

Future Land Use Scenarios For Federal Facilities





PRELIMINARY REVIEW OF FUTURE LAND USE SCENARIOS

FOR

FORT RICHARDSON

Prepared by:

Scott Leland EPA Region 10 Federal Facility Section

August 26, 1991

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1. INTRODUCTION

This memorandum addresses future land use plans for the Fort Richardson and the surrounding area. The scenarios presented here were developed after reviewing surrounding land uses and information available from Fort Richardson.

2. SITE DESCRIPTION

Fort Richardson is the largest of the army posts in Alaska and is headquarters for the 6th Infantry Division (Light), which also includes Fort Wainwright and Fort Greely. Fort Richardson employs approximately 6,000 civilian and military personnel. The post comprises approximately 62,000 acres (97 square miles).

Facilities include an airfield and hangars, family housing units, army barracks, several schools, a community center, a power plant, numerous large warehouses, commissary, firehouse, bank, theatre, other small shops and buildings, a cemetery, and thousands of acres of open land.

3. LAND USE IN THE AREA SURROUNDING FORT RICHARDSON

Fort Richardson is located within the municipality of Anchorage in south-central Alaska (see map, page 7). The reservation is bounded by Anchorage proper and Elmendorf Air Force Base to the west and Eagle Bay and Knik Arm in the northwest and north. The southern and eastern boundaries traverse undeveloped lands along much of the boundary, most of which is Chugach State Park. The Town of Eagle River is located on the eastern border. The Glenn Highway bisects Fort Richardson.

The Fort Richardson region is characterized by flat lowlands and gently rolling hills, open low-spruce forests, numerous streams, ponds, and treeless wetlands.

Wildlife migration occurs through the Ship Creek Basin, part of which passes through Fort Richardson, south of Glenn Highway. Wetlands are another important part of the base, located primarily in the northern portions of the facility. The largest and ecologically most important tidal march is Eagle River Flats, located along the lower section of the Eagle River at Eagle Bay. Portions of this area are currently contaminated with unexploded munitions.

Source: Draft document, Field Investigation Plan for the Confirmation of Fire Training Pits at Fort Richardson, Fort Wainwright, and Fort Greely Alaska. Prepared by: Ecology and Environment, Inc., Anchorage. December 28, 1990.

4. PROJECTIONS FOR CONTINUED ARMY OWNERSHIP OF FORT RICHARDSON

Fort Richardson was established in November 1940, and has operated continuously ever since. Its primary mission was originally to defend Alaska against foreign invaders. During World War II, Fort Richardson was a staging and supply area with the troop size varying from 7,800 to more than 15,000. In 1950, the Army established a new cantonment area on the northern part of the installation and released the land on the western section of the Fort to the Air Force. Elmendorf Air Force Base was built on this section of land.

Since 1986, Fort Richardson has been under the command of the 6th Infantry Division.

Official documents call for the continued use of Fort Richardson by the Army. There is some indication, however, that the future life of the base may be limited. Base personnel in the Environmental Resources Branch (ERB) have expressed the belief that Fort Richardson will be recommended for closure within the next three to four years by the Base Closure Commission. The feeling among ERB personnel is that the Fort "squeaked by" in not being recommended for closure by the 1991 Commission. The Commission is required to make new closure and realignment recommendations to the President by July 1993, and again by July 1995.

5. SCENARIOS FOR FUTURE LAND USE AT FORT RICHARDSON

a) The North Anchorage Land Agreement: The North Anchorage Land Agreement (NALA) governs the disposition of over one-half of Fort Richardson, if and when it is ever determined excess to the needs of the Department of Defense. NALA was signed in 1982 by the State of Alaska, the Municipality of Anchorage and Eklutna, Inc. (a Native corporation formed under provisions of the Alaska Native Claims Settlement Act). Approximately 42,300 acres of Fort Richardson and Elmendorf Air Force Base military lands are involved in the agreement. According to a summary of this agreement:

"Certain of these areas, which in the agreement are specified as public interest lands, will be transferred to the state. These include the Eagle River Flats (as wildlife habitat); a large tract south of Eagle river and east of the Glenn Highway (as a key winter range for moose); a corridor of land extending upland 200 feet from the line of ordinary high water of each bank of Eagle River (as a public greenbelt); 160 acres at either Clunie or Six-Mile lake (for a future floatplane base); and as much as 1,000 acres from an area south of Eagle River (for mass or bulk transportation purposes - probably a new railroad yard). Also conveyed to the state will be other

interest including the existing Alaska Railroad right-of-way and the right to realign the track if needed....

"An additional 3,000 acres of public interest lands -- which are not yet identified, will be conveyed to the Municipality of Anchorage for schools, police stations, libraries, local parks and recreational facilities, greenbelts and other municipal purposes....

"The remaining former military lands will be conveyed to Eklutna, Inc., and the Municipality of Anchorage as tenants in common. These lands are referred to as development lands. Eklutna, Inc., and the Municipality of Anchorage will prepare a land use plan for these lands in the event transfer of military land is to occur..."

Regardless of the impact of NALA, the closure of Fort Richardson will initiate a political process of negotiation and compromise between all parties interested in the disposition of the land. The Army will want to sell as much of the land and facilities as possible in order to recoup some of its investment; the Municipality of Anchorage may attempt to acquire additional portions for free or below market value, and it will probably attempt to control reuse scenarios through local zoning ordinances; there will be political and economic pressure to bring in businesses and industries to replace the civilian jobs lost as a result of the base's closure; and there will likely be special interest groups lobbying for additional wildlife preserves, parks and other public uses.

The experience of current base closures (including those at Pease, Norton, George, Mather and Chanute Air Force Bases) suggests that the local community's reuse plan heavily influences the outcome of a base transfer. In the case of Fort Richardson, NALA appears to be the only current reuse plan. However, more detailed plans will likely be developed when the base is eventually announced for closure.

b) <u>Parceling</u>: In addition to the provisions of NALA as summarized above, the transfer of Fort Richardson's land and facilities to new ownership will depend on certain legal issues. One of the key such issues is the extent to which current law will allow clean parcels of sites on the National Priority List to be separated from contaminated parcels and subsequently transferred to new ownership. For example, if the areas of groundwater contamination at Fort Richardson must be fully remediated before any uncontaminated land

North Anchorage Land Agreement. (A summary description of the actual agreement, provided by: Municipality of Anchorage, Economic Development and Planning Department/ P.O. Box 196650/ Anchorage, AK 99519. Tel: (907) 343-4222. [Contact: Tom Nelson, Supervisor of Land Use Planning.]) Page 2.

can be transferred to new owners, then the Army will be forced to maintain ownership of the entire base well into the next century until remedial pump-and-treat operations are completed.

A related issue is whether current law will allow the Army to transfer land overlying areas with groundwater contamination after remedial equipment has been installed and remediation begun (but before remediation has been completed). If not, then once again the Army will be forced to maintain ownership of such land well into the next century, until remedial ground water pump-and-treat operations are completed.

c) Additional complications due to groundwater. For the purposes of hazardous waste remedial work, four categories of land use are often considered: Residential, Industrial, Recreational, and Agricultural. These categories are used for any surface area in or around the affected site. For subsurface areas, and particularly for groundwater, the applicability of these separate categories becomes less clear due to the complications caused by the natural movements of the underlying aguifer.

For example, in section (e) below it is suggested that the runway at Fort Richardson may continue to be used for aviation, for which the Industrial classification is applicable. The underlying groundwater, however, may be more appropriately classified Residential, since this is a likely scenario for some of the surface areas within a mile of the airfield. The extent to which such distinct classifications can overly the same property is unclear. In such cases, it may be necessary to assign both surface and subsurface areas of the property to the same classification, selecting the classification which corresponds to the greatest exposure level -- in this case Residential. However, recommendation for resolving this issue is made in this memorandum. The issue is raised here because it needs to be resolved before the assignment of future use categories can be finalized.

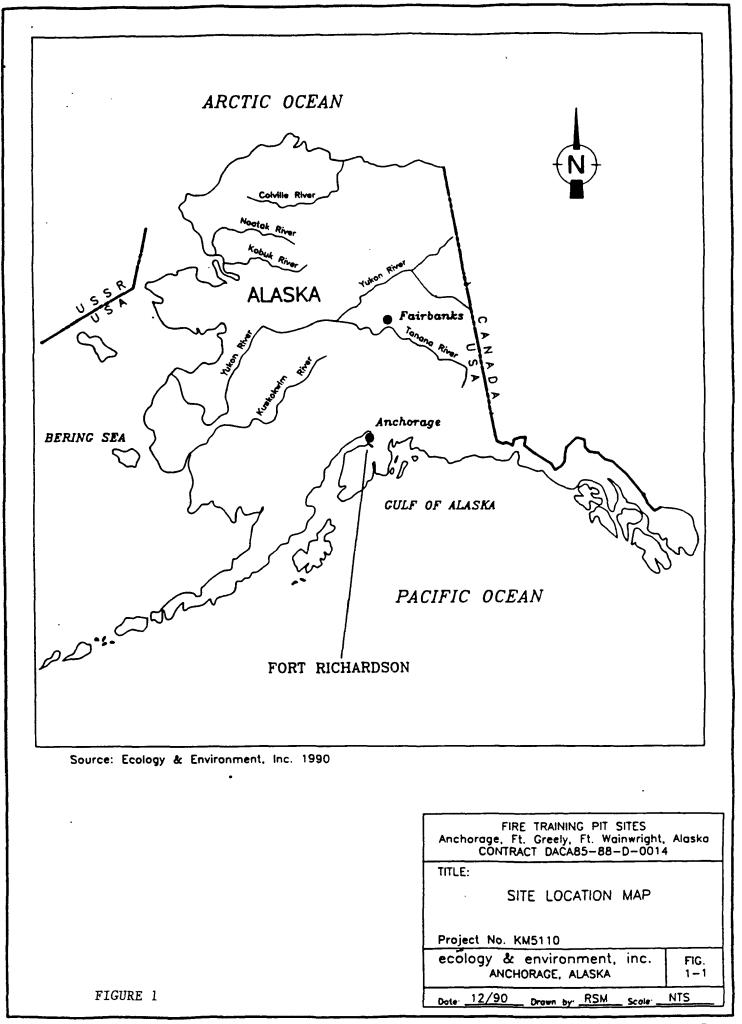
- d) <u>OEA survey</u>. A survey conducted by the Department of Defense's Office of Economic Adjustment (OEA) offers some insight into possible future uses of Fort Richardson land and facilities. Entitled "25 Years of Civilian Reuse," the survey gives 100 examples of base closures and their subsequent uses. The results of this survey are used to help formulate the scenarios suggested below.
- e) <u>Likely scenarios</u>. Based on the results of the OEA survey and the characteristics of Fort Richardson and the surrounding area, the following future scenarios are suggested:

