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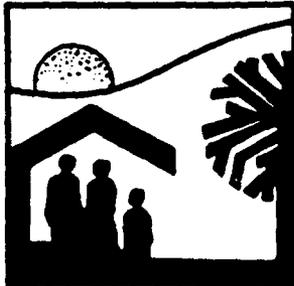


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# Environmental Impact Analysis Process



DRAFT  
ENVIRONMENTAL ASSESSMENT

Withdrawal of the 320th Bombardment Wing  
from Mather Air Force Base, California

November 1989

DEPARTMENT OF THE AIR FORCE

HEADQUARTERS, AIR TRAINING COMMAND  
RANDOLPH AIR FORCE BASE, TEXAS 78150-5001

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**D R A F T**  
**REVISED**  
**FINDING OF NO SIGNIFICANT IMPACT**

**WITHDRAWAL OF THE 320TH BOMBARDMENT WING**  
**FROM MATHER AIR FORCE BASE, CALIFORNIA**

**DESCRIPTION OF THE ACTION**

The 320th Bombardment Wing (BMW) stationed at Mather Air Force Base (AFB) California must be retired to comply with the FY 1989 federal budget requirement for the reduction of the conventional B-52 force. To accomplish this objective, fourteen of the older and/or less efficient aircraft would be selected for disposal from all five Strategic Air Command (SAC) bases housing B-52s. Twelve of the fourteen B-52s currently at Mather AFB would then be distributed to the other four bases to replace aircraft that have been retired, stored, or otherwise disposed of. Two of the B-52s at Mather AFB would be retired. In general, older and less-efficient aircraft would be disposed of or retired, and newer B-52s would be transferred to replace them. The proposed withdrawal would result in reassignment of 1,279 military and 12 civilian personnel. Ground support equipment would not be removed but would remain to support KC-135 aircraft. Personnel would also be temporarily involved in KC-135 support. Because no construction or demolition is planned, this action has little potential to affect soils, hydrology, ecological resources, or land use. Completion of personnel transfers is scheduled for 1991.

**SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS**

The withdrawal of the 14 B-52s of the 320th BMW from Mather AFB would have a small beneficial impact on noise, air quality, solid/liquid wastes, and air safety. Noise levels would be most affected by cessation of the 320th BMW's B-52 flying operations. The estimated 29,200 acres that are within 65-dB (Ldn) contour reflecting Mather AFB operations including the 320th BMW would be reduced by about 25% by cessation of 320th BMW flying operations. Noise levels above 65 dB (Ldn) can result in land use restrictions.

Air emissions in Sacramento County, California, would be slightly reduced because of the proposed action. Air emissions from the 320th BMW represent less than 1% of emissions in Sacramento County for hydrocarbons, nitrogen oxides, sulfur oxides, and particulates. Minor air quality improvements would be expected due to the reduction in air emissions.

Minor impacts could also occur in the area of wastewater and solid waste. Based on the SAC 320th BMW percentage of total Mather AFB military and civilian personnel, there would be a reduction of the base contribution to both the county landfill and sewage treatment facilities of ~28%. Mather AFB's contributions to these facilities is about 0.5% each. Due to the small magnitude of the reduction, potential effects on operation of the sewage treatment plant and landfill are expected to be minimal.

The air safety record of the 320th BMW has been excellent since operations were begun at Mather AFB in 1963. There have been no crashes, and incidents of dropped objects and bird-aircraft strikes have decreased during the last 3 years. Withdrawal should result in a slight enhancement of air safety as a result of about 1,000 fewer sorties being flown per year, with a corresponding reduction in the chance of aircraft accidents.

Rancho Cordova, an unincorporated community just north of the main entrance to Mather AFB, would experience the greatest potential socioeconomic impacts of the 320th BMW withdrawal. A population decrease of up to 1,450 people, or 3.4% of the 1980 population, could result in the immediate vicinity. A 1987 study showed that most Mather AFB personnel shop for goods and services in the city of Sacramento or on the base, and consequently, potential effects on local businesses would be slight. A resulting increase of 125-130 owner-occupied houses to local real estate listings and the availability of 285 rental units would result in excess housing vacancies and reduced prices in the immediate area.

The withdrawal action would result in a reduction of 2.3% of the student population of the Folsom-Cordova Unified School District. The potential loss of income because of the proposed action from all sources to the school district is approximately \$1.05 million, or about 3% of the total estimated income.

The economic impact of the proposed action includes the potential for a loss of 1,740 primary and secondary jobs and a spending loss of approximately \$60.7 million per year. However, this would depend on the extent of replacement by new economic growth. The estimated impacts on output and earnings would be only a fraction of 1% of the metropolitan Sacramento area total.

## CONCLUSION

The withdrawal of the 320th BMW from Mather AFB would have small beneficial impacts on pollutant levels, waste management, and safety of the local environment. Air emission and noise levels would be decreased; Mather AFB contributions to the county landfill and sewage treatment facilities would be decreased. Fewer flights would reduce the opportunities for aircraft accidents.

The proposed action would have insignificant socioeconomic impacts. Some excess vacancies and reduced prices may be experienced in the rental market in the immediate areas. The estimated potential net economic impacts on output and earnings would be slight and public revenues would not be affected.

In consideration of this information, a Finding of No Significant Impact (FONSI) is warranted.

Signature \_\_\_\_\_

Date \_\_\_\_\_

ENVIRONMENTAL ASSESSMENT

WITHDRAWAL OF THE 320TH BOMBARDMENT WING  
FROM MATHER AIR FORCE BASE, CALIFORNIA

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DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS, AIR TRAINING COMMAND  
RANDOLPH AFB, TEXAS

NOVEMBER 1989

DTIC QUALITY ASSURANCE

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## 1. INTRODUCTION

### 1.1 PURPOSE AND NEED

Under FY 1989 federal budget direction, it has been determined that 14 conventional B-52s should be retired from active service in order to conserve federal funds and enhance the remaining B-52 force through maintenance of only the newer, more efficient, and economical aircraft. The U.S. Air Force has determined that the most effective way to comply with the B-52 reduction requirement is to withdraw one of the five active Strategic Air Command (SAC) Bombardment Wings (BMWs). This approach would maintain the economies of scale allowed by the present number of aircraft in each remaining unit and would maintain the flying and weapons delivery capabilities of the remaining four Wings. The action must be carried out in a way that will not diminish the strategic effectiveness of the entire B-52 force.

The B-52 bombardment force is currently maintained by the U.S. Air Force within five SAC BMWs. Four of the units are located within the United States [Mather Air Force (AFB), California; Castle AFB, California; Loring AFB, Maine; and Barksdale AFB, Louisiana] and one at Andersen AFB, Guam. To comply with the budget directive, the Air Force proposes to withdraw the SAC 320th BMW from Mather AFB.

### 1.2 BACKGROUND

Mather AFB, an Air Training Command (ATC) base, is located in the lower Sacramento Valley between the Coast Range and the Sierra Nevada foothills, approximately 90 miles northeast of San Francisco and 12 miles east of Sacramento (Fig. 1). Just to the north of the base and outside the main gate lies the community of Rancho Cordova (Fig. 2).

The major units at Mather AFB include the Air Training Command (ATC) 323rd Flying Training Wing, the SAC 320th BMW, and the Air Force Reserve 940th Air Refueling Group. Current flying operations involve mainly B-52s, KC-135s, T-37Bs, and T-43As.

