives. For these reasons, proper land use controls and/or disclosures of the presence and necessity of these helicopter ingress and egress routes should be exercised in order to maintain the current noise compatibility of land uses along these routes.

Because the 55 Ldn contours associated with helicopter operations are not expected to encompass existing noise sensitive properties, and are equal to or less than existing background (non-helicopter) ambient noise levels, additional noise mitigation measures are not considered necessary prior to completion of the proposed helicopter facility.

Mitigation measures required to compensate for the forecasted growth in tour helicopter operations along the tour routes, to limit the growth of tour helicopter operations, or to improve the noise compatibility of these operations along the tour routes are being addressed in the current State Helicopter System Plan. In addition, helicopter operators on Kauai have agreed to abide by a voluntary noise abatement program which is structured to avoid noise sensitive areas along the tour routes whenever possible (REFERENCE 11).
The centralization of helicopter operations within the Lihue Airport complex with the proposed facility may improve the possible means of documenting and/or regulating tour helicopter operations on Kauai. It is possible that a centralized information network may be required to document the lift-off and touchdown times of tour helicopters, to estimate the general positions of tour helicopters along their routes, to receive complaints from the community on the existing Helicopter Helpline, to receive weather observations from tour helicopters, to receive radio position reports from tour helicopters, and to document information from pilots upon their return. If a recommendation for such a centralized information network results from the State Helicopter System Plan, the proposed helicopter facility at Lihue Airport should make it easier to implement, because it is consistent with the intent of centralizing the existing scattered facilities at Lihue Airport.
A. REFERENCES


7. "Hawaii State Airport System Plan Aviation Demand Forecasts;" Airports Division, Hawaii State Department of Transportation; June, 1986.


APPENDIX B

EXCERPTS FROM EPA'S ACOUSTIC TERMINOLOGY GUIDE

Descriptor Symbol Usage

The recommended symbols for the commonly used acoustic descriptors based on A-weighting are contained in Table I. As most acoustic criteria and standards used by EPA are derived from the A-weighted sound level, almost all descriptor symbol usage guidance is contained in Table I.

Since acoustic nomenclature includes weighting networks other than "A" and measurements other than pressure, an expansion of Table I was developed (Table II). The group adopted the ANSI descriptor-symbol scheme which is structured into three stages. The first stage indicates that the descriptor is a level (i.e., based on the logarithm of a ratio), the second stage indicates the type of quantity (power, pressure, or sound exposure), and the third stage indicates the weighting network (A, B, C, D, E, ...). If no weighting network is specified, "A" weighting is understood. Exceptions are the A-weighted sound level and the A-weighted peak sound level which require that the "A" be specified. For convenience in those situations in which an A-weighted descriptor is being compared to that of another weighting, the alternative column in Table II permits the inclusion of the "A". For example, a report on blast noise might wish to contrast the L_{CDN} with the L_{A30}.

Although not included in the tables, it is also recommended that "L_{PN}" and "L_{EPN}" be used as symbols for perceived noise levels and effective perceived noise level, respectively.

Descriptor Nomenclature

With regard to energy averaging over time, the term "average" should be discouraged in favor of the term "equivalent". Hence, L_{eq} is designated the "equivalent sound level". For L_{PN}, L_{EPN}, and L_{dn}, "equivalent" need not be stated since the concept of day, night, or day-night averaging is by definition understood. Therefore, the designations are "day sound level", "night sound level", and "day-night sound level", respectively.

The peak sound level is the logarithmic ratio of peak sound pressure to a reference pressure and not the maximum root mean square pressure. While the latter is the maximum sound pressure level, it is often incorrectly labelled peak. In that sound level meters have "peak" settings, this distinction is most important. "Background ambient" should be used in lieu of "background", "ambient", "residual", or "indigenous" to describe the level characteristic of the general background noise due to the contribution of many unidentifiable noise sources near and far.

With regard to units, it is recommended that the unit decibel (abbreviated dB) be used without modification. Hence, dBA, dNdB, and dPNDdB are not to be used. Examples of preferred usage are: the Perceived Noise Level (L_{PN} was found to be 75 dB, L_{EPN} = 75 dB.) This decision was based upon the recommendation of the National Bureau of Standards, and the policies of ANSI and the Acoustical Society of America, all of which disallow any modification of bef except for prefixes indicating its multiples or submultiples (e.g., deci).

Noise Impact

In discussing noise impact, it is recommended that "Level Weighted Population" (LWP) replace "Equivalent Noise Impact" (ENI). The term "Relative Change of Impact" (RCI) shall be used for comparing the relative differences in LWP between two alternatives.

Further, when appropriate, "Noise Impact Index" (NII) and "Population Weighted Loss of Hearing" (PHL) shall be used consistent with CHABA Working Group 69 Report Guidelines for Preparing Environmental Impact Statements (1977).

Table I: A-Weighted Recommended Descriptor List

<table>
<thead>
<tr>
<th>Term</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A-Weighted Sound Level</td>
<td>L_A</td>
</tr>
<tr>
<td>2. A-Weighted Sound Power Level</td>
<td>L_{WA}</td>
</tr>
<tr>
<td>3. Maximum A-Weighted Sound Level</td>
<td>L_{max}</td>
</tr>
<tr>
<td>4. Peak A-Weighted Sound Level</td>
<td>L_{Apk}</td>
</tr>
<tr>
<td>5. Level Exceeded x% of the time</td>
<td>L_x</td>
</tr>
<tr>
<td>6. Equivalent Sound Level</td>
<td>L_{eq}</td>
</tr>
<tr>
<td>7. Equivalent Sound Level over Time (T) (1)</td>
<td>L_{eq}(T)</td>
</tr>
<tr>
<td>8. Day Sound Level</td>
<td>L_d</td>
</tr>
<tr>
<td>9. Night Sound Level</td>
<td>L_n</td>
</tr>
<tr>
<td>10. Day-Night Sound Level</td>
<td>L_{dn}</td>
</tr>
<tr>
<td>11. Yearly Day-Night Sound Level</td>
<td>L_{dn(y)}</td>
</tr>
<tr>
<td>12. Sound Exposure Level</td>
<td>L_{SE}</td>
</tr>
</tbody>
</table>

(1) Unless otherwise specified, time is in hours (e.g. the hourly equivalent level is L_{eq}(1)). Time may be specified in non-quantitative terms (e.g., L_{eq}(WASH) to mean the washing cycle noise for a washing machine.)

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## APPENDIX B (CONTINUED)

### TABLE II: Recommended Descriptor List

<table>
<thead>
<tr>
<th>TERM</th>
<th>A-WEIGHTING</th>
<th>ALTERNATIVE(1) A-WEIGHTING</th>
<th>OTHER WEIGHTING</th>
<th>UNWEIGHTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sound (Pressure) Level</td>
<td>( L_A )</td>
<td>( L_{pA} )</td>
<td>( L_B ) ( pB )</td>
<td>( L_p )</td>
</tr>
<tr>
<td>2. Sound Power Level</td>
<td>( L_{WA} )</td>
<td>( L_{WB} )</td>
<td></td>
<td>( L_W )</td>
</tr>
<tr>
<td>3. Max. Sound Level</td>
<td>( L_{\text{max}} )</td>
<td>( L_{\text{max}} )</td>
<td>( L_{\text{Bmax}} )</td>
<td>( L_{\text{pmax}} )</td>
</tr>
<tr>
<td>4. Peak Sound (Pressure) Level</td>
<td>( L_{Apk} )</td>
<td>( L_{Bpk} )</td>
<td>( L_{pk} )</td>
<td></td>
</tr>
<tr>
<td>5. Level Exceeded ( x% ) of the time</td>
<td>( L_X )</td>
<td>( L_{AX} )</td>
<td>( L_{BX} )</td>
<td>( L_{px} )</td>
</tr>
<tr>
<td>6. Equivalent Sound Level</td>
<td>( L_{\text{eq}} )</td>
<td>( L_{\text{Aeq}} )</td>
<td>( L_{\text{Beq}} )</td>
<td>( L_{\text{peq}} )</td>
</tr>
<tr>
<td>7. Equivalent Sound Level over Time(( T ))</td>
<td>( L_{\text{eq}(T)} )</td>
<td>( L_{\text{Aeq}(T)} )</td>
<td>( L_{\text{Beq}(T)} )</td>
<td>( L_{\text{peq}(T)} )</td>
</tr>
<tr>
<td>8. Day Sound Level</td>
<td>( L_d )</td>
<td>( L_{\text{Ad}} )</td>
<td>( L_{\text{Bd}} )</td>
<td>( L_{\text{pd}} )</td>
</tr>
<tr>
<td>9. Night Sound Level</td>
<td>( L_n )</td>
<td>( L_{\text{An}} )</td>
<td>( L_{\text{Bn}} )</td>
<td>( L_{\text{pn}} )</td>
</tr>
<tr>
<td>10. Day-Night Sound Level</td>
<td>( L_{dn} )</td>
<td>( L_{\text{Adn}} )</td>
<td>( L_{\text{Bdn}} )</td>
<td>( L_{\text{pdn}} )</td>
</tr>
<tr>
<td>11. Yearly Day-Night Sound Level</td>
<td>( L_{dn(y)} )</td>
<td>( L_{\text{Adn}(Y)} )</td>
<td>( L_{\text{Bdn}(Y)} )</td>
<td>( L_{\text{pdn}(Y)} )</td>
</tr>
<tr>
<td>12. Sound Exposure Level</td>
<td>( L_s )</td>
<td>( L_{\text{SA}} )</td>
<td>( L_{\text{SB}} )</td>
<td>( L_{\text{Sp}} )</td>
</tr>
<tr>
<td>13. Energy Average value over (non-time domain) set of observations</td>
<td>( L_{\text{eq}(e)} )</td>
<td>( L_{\text{Aeq}(e)} )</td>
<td>( L_{\text{Beq}(e)} )</td>
<td>( L_{\text{peq}(e)} )</td>
</tr>
<tr>
<td>14. Level exceeded ( x% ) of the total set of (non-time domain) observations</td>
<td>( L_X(e) )</td>
<td>( L_{AX(e)} )</td>
<td>( L_{BX(e)} )</td>
<td>( L_{px(e)} )</td>
</tr>
<tr>
<td>15. Average ( L_X ) value</td>
<td>( L_X )</td>
<td>( L_{AX} )</td>
<td>( L_{BX} )</td>
<td>( L_{px} )</td>
</tr>
</tbody>
</table>

1. "Alternative" symbols may be used to assure clarity or consistency.
2. Only B-weighting shown. Applies also to C, D, E, ..... weighting.
3. The term "pressure" is used only for the unweighted level.
4. Unless otherwise specified, time is in hours (e.g., the hourly equivalent level is \( L_{\text{eq}}(T) \)). Time may be specified in non-quantitative terms (e.g., could be specified as \( L_{\text{eq(WASH)}} \) to mean the washing cycle noise for a washing machine).
APPENDIX B

SUMMARY OF PUBLIC HEARING

The public hearing concerning the New Helicopter Facility environmental document was held at Wilcox Elementary School, Lihue, Kauai on June 16, 1988. The Notice of Determination/Environmental Assessment (EA) was placed for public review for a period of 30 days prior to the Public Hearing. The availability of the EA was noted in the Legal Notice of Public Hearing advertised May 16 & 20, 1988 and June 3, 8, & 10, 1988.

This appendix consists of:

1. The verbatim transcript of the Public Hearing
2. Written testimonies received through June 30, 1988
3. Public Hearing Attendance List
4. Listing of responders of Media Noise Statement

<table>
<thead>
<tr>
<th>SPEAKER</th>
<th>ITEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tony Kunimura, Mayor County of Kauai</td>
<td>Strongly supports inland helicopter facility</td>
</tr>
<tr>
<td>2. Glenn Kimura, Principal Helber Haster &amp; Kimura Planners</td>
<td>AMFAC desires examination of alternative sites</td>
</tr>
<tr>
<td>3. Stanford Achi, Spokesperson Niamalu - Nawiliwili Tenants Association</td>
<td>Heliport at Lihue Airport should be abolished</td>
</tr>
<tr>
<td>4. Paul Asmus, President South Seas Helicopters</td>
<td>Questions various statements with the Environmental Assessment</td>
</tr>
<tr>
<td>5. Mark Phillips, Individual</td>
<td>Sierra Club supports inland facility</td>
</tr>
<tr>
<td>7. Eddie Sarita, Individual</td>
<td>Construct facility away from Lihue Airport</td>
</tr>
<tr>
<td></td>
<td>Name and Title</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>8</td>
<td>Jack Harter, Individual</td>
</tr>
<tr>
<td>9</td>
<td>Bev Harter, testimony of Margie Parker, Executive Director, Poipu Beach Resort Association</td>
</tr>
</tbody>
</table>

**WRITTEN TESTIMONIES RECEIVED THROUGH JUNE 30, 1988**

<table>
<thead>
<tr>
<th></th>
<th>Name and Title</th>
<th>Testimony of Public Hearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Glenn Kimura, Principal Helber Hastert &amp; Kimura Planners</td>
<td>Testimony of Public Hearing</td>
</tr>
<tr>
<td>2</td>
<td>Lois &amp; Harold Birbaum Individual</td>
<td>All aircraft be based at Lihue &amp; Princeville to enforce regulations.</td>
</tr>
<tr>
<td>3</td>
<td>Margie Parker, Executive Director, Poipu Beach Resort Association</td>
<td>Testimony of Public Hearing</td>
</tr>
<tr>
<td>4</td>
<td>Gary Blaich, Individual</td>
<td>Drop expanded heliport, relocate to mauka site</td>
</tr>
<tr>
<td>5</td>
<td>Jack Smith and Six other Individual</td>
<td>Close Lihue Airport to helicopters, construct private facility</td>
</tr>
</tbody>
</table>
IN THE MATTER OF:
THE PUBLIC HEARING RELATIVE TO
THE NEW HELICOPTER FACILITY AT
LIHUE AIRPORT, KAUAI

TRANSCRIPT OF PROCEEDINGS
Held by the Department of Transportation, Airports Division,
State of Hawaii, at Wilcox Elementary School, 4319 Hardy
Street, Lihue, Kauai, Hawaii, on Wednesday, June 16, 1988,
commencing at 7:10 p.m.

MODERATOR : ERIC HONMA, Chair
Commissioner on Transportation
State of Hawaii

REPORTED BY:
KATHLEEN L. SAKAMOTO
Certified Shorthand Reporter #180
Notary Public
State of Hawaii

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<tbody>
<tr>
<td>Owen Miyamoto</td>
<td>5</td>
</tr>
</tbody>
</table>
| Airports Administrator  
Department of Transportation  
State of Hawaii | |

### PRESENTATIONS BY:

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<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Henry Morita</td>
<td>6</td>
</tr>
</tbody>
</table>
| Vice President  
Akinaka & Associates, Ltd.  
Consulting Engineers | |
| Yoichi Ebisu | 16 |
| President  
Y. Ebisu & Associates  
Acoustical and Electronic Engineers | |

### PUBLIC TESTIMONY PRESENTED BY:

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<th>Page</th>
</tr>
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| The Honorable Tony T. Kunimura  
Mayor, County of Kauai | 23 |
| Glenn Kimura  
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| Jack Harter | 46 |
| Jack Harter Helicopters | |
| Bev Harter | 50 |
| On behalf of Margie Parker, Poipu Resort Association | |
Thursday, June 16, 1988

7:10 p.m.

--oo0oo--

MR. HONMA: Good evening, ladies and gentlemen.

It is now 7:10 p.m., and I hereby declare the public hearing concerning the Lihue Airport New Helicopter Facility SEIS is now convened here at Wilcox Elementary School on June 17, 1988 in accordance with the Notice of Public hearing advertised in the Honolulu Advertiser on May 16, 1988 and June 8, 1988; also in the Garden Isle on May 20, 1988 and June 3 and 10, 1988; and the Honolulu Star-Bulletin on June 12, 1988.

My name is Eric Honma. I am a Commissioner on Transportation, appointed by the Governor under Section Chapter 26-19 H.R.S. and confirmed by the State Senate. I am commissioned by the Director of Transportation to chair this public hearing on his behalf.

The following guests are here tonight. (Pause)

The purpose of this hearing is to comply with Section 91-3 of the Hawaii Revised Statutes by affording all interested persons an opportunity to submit data, views or arguments, orally or in writing, with respect to the Lihue Airport New Helicopter Facility SEIS.