³See: 25 Years of Civilian Reuse: Summary of Completed Military Base Economic Adjustment Projects, 1961-1986. Published by the Office of Economic Adjustment (Department of Defense), Washington, D.C. April-May 1986.

- Multiple uses are likely. Fort Richardson contains housing, warehouses and other structures, an airfield, plus large amounts of vacant land. It is unlikely that this entire area will be dedicated toward a single use in the future. In OEA's survey, 81 percent of the former bases listed more than one new occupant after transfer to the civilian sector. At least 66 percent show distinct categories of occupant and use -- a municipal airport and an industrial park, for example, or a community college and a housing center.
- O Portions of Fort Richardson may be transferred to the Air Force for adjoinment to Elmendorf Air Force Base. Elmendorf recently received personnel evacuating Clark AFB in the Philippines after a volcanic eruption threatened base activity. With the anticipated closure of Clark AFB, Elmendorf now appears to be in a good position for an expanded role within the Air Force, and it could use the airway and housing facilities currently at Fort Richardson for future growth.
- O Even if Elmendorf AFB does not take over portions of Fort Richardson, there is a reasonable possibility that the airfield and hangars will continue to be used for aviation. In OEA's survey, of the 54 former Air Force Depots and Naval Air Stations with runway facilities, 41 (or 76%) listed aviation as one of their uses after transfer to the civilian sector.
- O Unless deed restrictions or other institutional controls are employed, a Residential scenario cannot reasonably be ruled out for those areas containing housing facilities. In OEA's survey, about one quarter (26%) of the former depots contained residential developments. In no case was a residential development the only use of a former depot.
- O A likely use for the remaining buildings in the administration area is some form of industrial park. (Seventy-four percent of the former depots surveyed in OEA's study were at least partially devoted to business or industrial parks).
- Much of the land south of Glenn Highway is undeveloped, and approximately 20,000 acres are contaminated with unexploded ordnance. Due to prohibitive costs, it is unlikely that the Department of Defense will remediate this area to levels that would allow for unrestricted development. Consequently, some sort of institutional control is likely for this area. One possible scenario is that the land will be adjoined to adjacent Chugach State Park as some form of restricted wildlife refuge.

Some of the wetlands in Eagle River Flats are also contaminated with unexploded ordnance. This area will also likely require some form of institutional control to restrict future use.

The diagram on page 8 shows, in rough outline, how these scenarios might be translated to a map of Fort Richardson. It should be emphasized that the diagram is merely suggestive and should not be interpreted as a final evaluation of future land use classifications or boundaries.



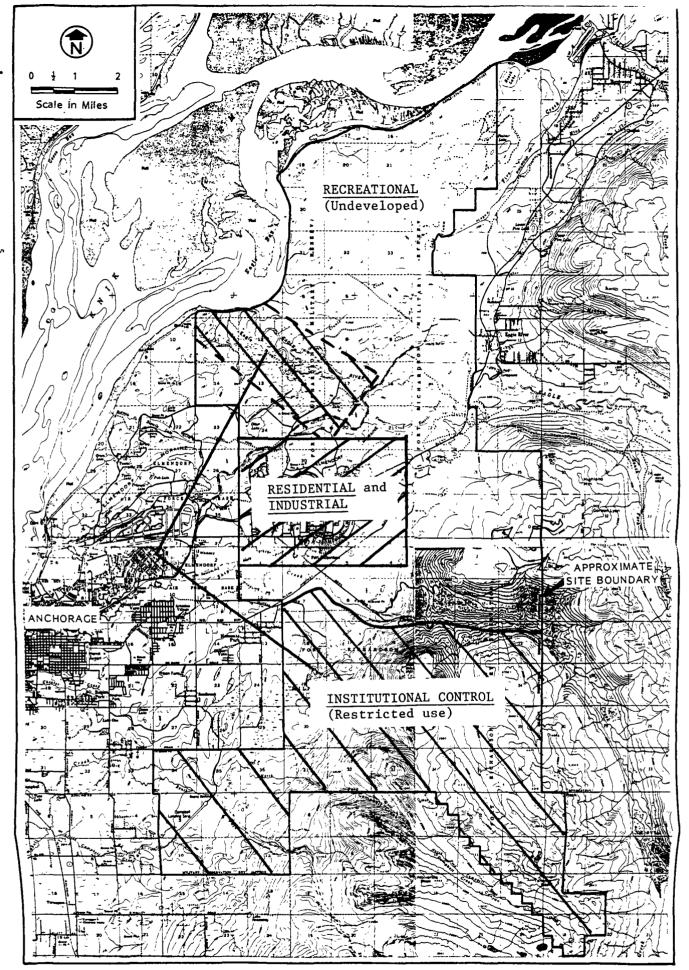


FIGURE 2: Possible future uses of property and facilities at Fort Richardson (62,000 acres). The scenarios presented here are merely suggestive and should not be construed as a final evaluation of future land use classifications or boundaries.

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MEMORANDUM ON FUTURE LAND USE SCENARIOS

FOR

FAIRCHILD AIR FORCE BASE

Prepared by:

Scott Leland EPA Region 10 Federal Facility Section

August 22, 1991

1.	Introduction
2.	Base Description
3.	Land Use in the Area Surrounding Fairchild AFB
1.	Projections for Continued Air Force Ownership
	of Fairchild AFB
5.	Scenarios for Future Land Use at Fairchild AFB
	a) Politics
	b) Parceling
	c) Additional Complications Due to Groundwater
	b) Comprehensive Plan
	c) OEA Survey
	d) Likely Scenarios

1. INTRODUCTION

This memorandum addresses future land use plans for Fairchild Air Force Base (Fairchild AFB) and the surrounding area. The scenarios presented here were developed after reviewing surrounding land uses and Fairchild AFB site plans.

2. BASE DESCRIPTION

Fairchild is located 12 miles southwest of the city of Spokane in Spokane County, Washington (see map on page eight). The base occupies 4,499 acres. The closest private residences lie adjacent to the northern base perimeter along Route 2.

Approximately 5,300 military personnel and their dependents live on the base; 1,900 military personnel live off-base. In addition, a total of about 855 civilians from surrounding communities are employed on the base.

Facilities at Fairchild include 1,580 family housing units, plus 373 other buildings (with over 6.02 million square feet of interior space), including warehouses, stores, schools, and a hospital. There are also 91.6 miles of paved roads, and an airfield with over 2.3 million square yards of pavement.

None of the land on Fairchild is leased or made available to surrounding land owners. The only exception is an easement for a local farmer for use of a private access road.

3. LAND USE IN THE AREA SURROUNDING FAIRCHILD AFB

There is no publicly owned land in the area immediately surrounding Fairchild AFB. Most of the surrounding area is made up of privately held farms; there is also a small residential area along the northeast corner of the base, on the north side of Route 2.

According to the Spokane City Planning Department, most of the land within one mile of Fairchild is designated as rural land, which allows a maximum density of one building unit per 10 acres. (The land immediately surrounding Airway Heights is designated for industrial use, as is much of the land extending further east toward Spokane. Despite this industrial designation, most of the land is currently either vacant or used for agriculture.) Existing designations and buffers are designed specifically to protect the area surrounding Fairchild from experiencing further growth to prevent interference with base operations.

¹Contact: Pat Frankovic, Spokane County Planning Department/ North 721 Jefferson Street/ Spokane, WA 99260. Tel: (509) 456-2205).

Communities that are close to the base include the city of Spokane, Airway Heights and Medical Lake:²

- O <u>Spokane</u> (population 173,700; 12 miles east of FAFB) is the economic capital of the region. Its economy is heavily based on service industries and wholesale/retail trade. Fairchild AFB is the largest single employer of the area.
- O <u>Airway Heights</u> (population 1,975; 1.5 miles northeast of FAFB), is heavily dependent on FAFB for its economic well-being.
- O <u>Medical Lake</u> (population 3,900; approximately one mile south of FAFB) is a residential community, with a number of its residents commuting to the city of Spokane and Fairchild AFB for their employment. Many residents are retired military personnel. State institutions, including Eastern State Hospital, are the major employers of city residents.