The base encompasses about 5800 acres. There are 395 buildings, 146 facilities, and 1064 military family housing units. The paved airfield elevation varies from 75 ft to 95 ft mean sea level. Mather AFB has two runways: the first is 11,300 ft long by 300 ft wide, and the second is 6,100 ft long by 150 ft wide (Fig. 3). Both runways meet the mission requirements of currently assigned aircraft.

### 1.3 SCOPE

This environmental assessment presents an analysis of the environmental impacts associated with removal of personnel and equipment related to B-52 operations from Mather AFB. The study is being performed in compliance with Air Force Regulation 19-2, which implements the President's Council on Environmental Quality regulations that implement the procedural provisions of the National Environmental Policy Act (NEPA) (40 CFR Pts. 1500-1508).

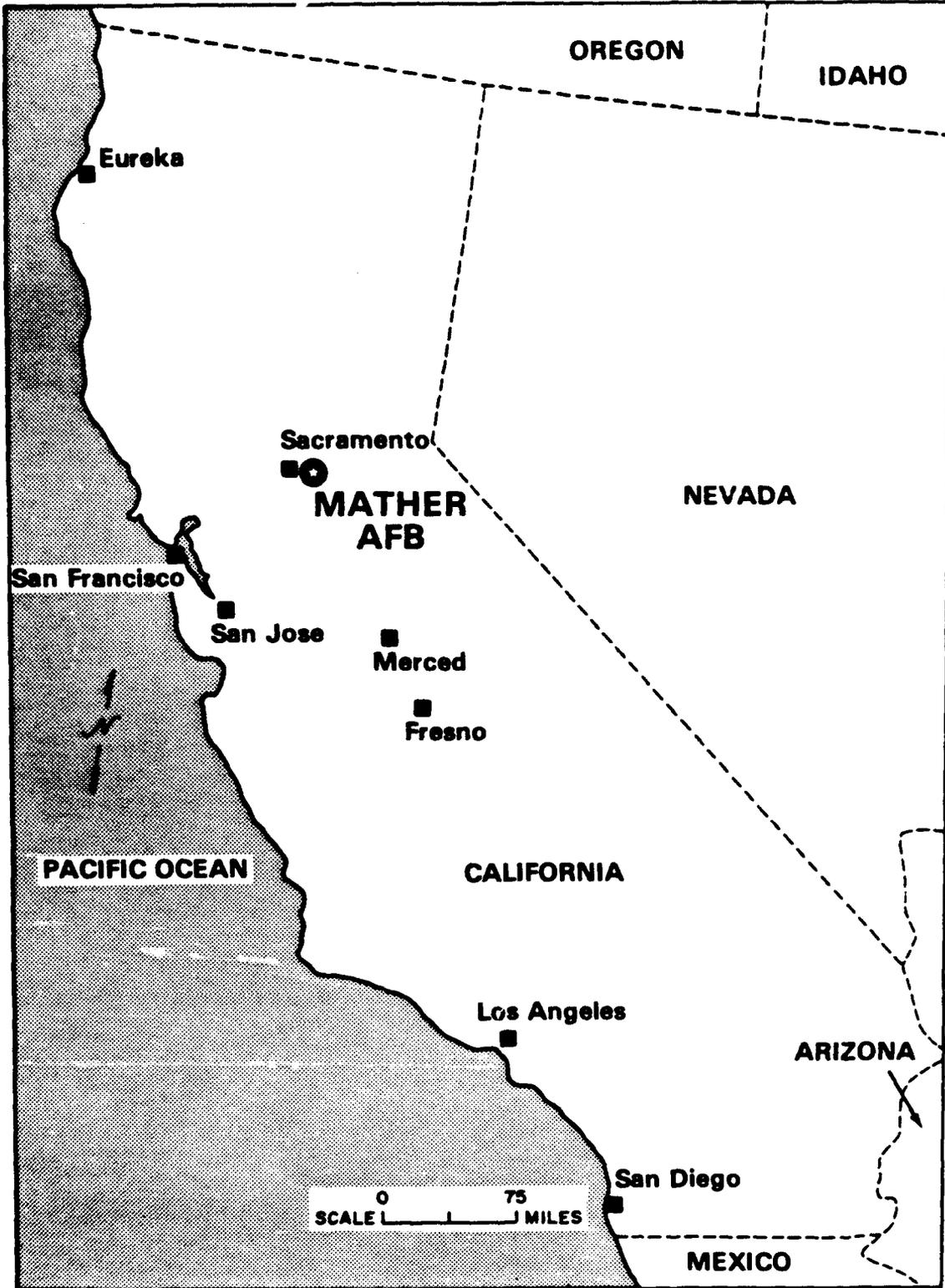


Fig. 1. State location map of Mather Air Force Base.