When your name is called, please come forward before the microphone, state your name, organization, if any, and interest. Unless you are called to order by me or
until your time is up, you may speak freely with respect to
the subject matter.

We ask that you limit your testimony to five
minutes so that others may have an equal opportunity to be
heard. Those who represent large groups or want more time
will be given an opportunity to speak further for a
reasonable length of time after everyone else has been given
a chance to speak for the allotted five minutes.

In order that the testimonies be kept relevant and
material to the issues, we ask that you address yourself to
the subject of this hearing.

Written submissions will be received at anytime
prior to June 30th, 1988 to the Engineering Branch, Airports
Division, Honolulu International Airport, Honolulu, Hawaii
96819.

In order that each and every interested person may
be given a fair opportunity to be heard at this public
hearing, we request that you observe the following
procedures:

If you wish to speak and have not done so already,
please enter your name on the sign-up sheet, together with
your address, the organization you represent, if any, and
await your turn. Those sign-up sheets are located on the
far end of the benches. There are four of them that are
evenly placed.
The general agenda for tonight will be as follows:

First, Mr. Owen Miyamoto, Airports Administrator of the Department of Transportation, will introduce the consultants preparing the SEIS for the Airports Division. The consultant will make a short presentation, followed by a 15-minute recess. When we resume, we will then receive your testimonies.

We are here tonight to solicit factual testimonies from you on the SEIS. This hearing is not intended to be a popular referendum. The proceedings of this hearing will be recorded. It is important that you speak into the microphone and clearly state your testimonies. Testimonies should be factual, brief, unemotional, and free of any political references.

We will now get into the details of the new helicopter facility SEIS for Lihue Airport. Mr. Miyamoto.

MR. MIYAMOTO: Thank you, Mr. Chairman. The Department of Transportation has selected consultants to assist them in the preparation of the supplemental environmental impact statement for the new helicopter facility at Lihue Airport.

The prime consultant on this project for the SEIS is Akinaka & Associates, who are represented here tonight by Mr. Henry Morita, Mr. Ron Yama and Mr. Salvador Quitoriano.

In addition, for the noise study, we have selected Y. Ebisu
& Associates, who is represented by Yoichi Ebisu. In addition to the consultants, from the staff of the Department of Transportation, we have Mr. Walter Nishigata and Mr. Steve Wong, both of whom are involved in the design work and the project management for the Lihue Airport improvements.

The official observers are from the Federal Aviation Administration, Mr. David Welhouse; from Wilson Okamoto & Associates, Rodney Funakoshi, Earl Matsukawa; and from MLA Associates, Mr. Chris Mills.

At this time I'd like to turn the microphone over to our consultant, Mr. Henry Morita, who will make the presentation for Akinaka & Associates.

MR. MORITA: Thank you, Owen. This portion of tonight's public hearing is to define the project and to provide some background of the situation. There are several documents that studied the entire Lihue Airport operations and provided guidelines to initiate this project.

The 1975 to 1995 airport master plan report and its various updates acknowledged the necessity of coordinated helicopter facilities. Basically, the need is due to the volume of helicopter traffic which has caused an unsatisfactory mix of fixed-wing and rotary aircraft and the congestion at the existing helicopter loading apron area. The most recent update, the Lihue Airport development plan
update of April 1986, includes a schematic of the project. (Pause)

You will not be able to see what is shown on the slide, but the exact same thing is posted on the board in front of you, and during the intermission you will have a chance to look at it in detail.

In June 1987, the notice of determination/environmental assessment for the new helicopter facility was filed with the State's Office of Environmental Quality Control. The Department of Transportation, Airports Division, distributed the notice to 36 agencies, which included the helicopter organizations on Kauai. The assessment discussed possible environmental impacts due to initiation of the project. The assessment concluded with a notice that a supplemental environmental impact statement should be developed to further address the project's impact on air quality, specifically in terms of noise levels.

Since the filing of the notice of determination, interviews with representatives of the helicopter organizations, the Federal Aviation Administration, county agencies and interested private groups, have resulted in several modifications to the original proposal. These modifications concerned the staging area, the building area and the fueling facilities. The proposal maintains the intent of the master plan and will be discussed later.
This project was planned and will be developed under the direction of the State's Department of Transportation, Airports Division. Since funding of the project will include participation by the Federal Aviation Administration, planning and development of this project must also conform to their regulations. This meeting is not a requirement of Chapter 343, Hawaii Revised Statutes, but is conducted to obtain further public input. The public hearing format was adopted to meet federal environmental regulations.

The consultant firm of Akinaka & Associates, Ltd. was employed to develop the construction plans and the environmental documents based on the facility plan of the Lihue Airport development plan update. The construction plans will adhere to Federal Aviation Administration advisory circulars. To accurately address the noise impacts, Y. Ebisu & Associates was commissioned to study and report on the conditions.

The environmental documents developed for this project concentrates on the impacts to the Lihue Airport vicinity. Secondary impacts which cover the entire island are addressed by the statewide helicopter study.

The master plan and the Lihue area development -- the master plan and the Lihue Airport development plan update of April 1986 includes realigning taxiway A and
constructing an apron area for various airport operations. The realigned taxiway requires relocation of the existing helipads to meet clearance standards.

Also, recent increased helicopter operations have resulted in congested traffic conditions. The traffic conditions are demonstrated by the increase of helicopter tour companies, 14 now on Kauai, and the increase in flights.

Finally, the present mix of helicopters and fixed-wing aircraft is undesirable. The helicopters account for 50 percent of the air traffic at Lihue Airport, which is a high percentage.

The existing helicopter operations are conducted on the northeasterly areas of the airport. The area is between taxiway A and Ahukini Road in the vicinity of the FAA control tower and the Weather Bureau facility.

Presently, most passenger boarding, as well as arrival and departure operations, are performed at three landing pads. Based on the airport tenant map and the property detail listings, there are 22 existing helipads for operator usage. Two of the pads are exclusively used for refueling by tanker trucks. Some of these pads were constructed by private funding, but follow development plans of the Airports Division.

Passenger management consists of off-airport
offices serving as gathering points and bussing by vans to the landing pads. Several firms maintain passenger offices at the airport within walking distance to the landing pads.

Aircraft maintenance consists of first and second echelon tasks at the helipads. Extended maintenance operations are completed at Rotor-Wings, a fixed-base operator, or at individual maintenance buildings. Individual maintenance buildings are the exception rather than the norm at Lihue Airport.

Safety instructions start with a passenger briefing at the office. Additional safety precautions are provided by an escort to the aircraft for loading and unloading. Chain-link fencing separates the helicopter operations from vehicles and personnel for safety and security. An asphalt concrete parking area is dedicated to helicopter passenger vans and private vehicles.

Operations in the existing area have resulted in media coverage of possible hazardous situations. The airport consideration -- the airport condition was discussed in detail within the July 1987 issue of the Hawaii Business News. Nationwide coverage was provided by the television program, West 57th Street. It emphasized the congested condition at the existing pads and possible traffic conflicts.

The objectives of the proposed project are as
follows: 1) Provide a facility that separates fixed wing from helicopter operations; 2) provide a consolidated helicopter facility that can serve the existing operators' needs to the extent feasible; 3) provide a facility at the Lihue Airport complex that conforms to FAA standards; 4) provide a facility with a lease lot concept integrated with a new helicopter terminal building; 5) provide such a facility that can allow construction to begin by late 1988.

The new helicopter facility is proposed to be located mauka of the airport control tower, conforming to the 1986 development plan update. It will be located on approximately 18 acres of State airport lands that are now leased to Lihue Plantation on a month-to-month permit. Locating the facility at the airport will integrate its operations into existing air traffic controls, safety systems and emergency procedures.

The plans for the proposed facility has been revised many times to address concerns of the administering agencies and expected users. The layout has been revised to reduce helicopter movements to a minimum and provide for the most efficient and safe fueling proceedings. Basic design will be in accordance to the FAA's advisory circular on heliport design. Final decision on safety aspects will be by the FAA's flight standards office.

The facility will provide two landing pads, final
approach/takeoff area, FATO, for arrival and departures. The traffic at the landing pads and the adjoining taxi route will be controlled by the airport tower. Each landing pad will consist of a 75-foot-square area centered upon a 40' by 40' concrete surface with helicopter landing markings. The pad perimeter and taxi routes will be grass surfaced with perimeter concrete markers.

 Nineteen 70 foot square concrete passenger boarding pads will be constructed with three of the pads designated for transient support and truck refueling. The remaining 16 pads will be used by preferential assignment and transient use. The number of transient use pads will be dependent upon operator needs. For this project, transients are operators that are not based at Lihue Airport. Twelve of the 16 pads will each be adjoined by a staging area of 5,250 square feet and a building area of 4,830 square feet. Each pad will be serviced by an underground fuel distribution system.

 The staging and building areas will be leased to the helicopter tour operators. The staging area is expected to support minor maintenance and repairs. Overnight parking of the aircraft can be designated for this area. Surfacing of the area will be the lessee's responsibility.

 The building area will allow for passenger and administration management. There will be building height
restrictions to assure line of sight from the control tower to the taxiways. Major repairs can be accomplished in this area if proper facilities are constructed. Building restrictions will be included in the lease agreements to control building type, color, height and other visual items. Improvements within the building area will also be the lessee's responsibility.

A terminal area with transient pads is planned for the center section. The terminal will be constructed by the State and available for use by any operator. The terminal building interior layout includes eight individual stalls, similar to those now used by the car rental companies, and a lobby area for passengers.

Vehicular access and parking will be provided by a common access driveway and off-street parking areas. Stalls will be designated for individual operators. This common access driveway and parking area will be constructed by the State for uniformity. A landscaping strip, which will be maintained by the State, will separate the parking area from the service road.

The helicopter flight paths departing and arriving at Lihue Airport were discussed between the State, FAA, and the operators. A path arriving and departing by way of Hanamaulu Saddle was proposed by the FAA, but will not be adopted due to noise and congestion. Other flight paths
were considered and the conclusion is to maintain the existing flight path.

Noise concerns associated with the traffic path will be discussed by Yoichi Ebisu immediately following this presentation. The discussion will be limited to the Lihue Airport vicinity as another project addresses concerns for the entire island.

The Department of Transportation is very aware of the concerns over the increasing activity by sightseeing helicopters on Kauai as well as the rest of the State. Instead of attacking the problem on a piecemeal basis, the Department has initiated a comprehensive study of the problem with the goal of establishing a statewide policy on the management of helicopters.

This statewide helicopter study, now in the initial stages, will address helicopter operations beyond the airport area. The initial public meeting was held on May 4, 1988 here at Wilcox Elementary School. Comments on noise and traffic were expressed by those in attendance.

It is appropriate that the topic of an inland helicopter facility be included in this presentation. This concept was proposed by private individuals at the previous informational meeting for the airport master plan. Proponents of this concept have developed schematics and have approached the governmental agencies for initiation.
Use of lands outside the Lihue Airport for helicopter operations is not new -- is not a new consideration.

Previous heliports have been located at Milolii Beach, Kalalau Beach, Kauai Surf and Poipu Beach. Existing helipads are located at Princeville, Coconut Plantation, Wilcox Hospital, Port Allen and Makaweli. Proposed locations included Omao, Wailua and Koloa Town. The inland sites will require State and County land use permits and environmental impact assessments.

The Department of Transportation, Airports Division, has previously declared that they support the inland facility concept in terms of traffic reduction at Lihue Airport. Their immediate concern is to relieve the present congestion and eliminate claims of unsafe operations. Construction at the present airport will eliminate many permit requirements and new environmental impact studies. These requirements and studies will prolong the congestion at the airport.

Several helicopter operators have promoted the feasibility of an inland facility. It is possible that the inland facility will be constructed and reduce the need for the helicopter facility at the Lihue Airport. Should construction of the inland facility be immediate, the size of the new helicopter facility can be scaled down to handle the reduced traffic. Should the inland facility be
constructed after the Lihue facility, the pads can be used for other purposes, such as ground transportation operations or airport support/fixed base operations. The terminal can be maintained for itinerant helicopter use.

The project has been delayed for many months to address operators' concerns and agency review. The new facility is intended to replace the existing operational area and not to generate additional traffic.

Maintaining the status quo conditions at the Lihue Airport will: a) retard the orderly improvements to Lihue Airport; b) continue the congested operations; and c) not alleviate the safety or hazardous concerns.

This proposed project is the best plan utilizing available State lands at the Lihue Airport.

I'd like to turn the speaker over now to Yoichi Ebisu who will discuss the noise concerns.

MR. EBISU: Thank you, Hank. Okay, I'm going to discuss the results of the noise impact evaluation on the new proposed helicopter facility at Lihue Airport.

The methodology we used was basically to use the Ldn noise descriptive system, to use the State airport system plan forecast for both 1991 and the year 2005 in developing the noise contours. We generated Ldn contours with and without the proposed facility for 1991 and 2005
basically to see what the differential effects of the new facility were on the noise contour and basically apply the very conservative 55 Ldn Public Health and Welfare criteria in terms of noise impact.

The Ldn system basically takes into account the loudness of the helicopter fly-by events, the duration of the noise events, the number of events that occur during an average day of the year, and applies the nighttime penalty if there are any flights before 7 in the morning or after 10 at night.

On the top of this, this is a land use compatibility matrix versus Ldn exposure area. The red area is generally the very intense noise levels where we generally considered incompatible. The green areas are basically what we call unconditionally compatible. And the amber areas are the gray, the shades of gray, the margin of compatible areas.

On the top is the more sensitive, residential land uses and you'll see the transition between green and amber occurring at about 55 Ldn, which is the EPA level for protecting public health and welfare. And the transition from amber to red occurs at about 65 Ldn, which almost everyone agrees is the -- the level of concern in terms of noise impact. Sixty-five Ldn is generally used as a regulatory level by the Federal government, and particularly
HUD, FHA, FAA and the Department of Defense.

For this study, we're using a level of 55 Ldn then for determining noise impact. So we're trying to be conservative on this study because of the concerns about helicopter noise.

This is a noise contour for Lihue Airport. Total noise levels are primarily controlled by fixed-wing jet aircraft -- your interisland aircraft, Hawaiian and Aloha aircraft. The yellow zone corresponds to the amber regions of 55 to 65 Ldn, and outside of the yellow region is basically what we call compatible. And as you can see on this chart, there aren't too many incompatible areas at Lihue Airport right now as a result of all aircraft operations in Lihue. These contours apply for 1986, but they haven't changed significantly in the last two years.

There are some areas of incompatibility in the red near Ahukini landing. There's a rental home there and that home is exposed to very high noise levels. But generally there's a lot of buffer space around Lihue Airport at this time.

Looking at the existing conditions at Lihue Airport, we used the following helicopter flight tracks in developing the helicopter noise contours. As you can see, we have green lines that are the primary arrival route from the Saddle Kalepa Ridge area north of Hanamaulu, and you
make a right turn on the down -- left turn. It's essentially onto runway 3, and then the helicopters depart in a clockwise manner. They go out toward the Kauai Westin and make a right turn up the river and they try to maintain this circular route, which is an established tour pattern for helicopters, not only at Lihue Airport, but around the island.

The helicopter noise levels at Lihue Airport, 1986 levels, basically are shown in this slide. The yellow area is basically still the region above 55 Ldn, so it still corresponds to the amber zone. We've added the green zone to indicate a region 5 Ldn levels below the most conservative 55 Ldn. In other words, we've constructed the contours in this study down to 50 Ldn just so we could see what the differential changes between the with-facility and without-facility conditions are.

So as you can see in this chart, the '86 helicopter noise component at Lihue is generally very small when compared to the jet -- if I can get it here -- the jet aircraft noise levels. That's because jet aircraft is essentially louder than helicopters. So helicopters generally don't generate the red type of noise levels.

In developing the out year noise contours, we relied on the SASP forecast. And this slide basically shows that from 1986, which is our base year, the flights are
predicted to go up to 92 per day in 1991 and then go to 40 percent to 123 flights per day. These are one flight is one departure or one arrival. So in terms of operations, you just double the numbers. These are just helicopter flights.

The graphics for this is shown in this slide. The blue -- the turquoise blue is basically the -- the historical data from the State Department of Transportation's landing reports from the helicopter companies from about 1971 up to 1986. You can see it's sort of peaking out at '85. The yellow graph represents the FAA past counts which they started to collect after helicopters started becoming a significant part of the total operations in Lihue. And also you can see, you know, peaking at about this time, '86.