It is also noteworthy that the Spokane International Airport is located approximately four miles east of Fairchild AFB. The proximity of the airport supports the notion that Fairchild's airfield may continue to be used for aviation in the future, should the base be closed.

The larger area of Spokane County has approximately 367,200 people (1990 estimate), or about 208.2 people per square mile. (Without the city of Spokane, the population density is approximately 106 people per square mile.) Neighboring Lincoln County, which lies about six miles west of Fairchild AFB, has a population density of only 3.8 persons per square mile.

The growth rate in the area is sluggish, with the population of the county having increased about 7.4 percent in ten years (from 341,835 in 1980 to 367,200 in 1990). Additional growth rates are given below:

City	Growth Rate	Population/Years
Spokane	1.4% in ten years	171,300 (1980) to 173,700 (1990)
Airway Heights	14% in ten years	1,730 (1980) to 1,975 (1990)
Medical Lake	8.3% in ten years	3,600 (1980) to 3,900 (1990)

Table 1 gives a breakdown of land ownership in Spokane County, showing that private ownership accounts for over 90 percent of all lands.

²The information on these three cities (with the exception of the population figures, which have been updated) is taken from pages 7 and 8 of the *Community Relations Plan, Fairchild Air Force Base*, March 1990.

		Percent
	Acres	<u>Total</u>
Private Land	1,024,662	91.0%
Public Lands		
Federal	21,396	1.9%
State	51,371	4.6%
County	27,691	2.5%
TOTAL	1,965,651	100.0%

Table 1. Breakdown of land ownership in Spokane County. (Source: Washington State Atlas and Databook: 1990 Edition. Published by The Information Press, 1990. Page 15.)

4. PROJECTIONS FOR CONTINUED AIR FORCE OWNERSHIP OF FAIRCHILD AFB

Fairchild AFB opened in 1942 and has operated continuously ever since. The base will celebrate its 50th anniversary next year. Fairchild appears to be well regarded within the Department of Defense; in 1985, it was appointed a "Model Installation" by the Deputy Secretary of Defense.

The Air Force has announced specific plans and realignments for Fairchild AFB only as far as mid-1995. Neither the 1988 nor the 1991 Base Closure Commissions recommended the base for closure, however, and there has been no indication that the base will be a target for closure when the Base Closure Commission makes new recommendations in 1993 and again in 1995. A "Comprehensive Plan" published by FAFB in February 1991 speaks of continuing operations "for many more years", and suggests that the land use strategies developed therein will carry the base "to the year 2000."

These plans are from page 18 of an Air Force Public Announcement Fact Sheet on Base Closures and Realignments released approximately May 1991: "Four actions are being announced. The 92nd Bombardment Wing will lose 2 KC-135R aircraft in mid-1993 and gain 3 B-52H aircraft in late 1993. The Castle AFB, Calif., closure recommendation realigns the Combat Crew Training missions and 5 KC-135R aircraft to Fairchild AFB in early 1995. The mid-1991 base manpower authorization of 4,117 full-time, 1,046 drill, and 772 civilians is projected to increase by 1,221 full-time and 89 civilians by mid-1995."

⁴See: Comprehensive Plan: Fairchild Air Force Base: Executive Summary. Printed February 1991. Page 1.

⁵ibid, page 23.

5. SCENARIOS FOR FUTURE LAND USE AT FAIRCHILD AFB

a) <u>Politics</u>: When Fairchild is eventually closed, the process of transferring the land and facilities to new owners is likely to be very political. The land and facilities are suitable for a variety of purposes, including housing, an industrial park, an airport; farming or range land.

The Air Force will attempt to sell the land and facilities at fair market value; the local communities of Spokane, Airway Heights and Medical Lake, together with the government of Spokane County, will attempt to acquire properties for free or below market value and will try to control reuse scenarios through the local zoning ordinances; there will be political and economic pressure to bring in businesses and industries to replace the approximately 850 civilian jobs lost from the base's closure; and there will likely be other competing interests between various local groups.

The experience of current base closures (including those at Pease, Norton, George, Mather and Chanute Air Force Bases) suggests that the local community's reuse plan heavily influences the outcome of a base transfer. Such plans typically are not formulated until after a base is announced for closure. In the case of Fairchild AFB, this study did not identify any local committee which has formulated reuse plans.

The reuse process is likely to involve a number of negotiations and compromises. The scenarios that are suggested in section (f) below represent possible outcomes based on current conditions and facilities, but the final result is impossible to predict beforehand.

b) Parceling: In addition to the political process described above, the transfer of Fairchild AFB land and facilities to new ownership will depend on certain legal issues. One of the key such issues is the extent to which current law will allow clean parcels of sites on the National Priority List to be separated from contaminated parcels and subsequently transferred to new ownership. For example, if the areas of groundwater contamination at Fairchild must be fully remediated before any uncontaminated land can be transferred to new owners, then the Air Force will be forced to maintain ownership of the entire base well into the next century until remedial pump-and-treat operations are completed.

A related issue is whether current law will allow the Air Force to transfer land overlying areas with groundwater contamination after remedial equipment has been installed and remediation begun (but before remediation has been completed). If not, then once again the Air Force will be forced to maintain ownership of such land well into the next century, until remedial ground water pump-and-treat operations are completed.

c) Additional complications due to groundwater. For the purposes of the baseline risk assessment, four categories of land use are applicable: Residential, Industrial, Recreational, and Agricultural. These categories apply to any surface area in or around the affected site. For subsurface areas, and particularly for groundwater, the applicability of these separate categories becomes less clear due to the complications caused by the natural movements of the underlying aquifer.

For example, in section (f) below it is suggested that the airfield at Fairchild AFB will continue to be used for aviation, for which the Industrial classification is applicable. The underlying groundwater, however, may be more appropriately classified Agricultural or Residential, since these are likely scenarios for the surface areas immediately adjacent to the airfield. The extent to which such distinct classifications can overly the same property is unclear. In such cases, it may be necessary to assign both surface and subsurface areas of the property to the same classification, selecting the classification which corresponds to the greatest exposure level -- in this case Residential. However, no recommendation for resolving this issue is made in this memorandum. The issue is raised here because it needs to be resolved before the assignment of future use categories can be finalized.

- d) <u>Comprehensive plan</u>. Fairchild's "Comprehensive Plan" outlines anticipated future land uses showing changes in the current residential and industrial patterns. A map detailing these anticipated new uses is reproduced on page nine and serves as one of the bases for the future use scenarios suggested in section (d) below.
- e) <u>OEA survey</u>. A survey conducted by the Department of Defense's Office of Economic Adjustment (OEA) offers some insight into possible future uses of Fairchild land and facilities. Entitled "25 Years of Civilian Reuse," the survey gives 100 examples of base closures and their subsequent uses. The results of this survey were also used to formulate the suggested scenarios below.
- f) <u>Likely scenarios</u>. Based on Fairchild's "Comprehensive Plan", the results of the OEA survey and the characteristics of Fairchild and the surrounding area, the following future scenarios are suggested:

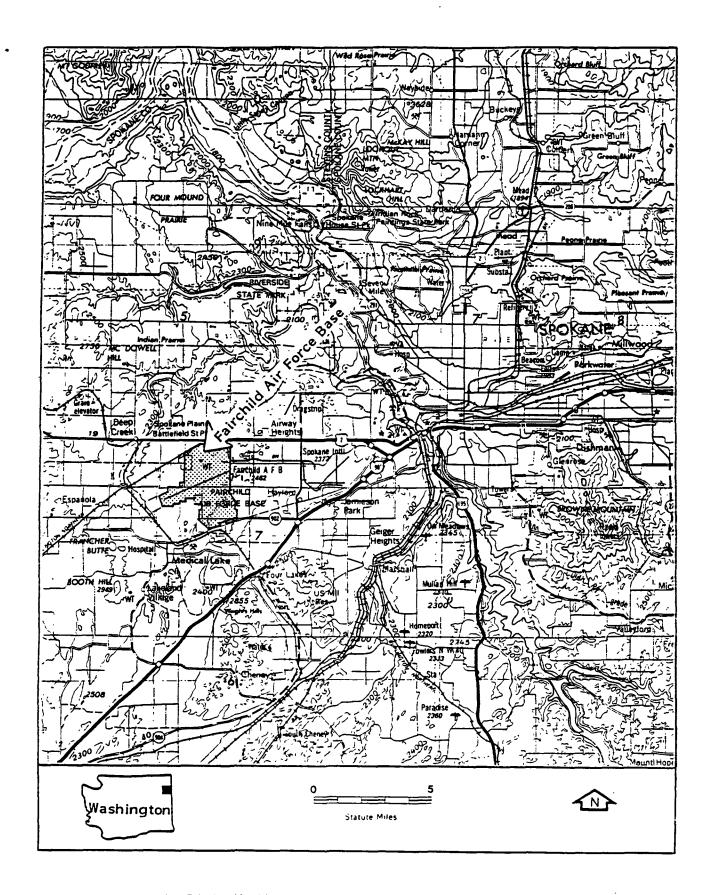
⁶See: 25 Years of Civilian Reuse: Summary of Completed Military Base Economic Adjustment Projects, 1961-1986. Published by the Office of Economic Adjustment (Department of Defense), Washington, D.C. April-May 1986.