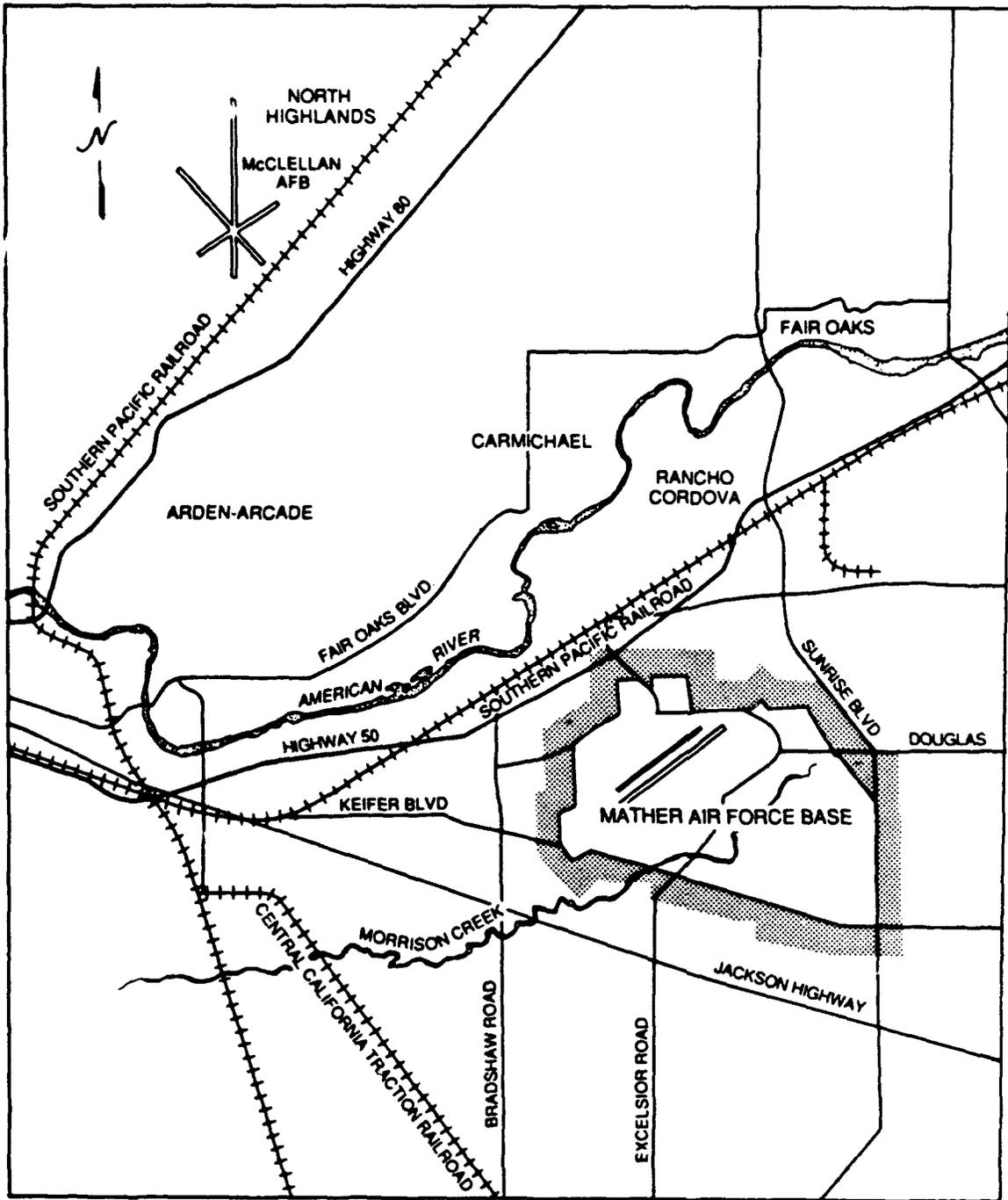


Fig. 2. Regional location map of Mather Air Force Base.

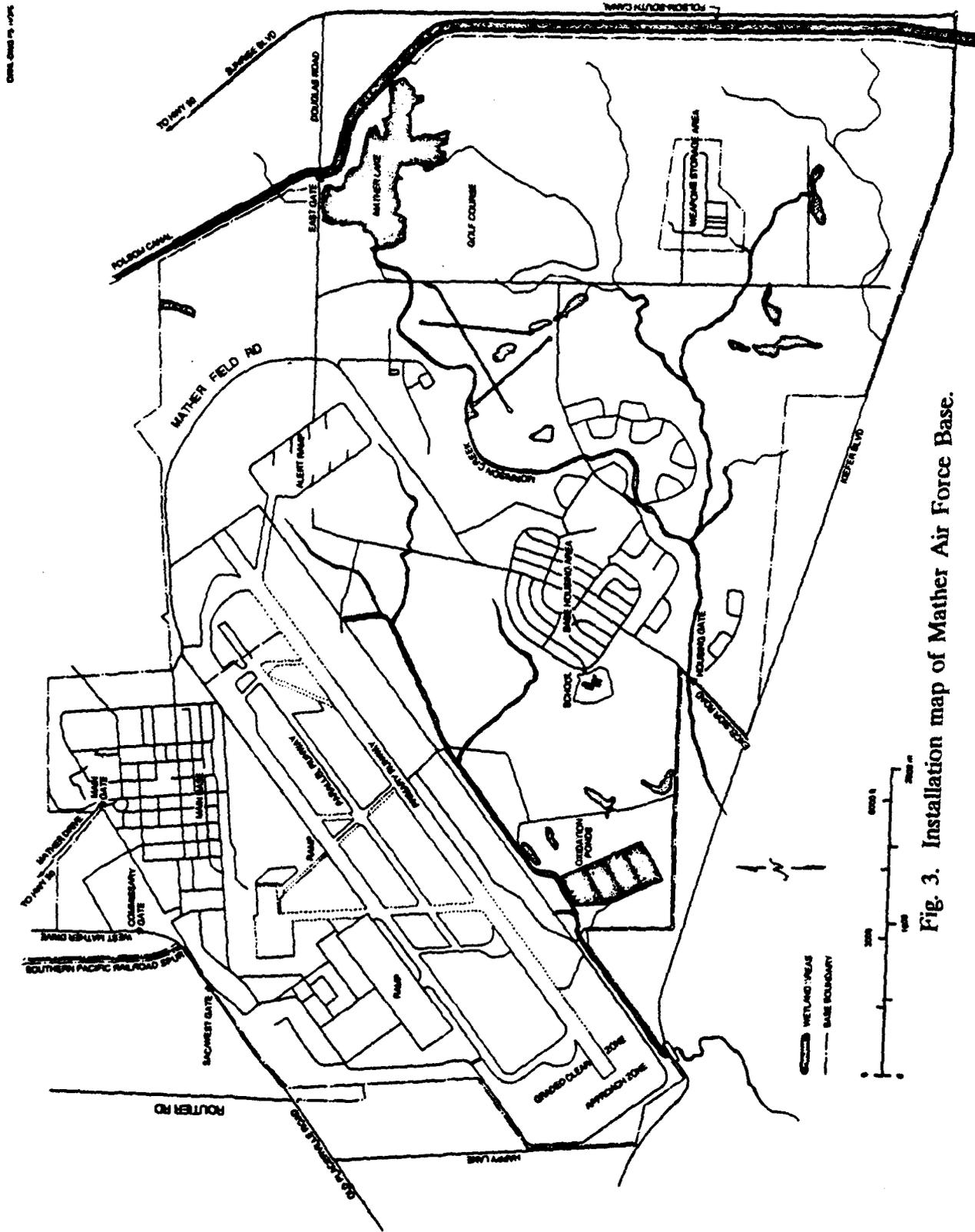


Fig. 3. Installation map of Mather Air Force Base.

This assessment deals only with those issues that may experience direct impacts as a result of the proposed action. Because the action is a withdrawal rather than an expansion or construction project, the impacts are limited to the following areas; noise, air quality, solid and liquid wastes, air safety, and socioeconomics. Because no construction or demolition is planned, this action would not affect soils, hydrology, ecological resources, or land use. An archeological survey of the base conducted in 1985 found no evidence of any historic or prehistoric sites (McIvers 1985).

As part of a separate Air Force action, Mather AFB is scheduled for closure by July 1993, as recommended by the Base Realignment and Closure Commission. The proposed withdrawal of the 320th BMW is not dependent on closure of Mather AFB. Although not part of the Commission's recommendations, withdrawal of the 320th BMW was a factor in the Commission's recommendation for closure of Mather AFB and is noted in the Commission's report (U.S. DOD 1988). The effects of the Mather AFB closure will be assessed in an Environmental Impact Statement (EIS) currently in preparation [*Fed. Regist.* 54, 6256 (Feb. 8, 1989)]; potential effects from withdrawal of the 320th BMW will be considered in the EIS when addressing the cumulative impacts of closing Mather AFB.

## **2. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES**

### **2.1 PROPOSED ACTION**

As discussed in Section 1.1, the Air Force is proposing to retire the 320th BMW stationed at Mather AFB, California, in order to comply with the FY 1989 federal budget requirement for the reduction of the conventional B-52 force. To accomplish this objective, fourteen of the older and/or less efficient aircraft would be selected for disposal from all five SAC bases possessing B-52s. The fourteen B-52s currently at Mather AFB would then be distributed to the other four bases to replace aircraft that have been retired, stored, or otherwise disposed. In general, older and less-efficient aircraft would be disposed or retired, and newer aircraft transferred. The proposed withdrawal would result in reassignment of 1279 military and 12 civilian personnel. Ground support equipment would not be removed but would remain to support KC-135 aircraft. Personnel would also be temporarily involved in KC-135 support. Completion of personnel transfers is scheduled for 1991.