The green curve is the SASP forecast extended from 1990 out to the year 2005. And the red thing bridging the gap there, it's basically the helicopter operational numbers that were used in the part 150 study for the Lihue Airport, and which we're also using, starting from 1986 to 1991. And we used the 2005 point at the upper right-hand corner for the out year forecast.

The future flight tracks with the new facility is shown on the next slide. And as you can see, the clockwise ingress and egress routes are maintained, but that the down wind lake or the down wind flight track, the green arrow
track, is displaced approximately 1800 feet toward Lihue town to accommodate the location of the new or the proposed facility closer to the town.

So just from geometry, you can see that we wouldn't expect the noise levels to change in the egress point at the Saddle where the green arrows start, and we wouldn't expect it to change too much at the end of the red tracks where the Westin Kauai is. But we expect some changes in the existing agricultural lands now where the new facility is proposed to be located.

The 1991 noise contours, assuming just the forecasted growth in helicopter operations at Lihue Airport, but with the existing facility in place -- in other words, no new facility is shown in this graphic.

And then this is the contours with the new facility in place, and you can see a slight change in the contours, the yellow area towards Lihue town, and a slight increase in the yellow area, but generally no significant change in the populated areas of Hanamaulu and Lihue and Nawiliwili.

For the year 2005, this is the contour without the new facility and this is the contour with the new facility. You can see that there is some increase in the yellow area, primarily due to the projected 40 percent increase in helicopter operations at the airport. But again, generally
Hanamaulu, Nawiliwili generally are clear of the 55 Ldn contour.

This graphic basically shows the differential change in the total predicted noise levels of Lihue Airport in the year 2005 if the new facility is implemented. I don't know if you can see it, but mauka runway 3 -- there's a shaded gray area and that shaded gray area represents the differential displacement or increase in the noise contours in the mauka direction as a result of the helicopter facility, okay? So this graphic basically has the same forecast for helicopter operations, but it shows the result of relocating the facility from runway 3 to a point 1800 feet inland.

And again you see that, you know, from what we could have concluded from geometry, that there isn't a significant change in the developed areas. What is of concern is that the -- there are some proposals for development north of Hanamaulu and north of the stadium area and the encroachment near the tracks, those developments for the Westin Kauai expansion. So we may be causing some increase in, you know, future complaint risks as a result of some of these encroachments to the noise contours.

And what we're recommending is at least the new landowners have the noise exposures disclosed to them prior to land purchase.
The study's conclusions are that there are minimal risks of adverse health and welfare effects related to the proposed facility. The facility should be compatible with existing land use in the Lihue Airport environment. We expect complaint risks to continue because of the nature of helicopter noise and people's attitudes toward that noise source, and that complaint risk may increase in the future if development occurs around the facility.

So that's all I have. Thank you.

MR. HONMA: Prior to our recess, we have a request -- due to a time constraint on his schedule -- from the Mayor to provide testimony prior to our recess. Insomuch as the purpose of this public hearing is to solicit as well as receive all testimony regarding the SEIS, we will afford the Mayor an opportunity to provide his testimony, immediately after which we shall recess as originally stated so that all may have an opportunity to view the proposed plans and sign up to present further testimony.

MAYOR KUNIMURA: For the record, my name is Tony Kunimura, Mayor of the County of Kauai. My first intention was not to come here tonight because I felt that, you know, industry and government can work it out. I just received this afternoon a beautiful document, that if the Founding Fathers were alive, you know, that started the 13 colonies and the United States of America, they would be most proud
that it was not government and it was not political coercion
that did it, but a group of helicopter operators got
together and put together an agreement on noise abatement.

And I'm very proud that on Kauai the people are
like, you know -- all are like that. We're willing to work
it out. But hell hath no greater fury than if anybody tried
to shove anything down Kauai people's throat. I want that
understanding because even King Kamehameha couldn't conquer
this island, and I don't think any latter-day King
Kamehameha is going to do it.

I decided to appear here today, this evening,
because I was told at the meeting by one of the individuals
that my name had been bounced around about this inland
heliport and the one that the D.O.T. is planning to put up,
and somebody from FAA said the Mayor is not taking a
position. Well, I want that person to understand that I do
not like newspaper headlines, okay?

I do too often get in the headlines and I'm very shy
about it and I don't say anything about what I'm doing. But
I support, for the record, once and for all, the inland
heliport.

As a matter of fact, Mr. Jack Harter -- you know, as
a matter of fact, if I saw Jack Harter here tonight, I
wouldn't know who the hell he is, you know. Where's Jack
Harter? (Gentleman in the audience responds by standing.)
1 Okay, I didn't mean to say "hell," okay, but when you put
2 out that newspaper commitment and I guess that survey form,
3 my secretary brought the newspaper to me and it was still
4 warm off the press. And I signed it and with a footnote,
5 and I said you have my full support.
6
7 Because, you know, what the heck's the matter with
8 this whole government? We have too much government.
9 Everybody in government is trying to tell business what the
10 heck to do. It's about time we go back and start listening
11 to the people and let the people do what they think they
12 ought to do as long as it's legal. And if they cannot, then
13 let's go ahead and support them and help them. This is my
14 philosophy of government.
15
16 I don't know why I'm a Democrat, but I'm that kind
17 of a Democrat. All right? Government should not do
18 everything. But government should do only those things that
19 people cannot do for themselves. And I can, you know -- I
20 hope I heard you folks -- you know, I hope my hearing is
21 wrong, you know. Is it true that if -- if the helicopter
22 operators should be able to put together this inland
23 heliport, that you folks are going to close down here? Is
24 that the understanding?
25
26 MR. MIYAMOTO: No.
27
28 MAYOR KUNIMURA: You're going to have one
29 competing with the other?
MR. MIYAMOTO: Not competing.

MAYOR KUNIMURA: What is it then?

MR. MIYAMOTO: I could explain it.

MAYOR KUNIMURA: It doesn't make sense. One is going to be government; the other is going to be private. Government is always cheaper because it's always subsidized. How do you expect the private entrepreneur to risk all his capital going up there to put in an improvement when they don't have assurance that other people cannot -- you know, are going to go up and support him, this one heliport on Kauai?

And secondly, some of these studies really amazes me when I hear the overtone that some of the studies made, you know, about Lihue Airport Heliport -- that they're not interested or they didn't even take a look at what the County Planning Department is looking at. By that Hanamaulu By-pass is going to be created something like 70 to 78 acres of house lots in Hanamaulu, and which should be so -- closer to work, less distance on the highway, good planning. You're going to be flying over these homes pretty soon. Then again the helicopter operators are going to be condemned.

Yesterday I was at Westin for that quarterback challenge, and we had an awards ceremony for the students who wrote about "Just Say No to Drugs." Half the time, we
couldn't hear what the heck they were saying because the helicopters were flying over Westin. Pretty soon there's going to be complaints against the helicopters again.

If these people want to, you know -- and I was told tonight that you people are going ahead with this plan because you don't know for sure if these helicopter operators can, you know, pull this. I wouldn't for the life of me go ahead and commit myself when the government is planning, you know, something like this, you know, down at Lihue Airport because you're going to lose all -- everybody's going to lose their tail.

If you put a stop and give the promise to these helicopter operators and give me time, I will support, you know, a tax-free revenue bond, okay, for the welfare of Kauai's mental health so that we can have the heliport inland.

Can you imagine -- have you seen the island from Hanalei over the pass to this heliport and up again and down Knudsen Gap to Poipu and then to Kokee, flying over minimal populated areas, instead of trying to come in and sneak into Lihue Airport? Some day we're going to be having a big catastrophe at Lihue Airport, and what's going to happen? I hope I'm not around, you know.

And if we're going to -- if you're going to put up this heliport, temporary heliport with all the monies you
are going to be expending, I would say give it to these private guys. Maybe they can use it in a better fashion. And I hope you folks think it over.

The other day I called the Department of Transportation, and I don't think -- Mr. Hirata, you know, if he really knew what this was, yeah, he would support it. And we're going to be sitting with Mr. Hirata because he's a very sensible man; sensitive, too, okay?

And I hope you folks can be sensitive and sensible because let's not have, you know, people have more ammunition to say government is inefficient, you know, incapable of being sensitive. I think it's about time we show the people that Hawaii's government are -- you know, people in government are sensitive to the needs of the people and that they listen.

So thank you very much. I have to go to another function and I thank you for allowing me to put myself on record that I am 100 percent -- Jack Harter, you can count on it, okay? Okay, thank you.

MR. HONMA: Now we have a 15-minute recess, after which we'll be ready to receive your testimony. If you haven't done so already and you would like to testify, please sign up because I will be calling you off the sign-up sheet.

This meeting is in recess until 8:10 p.m.
(Recess taken from 8:00 a.m. to 8:15 p.m.)

MR. HONMA: Will the meeting please come to order.

When you are called, please use the microphone up in the front to deliver your testimony. Please speak into the microphone, stating your name, your organization you represent, if any, and provide your testimony.

Mr. Glen Kimura.

MR. KIMURA: Good evening. My name is Glenn Kimura, principal with Helber Hastert & Kimura Planners. Our firm has been obtained by Amfac Property Development Corporation as the planning consultant for its lands in the Lihue area, and my comments tonight are made on behalf of Amfac.

As planners we recognize that the Lihue/Hanamaulu area is Kauai's civic and residential center today and should logically continue to be the center of urbanization in the future.

Amfac owns a major portion of the lands impacted by the proposed helicopter facility expansion and its proposed flight paths. In addition to owning the land adjacent to the airport, Amfac also has land zoned for residential development in Molokua and Hanamaulu, which were designed to meet the needs of the local housing community.

Amfac has been working with the State Housing and Finance Development Corporation on plans for affordable
housing in Hanamaulu, and is currently preparing a
comprensive master plan for all of its lands in the Lihue
region to meet Kauai's mid- and long-range urban needs.

Given anticipated expansion of residential
development in the Lihue and Hanamaulu areas, especially in
light of Kauai's housing shortage, we are concerned about
the potentially adverse noise and safety impact. It appears
that a supplemental EIS evaluating the impact of the
proposed helicopter facility site is premature since it has
not been determined that the Lihue Airport is the preferred
site. Rather, we urge the Department of Transportation to
examine alternative sites before expending the effort to
finalize the EIS. We feel that the time is right for a
study of alternative sites.

As I mentioned earlier, Amfac is undergoing a
major planning effort that will identify areas for
residential and other compatible land uses, resort areas
that matured, so that today we are better able to assess the
needs of the primary helicopter-using population.

Finally, as we all know, this issue has
dramatically captured the public's attention and we can
expect active participation by the community. We believe
this combination of factors will enhance the process of
finding a solution which provides efficient helicopter
service, while safeguarding Kauai's options for prudent
urban expansion.

Amfac has recently met with the State D.O.T. Airport Division, their planners, and the helicopter operators to search for more viable alternative sites, such as the inland site away from existing and potential population centers.

And, for the record, Amfac is willing to continue working with the State, the helicopter operators as well as other landowners to find a long-term solution to the problem at hand. Thank you.

MR. HONMA: Stanford Achi.

MR. ACHI: My name is Stanford Achi. I'm the spokesperson for the Niumalu-Nawiliwili Tenants Association. I lived here at Niumalu for 62 years, and I'm right close by at this airport here.

This evening when they were showing the slides where the helicopter lands and they take off, that's where they're going -- straight down to where I live.

And I'm not saying all of the helicopters, but a few of them go down below the 500 mark just to show the tourists that there's caves up here, and it's very annoying. And in five minutes, we have five helicopters -- tac, tac, tac, tac, tac, tac.

People don't know this, but you try and live down in Niumalu. Now our association is going to build homes
down there for low and moderate income, and that's going to
be about another 20 extra homes now at Niumalu. And the
Kanoe Estates, they have some other lands down Niumalu, and
I'm pretty sure that it's going to be for homes also and
it's going to be quite a few of it. So you just can imagine
that Niumalu will have a lot of homes.

And also I understand that the Nawili, under the
pier, it's going to be improved, and can you imagine the
noise, the pollution? Everything is going to be down at
Niumalu. And I feel personally -- I'm speaking for myself,
my family and the Niumalu Tenants Association -- that this
heliport down here should be abolished. Shouldn't increase.
Shouldn't have it down here. That's it. Because if they're
going to have it here, that's one foot in the door already,
and who knows if in the future we'll have more -- more of
these helicopters here. Can you imagine? Just what our
Mayor says. They had this quarterback thing at the Westin
and they couldn't hear when they presented the awards.
Okay.

And as far as I'm concerned, these people don't
live there all year. They just come here. They live -- I
mean they stay for a couple days and they're gone. I live
down there permanently. We all do live down here. So I say
again that they shouldn't have this heliport down here, down
at this airport. It's bad enough in the future they're
This couple weekends, Aloha Airlines, Hawaiian Airlines passed my house to land at the airport. Can you imagine the airlines and some other small planes that are landing over here at this airport? I don't know. It's -- I feel that enough is enough because people are getting tired, sick and tired, of this public hearings. You come, you talk. For what? They still do it.

So I hope these gentlemen here, with the help of our Mayor who supports us -- that they'll take this thing into consideration. I thank you.

MR. HONMA: Paul Asmus.

MR. ASMUS: I hope I can work with this tricky mic. I'm Paul Asmus. I'm the President of South Sea Helicopters here on Kauai. And just for the record, the reason I'm appearing is I wanted to get on the record my opinions or comments concerning this EIS, which I received a copy of today. So what I want to do is just go through it and bring up some points which I believe are -- I have a different opinion about or maybe it should be looked into.

First on page 3, which is "Economic Characteristics," this new heliport at the airport would provide construction jobs and so on and so forth to the tune of $2.3 million. I would just like to point out that our inland site would also generate jobs and income. So if
there are those that are afraid that they might lose the
income if it weren't for the construction jobs and such at
the airport, that would just be transferred over to the
inland site.

Also, they talk about social characteristics. And
it says, "There will be no on-site population impact due to
this project as the facilities are largely replacements to
house on-going activities." That is definitely an
inaccurate statement. In actuality, it's going to take care
of existing but also expansion.

What I see that they tend to gloss over is that
there will be five transient pads also with a terminal at
the new facility which will allow a large number of
additional helicopters and companies to start on the island.
So when they state that it's just to take care of the
existing operations, it's not quite accurate.

As a matter of fact, each of those pads could
probably operate or move at least 12 helicopters an hour.
So when you multiply that by five, you can imagine that's --
that's just for new uses, not handling existing ones.

Also -- we'll skip the zoning. I was just kind of
curious when they refer to existing zoning on page 4. They
talk about the State Land Use Commission. I was curious
about the County zoning and if they need to have a Planning
Department approval. It doesn't say anything about County.
It just says "State."

Also, I notice they talk about the Exhibit 7, the 1983 helicopter flight pattern. On page 8 they say, "Note that over 90 percent of the approaches are over the Hanamaulu canefields ending in a left turn to runway 3-21."

It's interesting to note, and the Mayor brought it up, that those Hanamaulu canefields are now going to have homes in the near future. So 90 percent of the helicopters or whatever are going to be flying over future homes. They don't mention anything about the future homes in the report.

Also, on page 10 they mention the FAR part 150 noise compatibility study. When they had a meeting here recently on the study, they had a chart for 1993. But as I recall, they didn't include helicopters because the noise consultant didn't believe or was under the impression the heliport wouldn't be built by then. That's as I recall. If that's still the case, I wonder if that's been adjusted for in here, you know. If they can answer that question, I'd appreciate it.

They talk about the resort down on the same page, Regional Development Proposals -- no resort units are proposed in excess of Ldn 60, section A. They say, "The project satisfies the State Land Use Condition that no resort units be located within the noise exposure forecast contour in excess of 25 or roughly Ldn 60. No resort units
are proposed in areas in excess of Ldn 60." We all know
that the Westin is right next to the airport and it's going
to be expanding, and I don't know. It's just to me that
they're kind of glossing over that. I'm kind of curious.
If they can give more detail in that area --

And it says, "Using conservative assumptions, the
results still indicate that even in the 1995 projection, no
resort units will be located in excess of the Ldn 60
contour." Again, it seems a little vague.

Another question I have is on the Exhibit 13,
helicopter noise level. They refer to "helicopters, Bell
Model 206, having the lowest approach noise level, as shown
on Exhibit 15, noise levels of various helicopters." When
they say "lowest approach noise level," I'm curious if
they're referring to -- it says there, I believe, a thousand
feet. But when we fly over Hanamaulu area, generally a lot
of the aircraft -- some of them are traveling at a somewhat
high airspeed and so I don't know if that would be
considered an approach or not. But it may be a flaw in the
study where if they're measuring the noise in Hanamaulu,
whether or not it still comes under the approach criteria or
a different criteria.