- Multiple uses are likely. Fairchild contains runways, housing, schools, stores, warehouses and other buildings, and large amounts of vacant land. It is unlikely that all of these facilities and land will be dedicated toward a single use in the future. In OEA's survey, 81 percent of the former bases listed more than one new occupant after transfer to the civilian sector. At least 66 percent show distinct categories of occupant and use -- a municipal airport and an industrial park, for example, or a community college and a housing center.
- There is a strong possibility that the runway facilities will continue to be used for aviation after transfer. In OEA's survey, of the 54 former Air Force Bases and Naval Air Stations with runway facilities, 41 (or 76%) listed aviation as one of their current uses.
- O Unless deed restrictions or other institutional controls are employed, a Residential scenario cannot reasonably be ruled out for the area containing houses and base barracks. In OEA's survey, about one quarter (26%) of the former bases contained residential developments. In no case was a residential development the only use of a former base.
- O A likely use for the remaining buildings on site is some form of industrial park. (Seventy-four percent of the former bases surveyed in OEA's study were at least partially devoted to business or industrial parks). Adding weight to this scenario is the fact that the economy of the city of Airway Heights is heavily dependent on the base, and the base also serves as a major employer for both Spokane and Medical Lake. This means that, locally, there will be substantial economic and political pressure to bring in substitute employers should the base ever be closed.
- O For the peripheral areas of the base, as of yet undeveloped, the most likely scenario is agricultural use, in keeping with most of the surrounding area. Residential and industrial scenarios are less likely in these areas, given the generally low population density outside of Spokane, the low growth rate, and the availability of residences and industrial facilities on other portions of the base.

The diagram on page ten shows, in rough outline, how these scenarios might be translated to a map of the base. It should be emphasized that the diagram is merely suggestive and should not be interpreted as a final determination of future land use classifications or boundaries.

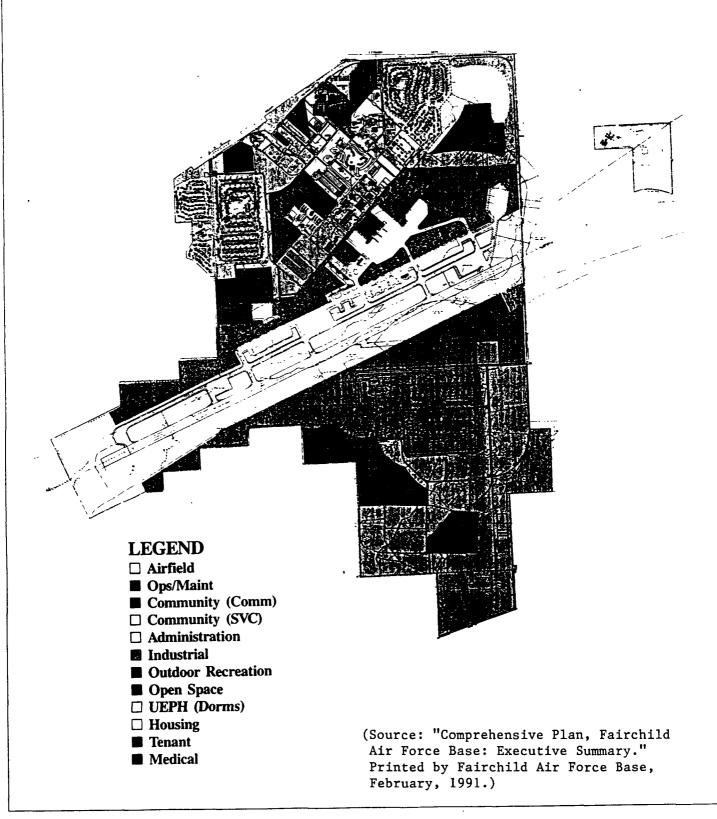
Future land use will conform to Air Force specifications, as represented by the map on page 7, until the base is closed and transferred to the civilian sector. The time until transfer is

indeterminate, although it appears unlikely that it would occur prior to the year 2000. This assessment stems from Fairchild's status as a "Model Installation" and from the fact the base has developed specific land use plans and construction activities that will take it to at least the year 2000, if not beyond. Despite this assessment, it should be noted that the Base Closure Commission will be making new recommendations for base closures by July 1993, and again by July 1995. All military installations will be subject to review for closure at these times.



LOCATION MAP OF FAIRCHILD AIR FORCE BASE AND SPOKANE, WASHINGTON

FUTURE LAND USE



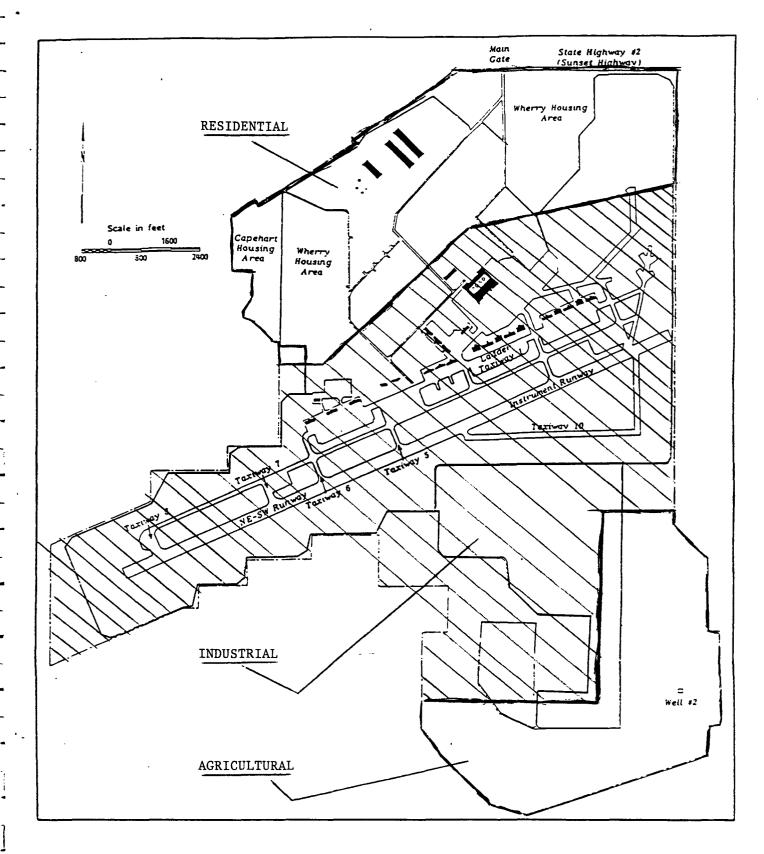


FIGURE 3: Possible future uses of property and facilities at Fairchild Air Force Base (4,500 acres). The scenarios presented here are merely suggestive and should not be construed as a final evaluation of future land use classifications or boundaries.

MEMORANDUM ON FUTURE LAND USE SCENARIOS FOR

MOUNTAIN HOME AIR FORCE BASE

Prepared by:

Scott Leland EPA Region 10 Federal Facility Section

August 21, 1991

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1. INTRODUCTION

This memorandum addresses land use plans for Mountain Home Air Force Base (MHAFB) and the surrounding area. The scenarios presented here were developed after reviewing surrounding land uses, soil survey information, and Mountain Home AFB site plans.

2. BASE DESCRIPTION

MHAFB is located ten miles southwest of the city of Mountain Home in Elmore County, Idaho (see pages seven and eight for maps). The base occupies 5,800 acres, or approximately nine square miles. Its southern boarder lies about 2.5 miles north of the Snake River; the closest private residence lies less than a mile to the northwest.

Approximately 6,990 military personnel and their dependents live on the base; 2,250 military personnel live off-base. In addition, approximately 1000 civilians from Mountain Home and surrounding towns are employed on the base.

Facilities at MHAFB include 1,521 houses, 26 dormitory quarters (with a capacity for 1,596 beds), a hospital, stores, recreational services, a riding stable, and several schools. Facilities to support the base's primary mission include an airfield, hangars, numerous warehouses and smaller buildings. A total of 243 non-residential buildings exist on base.

3. LAND USE IN THE AREA SURROUNDING MOUNTAIN HOME AFB

The following agencies were contacted regarding land use in the area surrounding MHAFB:

- O U.S. Bureau of Land Management
- O U.S. Forest Service
- O U.S. Department of Agriculture (Soil Conservation Service)
- O Idaho Department of Lands
- O Idaho Fish and Game
- O Idaho Department of Parks and Recreation
- O Elmore County Planning and Zoning
- O Elmore County Assessor's Office

Appendix A lists the information obtained from these agencies. None of the agencies contacted has future land management plans that call for significantly altering current land uses. The area surrounding Mountain Home AFB is primarily agricultural, although range land and forested areas make up over 91 percent of Elmore County land (see Table 1 for a breakdown of land uses within Elmore County). Much of the land is federally owned and managed by the Bureau of Land Management and the National Forest Service (see Table 2 for a breakdown of land ownership in Elmore County).

· •			
•		Percent	
	<u>Acres</u>	<u>Total</u>	
Urban Land	12,000	0.6%	
Agricultural	138,700	7.0%	
Rangeland	1,299,300	65.9%	
Forest	502,300	25.5%	
Water	18,900	1.0%	
Wetland	0	0.0%	
Barren Land	0	0.0%	
Tundra	0	0.0%	
Perennial Snow	0	80.0	
TOTAL	1,971,200	100.0%	

Table 1. Breakdown of land uses within Elmore County. (Source: "County Profiles of Idaho", published by the Idaho Department of Commerce, 1989.)