### **2.2 ALTERNATIVES**

It was determined that the proposed action would not geographically affect the ability of the B-52 force to reach the most strategically important areas of the world, should the need arise. Retirement of a B-52 wing other than the 320th BMW could compromise the effectiveness of the B-52 force; thus, no other reasonable alternatives to the proposed action were identified.

### 3. ENVIRONMENTAL SETTING

#### 3.1 NOISE

The Air Force has adopted the average day-night sound level (Ldn) as the measure of noise as expressed in decibels (dB). (Ldn is the energy-averaged noise level measured over a 24-hr period, with a 10-dB penalty applied to noise occurring between 10 p.m. and 7 a.m. to account for increased annoyance by nighttime noise.) An Ldn value of 65 dB is important for assessing potential noise impacts and is supported by regulations and administrative standards adopted by other governmental agencies. For example, the Department of Housing and Urban Development (HUD) has adopted an Ldn level of 65 dB as the upper limit of acceptable aircraft and nonaircraft noise with regard to residential development and governmental funding for community planning. The Ldn (sometimes written as DNL) value used by Federal Aviation Administration to define residential noise impact areas around airports is 65 dB. A recent American National Standard Institute standard on land use planning with respect to noise also suggests a limit of Ldn 65 for residential use.

The noise contours for 1989 base operations (Fig. 4) indicate that the 65-dB (Ldn) contour covers an area of approximately 29,200 acres. Most of this area is off the base and sparsely populated. For the most part, the surrounding land uses are compatible or conditionally compatible to the noise levels generated by Mather AFB operations.

Sound exposure level (SEL) is a common measure of short-term noise levels. SEL represents the level of continuous noise with a duration of 1 s that would produce the total amount of sound energy equivalent to the measured event. The B-52s in the 320th BMW fly an average of about 14 operations per day producing a maximum SEL of approximately 105 dB southwest of the airfield. Northwest of the airfield, B-52 operations produce a SEL of approximately 109 dB (D. Miller, AF Engineering Services Center, Tyndall AFB, personal communication to D. Hunsaker, ORNL, Oak Ridge, Tenn., 1989).

#### 3.2 AIR QUALITY

Air quality in the Sacramento region is classified as not meeting federal standards for several pollutants emitted by aircraft and motor vehicles (40 CFR Pt. 81.305): particulate matter (does not meet secondary standards), ozone (does not meet primary standards), and carbon monoxide (does not meet primary standards). Ambient levels of nitrogen dioxide and sulfur dioxide in the Sacramento area are below standards or cannot be classified due to lack of data (40 CFR Pt. 81.305). Since no construction, demolition, or other physical disturbance is planned under this proposed action, the potential for air quality impacts from other than vehicle and aircraft emissions is low and is not addressed further.

Emissions contributing to the air quality problems in the Sacramento area, including those from Mather AFB, are summarized in Table 1. Mather AFB represents about 1% of the county carbon monoxide emissions, about 2% of the hydrocarbon

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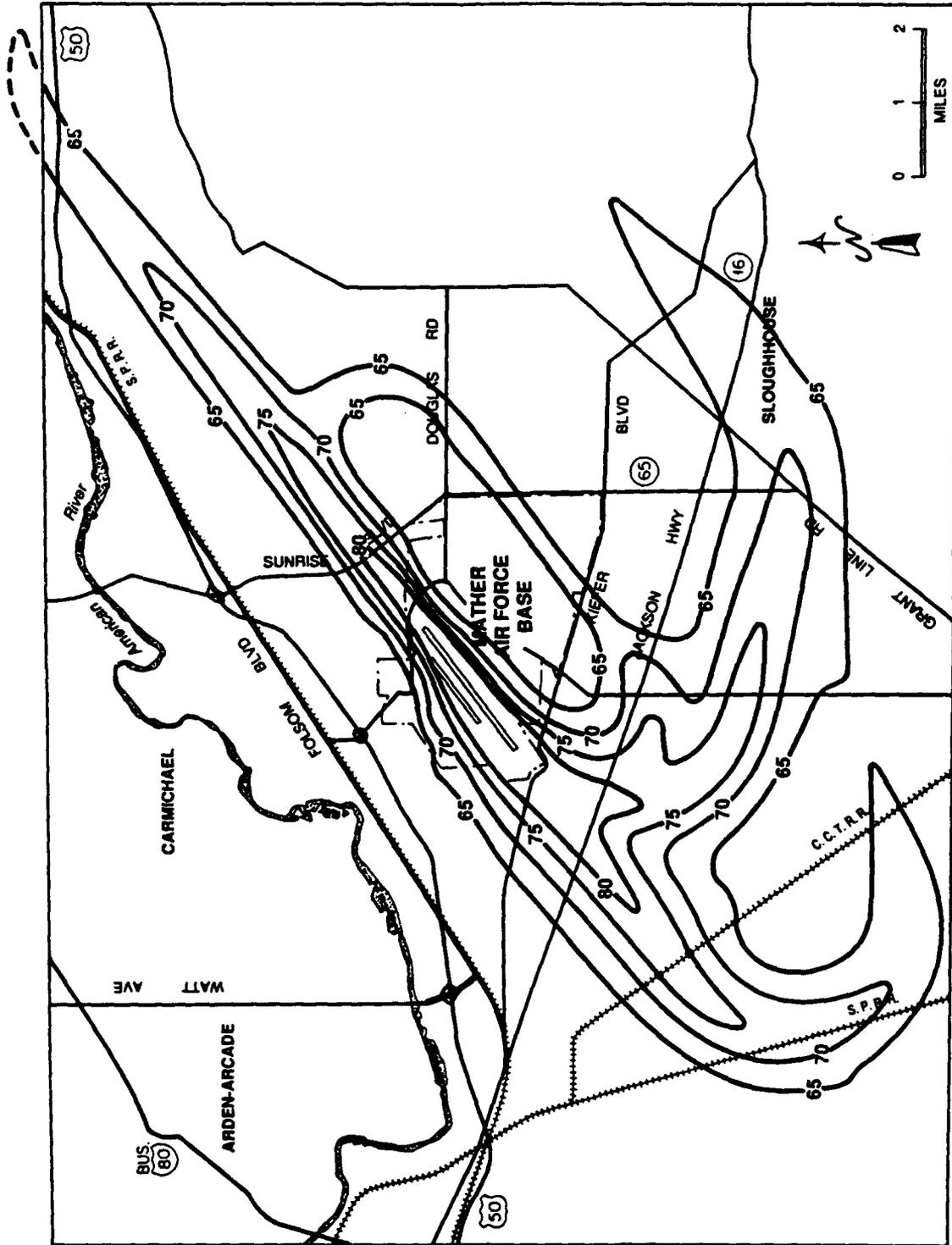


Fig. 4. Average day-night level (Ldn) noise contours for Mather Air Force Base operations including the 320th Bombardment Wing.