They also on page 14 mention "There will be
changes in the noise footprint due to the movement of the
helipad and subsequent approach/departure realignment," and
they give some existing routes with Exhibit 7 and Hanamaulu Saddle, Exhibit 16. And then underneath they say, "To motivate noise generated from takeoffs and landings, the routes will follow Ahukini Road for landings during tradewinds and takeoffs during Kona conditions."

As an operator, I'm real curious what they're saying here because they've been very vague in the report as to how we're supposed to get in and out. If -- according to the drawing, they don't show us flying down Ahukini Road. Now, they have us going down where on Ahukini Road? If they're talking about over the town, we know that's a problem. Years ago we stopped flying over Lihue town and flying over Ahukini Road because of the noise.

Now if they plan for us to fly over Ahukini Road, then the noise study is flawed because I don't see any -- it doesn't -- it doesn't fit with their maps.

Also, they go on -- they make mention here on page 15, "Once the pilot has transitioned from cruise to the approach glide slope, he can tailor his airspeed and rate of descent to fit local conditions, avoid unsafe regimes, and still guarantee minimum noise."

Now, on their drawing now, the exhibit of the approach, they have us making a very steep approach at the very final end, a very steep turn and descent right near the terminal area, which kind of contradicts the statement here
because it makes it sound, the way I interpret it, that they anticipate us to make a gradual, simple, straight-in approach, which would be one thing. But if we start making an abrupt and such, you're going to have a lot different noise setup, especially with your blade slap.

Now, there's the departure mentioned here,

"Takeoffs are reasonably quiet operations, but you can limit the total ground area exposed to helicopter sound by using a high rate-of-climb and making a very smooth transition to forward flight. Your departure route should take you over areas which are the least sensitive to noise."

Now, first of all under their plan, it's confusing as to where we're going to go. They have us going back over Hanamaulu. But I'd like to point out for the record that most of our operations are at max gross weight, and we don't have -- some of us don't have that high rate of flying power and so we can't necessarily limit our ground exposure noise using that -- that intended high rate of climb.

Now, they also say on recommendations, or they call it here -- let's see what they call it here -- findings and reasons supporting determination. On page 20, item 10, they say, "The proposed action does not detrimentally affect air or water quality of ambient noise levels." And in here it states, "If aircraft traffic is increased, it will be a result of other factors, tourism, recreation needs, etc.,
and not due to replacement of existing facilities."

Again, as I stated earlier, that's not accurate because they're saying if traffic is increased, it's caused by tourism and other things, not by the replacement. But the replacement facilities will allow an increase in traffic because there will be no limits or it will open it up to a lot more number of people.

And just a couple of other things I want to share in closing. In the very back, they have a letter here from one of the operators. In fact, it's Jack Harter Helicopters, dated July 14th, 1987, to Akinaka & Associates, stating his feelings on this plan.

And he states here, "Please investigate plans to reopen a public school at the Hanamaulu facility. It is very close to the flight path." Nowhere in this report, and there's two letters of this kind -- nowhere in this report does it mention that possibility. In fact, in a recent discussion with an FAA official, he was totally surprised this was even happening; yet here's a letter on file as of July 20, 1987, telling them to look into it, but it's not in the report.

Also, he says, "To provide separation for both approaches and departures from the proposed site, copters will have to make wider turns," which goes again to what I was saying earlier, speed turns, "at low altitudes, closer
to the hospital and Hanamaulu. The airport cut-off road being constructed lies directly under either approach or departure from the proposed heliport. Copters turning final on approach or departing on Kona days will be very low over or across the new highway. Please assess potential distraction of drivers." Again, no comments in here about that.

And there's one final letter in here, which also was from the Sierra Club, and it's also July of '87, where it says here under item 3, "Hanamaulu and Nukolii are noise sensitive areas and should not be subjected to the increased frequency of low helicopter overflights which this facility would create. In fact, a public school may be reopening in Hanamaulu, which would make that area even more incompatible with low overflights."

Now, I just want to also go on record that yesterday my chief pilot and myself flew this proposed route, which is an exhibit in here, and we had a very difficult time achieving our objective, trying to safely maneuver the aircraft around to make the approach into this new facility. So I think that some really, really serious questions need to be brought up.

And in Exhibit 16 it shows the approach coming in with a steep turn at the -- at the approach end and departure still over Hanamaulu Bay over the Nukolii area and
back across Saddle, crossing cross traffic. The industry, I believe some time ago, well over a year, year and a half ago, went on record saying that's totally unsafe. I was led to believe that that was not going to happen, and yet it's still in the report here. There's no concise, something written, to tell me what they intend to do.

So I would appreciate it if the D.O.T. and their consultants will review what I have stated and maybe send me some answers or -- to these questions and/or modify the report. Thank you.

MR. HONMA: Insomuch as there will be, according to the sign-up sheet, only five more testimonies, and to allow the speakers an opportunity to complete their testimony to maintain continuity of their testimony, once you start, you can complete it unless your testimony is substantially longer than the original five minutes, okay?

Mark Phillips.

MR. PHILLIPS: Good evening, Department of Transportation, people, politicians, legislators. For the record, my name is Mark Phillips and tonight I'll be representing myself.

Although I am a member of the Kauai Helicopter Local Advisory Council, I've been sitting on the Kauai Community Relations Helicopter Planning Board, and I'm also the conservation chairman for the Sierra Club.
And I'd like to put on record right now that the Sierra Club is in support of whatever we can do to develop an inland heliport as an alternative to this proposed interim or replacement helicopter facility in Lihue.

Helicopters benefit our community and helicopters also impact our community. I would like the possibility for our community to resolve these differences. As a community, we can do it. But with this plan, we can't.

Over the last couple of years, the community and the helicopter industry have been working very hard together to resolve the differences. There was a time when there was really, really hard feelings. When I look around me tonight and I see a lot of people that I've been working with on the same table, face to face, eye to eye, then I believe that we're very close to making some kind of progress in reaching some agreements.

But should this facility be built and the population of helicopters, companies and number of flights go out of control, everything that we've worked for and all the progress we've made is going to be lost. The community, which is on the verge now of working with the operators, is going to become totally alienated against the helicopter industry. The industry is going to suffer tremendous, you know, hatred and resentment from the community.

Well, we're close to working our problems out now,
but should this replacement facility be built, we're going
to lose all that work. I just want to say that this new
facility eliminates our option of working together as a
community. Thank you.

MR. HONMA: Steve Glass.

MR. GLASS: Good evening. I'm just representing
myself -- very brief, few statements here. Most of the talk
has been about coming into the airport over Hanamaulu area.
For three-and-a-half years I've been working on the Huleia
Stream as a kayak guide on the tour that runs past the
Menehune Fishpond.

Over the last three years, it's become absolutely
impossible to talk with people on the trip. As we go up the
river, the helicopters go over. I assume that they're at
their proper height level at that time, but we just have to
stop talking and wait for them to go by, and that happens
every few minutes. I assume in the future there's going to
be developments up along the rim of the stream there. It's
starting to push out that way now, so that's another
consideration. Obviously, I'm for moving the heliport
somewhere inland, too, if it's possible to do.

Another question that kind of came to my mind
tonight -- and I don't know the ins and outs of all these
things -- but I don't quite understand why the State should
be building a facility for a private industry anyway. It
seems that's their own business to build a heliport. Seems like it's subsidizing a sector of the private community. It's not public transportation, so I don't know why they should be involved in this at all.

And one other point I'd like to throw out. This may be a little different from the point tonight, but as long as we're thinking about all of this, it's time to think about an absolute limit on the flights per day on this island. We've limited the charter boat operations on the North Shore as to how many trips they can make, and I think it's getting time to think about that, too. Thank you.

MR. HONMA: Eddie Sarita.

MR. SARITA: My name is Eddie Sarita. I'm a resident of Hanamaulu. The opinion that I express tonight is personal, but it raises from discussions and conversations with area residents.

I reviewed the draft of the SEIS for the proposed helicopter facility at the airport. The people at Hanamaulu and Lihue have been impacted by noise levels from the airport. But the airport is essential to us all and we have had to adjust our lives to accommodate it. Over the years, we have tolerated the buildup of helicopter operations at the airport and it's accompanying noises. Initially, the small number of helicopters were of little concern. Now due to the growing numbers, the State wants to build bigger
I submit to you that by doing this, the State will encourage more growth in the helicopter operations at the airport. This means that more noise will be generated for area residents. The helicopter approach pattern to the airport comes close to Hanamaulu. It passes over Hanamaulu Beach Park, which is a popular resident and visitor recreational area. Families go there to relax and enjoy a day at the beach. Helicopters overflying will certainly create more disturbances.

Hanamaulu now has an estimated resident population of 3,000 people. The majority are moderate income with young and growing families. Being close to Lihue, it is a good place to live.

The County has approved housing developments towards the east and north and closer to the approach pattern. The current plans will allow nearly 400 more housing units. Along with this, the D.O.E. is considering removing of the school, and I have here an article which is dated June 8th, Wednesday, 1988, "New School for Hanamaulu and Homesteads." And in it there is no question that the D.O.E. intends to proceed with construction. In fact, they project an opening of 1990 for the school.

And this school will be located -- according to this article, "The new Hanamaulu School will serve not only
Hanamaulu children, but Wailua Homesteads children as well. Governor John Waihee has approved the site next to Peter Rayno Ballpark. The old Hanamaulu School, used in recent years for Hale Hauoli, a day care center for handicapped adults, will be demolished to make way for the 20-classroom building."

And it goes on to say the construction is scheduled to begin on the Hanamaulu School this summer, so there's no doubt that the school is going to be built. And I say that the State must give consideration to noise impact that it will bring if it proceeds with the construction of this facility. We will have to live with this in the foreseeable future. We want to reduce the noise levels; in fact, eliminate it if possible.

This facility should not be built at this location selected. Construction of the facility away from the airport is the better alternative. Thank you.

MR. HONMA: Jack Harter.

MR. HARTER: My name is Jack Harter and I'm here basically to represent myself, but I'm also going to represent many other people. We have published in the local paper and spread about the island here, a few statements regarding people's opinions concerning the inland heliport facility. I'd like to present these to you. (Hands documents to Mr. Honma.)
I think they far outnumber the people here in the building tonight, so we're doubling our representation with this. And each is signed and they're obviously not official, but they're indicative. We'll probably receive a great many more, but we'll send it to you when we get them. But they're public impression, how people feel about the situation as it is today, and we were quite surprised as to how good the response is.

I also am going to be representing -- Mark Phillips just said so. We had a phone call this morning from Bill Mowry (phonetic spelling) from the mainland, and he authorized me to state that the -- that both the State and the local Helicopter Advisory Council is 100 percent behind an inland heliport, as Mark Phillips suggested. So we have Bill Mowry, who's running the show, saying definitely that they are for it.

Also, you've already heard from the Mayor, and we have his statement which we'll include, personally signed by the Mayor, to the effect that he is also for it. And we've heard from him and we're delighted to have him here to get his viewpoint.

My position on this thing is so well known, I don't want to take any more of your time, but I do want to clarify a couple points. One, I'm speaking for myself in all these matters and I do not represent any helicopter
company on the island as a spokesman for them. We are an
independent bunch of people and what happened basically is
this. I just want to verify for everybody that this is
true.

All the operators have agreed to move with an inland
heliport. We have a verbal agreement from each operator,
and more than that in that we have finally put together a
fairly workable group. I am their coordinator. I do not
speak for any of them, but we are a viable group.

We're now putting together a careful study. We do
know that the inland facility can be built, so in getting
back to the question of EIS and the study at the airport
facility, we all don't like it; not just from the safety
standpoint, the noise standpoint, but because of the
operation standpoint. We want to move inland. Makes sense
economically, locally. Everybody -- everyone is for it.
But so I don't take any more time, but I wanted to add one
or two little thoughts that have slipped by the whole system
here.

The question of the school located -- what we're
trying to do apparently is to find some way of not having --
not being able if necessary to build a facility at the
airport through some regulation or whatever. I'd like to
toss one out to you. When we were trying to get approval
for a site near the Seventh Day Adventist School at Kahili
Mountain Park -- that was a previous site that I had chosen. We ended up trying for the tree tunnel, which was not my desire, but it ended up being that way. The site that I had hoped for was near the Seventh Day Adventist School.

In trying to get that approved, the regional office, the FAA regional office in California, passed on this location. They work with air route structures and the basic recommendations for safety, noise abatement, impact and such, and they said you can't. You're within 6,000 feet of a school. So I went out and measured very carefully and it turned out we were exactly 6,000 feet. They said if you can get the school's permission, we would approve it. So we got the school's permission, but nothing came of it. That whole thing folded.

But I'm making the point that the new school, which Mr. Sarita just pointed out, is going to be built within 4,000 feet that this new facility is planned. If that site was not approved, certainly this one can't.

So I'm going to suggest that you look into that in your report and the possibility that the site isn't even legal in that regard. Beyond that, I don't have much too add. The fact is that I don't think there's a person on this island that -- certainly none of the operators -- that wants that facility at the airport. We got the feeling from -- from the report here a little while ago that even the
State doesn't want it. So let's go ahead with the inland heliport for sure.

I have one further thought. When you put together these beautiful studies, and they're well done. We have to congratulate the State for doing a good job. They have really looked into it within the framework of noise detection and such. I have got to add that when he showed the graph on the screen there, it pointed out that public parks and schools were the most critical within the framework of the noise abatement.

And the question that I have is: How can they judge the impact of a sound like a helicopter based on a simple instrument, when we know for a fact that the sound is so obtrusive and so terrible, that even though it doesn't record on instruments, it still drives people nuts. I'd like to use an analogy, the noise of a chain saw in a forest. You couldn't even record a chain saw at a distance, but it eats in your mind, and that's the way it is with helicopters. And I hate to say so because they're my livelihood and my wife's. But we have to somehow avoid this going over Hanamaulu, Niumalu and around Lihue by moving inland. Thank you.

MR. HONMA: Bev Harter.

MS. HARTER: My name is Bev Harter, and I want to read testimony prepared by Margie Parker, Executive Director
of the Poipu Beach Resort Association. She asked us to read
this for her because she was unable to attend. The
testimony reads as follows:

"The Poipu Beach Resort Association, on behalf of
the Lihue Airport helicopter operator members, is in favor
of establishing an inland heliport facility to take the
place of existing helicopter operations at the airport.

"We favor such a facility because it takes
helicopter traffic away from the airport and from
surrounding residential and commercial developments. Most
importantly, if this inland facility were developed, it
would establish a flight pattern away from Kauai's
population and resort centers, an issue this association
strongly supports.

"It is important, however, that this facility be a
replacement of helicopter facilities at the airport, rather
than in addition to an airport helicopter facility. Any
measure taken to establish helicopter flight operations and
patterns away from populated regions of Kauai, would be more
conducive to providing an environment of peace and
tranquility, which is one of the key motives for tourists
who choose to come to Kauai, as well as for residents who
choose to live here.

"We recognize the valuable experience that the
helicopter operators provide for our visitors, and we hope
that the State can work with these operators on providing
the best of all solutions for the existing industry.

"We continue to have strong concerns about flight
patterns over resort and residential areas, and urge the
State to support helicopter operations which would solve
this issue.

"Respectfully submitted, Margie Parker, Executive
Director." Thank you.

MR. HONMA: Some of you have you learned more
about the new helicopter facility SEIS and may not be
prepared to submit statements tonight. The State Department
of Transportation will continue to accept written statements
through June 30th, 1988.

If you are not able to complete your written
testimony within this period, please call the Department of
Transportation for an extension of time. The number to call
is 836-6526. I assure you that any reasonable request will
be considered. It is the Department's expectation that your
testimony will be a valuable addition to the studies which
they are conducting and will help to guide them in adopting
the best solution for the proposal.

The staff of the Department of Transportation will
weigh the effects of your testimonies and information
presented tonight, together with factual data they already
have. If it is believed that the data, views or arguments
indicate a necessity for any revisions, these revisions will be made.

We thank you for taking the time to attend and to participate in this hearing.

It is now 8:50 p.m. and I declare this public hearing concerning the Lihue Airport new helicopter facility SEIS is hereby concluded.