		Percent	
	<u>Acres</u>	<u>Total</u>	
Federal Land			
BLM	535,653	27.3%	
National Forests	783,321	39.9%	
Other	116,521	5.9%	
State Land			
Endowment Land	117,186	6.0%	
Fish & Game	6,405	0.3%	
Parks & Recreation	513	80.0	
Private Land	406,028	20.7%	
County Land	0	0.0%	
Municipal Land	24	0.0%	
TOTAL	1,965,651	100.0%	

Table 2. Breakdown of land ownership in Elmore County. (Source: "County Profiles of Idaho", published by the Idaho Department of Commerce, 1989.)

The population of the area surrounding MHAFB is sparse. Elmore County has approximately 22,100 people (1987 estimate), or about 7.2 people per square mile. The growth rate is also modest, with

the population of the county having increased only 2.4 percent in eight years (from 21,565 in 1980 to 22,100 in 1988). Table 3 lists the population of the towns surrounding MHAFB and gives the approximate number of people from each town that work on the base. It also shows that the economies of most of the surrounding towns are based on agriculture and ranching.

0	City of Mountain Home:	
	- Population	8,900
	- Number of residents employed at MHAFB	≈1,000
	- Located 10 miles southwest of MHAFB	
	 Economy is service and agriculturally oriented 	
0	Grandview	
	- Population	350
	- Number of residents employed at MHAFB	0
	- Located 15 miles southwest of MHAFB, across the Snake River	
	- Economy is farming oriented	
0	Hammet	
	- Population	500
	- Number of residents employed at MHAFB	2
	- Located southeast of MHAFB	
	 Economy is farming and ranching oriented 	
0	Glenns Ferry	
	- Population	1,500
	- Number of residents employed at MHAFB	75
	 Located 25 miles southeast of MHAFB 	
	- Economy is based on agriculture and an electronics plant	
	(which is a major employer)	
0	Bruneau	
	- Population	600
	- Number of residents employed at MHAFB	0
	- Located 10 miles south of MHAFB	
	 Economy is ranching oriented 	

Table 3. Descriptive data on communities surrounding Mountain Home Air Force Base. (Source: "Installation Restoration Program Community Relations Plan, Mountain Home AFB, Idaho." Prepared by Woodward-Clyde, Omaha, NE. April 1991. Page 4.)

4. SOIL AND CLIMATE INFORMATION

A soil survey of the Mountain Home AFB area was performed by the U.S. Department of Agriculture's Soil Conservation Service. This survey indicates generally poor suitability for agriculture without irrigation due to low precipitation (7-9 inches per year). Even with irrigation, agricultural suitability is rated only fair in four of the seven areas surveyed. All areas are susceptible to

erosion problems, and three of the seven areas are limited due to shallow topsoil.

One factor which may limit future development of the area is the availability of groundwater. The area is currently in its fifth year of drought, and the water table is falling. This problem was mentioned by several of the agencies contacted as being a limiting factor in the future growth of the area.

5. PROJECTIONS FOR CONTINUED AIR FORCE OWNERSHIP OF MHAFB

MHAFB was one of the installations which the 1991 Base Closure Commission added to the Pentagon's recommended closure list in order to further investigate closure options. By July 1991, however, the Commission announced that it was not recommending MHAFB for closure. Nevertheless, the Commission will be making new closure recommendations by July 1993, and again by July 1995. All military installations are subject to review for closure at those times.

The Air Force has announced specific plans for Mountain Home AFB only as far as 1992. There are indicators which suggest, however, that military hopes to maintain control significantly into the future:

- O Per an Air Force public announcement: "Mountain Home AFB will host a new composite wing formed of different types of aircraft. However, actual number and mix of aircraft and personnel requirements, have not yet been defined. The forces will begin arriving in 1992."
- O There is a proposal from the Air Force, supported by the Governor's office, to open up a new 150,000 acre training facility for MHAFB in an area currently owned by the Bureau of Land Management, located approximately 50 miles SE of Mountain Home city. The Environmental Impact Study for this proposal is currently scheduled to be undertaken in 1992. Estimates from BLM contacts indicate that the whole process could take several years before being approved. This suggests that the Air Force may have plans for MHAFB extending well beyond 1992.

6. SCENARIOS FOR FUTURE LAND USE AT MHAFB

a) <u>Politics</u>: When MHAFB is eventually closed, the process of transferring the land and facilities to new owners is likely to be very political. The land and facilities are suitable for a variety

¹United States Air Force. *Public Announcement Fact Sheets (re, Base Closures and Realignments)*. Washington, D.C. 1991. Page 11.

of purposes, including housing, industrial parks, a municipal airport, rangeland and farming (with adequate irrigation).

The Air Force will attempt to sell the land and facilities at fair market value; the local community of Mountain Home, together with the government of Elmore County, will attempt to acquire properties for free or below market value and will try to control reuse scenarios through the local zoning ordinances; there will be political and economic pressure to bring in businesses and industries to replace the 1000 civilian jobs lost from the base's closure; and there will likely be other competing interests between various special interest groups.

The experience of current base closures (including those at Pease, Norton, George, Mather and Chanute Air Force Bases) suggests that the local community's reuse plan heavily influences the outcome of a base transfer. Such plans typically are not formulated until after a base is announced for closure. In the case of Mountain Home AFB, local communities have not developed reuse plans, although numerous residents were active in lobbying to keep the base open during the period in which it was being considered for closure.

The reuse process is likely to involve a number of negotiations and compromises. The scenarios that are suggested in section (e) below represent possible outcomes based on current conditions and facilities, but the final result is impossible to predict beforehand.

b) Parceling: In addition to the political process described above, the transfer of MHAFB land and facilities to new ownership will depend on certain legal issues. One of the key such issues is the extent to which current law will allow clean parcels of sites on the National Priority List to be separated from contaminated parcels and subsequently transferred to new ownership. For example, if the areas of groundwater contamination at MHAFB must be fully remediated before any uncontaminated land can be transferred to new owners, then the Air Force will be forced to maintain ownership of the entire base well into the next century until remedial pump-and-treat operations are completed.

A related issue is whether current law will allow the Air Force to transfer land overlying areas with groundwater contamination after remedial equipment has been installed and remediation begun (but before remediation has been completed). If not, then once again the Air Force will be forced to maintain ownership of such land well into the next century, until remedial ground water pump-and-treat operations are completed.

c) Additional complications due to groundwater. For the purposes of the baseline risk assessment, four categories of land use are applicable: Residential, Industrial, Recreational, and

Agricultural. These categories apply to any surface area in or around the affected site. For subsurface areas, and particularly for groundwater, the applicability of these separate categories becomes less clear due to the complications caused by the natural movements of the underlying aquifer.

For example, in section (e) below it is suggested that the airfield at MHAFB will continue to be used for aviation, for which the Industrial classification is applicable. The underlying groundwater, however, may be more appropriately classified Residential, since this is a likely scenario for some of the surface areas within 1.5 miles of the airfield. The extent to which such distinct classifications can overly the same property is unclear. In such cases, it may be necessary to assign both surface and subsurface areas of the property to the same classification, selecting the classification which corresponds to the greatest exposure level -- in this case Residential. However, no recommendation for resolving this issue is made in this The issue is raised here because it needs to be memorandum. resolved before the assignment of future use categories can be finalized.

- d) <u>OEA survey</u>. A survey conducted by the Department of Defense's Office of Economic Adjustment (OEA) offers some insight into possible future uses of Mountain Home AFB land and facilities. Entitled "25 Years of Civilian Reuse," the survey gives 100 examples of base closures and their subsequent uses. The results of this survey were used to help formulate the scenarios suggested below.
- e) <u>Likely scenarios</u>. Based on the results of the OEA survey and the characteristics of MHAFB and the surrounding area, the following future scenarios are suggested:
- O Multiple uses are likely. MHAFB contains runways, housing, schools, stores, warehouses and other buildings, and large amounts of vacant land. It is unlikely that all of these facilities and land will be dedicated toward a single use in the future. In OEA's survey, 81 percent of the former bases listed more than one new occupant after transfer to the civilian sector. At least 66 percent show distinct categories of occupant and use a municipal airport and an industrial park, for example, or a community college and a housing center.
- O There is a strong possibility that the runway facilities will continue to be used for aviation after transfer. In OEA's survey, of the 54 former Air Force Bases and Naval Air Stations

²See: 25 Years of Civilian Reuse: Summary of Completed Military Base Economic Adjustment Projects, 1961-1986. Published by the Office of Economic Adjustment (Department of Defense), Washington, D.C. April-May 1986.

with runway facilities, 41 (or 76%) listed aviation as one of their current uses.

- O Unless deed restrictions or other institutional controls are employed, a Residential scenario cannot reasonably be ruled out for the areas containing houses and base barracks. In OEA's survey, about one quarter (26%) of the former bases contained residential developments. In no case was a residential development the only use of a former base.
- O A likely use for the remaining buildings on site is some form of industrial park. (Seventy-four percent of the former bases surveyed in OEA's study were at least partially devoted to business or industrial parks). Adding weight to this scenario is the fact that the economy of the city of Mountain Home is heavily dependent on the base, with approximately 1000 civilian residents being employed there. This means that, locally, there will be substantial economic and political pressure to bring in substitute employers should the base ever be closed.
- O For the peripheral areas of the base, as of yet undeveloped, likely scenarios are:
 - agricultural, if irrigation is provided, or
 - range land, similar to much of the surrounding land area. Residential and industrial scenarios are less likely in these areas, given the low population density, low growth rate, and the availability of residences and facilities on other portions of the base.