**Table 1. Summary of estimated annual air emissions (tons) from Sacramento County, Mather Air Force Base (AFB), and the Strategic Air Command (SAC) 320th Bombardment Wing (BMW) activity at Mather Air Force Base**

<b>Pollutant</b>	<b>Annual regional emissions, Sacramento County</b>	<b>Estimated annual emissions, Mather AFB</b>	<b>Estimated annual emissions associated with the 320th BMW</b>
Carbon monoxide	200,750	2,060	453
Hydrocarbons	41,975	1,058	250
Nitrogen oxides	28,105	428	85
Sulfur oxides	1,934	28	10
Particulates	69,350	48	13

*\*Source: Sacramento County Air Pollution Control District, 1983 Base Year Air Pollutant Emissions Inventory, Sacramento, Calif., Dec. 24, 1986.*

*<sup>b</sup>Communication from M. Sgt. G. Doig, Mather AFB Hospital, to D. Hunsaker, ORNL, May 19, 1989.*

emissions, 1% of the nitrogen oxides emissions, about 1% of the sulfur oxides emissions, and about 0.1% of the particulate emissions (SCAPCD 1986). The contribution from the 320th BMW activity (aircraft, above ground equipment, and motor vehicle use on base) contributes from 20% to 36% of Mather AFB emissions but still represents a small fraction of the regional emissions.

### 3.3 SOLID/LIQUID WASTES

Daily operations within the 320th BMW at Mather AFB involve the use of many of the same materials used by the other units on base, such as JP-4 fuel, automobile fuel, solvents, and lubricating fluids. Three substances that are unique to the 320th BMW are a silicone dampening fluid, a gun bore cleaner, and gun oil. These materials are stored in metal containers in the respective work areas.

Several Installation Restoration Program sites within the SAC area are in the remedial investigation/remedial study portion of the program. This program will continue through the cleanup process under ATC management, independent of the 320th BMW withdrawal. No underground storage tanks currently in use will be abandoned as a result of the withdrawal. Hazardous wastes generated by 320th BMW operations are put into drums and shipped off-site for disposal in accordance with permit conditions.

Mather AFB accounts for about 0.5% of the sanitary sewage treated by the Sacramento County Regional Wastewater Treatment Plant. Average daily flow from sanitary and industrial sources at Mather AFB is approximately 900,000 and 150,000 gal/d respectively. The 320th BMW personnel (2092 military personnel, on base dependents, and civilian employees) comprise about 28% of the base population of 7600. Therefore, 320th BMW personnel and their families on base are assumed to represent the same percentage of liquid waste flow (252,000 gal/d).

Solid waste produced by Mather AFB is taken by a contractor to the Sacramento County landfill. Total solid waste production at the base for the period of February 1988 through January 1989 was 5621 tons, or 0.6% of the total landfill input for the period. Assuming the same 28% production by the 320th BMW, the production rate for the SAC 350th is estimated to be about 1574 tons per year.

### 3.4 SAFETY

The 320th BMW has achieved an excellent safety record since beginning operations at Mather AFB in 1963. For dropped objects, one of the more common aircraft safety incidents, a historical rate of 11.3 per 1000 sorties (defined as a takeoff, a landing, and related activities in between) was determined for the 320th BMW for the period January through November 1987. The 320th BMW typically flies about 1000 sorties per year at Mather AFB. None of the incidents resulted in reported damage or injuries. Most such incidents occur during takeoff, landing, or high speed practice bombing runs, during which the B-52s are over cleared areas.

Due to the high population densities of large birds in the Mather AFB area, bird-aircraft strikes are a particular hazard. Collision with the large birds can result in exterior damage to the planes and can foul engines. Current data on bird strike

incidents for the 320th BMW show four bird/aircraft collisions for the period October 1988 through April 1989.

No crashes involving 320th BMW B-52s have occurred during the time of operations at Mather AFB. The one B-52 crash that did occur at Mather AFB on December 16, 1982, involved an aircraft from Castle AFB.

### **3.5 SOCIOECONOMICS**

The topics relevant to an assessment of socioeconomic impacts associated with the retirement of the 320th BMW include: population, schools, housing, and the local economy.

#### **3.5.1 Population**

The 320th BMW includes 1279 military personnel and 12 civilian personnel (Table 2). The U.S. Air Force Cost and Planning Factors Guide uses a multiplier of 2.49 to determine the number of dependents of military personnel; a similar distribution for civilian personnel is assumed for this assessment. Thus, military personnel of the 320th BMW have approximately 3185 dependents, and civilian personnel have approximately 30 dependents (USAF 1989a). About 4500 personnel and household members are expected to be directly affected by the action.

Three hundred twenty-two of the 320th BMW's military personnel live on Mather AFB (USAF 1989a). According to the 1987 Zip Code distribution data, about 43% of the 320th BMW's military and civilian personnel who live off-base reside in the unincorporated town of Rancho Cordova. 320th BMW personnel and their dependents account for about 1450 of the people living in Rancho Cordova. The 1980 population of Rancho Cordova was 43,108 (U.S. Department of Commerce 1983).

Approximately 190 of 320th BMW's personnel live in the community of Perkins, a part of the city of Sacramento located just outside the boundary of Mather AFB. The remaining personnel residences are distributed throughout the communities of Fair Oaks, Carmichael, Orangevale, Folsom, Citrus Heights, Elk Grove, North Highlands, and other parts of Sacramento County (Mather AFB 1987).

Sacramento County had a 1980 population of 783,381, an increase of 23.5% over its 1970 population (U.S. Department of Commerce 1983). Projections indicate a 1990 population of approximately 993,000, or a growth rate of 26.8% over the 10-year period from 1980 (State Population Research Unit 1986). Sacramento County is a part of the Sacramento Metropolitan Statistical Area (MSA), comprising El Dorado, Placer, Sacramento, and Yolo counties, having a 1980 population of over 1.2 million (U.S. Department of Commerce 1986).

#### **3.5.2 Schools**

Questionnaire data from 1987 indicate that approximately 575 children of 320th BMW personnel attend public schools in grades K-12 in Sacramento County. Approximately 58% of children of 320th BMW personnel, or about 330-35 children,

**Table 2. Residences of 320th Bombardment Wing (BMW) and Mather Air Force Base (AFB) personnel**

Residence	320th BMW <sup>a</sup>		Mather AFB <sup>b</sup>	
	Military	Civilian	Military	Civilian
On-base	322	c	2489	c
Off-base	957	12	3163	1962
Total	1279	12	5652	1962

<sup>a</sup>United States Air Force, *Economic Resource Impact Statement, Fiscal Year 1988, 320th Bombardment Wing (SAC), Mather Air Force Base, California, 320th Comptroller Division, Mather AFB, Calif., 1989.*

<sup>b</sup>United States Air Force, *Economic Resource Impact Statement, Fiscal Year 1988, Mather Air Force Base, California, 323D Comptroller Squadron, Mather Air Force Base, Calif., 1989.*

<sup>c</sup>No civilian personnel live on the base except those married to military personnel.

are enrolled in the Folsom-Cordova Unified School District. Two of the Folsom-Cordova schools are located on Mather AFB and serve on-base children in grades K-6. Students in grades 7-12 living on-base attend Mitchell Jr. High School and Cordova High School. The Folsom-Cordova district had a total enrollment of 11,612 in October 1988. The district is planning for no increase during the 1989-90 school year because expected student withdrawals are associated with the proposed closure of Mather AFB that was announced in December 1988.

Approximately 14% of the children of 320th BMW personnel, about 80 students, attend school in the San Juan Unified School District, which had a fall 1986 enrollment of 45,791. The enrollment of the remaining children is distributed throughout Elk Grove Unified, Robla Elementary, Sacramento City, and other school districts in the area.