--oo0oo--
CERTIFICATION

I, KATHLEEN L. SAKAMOTO, Certified Shorthand Reporter and Notary Public of the State of Hawaii, do hereby certify that the foregoing pages comprise a complete, true and accurate transcript of the proceedings held on Wednesday, June 16, 1988, relative to the aforementioned matter.

Dated this 23rd day of June, 1988.

KATHLEEN L. SAKAMOTO
Certified Shorthand Reporter No. 180
Notary Public, State of Hawaii
Public Hearing Testimony
Regarding the
Lihue Airport New Helicopter Facility
Supplemental EIS

Time: 7:00 p.m.
Date: June 16, 1988
Location: Wilcox Elementary School,
Lihue, Kauai

Good evening. My name is Glenn Kimura, principal of Helber, Hastert & Kimura, Planners. Our firm has been retained by Amfac Property Development Corp. as the planning consultant for its lands in the Lihue area and my comments tonight are made on behalf of Amfac.

As planners, we recognize that the Lihue/Hanamaulu area is Kauai's civic and residential center today and should logically continue to be the center of urbanization in the future.

Amfac owns a major portion of the lands impacted by the proposed helicopter facility expansion and its proposed flight paths. In addition to owning the lands adjacent to the airport, Amfac also has land zoned for residential development in Molokoa and Hanamaulu which would be designed to meet the housing needs of the local community. Amfac has been working with the State Housing Finance and Development Corporation on plans for affordable housing in Hanamaulu, and is currently preparing a comprehensive master plan for all of its lands in the Lihue region to meet Kauai's mid and long range urban needs. Given anticipated expansion of residential development in the Lihue and Hanamaulu areas, especially in light of Kauai's housing shortage, we are concerned about potentially adverse noise and safety impacts.

It appears that a Supplemental EIS evaluating the impacts of the proposed helicopter facility site is premature since it has not been determined that the Lihue Airport is the preferred site. Rather, we urge the State Department of Transportation to examine alternative sites before expending the effort to finalize the EIS.

We feel that the time is right for a study of alternative sites. As I mentioned earlier, Amfac is undergoing a major planning effort that will identify areas for residential and other compatible land uses. Resort areas have matured so that, today, we are better able to assess the needs of the primary helicopter-using population. Finally, as we all know, this issue has dramatically captured the public's attention and we can expect active participation by the community. We believe this combination of factors will enhance the process of finding a solution which provides efficient helicopter service while safeguarding Kauai's options for prudent urban expansion.

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AKINAKA & ASSOCIATES, LTD.
Amfac has recently met with the State DOT Airport Division, their planners, and the helicopter operators to search for more viable alternative sites, such as an inland site away from existing and potential population centers. And, for the record, Amfac is willing to continue working with the State, the helicopter operators, and other landowners to find a long term solution to the problem at hand. Thank you.

Sincerely,

Glenn T. Kimura
Vice President
Mr. Dean Nakagawa
3901 Hokulele Loop -- Box 6
Lihue Hi 96766-9797

re: Public Hearing at Wilcox School
Lihue, Hi on June 17, 1988
Concerning Helicopters and low-flying Aircraft

Dear Mr. Nakagawa:

We urge that all aircraft flying over Kauai be based at the two airports, at Lihue and Princeville, where some regulations are enforceable.

The first consideration is safety: in case of an accident on takeoff or landing, immediate attention can be provided at an airport.

The second consideration is operational: parking, toilets, food, shelter, flight fuel, oil, repairs, etc., are in place at airports.

Self-regulation of flights on Kauai by helicopters is recently liveable, except for one company which consistently flies over populated areas.

We no longer swim or enjoy picnics at Salt Pond, because of noise from helicopters and grit blown by them on our bodies and food.

Sincerely,

Lois A. Birnbaum
Harold F. Birnbaum
The Poipu Beach Resort Association, on behalf of its Lihue Airport Helicopter Operator Members, is in favor of establishing an inland heliport facility to take the place of existing helicopter operations at the airport. We favor such a facility because it takes helicopter traffic away from the airport and from surrounding residential and commercial development. Most importantly, if this inland facility were developed it would establish a flight pattern away from Kauai's population and resort centers, an issue this Association strongly supports. It is important, however, that this facility be a replacement of helicopter facilities at the airport rather than in addition to airport helicopter facilities. Any measure taken to establish helicopter flight operations and patterns away from populated regions of Kauai would be more conducive to providing the environment of peace and tranquility, which is one of the key motives for tourists who choose to come to Kauai as well as for residents who choose to live here.

We recognize the valuable experience that the helicopter operators provide for our visitors and we hope that the State can work with these operators on providing the best of all solutions for the existing industry. We continue to have strong concerns about flight patterns over resort and residential areas and urge the State to support helicopter operations which would solve this issue.

Respectfully submitted

Marny Parker
Executive Director
Dear Dr. Green,

Success,

And soon.

Thank you for your patience.

Always kind regards,

Gary L. Black, M.D.
Concerned about helicopter noise
and needing support from all non-political
constituents and a few prominent officials
operational and to prevent the immediate
to all noise from helicopters
I urge the State to close Hilo Airport

June 16, 1988
<table>
<thead>
<tr>
<th>NAME (PLEASE PRINT)</th>
<th>ORGANIZATION</th>
<th>MAILING ADDRESS</th>
<th>PHONE NUMBER</th>
<th>TESTIMONY (YES OR NO)</th>
</tr>
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<tbody>
<tr>
<td>Patricia Chevalier</td>
<td>South Sea Helicopters</td>
<td>Kahului Heliport, Hangar 108, Kahului</td>
<td>871-8844</td>
<td>NO</td>
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<tr>
<td>David Chevalier</td>
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<tr>
<td>Tony T. Funiman</td>
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<td>P.O. Box 221, Koloa, Kauai</td>
<td>742-6545</td>
<td>NO</td>
</tr>
<tr>
<td>Paul D. Asmus</td>
<td>South Sea Helicopters</td>
<td>P.O. Box 1443, Wailuku, HI</td>
<td>245-7755</td>
<td>YES</td>
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<tr>
<td>Mark J. Phillips</td>
<td>Self</td>
<td>P.O. Box 1011, Kapa'a, HI 96746</td>
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# PUBLIC HEARING FOR NEW HELICOPTER FACILITY

**WILCOX ELEMENTARY SCHOOL, LIHUE, KAUAÏ**

**JUNE 16, 1988**

## SIGN-UP SHEET

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<tr>
<td>1. <strong>Glenn Kimura</strong></td>
<td>HII/K/Ontra Prop. Dev. Corp</td>
<td>783 Bishop St. #2590  Honolulu, HI 96813</td>
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<td>2. <strong>Chris Mills</strong></td>
<td>MLA Associates</td>
<td>1451 S. King St. RM 507  Honolulu, HI 96814</td>
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<td>3. <strong>George Brosky</strong></td>
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<td>4. <strong>Adrian Miyata</strong></td>
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<td>5. <strong>Ronald T. Yama</strong></td>
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<td>5088 PANA DR.</td>
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<td>2. JACK HARTER</td>
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If the state proceeds with the airport plan, they will soon build 19 new pads used by as many as 40 helicopters. NOISE and HAZARDS to residents and resorts around the airport will become UNBEARABLE.

The mixing of helicopters with airplanes has already become dangerous. Please give us your support for a safe facility away from everyone and built with private sector funds.

I urge the state to close Lihue Airport to all scenic tour helicopter operations and to permit the immediate construction of a private sector facility away from all noise sensitive areas.

SEND TO:
Concern About Helicopter Noise
P.O. Box 306, Lihue, Hawaii 96766

SIGNED:

PLEASE PRINT NAME ________________________________________
ADDRESS _______________________________________________
PHONE _________________________________________________

STATEMENT
NEW HELICOPTER FACILITY
LIHUE AIRPORT, KAUAI, HI.

LIST OF STATEMENT SIGNERS RECEIVED AT SUPPLEMENTAL
ENVIRONMENTAL IMPACT STATEMENT PUBLIC HEARING,
JUNE 20, 1988, 7:00 P.M. AT WILCOX ELEMENTARY SCHOOL,
LIHUE, KAUAI

ADVERTISEMENT: "PLEASE HELP REDUCE HELICOPTER NOISE

If the state proceeds with the airport plan, they will soon
build 19 new pads used by as many as 40 helicopters. NOISE
and HAZARDS to residents and resorts around the airport will
become UNBEARABLE.

The mixing of helicopters with airplanes has already become
dangerous. Please give us your support for a safe facility
away from everyone and built with private sector funds."

STATEMENT: "I urge the state close Lihue Airport to all scenic tour
helicopter operations and to permit the immediate construction
of a private sector facility away from all noise/sensitive areas."

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APPENDIX C

COMMENTS TO NOTICE OF
DETERMINATION/ENVIRONMENTAL ASSESSMENT
DATED APRIL 1987

FOR

NEW HELICOPTER FACILITY
LIHUE AIRPORT COMPLEX
LIHUE, KAUAI, HAWAII
PROJECT NO. AK1046-14
June 8, 1987
PN: 0053

Mr. Dean Nakagawa
Airports Division
State Department of Transportation
Honolulu International Airport
Honolulu, Hawaii 96819

Dear Mr. Nakagawa:

Environmental Impact Statement (EIS) Preparation Notice
Lihue Airport Complex - New Helicopter Facility
Lihue, Kauai

It is our understanding that a Supplemental EIS has been required for
the new helicopter facility. Consequently, the referenced document has
been prepared to identify the potential impacts that are of major concern.
The forthcoming Draft Supplemental EIS would focus its analysis on these
major concerns and supplement the 1977 Lihue Airport Master Plan Study
EIS. The Environmental Center has conducted a brief review of the noted
Preparation Notice with the assistance of George Curtis, Hawaii Natural
Energy Institute; Jon Matsuoka, Social Work; Pamela Bahnsen and Jennifer
Crummer, Environmental Center.

The proposed project involves the replacement and centralization of
fifteen helicopter parking positions rented on 30-day revocable permits,
three State Department of Transportation controlled helipads, and three
refueling positions at the Lihue Airport. In addition, a terminal building
(3,100 sq. ft.) with parking would be provided to replace various
structures now used for passenger and administrative needs. The airport
fuel farm and underground fuel dispensing system would also be installed.
This project is intended to promulgate safe and efficient helicopter
operations at the Lihue Airport by segregating it from fixed wing airplane
operations.

General Comment

While we recognize that it is not specifically a consideration of this
Preparation Notice, we would like to raise the issue that enhancement of
helipad facilities may stimulate further growth of the helicopter

A Unit of Water Resources Research Center
AN EQUAL OPPORTUNITY EMPLOYER
industry. The potential resulting impacts (noise/safety - primarily beyond the regulation of the Lihue Airport Control Tower) could be deleterious to the economic base of Kauai's tourist industry.

Specific Comment

Noise Impacts

The statement that "annoyance" resulting from sight-seeing helicopter noise levels is "dependent on the listener" is tautological. The issue of noise is significant in the context of impacts to wildlife and visitors at remote, scenic areas of Kauai. While there may be correspondence in decibel levels between helicopters and "familiar surface transportation vehicles," the latter are not normally a component of remote, scenic areas and would constitute a significant impact if they were. As noted earlier, we are concerned that proliferation of helicopter sight-seeing could ultimately undermine the economic base of Kauai's tourist industry. Enhancement of helicopter support facilities has the potential to encourage such proliferation.

We appreciate the opportunity to comment at the preparation stage.

Yours truly,

John T. Harrison
Environmental Coordinator

cc: OEQC
L. Stephen Lau
George Curtis
Jon Matsuoka
Jacquelin Miller
Pamela Bahnsen
Jennifer Crummer
Mr. Owen Miyamoto  
Airports Administrator  
Airports Division  
Department of Transportation  
Honolulu International Airport  
Honolulu, HI 96819

Re: AIR-EP 87.1829, New Helicopter Facility at Lihue Airport

Dear Mr. Miyamoto:

We have reviewed the referenced Notice of Determination/Environmental Assessment and offer the following comments for your consideration.

This report has been prepared under the authority of and in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and other authorities mandating Department of the Interior concern for environmental values. It is also consistent with the intent of the National Environmental Policy Act.

The proposed action will have little adverse impact on fish and wildlife resources within our jurisdiction. In view of this, we have no objection to your issuance of a permit for this project.

We appreciate this opportunity to comment.

Sincerely yours,

Ernest Kosaka  
Project Leader, Environmental Services  
Pacific Islands Office

cc: DLNR  
Akinaka & Associates, Ltd.
Sincerely,

[Signature]

Mr. Miller

Director

Office of Environmental Affairs

Dept. of Health

Dec. 15

Los Alamos, H. I.

P.O. Box 1071

Advisory Board

Royal Citizens Helicopter

July 1, 1987
July 2, 1987

Mr. Owen Miyamoto  
State of Hawaii  
Department of Transportation  
Airports Division  
Honolulu International Airport  
Honolulu, Hawaii 96819  

Subject: Lihue Airport Master Plan Update and Noise Compatibility Study, AIR-EP 87-1741

Dear Mr. Miyamoto:

Please inform your consultant that Amfac Properties and Lihue Plantation Company wish to be included as consulted parties in the preparation of the Environmental Assessment for the helicopter facility at Lihue Airport.

Sincerely,

Jeffrey M. Melrose  
Land Planner

JMM/kk
Mr. Owen Miyamoto  
Airports Administrator  
Department of Transportation  
Honolulu International Airport  
Honolulu, HI 96819

Dear Mr. Miyamoto:

RE: NOTICE OF DETERMINATION/ENVIRONMENTAL ASSESSMENT  
NEW HELICOPTER FACILITY - LIHUE AIRPORT  
PROJECT NO. AK1046-14

Thank you for the opportunity to comment on the Environmental Assessment for the New Helicopter Facility at the Lihue Airport.

Inasmuch as dust control is addressed in the EIA, we would like to point out that during the construction of the north-south runway and the new terminal complex, there were times when dust became uncontrollable because of inadequate dust control equipment for the area exposed. To avoid similar problems during the construction of the helicopter facility, tighter procedures for controlling dust should be specified in your drawings and specifications. The procedures should not, however, call for a County grading permit, as work under the control of your agency is exempt from our grading ordinance.

Please feel free to call Ken Kitabayashi or Wallace Kudo of our Engineering Division at 245-4751 if you have questions regarding our grading ordinance.

Very truly yours,

ORIGINAL SIGNED BY

STEVEN KYONO  
County Engineer
Mr. Owen Miyamoto, Airports Administrator  
State of Hawaii  
Department of Transportation  
Airports Division  
Honolulu International Airport  
Honolulu, HI 96819  

Dear Mr. Miyamoto:

Thank you for the opportunity to review and comment on the Notice of Determination/Environmental Assessment for New Helicopter Facility, Lihue Airport, Lihue, Kauai. The following comments are offered:

a. A Department of the Army permit application is not needed.

b. Without a tax key number, to identify the site, we can only provide an approximate flood hazard evaluation. According to the approximate location, the Flood Insurance Rate Map indicates the entire area around Ahukini Road is in Zone X, area of minimal flooding.

Sincerely,

[Signature]

Risuk Cheung  
Chief, Engineering Division

Enclosure
Akinaka & Associates, Ltd.
250 North Beretania St.
Suite 300
Honolulu, HI 96817

Re: Project # AK1046-14

Aloha:

Please consider the following views in the compilation of your EIS followup on the proposed Lihue heliport.

As a preface, I would like to note that the Environmental Assessment has so far covered most factors very well. I am also compelled to explain that I have never offered any views on the heliport design because it is about the best that can be done with inadequate space in a terrible location.

These views, now offered, deal primarily with the impact on existing and planned residential areas as well as recreation and highways.

To reduce or eliminate the mixing of fixed-wing and helicopter traffic is essential. Regrettably, it leaves only one narrow corridor for both departure and approach. The frequency of flights near Hanamaulu and Nukolii is already too high. It would more than double in the future. To provide lateral separation between routes, the copters would have to go closer to each sensitive area.

All flights would pass almost over the Hanamaulu beach park with altitudes below 1000 feet because of fixed-wing traffic from the North.

Please investigate plans to reopen a public school at the Hanamaulu facility. It is very close to the flight path.

To provide separation for both approaches and departures from the proposed site, copters will have to make wider turns, at low altitudes, closer to the hospital and Hanamaulu. On a Kona wind day, with copters heavier at takeoff, the climb out would be even nearer to residential areas.
The airport cut-off road being constructed lies directly under either approach or departure from the proposed heliport. Copters turning final on approach or departing on Kona days will be very low over or across the new highway. Please assess potential distraction of drivers.