The diagram on page ten shows, in rough outline, how these scenarios might be translated to a map of the base. It should be emphasized that the diagram is merely suggestive and should not be interpreted as a final evaluation of future land use classifications or boundaries.

The likely time until transfer to the civilian sector is indeterminate. This uncertainty is highlighted by the fact that the base's mission has changed six times since being opened in 1943, including two periods of deactivation (1945-49 and 1950-51). MHAFB was also one of the bases which the 1991 Base Closure Commission considered recommending for closure, so it may again be singled out for consideration in the future. The Commission will make new recommendations by July 1, 1993, and again by July 1, 1995.

³The following table summarizes the base's history:

DATES	<u>COMMAND</u>	DATES	COMMAND
1943-1945	Army Air Corps	1951-1953	Military Air Transport
1945-1949	Deactivated	1953-1965	Strategic Air Command
1949-1950	Strategic Air Command	1966-Present	Tactical Air Command
1050-1051	Reactivated		

The Air Force has committed activities for a new composite wing at MHAFB into at least 1992. The proposal to open up a new training grounds area nearby suggests that the Air Force hopes to keep the base open for several more years, although more detailed plans have yet to be announced.

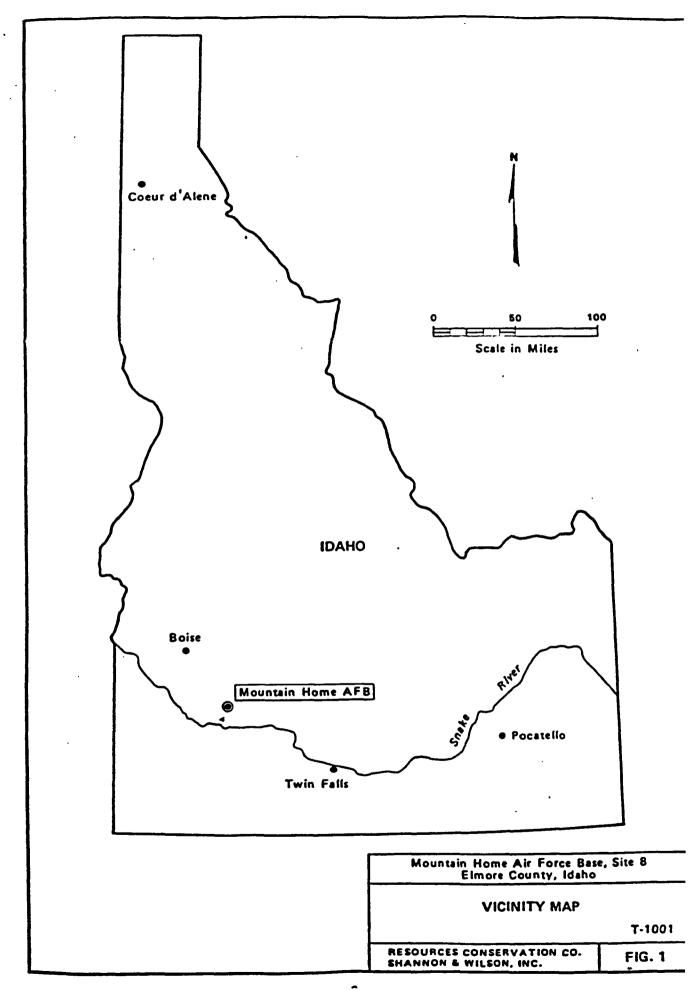


FIGURE 1: Location of Mountain Home AFB.

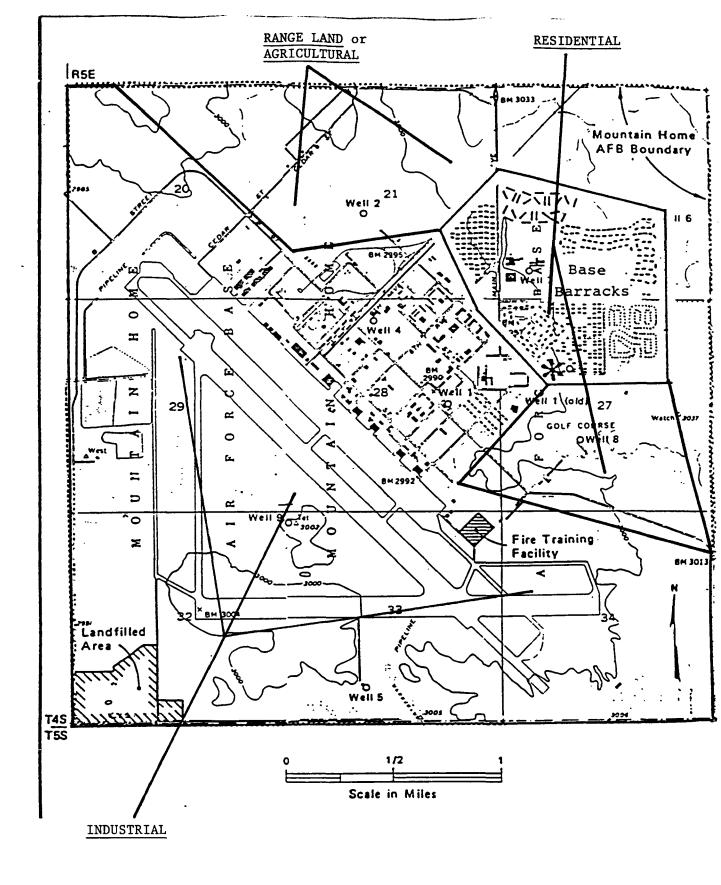


FIGURE 2: Possible future uses of property and facilities at Mountain Home Air Force Base (5,800 acres). The scenarios presented here are merely suggestive and should not be construed as a final evaluation of future land use classifications or boundaries.

APPENDIX A: LAND USE PLANS SURROUNDING MOUNTAIN HOME AFB

O U.S. Bureau of Land Management:

The U.S. Bureau of Land Management (BLM) has scattered ownership of the land surrounding MHAFB. Grazing is the primary use of the land, followed by wildlife habitat. There is also some recreational use, primarily on nearby Snake River. The BLM regional office is scheduled to do a "Resource Management Plan" in 1995, which will address future land uses. (Contact: Dennis Hoyem/ BLM Area Manager for Mountain Home/ 3948 Development Ave./ Boise, ID 83705. FTS 327-3300.)

O U.S. Forest Service:

The Forest Service owns no land adjacent to MHAFB. The nearest Forest Service land lies about 40 miles north of the city of Mountain Home. Moreover, MHAFB lies outside of the proclaimed boundary of potential U.S. Forest Service property. The Forest Service therefore has no legislative authority to bid for MHAFB property, should it ever become available. (Contact: Larry Tripp, Mountain Home Ranger Station (208) 587-7961.)

O U.S. Department of Agriculture (Soil Conservation Service):
USDA's involvement with the area has been primarily in
undertaking a soil survey. The land in and around MHAFB is
generally unsuitable for agriculture without irrigation. Erosion
and shallow soil depth are other limiting problems. (Contact:
Skip Venton (208) 587-3616)

O Idaho Department of Lands:

Large portions of land surrounding MHAFB belong to the Snake River Birds of Prey National Conservation Area. No changes in current management practices are foreseen in the near future. (Contact: Don McNearie, Boise office, (208) 334-0253.)

O Idaho Fish and Game:

Fish and Game has no land adjacent to MHAFB. The nearest property is a reservoir lying approximately 4 miles south along the Snake River. (Contact: Dale Vonsteem, Garden City district office: (208) 327-7025.)

O Idaho Department of Parks and Recreation:

Has no land that borders MHAFB. Bruneau State Park is the closest Parks and Recreation land. (Phone: (208) 887-4863)

O Elmore County Planning and Zoning:

Elmore County maintains zoning ordinances which protect the land area immediately surrounding MHAFB from experiencing significant growth. The County expects to maintain these ordinances indefinitely, as long as the Air Force Base is operational. The Planning and Zoning office has no other long range management plans for the area.

(Contact: Larry Lasuen, Director. 190 South 4th East/ Courthouse Annex/ Mountain Home, ID 83647. (208) 587-2142)

O Elmore County Assessor's Office:

The Assessor commented that residential growth in the area is very slow, with very few new residential developments. The approximate land values in the area are \$500 per acre for irrigated land (with pumps installed); \$60-70 per acre for dry grazing land; and \$1,300-2,000 per acre for residential use, for lots under five acres. (Contact: Ken Pierce, Assessor. (208) 587-2126)

MEMORANDUM ON FUTURE LAND USE SCENARIOS

FOR

U.S. ARMY DEPOT ACTIVITY UMATILLA

Prepared by:

Scott Leland EPA Region 10 Federal Facility Section August 26, 1991

L.	Introduction
2.	Site Description
3.	Land Use in the Area Surrounding Umatilla Army Depot
1.	Projections for Continued Army Ownership
	of the Umatilla Depot
5.	Scenarios for Future Land Use at Umatilla Army Depot
	a) Parceling
	b) Complications due to groundwater
	c) OEA survey

1. INTRODUCTION

This memorandum addresses future land use plans for the U.S. Army Depot Activity Umatilla (UMDA) and the surrounding area. The scenarios presented here were developed after reviewing surrounding land uses and UMDA site plans.