There is a potential for lost income from various state and federal sources to the Folsom-Cordova School District. State and federal revenues to the district are estimated at \$2,757 per student in 1989, for a district total of approximately \$32 million. State of California lottery funds to the district are estimated at \$150 per student for 1989, for a district total of \$1.74 million. Federal impact aid funds (Pub. L. 874) averaged \$840 per child of military personnel living on-base, \$36 per child of military personnel living off-base, and \$24 per child of civilian personnel. The maximum amount of income from Pub. L. 874 funds for which the Folsom-Cordova district was eligible during 1988-89 is approximately \$811,500. Based on receipts in past years, district personnel estimate that about \$500,000 of this amount probably will be received by the district (D. Sarich, Director of Business Services, Folsom Cordova Unified School District, Folsom, Calif., personal communication to J. Morrissey, SAIC, Oak Ridge, Tenn., July 19, 1989). The total income from all sources to the Folsom Cordova district for 1988-89 is estimated at approximately \$34.3 million.

### 3.5.3 Housing

Most of the 320th BMW personnel live in unincorporated areas of Sacramento County. As of 1987, there were 384,739 housing units in Sacramento County, with a vacancy rate of 6.39%. Data from 1987 indicated that 31% of Mather AFB personnel who live off-base own their homes and 69% rent (Mather AFB 1987). If 320th BMW personnel are distributed similarly, they occupy approximately 300 owned units and 650 rental units in Sacramento County. Of these, an estimated 130 owned units and 285 rental units are located in the Rancho Cordova community. The yearly sales volume in Rancho Cordova was approximately 756 per year as of April 1987. The market value of most homes owned by Mather AFB personnel is in the range of \$75,000 to \$130,000.

### 3.5.4 Economy

The 320th BMW generates personnel income and procurement expenditures to support its activities. The total payroll in the Sacramento MSA is about \$17 billion. In fiscal year 1988, the gross military and civilian payroll level for the 320th BMW was over \$39.7 million; and payments for contracts, construction, and procurement of services, materials, equipment, and supplies totalled \$138.8 million. The 320th BMW generates an estimated cash flow of approximately \$23.6 million within the Economic Impact

Region (EIR), which is defined as the area within a 50-mile radius of Mather AFB (see Fig. 5). Using the Gross Income Multiplier of \$2.5, the indirect effect that ripples through the EIR economy is estimated at approximately \$60.7 million (USAF 1989a).

The number of total local jobs directly and indirectly supported by the 320th BMW, including 1291 direct personnel and an estimated 449 secondary jobs created in the 11-county EIR, was approximately 1740 in fiscal year 1988. There were approximately 573 thousand total jobs in the Sacramento MSA, comprising 4 counties of the EIR, in 1986. An additional 704 jobs were supported outside the EIR (USAF 1989a).

The public revenues in the Sacramento MSA and Sacramento County come primarily from property (60%) and sales taxes (30%). Housing owned by Mather AFB personnel has an assessed value of \$395 million, or about 1.5% of assessed property values in Sacramento County.

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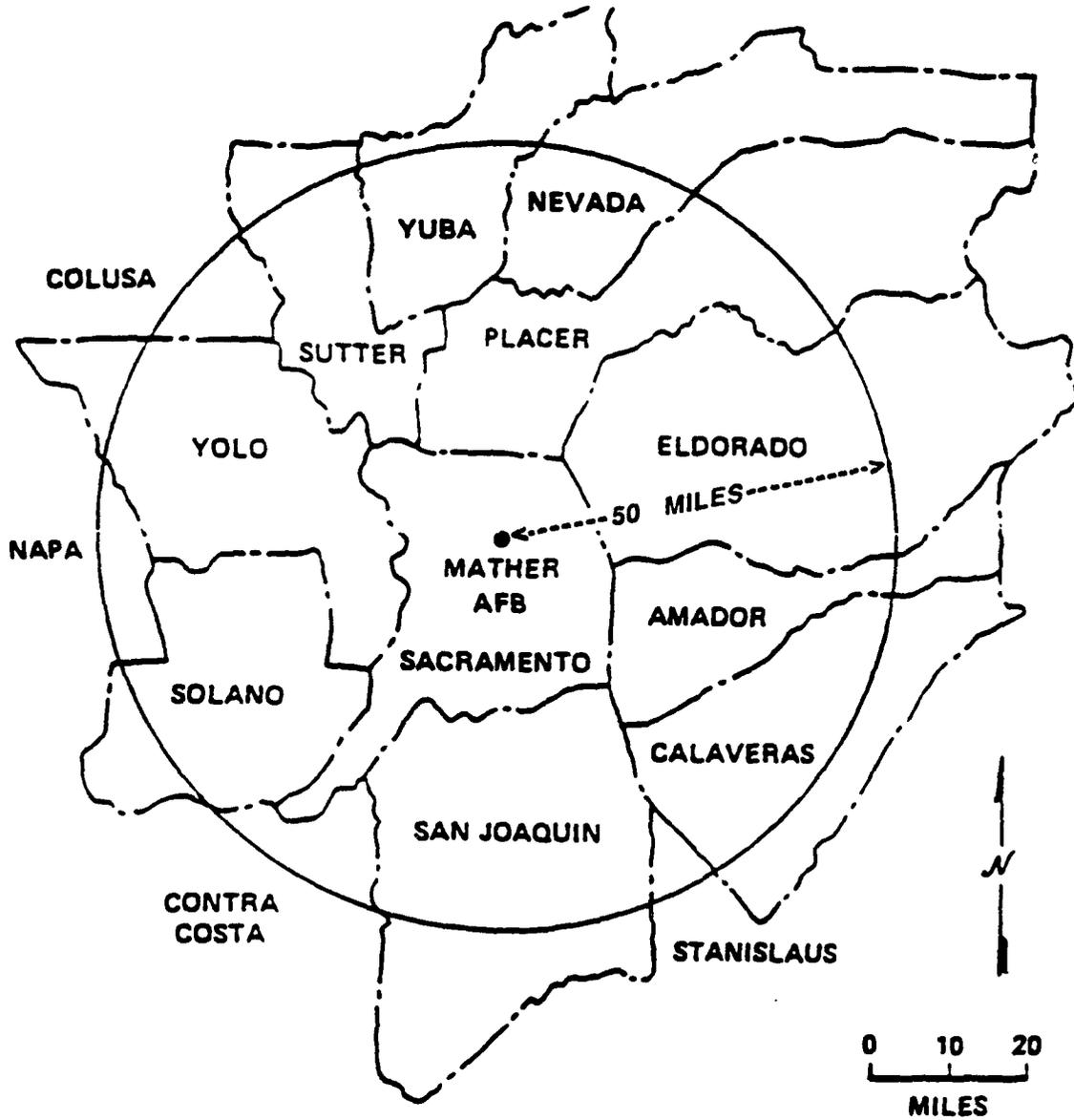


Fig. 5. The Mather Air Force Base Economic Impact Region. Counties in the vicinity of Mather Air Force Base.