All these problems can only get worse as Lihue grows. Therefore, I am strongly in favor of moving the heliport to an area northwest of Lihue. This would eliminate virtually all environmental impact and surely benefit everyone.

Sincerely,

Jack Harter

JH:ar
MEMORANDUM

To: Mr. Owen Miyamoto, Airports Administrator
   Airports Division, Department of Transportation

From: Chief, Environmental Protection & Health Services Division

Subject: Notice of Determination/Environmental Assessment—New Helicopter Facility, Lihue Airport, Project No. AK1046-14

Thank you for allowing us to review and comment on the subject project. Our concerns are as follows:

1. The applicant shall provide minimum sanitary facilities according to Chapter II, Sanitation of Title II, Administrative Rules, State of Hawaii, Department of Health.

2. The entire development shall be connected to an approved sewage treatment work facility. Should the applicant connect to the Lihue Sewage Treatment Plant, it should be demonstrated to the Department of Health that the existing plant has adequate capacity.

3. The proposed development shall be provided with potable water from the Department of Water, County of Kauai.

4. Should the development include the construction of storage facilities for volatile organic compounds, an authority to construct permit issued through our Environmental Permits Branch is necessary.

5. Grubbed material and debris generated by land clearing shall be disposed in a manner and at a site approved by the Department of Health.

6. Effective dust and soil erosion control measures shall be implemented during all phases of development by the developer.

Due to the general nature of the application submitted, we reserve the right to implement further environmental restrictions when more detailed plans are submitted.

cc: Chief Sanitarian, Kauai

SHINJI SONEDA
DEPARTMENT OF WATER
COUNTY OF KAUAI
P. O. BOX 1706
LIHUE, HAWAII 96766-5706

July 14, 1987

Mr. Owen Miyamoto
Airports Administrator
Airports Division
Dept. of Transportation
Honolulu International Airport
Honolulu, HI 96819

Re: Notice of Determination/Environmental Assessment, New Helicopter Facility, Lihue Airport, Project No. AK-1046-14

We reviewed the Notice of Determination/Environmental Assessment for the New Helicopter Facility at the Lihue Airport and have no comments to offer at this time.

Thank you for the opportunity to comment.

Raymond H. Sato
Manager and Chief Engineer

WH:rm
July 17, 1987

Akinaka & Associates, Ltd.
250 North Beretania Street, Suite 300
Honolulu, HI 96817

Re: April, 1987, Notice of Determination/Environmental Assessment for Project No. AK 1046-14 (new helicopter facility at Lihue Airport Complex).

Ladies & Gentlemen:

We would like to submit the following comments regarding this project. Section 4.5.6 states:

Basal groundwater in the vicinity of Lihue Airport is of limited quantity and poor quality and cannot be used as a source of potable water for the airport or the surrounding area.

No alternative is mentioned as a source of potable water.

Regarding heliport operations, we see these problems with the narrow corridor proposed for both departures and approaches:

1) We feel it would be dangerous to have both departures and approaches within such a narrow corridor.

2) Helicopters would have to fly very low over the new Ahukini cut-off road on days with Kona winds. This activity would provide a visual distraction to drivers on that road.

3) Hanamaulu and Nukolii are noise sensitive areas and should not be subjected to the increased frequency of low helicopter overflights which this facility would create. In fact, a public school may be reopening in Hanamaulu, which would make that area even more incompatible with low overflights.

Finally, we disagree with the conclusion and recommendation of the "Report of the Committee to Develop Corrective Actions for the Helipad" [REF 8] to move the helipad to another location on the airport. We feel that in light of all the aforementioned problems, relocation of the helipad to another site altogether would be best. Either Port Allen Airport (Burns Field) or a site proposed northwest of Lihue would be preferable to Lihue Airport.

Thank you for the opportunity to comment on this proposal.

Sincerely,

Bert Lyon
Conservation Chairman

cc: State Airports Division
The Garden Island
MEMORANDUM

To: Mr. Owen Miyamoto, Airports Administrator
   Airports Division
   Department of Transportation

Subject: Notice of Determination/Environmental Assessment
         New Helicopter Facility
         Lihue Airport
         Project No. AK1046-14
         TMK: 3-7-02: por. 1
         Area: approximately 30 acres

The Department of Agriculture has reviewed the subject Notice and offers the following comments.

According to the subject document, the applicant is seeking to construct and operate a fifteen-pad helicopter facility adjacent to the Lihue Airport. The subject area is mostly in sugarcane cultivation by Lihue Plantation Company. Also in the subject area are a car rental agency and two helicopter sight-seeing companies.

The Environmental Assessment should include a discussion on the amount of sugarcane acreage to be affected by the proposed project, the economic impact of the lost sugarcane production on Lihue Plantation Company, and any mitigating measures.

Thank you for the opportunity to comment.

SUZANNE D. PETERSON
Chairperson, Board of Agriculture

cc: OEQC
Mr. Owen Miyamoto, Airports Administrator  
Department of Transportation  
Airports Division  
Honolulu International Airport  
Honolulu, Hawaii 96819

Dear Mr. Miyamoto:

SUBJECT: Review of Environmental Assessment - Helicopter Facility at Lihue Airport, Department of Transportation, Airports Division  
Hanamaulu, Lihue, Kauai -- TMK: 3-5-01: 13

Thank you for the opportunity to review the subject undertaking. We offer the following comments:

Historic Sites Concerns:

The environmental assessment states on page 18 under "8.3 WATER QUALITY" that "No significant impact on the quality of off-shore waters is anticipated as a result of the proposed project. Potential sources of degradation include storm water runoff to the ocean, which will be disposed through the use of the drainage system recently completed." and "To mitigate impacts from helicopter wash-downs, construction of an oil/water separator will be included in the project. Proper design and maintenance of the facility will assure that no oils, fuels, or similar material reaches the receiving waters." Also, the present use of cesspools and self-contained sewage treatment units would be eliminated as the new facility connects to a sewer system and pumping station.

We recommend all precautions be taken to ensure that eroded soils, petroleum products, fertilizers, pesticides, and other potential contaminants associated with the helicopter facility do not blow, leach, or flow into coastal waters.
Historic Sites Concerns:

This project area does not contain historic sites that are listed on the Hawaii Register or the National Register of Historic Places, or that have been determined eligible for inclusion on the National Register of Historic Places.

No archaeological surveys have taken place in the area, so it is uncertain if significant historic sites are present. However, our records indicate that the project area has been previously impacted by commercial agriculture activities and construction associated with existing rental car and helicopter facilities. Therefore, we have determined that the subject undertaking will have "no effect" to any known cultural resources.

We do recommend that if historic remains such as artifacts, shell or charcoal deposits, burials, and stone platforms, pavings, or walls are found during construction, please direct the applicant to stop work in the immediate area and contact the Historic Sites Section at 548-7460 immediately. Our office will assess the situation and make recommendations for mitigative action, if needed.

Recreation Concerns:

While there are no state park concerns regarding the location of the subject project we have serious concerns regarding the number of helicopter flights over state park areas on Kauai; particularly over Waimea Canyon, Kokee and Na Pali Coast State Parks. We note that a concurrent study, the Statewide Airport Systems Plan, is to address "...secondary impacts in non-congested areas due to helicopter overflights...". We believe it is essential to determine the need for helicopters and the carrying capacity of scenic tour routes over our parks before committing the State to new helicopter facilities.

Thank you for your consideration of our concerns.

Very truly yours,

WILLIAM W. PATY, Chairperson
Board of Land and Natural Resources
Mr. Owen Miyamoto  
Airports Administrator  
Department of Transportation  
Honolulu International Airport  
Honolulu, Hawaii 96819  

Dear Mr. Miyamoto:  

Re: New Helicopter Facility - Lihue Airport  
Project No. AK1046-14  

We have reviewed the Notice of Determination/Environmental Assessment for the new helicopter facility and the following are our concerns:  

Fire Protection  
The complex shall be provided with water mains and fire hydrants complying with the Kauai Water Department standards to provide adequate fire protection.  

Fueling  
For the safety of all helicopter operators, we concur with the proposed fuel underground dispensing system. This system should be mandatory.  

If you have any questions, please call me at 245-4721.  

Very truly yours,  

Damien D. Victorino  
Fire Chief  

August 10, 1987
September 18, 1987

Mr. Owen Miyamoto
Airports Administrator
State Dept. of Transportation
Airports Division
Honolulu International Airport
Honolulu, Hawaii 96819

Subject: Notice of Determination/Environmental Assessment for a New Helicopter Facility at Lihue Airport

In reviewing the determination made on the subject matter, we have no alternative but to disagree with the statement that "other considerations of the proposed actions will not have a significant impact on the environment and have been satisfactorily discussed in previous documents." We believe that the extent of the supplemental environmental statement cannot be limited to "the acreage below the air space under the sole management of the Lihue Airport control tower."

Helicopter impacts extend well beyond this area and affects the entire island. Mitigative measures to minimize impacts to "other areas" as discussed on Page 16 are available. However, we have not seen these mentioned in the report, mainly:

a. Establishment of strict flight patterns and flight elevations throughout the entire island and enforcement of such;

b. Controlling the total number of tour helicopters allowed to operate commercially.

We are however, in favor of the new heliport facility (Site 1) west of Ahukini Road since it will improve safety at the existing airport.

Thank you for allowing us to comment on this application.

Avery H. Youn
Planning Director
APPENDIX D

COMMENTS AND RESPONSES
DRAFT TO ENVIRONMENTAL IMPACT STATEMENT
DATED OCTOBER 1988

FOR

NEW HELICOPTER FACILITY
LIHUE AIRPORT COMPLEX
LIHUE, KAUAI, HAWAI'I
PROJECT NO. AK1046-14
Dr. Haruo T. Miura  
Office of Environmental Quality Control  
465 South King Street, Room 104  
Honolulu, Hawaii 96813  

Dear Dr. Miura:

Subject: Draft Environmental Impact Statement for the Interim Helicopter Facility, Lihue Airport Complex

Thank you for the opportunity to review the Draft EIS. We have no comments to offer at this time.

Sincerely,

MAURICE H. KAYA  
Energy Program Administrator

MHS/hk  
cc: Dean Nakagawa

Mr. Maurice H. Kaya  
Energy Program Administrator  
Department of Business and Economic Development  
Energy Division  
335 Merchant Street, Room 110  
Honolulu, Hawaii 96813  

Dear Mr. Kaya:

Subject: Draft Supplemental Environmental Impact Statement  
Interim Helicopter Facility  
Lihue Airport Complex  
Lihue, Kauai, Hawaii

Thank you for reviewing the draft supplementary environmental impact statement for the Interim Helicopter Facility.

Your letter will be made part of the final environmental impact statement.

Very truly yours,

Owen Miyamoto  
Airports Administrator
Dr. Marvin T. Miura  
Office of Environmental Quality Control  
465 South King Street, Room 104  
Honolulu, Hawaii 96813  

Re: Environmental Impact Statement for Interim Helicopter Facility, Lihue Airport Complex, Lihue, Kauai  

Dear Dr. Miura:  

We have reviewed the subject document and find that it adequately addresses fish and wildlife resources within our jurisdiction. We appreciate this opportunity to comment.  

Sincerely yours,  

Ernest Kosaka  
Field Office Supervisor, Environmental Services  

cc: Dean Nakagawa, DOT
November 23, 1988

Dr. Marvin T. Miura, Ph.D.
Office of Environmental Quality Control
465 South King Street, Room 104
Honolulu, Hawaii 96813

Dear Dr. Miura:

Re: Draft Supplement Environmental Impact Statement for the Interim Helicopter Facility Lihue Airport Complex

Thank you for the opportunity to review the subject report. We have no comments to offer.

Sincerely,

JOSEPH K. CONANT
Executive Director

cc: Dean Nakagawa, Dept. of Transportation

---

February 16, 1989

Mr. Joseph K. Conant
Executive Director
Housing Finance and Development Corporation
Department of Business and Economic Development
State of Hawaii
P.O. Box 29360
Honolulu, Hawaii 96820-1760

Dear Mr. Conant:

Subject: Draft Supplemental Environmental Impact Statement
Interim Helicopter Facility
Lihue Airport Complex
Lihue, Kauai, Hawaii

Thank you for reviewing the draft supplementary environmental impact statement for the Interim Helicopter Facility.

Your letter will be made part of the final environmental impact statement.

Very truly yours,

Owen Miyamoto
Airports Administrator
November 23, 1988

Marvin T. Hlura, Ph.D.
Office of Environmental Quality Control
465 South King Street, Room 104
Honolulu, HI 96813

Re: Interim Helicopter Facility, Lihue Airport Complex

We reviewed the Draft Supplement Environmental Impact Statement for Interim Helicopter Facility, Lihue Airport Complex and have no comments to offer at this time.

Thank you for the opportunity to comment.

Raymond H. Sato
Manager and Chief Engineer

cc: Mr. Dean Nakagawa
Airports Division
Department of Transportation
Honolulu International Airport
Honolulu, HI 96819

Mr. Raymond Sato
Manager and Chief Engineer
Department of Water
County of Kauai
P.O. Box 1706
Lihue, Hawaii 96766

Subject: Draft Supplemental Environmental Impact Statement
Interim Helicopter Facility
Lihue, Kauai, Hawaii

Dear Mr. Sato:

Thank you for reviewing the draft supplementary environmental impact statement for the Interim Helicopter Facility.

Your letter will be made part of the final environmental impact statement.

Very truly yours,

Owen Miyamoto
Airports Administrator
MEMORANDUM:

TO: Dr. Harvin Hiura, Director  
Office of Environmental Quality Control  

FROM: Director of Transportation  

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR INTERIM HELICOPTER FACILITY; LIHUE AIRPORT COMPLEX  
LIHUE, KAUAI  

We have reviewed the subject document from a Harbors Operation standpoint and have no substantive comments to offer. Thank you for the opportunity to review the document which is returned herewith.  

Edward Y. Hirata  

Enclosure  
cc: Dean Nakagawa, Airports Division  

Thank you for reviewing the subject document from a Harbors Operation standpoint. 

Your letter will be included in the final environmental impact statement.  

Owen Miyamoto  
Airports Administrator
November 29, 1988

Marvin Miura, Ph.D.
Office of Environmental Quality Control
465 S. King Street, Room 104
Honolulu, HI 96813

Dear Dr. Miura:

Subject: Draft Environmental Impact Statement (DEIS) - Interim Helicopter Facility, Lihue Airport Complex, Lihue, Hawaii

We have no comments to offer at this time, however, we would appreciate the opportunity to review the final EIS.

Sincerely,

Richard H. Duncan
State Conservationist

cc: Sean Nakamura, Airports Division, Department of Transportation, Honolulu International Airport, Honolulu, HI 96819

February 16, 1989

Mr. Richard N. Duncan
State Conservationist
U.S. Soil Conservation Service
P.O. Box 50004
Honolulu, Hawaii 96850

Dear Mr. Duncan:

Subject: Draft Supplemental Environmental Impact Statement Interim Helicopter Facility Lihue Airport Complex Lihue, Kauai, Hawaii

Thank you for reviewing the draft supplementary environmental impact statement for the Interim Helicopter Facility.

Your letter will be made part of the final environmental impact statement.

Very truly yours,

Owen Miyamoto
Airports Administrator
NOV 29 1988

Dr. Harvin T. Miura
Director
Office of Environmental Quality Control
465 South King Street, Room 104
Honolulu, Hawaii 96813

Dear Dr. Miura:

Subject: Draft Supplemental Environmental Impact Statement for Interim Helicopter Facility, Lihue Airport Complex

We have reviewed the subject document and have no comments to offer.

Very truly yours,

TEUANE TOMINAGA
State Public Works Engineer

SH:jk
cc: Mr. Dean Nakagawa

Mr. Teuane Tominaga
State Public Works Engineer
Department of Accounting and General Services
State of Hawaii
P.O. Box 119
Honolulu, Hawaii 96810-0119

Dear Mr. Tominaga:

Subject: Draft Supplemental Environmental Impact Statement
Interim Helicopter Facility
Lihue Airport Complex
Lihue, Kauai, Hawaii

Thank you for reviewing the draft supplementary environmental impact statement for the Interim Helicopter Facility.

Your letter will be made part of the final environmental impact statement.