2. SITE DESCRIPTION

The Umatilla Army Depot occupies 19,727 acres and is located 10 miles west of Hermiston, in Umatilla and Morrow counties, Oregon (see map on page 8).

Since 1941, Umatilla has performed the mission of reserve storage and demilitarization of conventional and chemical munitions. In December 1988, however, UMDA was recommended for realignment and eventual closure by the 1988 Base Closure Commission. According to the Commission's report:

"The military value of the installation was lower than other installations in the same category, primarily because it is a small single-mission installation. The facilities at Umatilla also require upgrading... Umatilla's mission can be managed more effectively in another location..."

Facilities at UMDA, as of November 1987, consisted of 346 buildings; 1,001 ammunition igloos; approximately one million feet of warehouse space; 24 family housing units; a 13-unit bachelor-enlisted quarters; and an apartment for visiting personnel. Additionally, the installation has 194 miles of paved roads, 51 miles of railroad track, and a 3,000-foot airstrip.

UMDA has several noteworthy characteristics which will impact future land uses:

- The 1001 ammunition igloos are large, semi-buried fortified structures measuring approximately 100 feet long by 15 feet high; the walls are several feet thick and designed to withstand the force of high explosives at close range. These igloos were constructed on-site; it is likely that they will remain on-site after UMDA is eventually closed down, as the cost of removal is likely to be prohibitive.
- O Approximately 1,100 acres of the northwest portion of UMDA have been used as an "Ammunition Destruction Activity (ADA)"

¹Base Realignments and Closures: Report of the Defense Secretary's Commission, December 1988. Published by the Department of Defense, December 1988.

area. The ADA contains numerous burning pits and trenches where bulk explosives were open burned without detonation or where ordnance was buried and detonated. A portion of the buried ordnance may have never detonated, however, and may be buried up to 15 feet below the surface. The task of screening for unexploded ordnance over 1,100 acres to a depth of 15 feet to uncover and safely dispose of this ordnance would be formidable. The costs for the Department of Defense to clear this area to the point at which it may be considered safe for unrestricted use, such as residential or industrial, would be prohibitive.

The chemical munitions currently stored at UMDA are scheduled to be destroyed through a program known as chemical demilitarization. If the four incinerators required for this program are constructed on-site at UMDA, as appears likely, then future scenarios could include their continued use as hazardous waste incinerators after the eventual closure of UMDA.

As of January 1988, the work force at Umatilla consisted of three military personnel and 250 civilians. However, the 1988 Base Closure Commission projected that, after realignment, the number of civilian employees will decrease.

"Approximately 75 civilians will remain at Umatilla to perform environmental monitoring of ammunition-storage igloos, munitions handling, munitions transport quality control activities, and security escort duties. Additionally, personnel will be needed to support the increased depot workload for such activities as storage site monitoring, laundry operations, and vehicle and road maintenance."

The 1988 Base Closure Commission predicted that realignment of Umatilla will have minimal impact on local employment. Realignment is currently scheduled to be completed by January 1994. It should be noted that the incinerators required for the chemical demilitarization mission are likely to employ 300 to 400 workers.

3. LAND USE IN THE AREA SURROUNDING UMDA

Located two miles south of the Columbia River, UMDA is within the Umatilla Lowlands and is surrounded primarily by irrigated agricultural land. Most of the surrounding land is privately owned, although the Bureau of Land Management (BLM) owns

²ibid, page 66.

^{***} August 26, 1991 -- DRAFT, DO NOT CITE OR QUOTE ***

scattered, non-contiguous small tracts of land in all directions, within one or more miles of the installation's boundaries. In addition, the Umatilla National Wildlife Refuge lies about three miles west by northwest of UMDA. The Bureau of Reclamation also owns some land about two miles east by northeast of the site.

Communities located near UMDA include <u>Boardman</u> (population 1,420'; 12 miles to the west), <u>Irrigon</u> (population 800; near the northwestern perimeter); <u>Umatilla</u> (population 3,010; 8 miles to the northeast), and <u>Hermiston</u> (the area's most populated city at 10,075 residents, located 10 miles to the northeast).

Other regional cities include Pendleton, the Umatilla County seat, 35 miles to the southeast, and the cities of Richland, Pasco, and Kennewick, which comprise the Tri-Cities area of Washington and are located 35 miles to the northeast.

Additional land use and historical information is provided in a report prepared for the Army (the "USATHAMA" report):

"Since its creation in 1941, UMDA has been recognized as a major element of the bi-county regional economy. It was not until the development of the circular irrigation method that the semiarid region became primarily an agricultural center. Hermiston city and Chamber of Commerce officials estimate the area's population doubled between 1970 and 1980 as a direct result of desert land being revitalized into farm production. Regional crops include potatoes, alfalfa, corn, wheat, onions, asparagus, apples, grapes, and regionally renowned Hermiston watermelons. Beef cattle and pork production also exist, with one of the nation's largest hog farms located on the perimeter of the installation.

"Major Hermiston area employers in 1987 were as follows: Lamb-Weston (potato processing; 1,600 employees); Simplot (potato processing; 1,050 employees); Union-Pacific (362 employees); Hermiston

Most of these tracts are under 200 acres. They are used primarily for grazing or agriculture (the land is either leased, or made available through permits). A few tracts are material sites (gravel pits); some of the land lies unused. Limited recreation may occur on some of these lands, including hunting and dirt biking. The 1989 Baker Resource Management Plan does not call for any significant change in current land uses. (Contact: Steve Davidson, BLM Baker Resource Area, (503) 523-6391.)

[&]quot;All population figures quoted in this memorandum are from: 1991-1992 Oregon Blue Book. Compiled and published by Phil Keisling, Secretary of State.

School District (300 employees); and UMDA (250 employees).

"In Pendleton, the Umatilla County seat, located 28 miles east of UMDA, wool processing at Pendleton Mills and the Eastern Oregon Correctional Institution reinforce the agricultural economy."

Characteristics which may affect UMDA's potential as a future business or industrial park are also highlighted in the USATHAMA report:

"UMDA has immediate access to water, land, and air transportation for shipping and receiving. The Columbia river is 2 miles north from the Activity's boundary, and the port of Umatilla provides direct water transportation to Portland and beyond to the Pacific Rim, as well as access to the 465-mile-long Columbia/Snake River System.

"U.S. Interstate 84 parallels the southern boundary of UMDA and provides direct land linkage with Portland, 175 miles west, and Boise, Idaho, 265 miles southeast. Interstate 82 parallels the eastern boundary of UMDA and intersects Interstate 84 near the southeastern corner of the installation."

4. PROJECTIONS FOR CONTINUED ARMY OWNERSHIP OF UMDA

UMDA opened October 14, 1941 and has operated continuously ever since. However, the mission performed by UMDA has been realigned to Hawthorne Army Ammunition Plant in Nevada, in accordance with the recommendations of the 1988 Base Closure Commission. UMDA is in the process of completing its mission, and realignment is scheduled to be completed by January 1994. According to the 1988 Base Closure Commission's report:

"The Commission was prevented from closing Umatilla because of the ongoing chemical demilitarization (CHEM DEMIL) mission. CHEM DEMIL prevented closure because

⁵This paragraph is not a direct quote, but rather a summary of a chart provided in the USATHAMA report.

⁶U.S. Army Toxic and Hazardous Materials Agency: Public Involvement and Response Plan for Umatilla Army Depot Activity. Prepared by William K. Boe, Environmental Science and Engineering, Inc., P.O. Box 1703, Gainesville, FL 32602. October 1988. Prepared for: U.S. Army Toxic and Hazardous Materials Agency, Aberdeen Proving Ground, MD 21010. Pages 2-1 and 2-2.

 $^{^{7}}$ ibid, page 1-2.

the Army cannot begin on-site destruction of chemical munitions until 1994 with an expected completion date of 1996, which falls outside of the Commission's allowed time frame for completing closures.

"The installation will be realigned to the maximum extent possible in order to facilitate closure as soon as the CHEM DEMIL mission is complete."

Construction has not yet begun on the four incinerators which will be used to complete the CHEM DEMIL mission, although it is likely that these incinerators will be sited near the K-Block of ammunition igloos (see map, page nine). Despite delays in the siting of the incinerators, it appears likely that the CHEM DEMIL mission will be completed before the end of the decade. If so, closure of UMDA could be completed near the year 2000. The Base Closure Commission will make new closure recommendations to the President by July 1993, and again by July 1995.

5. SCENARIOS FOR FUTURE LAND USE AT UMDA

a) Parceling: Once closed, the transfer of UMDA land and facilities to new ownership will depend on a variety of issues. One of the key issues is the extent to which current law will allow clean parcels of sites on the National Priority List to be separated from contaminated parcels and subsequently transferred to new ownership. For example, if the Ammunition Destruction Activity area of UMDA must be fully remediated before any uncontaminated land can be transferred to new owners, then the Army will be forced to maintain ownership of all of UMDA indefinitely, as it is unlikely that this area will be remediated in the foreseeable future.

A related issue is whether current law will allow the Army to transfer land overlying areas with groundwater contamination after remedial equipment has been installed and remediation begun (but before remediation has been completed). If not, then the Army will be forced to maintain ownership of such land well into the next century, while ground water pump-and-treat operations are on-going.

b) Additional complications due to groundwater. For the purposes of the baseline risk assessment, four categories of land use are applicable: Residential, Industrial, Recreational, and Agricultural. These categories apply to any surface area in or around the affected site. For subsurface areas, and particularly

⁸Base Realignments and Closures: Report of the Defense Secretary's Commission, December 1988. Published by the Department of Defense, December 1988. Page 66.