## 4. IMPACTS

### 4.1 NOISE

Withdrawal of the 320th BMW from Mather AFB would reduce the noise levels illustrated in Fig. 4 to those illustrated in Fig. 6. Removal of the 320th BMW would reduce the area affected by noise levels above 65 dB by about 25%. Operation of Mather AFB without the 320th BMW would result in a noise footprint with an area of about 22,000 acres within the 65 dB contour. The B-52 aircraft generates the highest noise levels of all the aircraft routinely flown at Mather AFB. The SELs of 105 and 109 dB are higher than for the other aircraft. Noise complaints received by the Mather AFB Public Affairs Office demonstrate the importance of the B-52s to the overall noise impact of the base; of the 42 noise complaints received in CY 1988, 22 were directed at the B-52. The remaining complaints were distributed among several other Mather AFB aircraft, none of which motivated more than five complaints. Withdrawal of the 320th BMW would thus reduce maximum SELs and reduce the number of noise complaints received by the base.

### 4.2 AIR QUALITY

Removal of the 320th BMW from Mather AFB would result in a small beneficial impact to air quality in the Sacramento area due to the elimination of air emissions from aircraft and automobiles associated with on-base traffic for the 320th BMW. Cessation of 320th BMW operations would reduce Mather AFB emissions by 20 to 36%; however, this reduction would be less than 1% of Sacramento County air emissions.

A small reduction in vehicle emissions could also be expected from reduced off-base vehicle activity. In 1981 the average vehicle occupancy of vehicles entering Mather AFB during peak morning rush hour (7 to 8 a.m.) was determined to be 1.15 persons (MTMC 1981). Approximately 330 320th BMW personnel live off-base and commute to Mather AFB. Correlation of these two factors indicates that approximately 290 fewer vehicles would be regularly traveling the roads in the vicinity of Mather AFB. This is a 14% decrease in the total morning peak hour traffic load of 2,015 at the main and west gates (MTMC 1981). A corresponding reduction in 320th BMW-related atmospheric emissions would result.

### 4.3 SOLID WASTE

The withdrawal of the 320th BMW would decrease the amounts of the materials routinely used by all the flying operations of the base, including JP-4 fuel, gasoline, solvents, and lubricating fluids. This reduction, in combination with the fewer numbers of flying operations resulting from the withdrawal action, should reduce the likelihood of environmental contamination through spills and leaks. Removal of the silicone dampening fluid, gun bore cleaner, and gun oil used exclusively by the 320th BMW would further reduce the opportunities for environmental contamination.

The portion of the base involved in flight-line operations would not change much because other units at the base are scheduled to take over the facilities vacated by

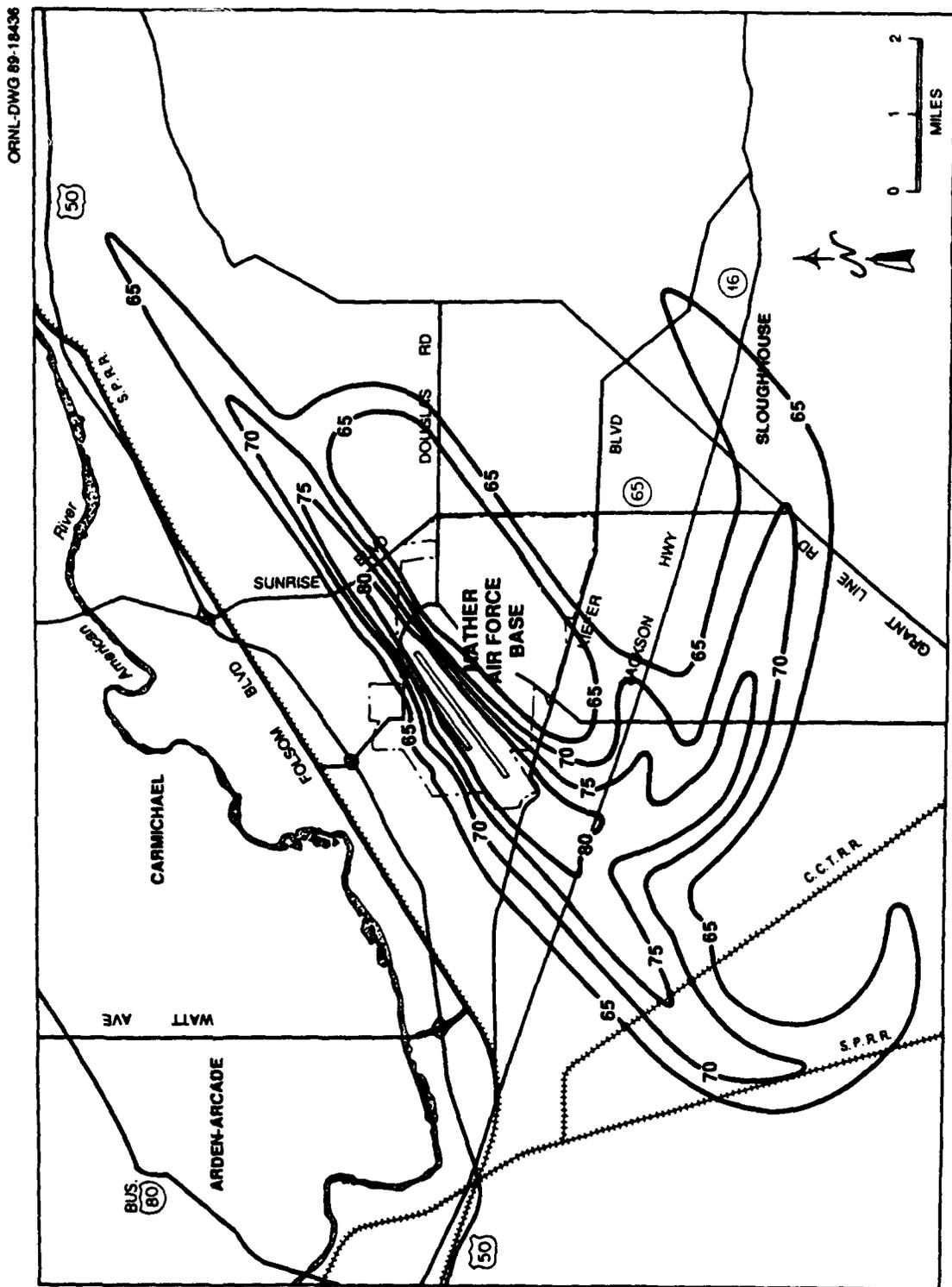


Fig. 6. Average day-night level (Ldn) noise contours for Mather Air Force Base operations without the 320th Bombardment Wing.

the 320th BMW. Therefore no abandoned storage areas or facilities would be created by the proposed action.

Withdrawal of the 320th BMW would reduce the Mather AFB demand on the county landfill and sewage treatment facilities by about 28%. Mather AFB's contribution to these facilities is currently about 0.5% each; therefore, the beneficial impacts are expected to be slight. Including the military dependents living off-base and civilian dependents, the total number of people who would no longer depend on the facilities amounts to 4506. This reduction would enhance the operation of the landfill and sewage treatment facilities by extending their operational lives and providing for future growth of the community. The reduction in users may result in slight increases in charges for these services to the rest of the community. However, 4506 people are a very small portion of the total area population (0.4% of projected 1990 Sacramento County population).