Very truly yours,

Owen Miyamoto
Airports Administrator
MEMORANDUM

To:      Dr. Marvin T. Miura, Director
           Office of Environmental Quality Control

From:    Deputy Director for Environmental Health

Subject: Draft Supplemental Environmental Impact Statement (dSEIS) for Interim
          Helicopter Facility, Lihue Airport Complex, Lihue, Kauai, Hawaii

Thank you for allowing us to review and comment on the subject dSEIS. Our
environmental health concerns are as follows:

1. Toilet facilities shall be provided for the passengers and workers of the helicopter
   services as required by Chapter 11, Sanitation, Title 11, Administrative Rules, State
   of Hawaii, Department of Health. Such toilet facilities for the workers shall be
   located within 200 feet of all locations at which workers are regularly employed.

2. Potable water from the County of Kauai Department of Water system shall be
   provided to the toilet facilities.

3. Wastewater generated from the toilet facility shall be disposed into the County of
   Kauai sewer system.

4. Applicable permits for the proposed fuel facility shall be obtained from the
   Department of Health prior to construction.

5. Grubbed material shall be taken to a disposal site having a Department of Health
   Solid Waste Management Permit.

cc:      OHO, Kauai
         Dean Nakagawa, DOT

Bruce S. Anderson, Ph.D.

Mr. Bruce S. Anderson, Ph.D.
Deputy Director for Environmental Health
Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801

Subject: Draft Supplemental Environmental Impact Statement (dSEIS)
Interim Helicopter Facility
Lihue Airport Complex
Lihue, Kauai, Hawaii

Thank you for reviewing the subject dSEIS. Your letter will be
included in the final environmental impact statement. The following
discussion is provided in response to your comments:

1. Regularly employed workers will not be stationed at the
   facility. Passengers will be bussed to the facility from Lihue
   Town offices where adequate sanitary facilities are available.
   We propose to use the new commuter terminal to provide for the
   needs of the pilots and fuel services operators.

2. Potable water will be provided in vicinity of each passenger
   loading/unloading pad.

3. Wastewater generated by the commuter terminal sanitation
   facilities will be disposed into the County of Kauai sewer
   system.

4. Applicable permits for the fuel facility will be obtained prior
   to construction of the fuel facility.

5. The Contractor will be required to dispose of grubbed material at
   a site having a Department of Health Solid Waste Management
   Permit.

Your interest in this project is appreciated.

Bruce S. Anderson, Ph.D.
Marvin T. Miura, Ph.D.
Office of Environmental Quality Control
465 S. King St., Room 104
Honolulu, Hawaii 96813

Dear Mr. Miura:

The Draft Supplemental Environmental Impact Statement for the Interim Helicopter Facility, Lihue Airport Complex, has been reviewed and we have no comments to offer. Since we have no further use for the EIS, it is being returned to your office.

Thank you for the opportunity to review the draft.

Sincerely,

Encl

DEIS Interim Helicopter Facility, Lihue Airport Facility

Copy to: (w/o encl)
Dean Nakagawa
Airports Division
Dept of Transportation
Honolulu Intl Airport
Honolulu, HI 96819
MEMORANDUM

TO: Dr. Marvin T. Miura, Director
   Office of Environmental Quality Control
SUBJECT: Draft Environmental Impact Statement (DEIS) for Interim Helicopter Facility, Lihue Airport Complex, Lihue, Kauai

December 6, 1988

We have reviewed the subject document and have the following comments relative to the Hawaii Coastal Zone Management (CZM) Program.

Managing Development

The DEIS states that the interim helicopter facility will be constructed on Lihue Airport property as a relocation for the present helicopter operations area and is an integral item within the Lihue Airport development scheme. It is a CZM policy to effectively utilize and implement existing law to the maximum extent possible in managing present and future coastal zone development. In this regard, Act 397, SDH 1988, requires that the Department of Transportation develop and implement a helicopter master plan for each State-controlled airport. The Act further specifies that "the director shall not make or permit any addition or alteration to any helicopter facilities at any state airport other than those additions or alterations in conformity with the helicopter master plan for that state airport." (Section 261-3).

We understand that a helicopter master plan has not yet been developed for Lihue Airport. If this is the case, the EIS should clarify the apparent discrepancy between the proposed project and Act 397.

Coastal Resources

The DEIS also states that helicopter impacts extend well beyond the air space under jurisdiction of the Lihue Airport control tower. These impacts concern visual and noise intrusions into the Kauai lifestyle. In addition, secondary impacts from helicopter noise may impact endangered bird species in areas far removed from the facility itself. A CZM policy is to preserve valuable coastal ecosystems of biological or economic importance. Relative to
Mr. Harold S. Masumoto, Director  
Office of State Planning  
Office of the Governor  
State Capitol  
Honolulu, Hawaii 96813

Dear Mr. Masumoto:

Subject: Draft Supplementary Environmental Impact Statement  
Interim Helicopter Facility  
Lihue Airport Complex  
Lihue, Kauai, Hawaii  
(Ref. No. P-8990)

Thank you for reviewing the subject document. The following discussion responds to comments within your letter.

1. A helicopter master plan was indeed developed for Lihue Airport within the past year. However, due to objections by the helicopter operators on Kauai as well as the county's previous administration, the helicopter facility was reduced in scope. An interim facility is planned to accommodate existing operators until an inland facility is developed. The State Helicopter System Plan does reflect this interim facility for Lihue Airport.

2. To address the impacts of helicopter operations well outside of the Lihue Airport environs is beyond the purview of the subject DEIS. There is however sufficient disclosure that states that these impacts do occur in areas beyond airspace controlled by the Lihue Airport Tower and that, more appropriately, the State Helicopter System Plan is being developed to address this county and statewide concern.

Your interest in the project is appreciated. The final environmental impact statement will include a copy of your letter.

Very truly yours,

[Signature]

Dawn Miyamoto  
Airports Administrator
December 8, 1988

Dr. Marvin Miura
Office of Environmental Quality Control
465 South King Street, Room 104
Honolulu, Hawaii 96813

Dear Dr. Miura:

Thank you for the opportunity to review the Draft Supplemental Environmental Impact Statement (DSEIS) for the proposed Interim Helicopter Facility, Lihue Airport Complex, Lihue, Kauai, Hawaii. The following comments are offered:

a. As noted in our earlier letter (DSEIS, Appendix C), a Department of the Army permit is not required for this project.

b. According to the Flood Insurance Study for the County of Kauai, the project site is located in Zone D (areas in which flood hazards are undetermined).

Sincerely,

Kisuk Cheung
Chief, Engineering Division

Copy furnished:

Mr. Dean Nakagawa
Airports Division
Hawaii State Department of Transportation
Honolulu International Airport
Honolulu, Hawaii 96819

February 16, 1989

Mr. Kisuk Cheung, Chief
Engineering Division
U.S. Army Engineer District
Department of the Army
Bldg 230
Fort Shafter, Hawaii 96850-5440

Attention: Planning Branch

Dear Mr. Cheung:

Subject: Draft Supplemental Environmental Impact Statement
Interim Helicopter Facility
Lihue Airport Complex
Lihue, Kauai, Hawaii

Thank you for reviewing the subject documents. Your comments are appreciated. The final environmental impact statement will include a copy of your letter.

Sincerely,

Owen Miyamoto
Airports Administrator
December 9, 1988

Mr. Marvin T. Miura, Ph.D.
Office of Environmental Quality Control
465 South King Street, Room 104
Honolulu, Hawaii 96813

Subject: Draft Supplemental Environmental Impact Statement
Interim Helicopter Facility, Lihue Airport Complex

The following information and comments are provided in response to the subject matter which has been submitted for our review:

1. As we understand, the development of an interim helicopter facility in lieu of a permanent one as initially proposed hinges on the proposed development of an inland helicopter facility. To date, we have not received any formal inquiries or permit applications for such a facility and its exact location. Section 2.3 of the draft statement states that the "interim facility concept was adopted to allow continuation of the airport development and operations after completion of the inland facility." Certain conclusions from this EIS are drawn as follows and we request that they be clarified by the Department of Transportation (DOT), Airports Division and/or the FAA:
   a. Completion of the inland facility would mandate the relocation of all helicopter operators at Lihue Airport to such a facility.
   b. DOT, Airports Division, and the person(s) involved in initiating the effort to establish an inland facility have a development schedule proposed to minimize any delays to the Lihue Airport Master Plan.

2. We find that the interim helicopter facility conforms to the original plan for a permanent facility. This is appropriate to allow the alternative site improvements for a permanent facility in the event that establishment of an inland facility fails. At this time, we have no objections to the establishment of an inland facility since the primary goal is to achieve safer traffic conditions between helicopters and fixed wing aircraft at Lihue Airport.

3. Relative to the inland facility, the Planning Department can support this concept provided we are assured that helicopter operations at Lihue Airport will be discontinued once the inland facility is completed and that measures are instituted to control the number of commercial helicopter companies that can operate on Kauai.

Thank you for the opportunity to comment on this matter.

TOM H. SHIBUYA
Planning Director

cc: Dean Nakagawa
Mr. Tom H. Shigemoto, Planning Director
Planning Department
County of Kauai
4280 Rice Street
Lihue, Kauai, Hawaii 96766

Dear Mr. Shigemoto:

Subject: Draft Supplemental Environmental Impact Statement
Interim Helicopter Facility
Lihue Airport Complex
Lihue, Kauai, Hawaii

Thank you for reviewing the subject document. The following discussion responds to comments within your letter.

1. Our understanding is that if the inland site is developed by the State, then the Airports Division could possibly require all tour helicopter operations to be relocated to this site from Lihue Airport. Incidentally, the Airports Division has requested funds in their biennium budget for development of an inland facility in the event that the private sector is unsuccessful in their bid to establish an inland facility themselves.

2. Establishment of an inland site does not have a bearing on the present Lihue Airport Master Plan which includes the interim facility. Relocation of the existing helicopter operations areas at Lihue Airport to the interim facility site will enable the Airports Division to continue with the planned development of the airport. The master plan will be updated when the interim facility is abandoned and the site utilized for other airport related activity.

3. If conditions evolve in a manner that allows the abandonment of the interim facility, this area will be developed for other airport related uses thereby precluding its use for helicopter operations.

Thank you for your interest in the project. Your letter will be included in the final environmental impact statement.

Very truly yours,

[Signature]

Owen Miyamoto
Airports Administrator
MEMORANDUM

TO: The Honorable Marvin T. Hiura, Director
Office of Environmental Quality Control

FROM: William W. Paty, Chairperson
Board of Land and Natural Resources

SUBJECT: Draft Supplemental EIS
Interim Helicopter Facility
Lihue Airport Complex

Thank you for giving our Department the opportunity to comment on this matter. We have reviewed the materials you submitted and have the following comments.

Our Department's Historic Sites Section comments that while we agree that the project will have "no effect" on significant historic sites, we recommend some of the wording under the section on "Archaeology" (pp. 4-3 to -4) be revised, in part to accurately meet legal compliance concerns. We recommend the following changes:

1. Under 4.8 - Archaeology, p. 4-4, Sentences starting "One archaeological site...". Revise to read "One archaeological site (30-11-100), Ninini Heiau) has been identified in the Lihue Airport property. This site, in vicinity of Ninini Point Lighthouse, is a heiau which has been completely destroyed."

2. Under 4.8, p. 4-4: Add a new sentence after the above sentence. "There is another heiau in the near vicinity of the Airport: site (30-11-101, Ahuhini Heiau) located near Ahukini Point. This site is also reported as being destroyed."

3. Under 4.8, p. 4-4: Delete last sentence on "historical values". Values has no legal meaning; the concern is with historic sites. This last sentence should read, "This project area has not undergone archaeological survey. However, the project area has long been under intensive agricultural cultivation and any historic sites are likely to have been destroyed. Therefore it is highly unlikely that significant historic sites are in the project location."

If there are any questions, call our Historic Sites Section (548-7450). Nancy McMahon is the Staff Archaeologist handling Kauai County.

Our Recreation Section states that there are no existing or proposed state parks in the vicinity of the proposed project, but there is concern about the continued increase in tour helicopter over-flight activities in some of our remote, scenic park areas. It is noted on page 10-1 that the subject project is only intended to replace existing operational space needs for flightseeing tours. However, there already may be more helicopters and/or helicopter flights than desired. A helicopter master plan as requested by the 14th Legislature should therefore develop a carrying capacity for flightseeing tours, and address the need for helicopters before developing new facilities.

Based on the information provided, our Land Management Division has no objections to the interim facility. However, we strongly recommend, lacking any address to the matter, that the approach and take off flight patterns to and from the interim facility avoid residential areas as well as concentrations of native bird life.

Please feel free to call me or Roy Schaefer of our Office of Conservation and Environmental Affairs, at 548-7837, if you have any questions.

cc: Dean Nakagawa
Mr. William W. Paty, Chairman
February 16, 1989
Page 2

Thank you for your interest in the project. Your letter will be included in the final environmental impact statement.

Very truly yours,

Owen Miyamoto
Airports Administrator
Will Squyres Helicopter Tours  
P. O. Box 1770  
Lihue, Hawaii 96766  
December 13, 1988

Mr. Henry S. Morita, P.E.  
c/o Akinaka & Associates, Ltd.  
250 North Beretania St., Suite 300  
Honolulu, Hawaii 96817

Owen and Henry,

Here is the revised Interim Facility I said I would send you both. I feel that it complies with the safety and efficiency that the EIS study states are the DOT's goal for the Interim Facility. There are a few changes; not many, but I feel they are all important.

I've gone back to the original parking lot for two reasons. Host operations need more than two stalls. I myself have had three for the past five years. When you get to the higher numbers of movements within a company, six to seven would be a minimum. Reason two: I don't think that the space should be cut down from the original that was allotted to us. I have used all the original space in somewhat the same design as the finished facility but with a lot less expense, and no building erections intended.

As I explained to you over the phone, we are down in the numbers on the facility being used. Since the intent stated by all is not to increase the size of the Interim Facility, I have reduced the new facility by three pads. Yet I feel I have brought utilization to a maximum. There are walkways to each individual pad, and portable toilets are spaced throughout the facility so pilots may find relief during their long day. I have included a waterline that could be three or four inch PVC and still be effective.

I have also included fuel truck access for those of us who have used fuel trucks over the many years. You'll notice that I have doubled the standard of twenty-five feet from a moving object to fifty feet, and allowed one-hundred sixty plus feet from the actual refueling operation to where the passengers are waiting by the gate.

There are several safety factors involved in this choice. Fuel trucks stay stationary and they do not have to be readjusted as would be the case if the facility were to be located across on the eastside. All the helicopter companies that have been using fuel trucks of their own are located on the southside. All those using Hemmeter, and will probably continue doing so, are located on the northside by the two Hemmeter refueling pads that replace the ones now in existence.

This reduces the number of movements to the southside from landing pad to refueling pad, and can be accomplished in the same manner as is being used now (contact tower, move to fueling pad, in this case using the emergency access road, refuel, contact tower, move back). The aircraft involved in this movement are already aware of this maneuver and should put each other at minimum risk, under supervision.

Two fuel pads have been capable of handling these aircraft, and I've noticed the operators have already somewhat adjusted their schedules to compensate for refueling in a non-congested way throughout the day. By locating the fuel pads on the north end, and reducing the number of helicopters required to use them, we have accomplished several important safety features. Aircraft no longer are criss-crossing in an extremely hazardous manner from northeast to southwest, southeast to northwest, east to west, and vice-versa. This also eliminates the extremely hazardous potential of aircraft landing and taking off while other aircraft are hovering in the opposite direction.

A moment should be spent reflecting on the statistics that state 90% of all aircraft accidents or incidents occur in landing, take-off, and hover taxiing. Virtually all intermeshing rotorblade accidents occur in hover-taxis situations.

I have divided the properties back into leased lots as this is the only practical way to approach the helicopter tour situation. For purposes of liability as you discussed, Owen, at the meeting on Oahu, we are all supposed to carry a minimum of insurance to cover our helicopter, ground taxiing operations, and the safety of our passengers as they embark and debark. In a leased-lot sit-
uation as is the case now where my helicopter sits over-
night, and is maintained by my maintenance people, washed
down and cleaned by my ground crew, the State requires
me to carry a minimum of one-million dollars liability.
There isn't an insurance company in the world that will
insure two helicopters from two different companies on
the same piece of land. There must be a differentiation
so that we can comply with what the State already requires.

From a practical standpoint, I have located the	hree companies most likely to use more than their allotted
pads next to the transient-use helipads. Try to imagine
coming in for a landing and my people are waiting for me
on Helipad "3," but one of the operators has decided he
will run several helicopter at that same period of time,
and the only pad available to me is Pad "15." It seems
not only impractical, but unsafe (i.e. crew rushing people
back to van, quickly shuttle them out a one-way road,
spin around to the opposite end to match up where the
helicopter has finally landed). The slots themselves have
been designated according to fuel usage, practicality and
proximity to transient-use helipads, and companies util-
izing more than one helicopter.

The second line of helipads as was discussed in the
original plan are just as wide but ten feet narrower than
the loading/unloading pads. All walkways go around these
secondary helipads so that loading and unloading/refueling
pads can be approached in a safe manner. All "A" pads are
for parking, maintenance, or storage. They are not for
the loading/unloading of passengers.

I feel that every pad, whether it be a main pad or
storage pad with the exception of the transient pads, be
assigned by "N" number. If any changes come about, the
Tower or Airport Director should be notified.

No parking or waiting should be allowed on the taxi-
route, or we'll be right back in the same situation as
was created on the existing helicopter facility.

Depending on the needs of the emergency vehicles,
access roads or emergency aprons could be grass, asphalt,
or concrete.

I feel this is a workable plan. Expense is close to
what is being planned, but utilization and safety, much,
much improved. Anxious to hear from you both.

Respectfully,

[Signature]

W. W. [Name], Owner/Pilot

P.S. We didn't know where the main water line was located,
so we didn't know how to connect up. Also, Henry, you
asked me for copies of the Hawaii statutes that gives the
Department of Transportation the power to limit aircraft
numbers by type for congestion and safety. You'll find
that enclosed and underlined.
Mr. Will Squyres
Owner/Pilot
Will Squyres Helicopter Tours
P.O. Box 1770
Lihue, Hawaii 96766

Subject: Draft Supplemental Environmental Impact Statement (dSEIS)
Interim Helicopter Facility, Lihue Airport Complex
Kauai, Hawaii

Dear Mr. Squyres,

Thank you for reviewing the subject dSEIS. The following discussion responds to comments provided by your letter:

1. The number of helicopter parking pads provided in the Interim facility is the same as that exists in the present operational area.

2. Gates and walkways are minimized due to security concerns. Additional gates and walkways may be approved on the basis of tour operator responsibility.

3. Toilets within the commuter terminal are being considered to service the helicopter facility. Passengers are expected to utilize facilities at the helicopter operator's office in Lihue.

4. Refueling is planned only at the three fueling pads. Refueling by fuel trucks at passenger loading/unloading pads and the indiscriminate storage of the trucks are objectionable.

5. The document included a statement that the helipads would be assigned preferentially. This statement was based on anticipated federal financial participation and federal regulations prohibit exclusive assignments. The project will now be entirely State funded and exclusive pad assignments are allowed. Conditions of pad assignment will be determined during the construction period.

6. The second line of helipads in the "original plan" was deleted as the Interim facility will provide improvements equal to that in the existing operations area. This second line of helipads should be promoted for the inland facility for parking, maintenance, or storage.

7. Assignment of pad identification numbers will be addressed in the future but prior to leasing.

8. Movements on the taxi route will be under the jurisdiction of the airport tower. Circumstances will dictate usage of the taxi route.

9. The access roads for emergency vehicles will be asphalt concrete. Construction specifications will include compaction requirements such that embankments can support emergency vehicle loads.

10. Your plan appears workable but does not conform to the guidelines established for the interim facility. These guidelines and items within the plan that may be objectionable are:
   a. Interim facility improvements should equal and not exceed facilities at the present operational area.
   b. Minimize number of access gates for security reasons.
   c. Discourage refueling at individual loading/unloading pads by fuel trucks for safety and indiscriminate storage of trucks.

Thank you for your interest in the project. Your letter and plan will be included in the final environmental impact statement.

Very truly yours,

[Signature]

Owen Miyamoto
Airports Administrator
Mr. Henry Morita
Akinaka & Associates, Ltd.
259 North Beretania Street, Suite 300
Honolulu, Oahu, Hawaii 96817-4716

December 18, 1988

Dear Mr. Morita,

After reviewing my copy of the Draft Supplemental Environmental Impact Statement dated October, 1988, for the Interim Helicopter Facility at the Lihue Airport, I wish to make the following comments.

Based on discussions with State Airports Management, it is my understanding this Interim Facility will be used only on a temporary basis for the EXISTING helicopter operations at Lihue Airport; the pads will be assigned for preferential use and there will only be twenty of them.

How all this is confirmed by what is said in your Environmental Impact Statement except that your report goes into more detail and it is in this detail that concerns me. I will quote from the report:

Paragraph 2.2 Definition and Regulations
Page 2-2

"As a public use heliport, it is available for the take off or landing of helicopters without prior authorization being required to use the facility."

This statement contradicts the intent that the State Airports Management has given to the operators for building these pads for the following reasons:

1. Presently we have assigned helipads. These pads are used for refueling, loading, and parking our helicopters. We do not share our assigned pads with any other operator simply because it wouldn't work. These pads are used for overnight parking, maintenance, etc. and therefore, the aircraft may sit on these pads for days. Under the preferential system we would conceivably have to share these pads. How could we do that if our aircraft are using them for parking or maintenance?

2. At last count there were at least two dozen (24) helicopters based at Lihue, but in the Interim Plan, twenty helipads will be built. This shouldn't create a big problem as long as we don't add more helicopters because the extra aircraft belong to companies like Kauai Helicopters who can park them at their maintenance hangar.

However, your statement under Paragraph 2.2 and another on Page 6-8 says: "These unused airfield areas show that the capacity for increased helicopter activities already exists." It also says that the State does have the room to park more NEW helicopters at Lihue, and with the preferential system we would have to share our pads. This would only create a worse safety problem than we already have with the existing helipads due to increased congestion. If these pads are assigned under the preferential system, the State will legally have to let in any new helicopter company, or even allow the expansion of existing companies, which will contradict and defeat the perceived intent of this Interim Facility.

Concerning the Facility Design, I believe there are several major flaws in the design.

1. Refueling Pads: At the present heliport there are up to ten assigned refueling/parking pads used by seven different operators and two dedicated refueling pads presently being used by four operators. This totals twelve refueling pads. The new Interim design allows for only three refueling pads. The resulting congestion and time delays waiting to refuel would be a tremendous safety problem and cause financial losses.

At a meeting several months ago with Owen Miyamoto, he showed us this plan. We informed him that this would not work, and that instead the State should change the plan so that refueling could be accomplished at the loading pads. This would greatly reduce the need to move the aircraft to refuel and therefore, reduce congestion, thus, improving safety and increasing efficiency and thereby saving money.
December 18, 1988

Mr. Henry Morita
Akinaka & Associates, Ltd.

Page 3

2. No where can I find any indication that the State or the Federal Aviation Administration has done any formal testing of the approach route and final approach path into this Interim Facility. I outlined my concerns in a previous letter that did not arrive in time for inclusion in this study, but I believe you will find it in Public Testimony.

3. I also don't see any mention of whether or not water, electricity, or tie-downs will be included in these helipads.

   A. Water: The water is necessary to wash the aircraft to prevent severe corrosion. The aircraft are washed daily.

   B. Electricity: Because almost all daily Inspections of the aircraft are performed on these pads and usually at night, electricity is important.

   C. Tie-Downs: These obviously are needed in case of high winds or hurricanes.

I sincerely hope that you will take into consideration these observations and suggestions before proceeding with this design. Your attention to this matter and an expedient reply would be greatly appreciated.

Yours truly,

[Signature]

Paul D. Ansue
President
South Sea Helicopters, Inc.
Mr. Paul D. Asmus
South Sea Helicopters, Inc.
P.O. Box 1445
Lihue, Kauai, Hawaii 96766

Dear Mr. Asmus:

Subject: Draft Supplemental Impact Statement

Interior Helicopter Facility
Lihue Airport Complex
Lihue, Kauai, Hawaii

Thank you for reviewing the subject document. The following discussion responds to the comments contained in your letter.

1. The document included a statement that the helipads would be assigned preferentially. This statement was based on anticipated federal financial participation and federal regulations prohibit exclusive assignments. The project will now be entirely State funded and exclusive pad assignments are allowed. Conditions of pad assignment will be determined during the construction period.

2. A waiting list of operators desiring helicopter parking position exists at the Lihue Airport. The State has determined that the existing paved open areas are not conducive for helicopter operations. The State does not wish to create a safety problem due to increased congestion.

3. The desirability of fueling at the loading/unloading pads is recognized. The original plan (pre-inland facility) included underground fuel service to each pad. Present fueling by individual fuel trucks and their indiscriminate storage should not continue considering passenger loading/unloading at the same pad. The format of the fueling operations was developed by a committee of representatives from each major FAA program, the State Department of Transportation and Industry. A diagram of the proposal is included in the FAA report “Study of Helicopter Operations in the State of Hawaii” May 29, 1986.

4. The FAA has conducted an airspace analysis under Aeronautical Study No. 88-AMP-1022-NRA. As discussed in the attached FAA letter, their review has determined that the plan is acceptable from an airspace utilization during daylight hours.

5. Potable water will be provided in vicinity of each helipad. Installation of meters and distribution system will be the user's responsibility. No electricity will be provided as the present operational area does not include electrical service. Tie downs will be provided at each helipad.

Thank you for your interest in this project. Your letter will be included in the final environmental impact statement.

Very truly yours,

Owen Miyamoto
Airports Administrator

Attachment
Dear Mr. Nakagawa:

Draft Supplemental Environmental Impact Statement
Interim Helicopter Facility
Lihue Airport Complex
Lihue, Kauai

The Airports Division, State Department of Transportation (DOT), has proposed that an Interim Helicopter Facility be built on Lihue Airport property as a relocation for the present helicopter operations area. The heliport facility is part of Phase III of the 1975-1995 Lihue Airport Master Plan Report. The facility will provide two landing pads (Final Approach/Takeoff Area) for arrivals and departures. A grass surfaced taxi route will lead to twenty 62.5-foot square asphalt concrete passenger boarding pads.

The Environmental Center has reviewed the above referenced Draft Supplemental Environmental Impact Statement (DSEIS) with the assistance of George Curtis, Hawaii Natural Energy Institute; Jon Matsuzaka, Social Work; Yu-Si Fok, Water Resources Research Center; and Randall Rush, Environmental Center.

General Comments

From the designation of an interim status for this facility and from commentary provided by the DOT at the public hearing, the state apparently supports the concept of an inland helicopter facility. It is not clear from the present document whether such a facility will operate under public or private jurisdiction, but references to offerings of privately-owned land for the facility suggests a private operation. It should be noted that staging commercial helicopter operations from a State facility as proposed in the subject DSEIS provides the opportunity to regulate such operations. As we pointed out in testimony before the Senate Committee on Transportation at a public hearing on February 25, 1988 considering SB 2681:

Although the Federal Aviation Agency (FAA) regulates helicopter flight operations, the state has the authority to regulate all ground operations, and by judicious application of this authority, flight operations may be substantially regulated. Such an approach has been effectively implemented in other communities such as Los Angeles, California, where aircraft take-offs and landings are strictly controlled. Airport operators have been held responsible by court decisions in California for nuisances created by aircraft operating from their facilities.

We are confident that due consideration is being given to other states' regulatory strategies for application to the State Helicopter System Plan by the DOT. Regulatory control over operations at private airports may prove more problematic.

Social Issues

The proposed plan will permit increased numbers of helicopter operations, while promoting safety during take-offs and landings. However, the document does not address results of encouraging increased helicopter use. More frequent tours over wilderness areas have greater impacts on hikers seeking tranquility. More importantly, congestion of airspaces in scenic valleys subject to visibility restrictions poses serious safety concerns. These issues need to be further considered in the SEIS.

Appendix B

Appendix B summarizes the Public Hearing and consists of transcripts of the hearing, written testimonies, attendance list, and a listing of responders to the Media Noise Statement. In reference to the Media Noise Statement, we feel there may be confusion among the signers as to whether they were signing in favor of separate facilities, or signing in support of less noise.

We appreciate the opportunity to comment on this Draft Supplemental EIS.

Yours truly,

John T. Harrison
Environmental Coordinator

CII:OEECC
L. Stephen Lau
George Curtis
Jon Matsuzaka
Yu-Si Fok
Randall Rush
Mr. John T. Harrison  
Environmental Coordinator  
University of Hawaii at Manoa  
Environmental Center  
2550 Campus Road  
Honolulu, Hawaii 96822  

Dear Mr. Harrison:

Subject: Draft Supplemental Environmental Impact Statement  
Interim Helicopter Facility  
Lihue Airport Complex, Kauai, Hawaii  
(RE: 0513)

Thank you for reviewing the subject document. The following discussion responds to comments within your letter.

1. Initially, the Airports Division had intended to develop a permanent, new helicopter facility on the premises of Lihue Airport. However, due to strenuous objections from the helicopter operators and the previous Kauai County Administration, the proposed new development was reduced in scope to an interim facility. It is the Airports Division's understanding that the helicopter operators through their newly formed corporation, Lihue Inland Heliport Ltd., will pursue the development of a private inland facility. At this time, the Airports Division is awaiting action on this matter by the Lihue Inland Heliport Ltd. organization. Meanwhile the Division has requested funds for the biennium budget for development of an inland facility in the event that the private sector is unable to proceed with their plans.

2. Although the Airports Division has the authority to regulate operations on the ground, any restrictions or inferred control of operations within the airspace is prohibited by the Federal Aviation Administration (FAA). Any and all control of airspace is preempted from the State by the FAA.

3. The interim facility is intended for temporary use only until an inland site is developed. It is simply a replacement of existing facilities to a single consolidated location on the Airport.

4. The concerns on the impact of helicopter operations in the wilderness areas which are well beyond the immediate airport environs, are (more appropriately) being addressed under the State Helicopter System Plan (SHSP).

5. Congestion of airspace and the associated safety concerns are primarily in the purview of the FAA. The Airports Division however, is addressing this matter within the SHSP.

6. The preamble of the Media Noise Statement is based on noise and hazards around the airport with the solution being a separate facility. Since the address of the Media Noise Statement promoters is the same as the organizers of the inland facility, it is apparent that the statement was intended to give support for the separate facility on the basis of reducing noise and hazards around the airport.

Your interest in the project is appreciated. The final environmental impact statement will include a copy of your letter.

Very truly yours,

[Signature]

Owen Miyamoto  
Airport Administrator
MEMORANDUM

TO: AIR-E
FROM: HWY-K
SUBJECT: INTERIM HELICOPTER FACILITY
LIHUE AIRPORT COMPLEX
LIHUE, KAUAI, HAWAII
TMX: FOURTH DIVISION 3-5-1: 8, 13

DATE: Jan. 12, 1989

Thank you for the opportunity to comment.

We reviewed the Draft Supplemental Environmental Impact Statement for the subject project and have no comments to offer.

SHIGETO YAMAGUCHI

Dear Mr. Yamaguchi:

Thank you for reviewing the draft supplementary environmental impact statement for the Interim Helicopter Facility.

Your letter will be made part of the final environmental impact statement.

Very truly yours,

Owen Miyamoto
Airports Administrator
Dr. Marvin T. Miura, Interim Director  
Office of Environmental Quality Control  
465 South King Street, Room 104  
Honolulu, Hawaii 96813

Dear Dr. Miura:

Subject: Draft Environmental Impact Statement (DEIS)  
Interim Helicopter Facility, Lihue Airport Complex  
Project No. AK1046-14  
TNX: 3-5-01: Fux. 6-13  
Area: Approx. 13 acres

The Department of Agriculture has reviewed the subject DEIS and has no comments to offer.

Thank you for the opportunity to comment.

Sincerely,

YUKIO KITAGAWA  
Chairperson, Board of Agriculture

cc: Mr. Dean Nakagawa  
State Dept., Airports Div.

Mr. Yukio Kitagawa  
Chairperson, Board of Agriculture  
Department of Agriculture  
State Of Hawaii  
1420 So. King Street  
Honolulu, Hawaii 96814-2512

Subject: Draft Supplemental Environmental Impact Statement  
Interim Helicopter Facility  
Lihue, Kauai, Hawaii

Dear Mr. Kitagawa:

Thank you for reviewing the draft supplementary environmental impact statement for the interim Helicopter Facility.

Your letter will be made part of the final environmental impact statement.

Very truly yours,

Owen Hiyama  
Airports Administrator