#### 4.4 SAFETY

The air safety record of the 320th BMW has been excellent since operations were begun at Mather AFB in 1963. Incidents of dropped objects and bird-aircraft strikes steadily decreased during the last three years. Withdrawal of the 320th BMW would result in approximately 1000 fewer sorties flown each year, and the likelihood of a crash at Mather AFB from the 320th BMW would be reduced to zero.

#### 4.5 SOCIOECONOMICS

##### 4.5.1 Population

Assuming that all personnel and their dependents relocate with the 320th BMW withdrawal, the maximum potential decrease in population associated with the proposed action is approximately 4500, which represents less than 0.6% of the total population of Sacramento County. This effect could increase slightly if workers indirectly related to the 320th BMW leave the area also. Only a small impact on the population of Sacramento County is expected.

The off-base population decreases would be concentrated in the unincorporated town of Rancho Cordova. Other small communities near the base would be affected to a lesser degree. Rancho Cordova potentially could experience a population decrease of up to 1450 people, or 3.4% from its 1980 level, which is likely to be a noticeable decline in the immediate vicinity. While some small service businesses (e.g., gas stations and dry cleaners) may notice a slight effect from the decrease in Rancho Cordova's population, it is not expected to be widespread because most Mather AFB personnel tend to shop for goods and services in the city of Sacramento or on the base. A 1987 study of shopping patterns among Mather AFB personnel showed that most purchase cars, furniture, other durables, and clothing in Sacramento, while they shop for groceries, gas, and medical services primarily on Mather AFB.

#### 4.5.2 Schools

Almost all the reductions in school population associated with the proposed action would be from military families, suggesting that most of the families with school-age dependents would transfer. The potential public school enrollment decrease associated with the proposed action would be concentrated in the Folsom-Cordova Unified School District. The maximum reduction in student population in this district would be about 2.3%, or about 10 classrooms, a small but noticeable impact. No impacts would be experienced by other school districts in the area.

The maximum loss of income from Pub. L. 874 funds to the Folsom-Cordova district due to the proposed action is estimated at \$75,000-80,000. State and federal funds lost as a result of the proposed would be approximately \$923,600. The loss of state lottery funds is estimated at \$50,250. The potential total loss of income from all sources associated with the proposed action is approximately \$1.05 million, which represents approximately 3% of the total estimated income to the Folsom-Cordova district.

#### 4.5.3 Housing

The proposed action would result in no impact on the housing market in Sacramento County as a whole. The total number of units owned and rented by 320th BMW personnel represents 0.25% or less of Sacramento County units. The effect could be increased slightly with the loss of employment indirectly dependent on the 320th BMW.

The concentration of off-base personnel in a few unincorporated communities in the vicinity of Mather AFB, particularly Rancho Cordova, could result in a localized impact on the housing market. An increase of about 130 owner-occupied houses to listings in the Rancho Cordova area represents about 17% of the yearly sales volume. Such an increase in listings could result in an increase in the average time required to sell a house and a possible reduction in average selling price. The potential vacating of 285 rental units in these communities could result in excess vacancy and reduced prices in the rental market in the immediate area. The impact may be exacerbated if other Mather AFB military families move from off-base local housing to on-base family housing.

#### 4.5.4 Economy

The potential economic impact of the proposed action includes the loss of approximately \$60.7 million spent in the EIR. The potential number of jobs lost, including both primary and secondary jobs, could be 1740. Actual cutbacks in output and secondary jobs, however, will depend on the extent to which new economic growth replaces the military expenditure loss. Results of an earlier study of the complete closure of Mather AFB showed that it would not reduce property tax receipts in Sacramento County. Furthermore, the reduction in total Retail Trade and Service sector receipts in Sacramento County was not expected to affect the provision of public services in Sacramento County. The estimated potential net economic impacts on output and earnings from total closure of the base would be only a fraction of a percent

of the Sacramento MSA total. Public revenues also would not be affected by the proposed action.

## 5. SUMMARY

The FY 1989 federal budget direction mandates that 14 Air Force B-52s be retired from active service. To comply with this directive, the Air Force has determined that the SAC 320th BMW, a unit of 14 B-52s stationed at Mather AFB, California, should be retired. In addition, 1279 military and 12 civilian 320th BMW personnel would be reassigned. This action would maintain the flying and weapons delivery capability of the remaining four B-52 wings and would not diminish the strategic effectiveness of the B-52 force. No construction or demolition is planned as part of the proposed action.

The region of influence of the principal impacts of this action (noise, air quality, solid/liquid wastes, air safety, and socioeconomics) is the base itself and immediate vicinity, particularly the Rancho Cordova community. Because this is a withdrawal action, soils, hydrology, ecological resources, and historical and cultural resources would not be affected by this action.

The withdrawal of the 14 B-52s of the 320th BMW from Mather AFB would have a small beneficial impact on noise, air quality, solid/liquid wastes, and air safety. Noise levels would be most affected by cessation of the 320th BMW's B-52 flying operations. The sound exposure level from these operations may reach 109 dB in the sparsely inhabited areas just northwest and southwest of the airfield. The 29,200 acres that are enclosed by the 65-dB (Ldn) contour for Mather AFB operations including the 320th BMW would be reduced by about 25% with cessation of 320th BMW flying operations. Noise levels above 65 dB (Ldn) can be associated with land use restrictions.

Mather AFB contributes ~1% of the county carbon monoxide emissions, ~2% of the hydrocarbon emissions, 1% of the nitrogen oxide emissions, ~1% of the sulfur oxides emissions, and ~0.1% of the particulate emissions. The 320th BMW activities contribute from 20% to 36% of Mather AFB emissions but still represent a small fraction of the regional emissions.

Based on the 320th BMW percentage of total Mather AFB military and civilian personnel, there should be a reduction of the base contribution to the county landfill and sewage treatment facilities of ~28%. In addition, there is the potential for a reduction of approximately 4500 in the total population of users of these facilities. Since this number represents less than 0.6% of the total population of Sacramento County, there should not be an appreciable increase in charges to the remaining users.

The air safety record of the 320th BMW has been excellent since operations were begun at Mather AFB in 1963. There have been no crashes, and incidents of dropped objects and bird-aircraft strikes have decreased during the last 3 years. Withdrawal should result in a slight enhancement of air safety as a result of about 1000 fewer sorties being flown per year, with a corresponding reduction in the chance of aircraft accidents.

Rancho Cordova, an unincorporated community just north of the main entrance to Mather AFB, would experience the greatest socioeconomic impacts of the 320th BMW withdrawal. A population decrease of up to 1450 people, or 3.4% of the 1980 census level, could result. However, a 1987 study showed that most Mather AFB personnel shop for goods and services in the city of Sacramento or on the base. Therefore, effects on local businesses would be slight. A resulting increase of

125-130 owner-occupied houses to local real estate listings and the availability of 285 rental units could result in excess housing vacancies and reduced prices in the immediate area.

The withdrawal action could result in a reduction of 2.3% in the student population of the Folsom-Cordova Unified School District. The potential loss of income from all sources to the school district is approximately \$1.05 million, or about 3% of the total estimated income.

The economic impact of the proposed action includes the potential for a loss of 1740 primary and secondary jobs and a spending loss of approximately \$60.7 million per year. However, this would depend on the extent of replacement by new economic growth. The estimated impacts on output and earnings would be only a fraction of 1% of the Sacramento MSA total.

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## 7. PERSONS AND AGENCIES CONTACTED

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