^{***} August 26, 1991 -- DRAFT, DO NOT CITE OR QUOTE ***

for groundwater, the applicability of these separate categories becomes less clear due to the complications caused by the natural movements of the underlying aquifer.

For example, in section [d] below it is suggested that the runway at Umatilla may continue to be used for aviation, for which the Industrial classification is applicable. The underlying groundwater, however, may be more appropriately classified Agricultural, since this is a likely scenario for the surface areas adjacent to the airfield. The extent to which such distinct classifications can overly the same property is unclear. In such cases, it may be necessary to assign both surface and subsurface areas of the property to the same classification, selecting the classification which corresponds to the greatest exposure level -- in this case Agricultural. However, no recommendation for resolving this issue is made in this memorandum. The issue is raised here because it needs to be resolved before the assignment of future use categories can be finalized.

- c) <u>OEA survey</u>. A survey conducted by the Department of Defense's Office of Economic Adjustment (OEA) offers some insight into possible future uses of UMDA land and facilities. Entitled "25 Years of Civilian Reuse," the survey gives 100 examples of base closures and their subsequent uses. The results of this survey are used to help formulate the scenarios suggested below.
- d) <u>Likely scenarios</u>. Based on the results of the OEA survey and the characteristics of Umatilla and the surrounding area, the following future scenarios are suggested:
- Multiple uses are likely. Umatilla contains housing, warehouses and other structures, a small runway, plus large amounts of vacant land. It is unlikely that this entire area will be dedicated toward a single use in the future. In OEA's survey, 81 percent of the former bases listed more than one new occupant after transfer to the civilian sector. At least 66 percent show distinct categories of occupant and use -- a municipal airport and an industrial park, for example, or a community college and a housing center.
- There is a reasonable possibility that the runway, though small and with few supporting structures, will continue to be used for aviation after transfer. In OEA's survey, of the 54 former Air Force Depots and Naval Air Stations with runway facilities, 41 (or 76%) listed aviation as one of their current uses.

See: 25 Years of Civilian Reuse: Summary of Completed Military Base Economic Adjustment Projects, 1961-1986. Published by the Office of Economic Adjustment (Department of Defense), Washington, D.C. April-May 1986.

- O Unless deed restrictions or other institutional controls are employed, a Residential scenario cannot reasonably be ruled out for the land in the administration area containing housing facilities. In OEA's survey, about one quarter (26%) of the former depots contained residential developments. In no case was a residential development the only use of a former depot.
- O A likely use for the remaining buildings in the administration area is some form of industrial park. (Seventy-four percent of the former depots surveyed in OEA's study were at least partially devoted to business or industrial parks).
- The 1,100 acre Ammunition Destruction Activity (ADA) area in the northwest portion of the installation is likely to require some sort of institutional control to restrict future use. The costs to the Department of Defense to remediate this area for unrestricted land use are prohibitive. A possible future use that has been suggested is for the area to be used by the Oregon National Guard for tank training. (In the unlikely event that the area is fully remediated, a likely scenario would be for the land to be used for farming.)
- O South of the ADA, toward the southwestern portion of the depot and easily accessible to Interstate 84, a series of warehouses make a Residential or light industrial scenario possible.
- O In the chemical munitions storage area, in and around K-Block, a potential scenario is for the continued use of the area for hazardous waste storage. This scenario will become more likely if the incinerators necessary to complete the CHEM DEMIL mission are constructed in this area, as expected.
- O In the remaining storage areas, Blocks A through J, the presence of the igloos makes a variety of uses possible. The igloos would not prohibit farming in these areas, although they make some form of warehousing or light industrial use more likely.
- O For the peripheral areas of the depot, as of yet undeveloped, the most likely scenario is agricultural use, in keeping with most of the surrounding area.

The diagram on page 9 shows, in rough outline, how these scenarios might be translated to a map of UMDA. It should be emphasized that the diagram is merely suggestive and should not be interpreted as a final evaluation of future land use classifications or boundaries.

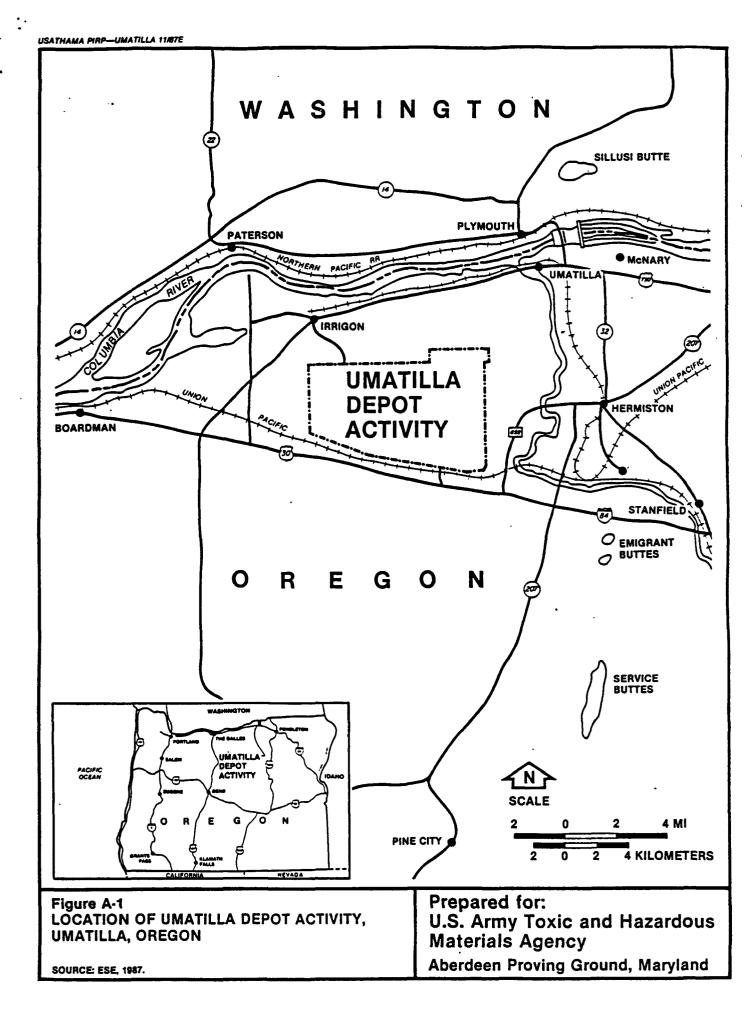


FIGURE 2: Possible future uses of UMDA property and facilities (total of 19,727 acres). Boundaries are suggestive only. Map not to scale.

MEMORANDUM ON FUTURE LAND USE SCENARIOS

FOR

WHIDBEY ISLAND NAVAL AIR STATION

Prepared by:

Scott Leland EPA Region 10 Federal Facility Section August 23, 1991

⊥.	Introduction
2.	Base Description
3.	Land Use in the Area Surrounding NAS Whidbey Island
4.	Projections for Continued Air Force Ownership
	of NAS Whidbey Island
5.	Scenarios for Future Land Use at NAS Whidbey Island
	a) Politics
	b) Parceling
	c) Additional Complications Due to Groundwater
	d) OEA Survey
	u,

1. INTRODUCTION

This memorandum addresses future land use plans for Whidbey Island Naval Air Station (NAS Whidbey Island) and the surrounding area. The scenarios presented here were developed after reviewing surrounding land uses and NAS Whidbey Island site plans.

2. BASE DESCRIPTION

NAS Whidbey Island is located 80 miles north of Seattle on Whidbey Island, in Island County (see Figure 1, page 9). It is a complex of approximately 7,160 acres (over 11 square miles) and is composed of two bases that are five miles apart: Ault Field and the Seaplane Base.

Ault Field contains 4,360 acres, or approximately seven square miles. Approximately 899 acres are used for agriculture (see Figure 2, page 10); 235 acres are under forest management; 2,700 acres are unimproved grasslands; 45 acres are lawns; and approximately 725 acres are covered by pavement or buildings. Ault Field contains most of the Station's military activities, including the airfield, hangars, maintenance and administrative buildings, as well as barracks, a small residential area and a hospital.

The Seaplane Base contains 2,800 acres, or approximately 4.3 square miles. Approximately 282 acres are used for agriculture; 1,092 acres are under forest management; 550 acres are leased to the State Department of Wildlife; 882 acres are unimproved grasslands; 373 acres are improved grasslands; 206 acres are lawns; and about 484 acres are covered by buildings on pavement. Much of the acreage is covered by dual-use leases. The Seaplane Base contains support activities for the station, including most of the 1,445 family housing units, the Family Service Center, Commissary, Exchange, administrative buildings and a marina.

The combined areas of Ault Field and the Seaplane Base have over 2.04 million square feet of buildings and structures.3

Approximately 8,400 military personnel are assigned to NAS Whidbey Island, making it the largest Naval installation in the Northwest. Approximately 1,750 civilians work at the Station.

NAS Whidbey Island Master Plan, 1988. Prepared by the firms of Reid, Middleton & Associates, Inc. and Dean Wolf - Environmental Planning/Design. Prepared for Western Division, Naval Facilities Engineering Command, San Bruno, CA 94066. Page 65.

²ibid, page 68.

³ibid, page 1.

Prior to the construction and establishment of NAS Whidbey Island in 1942, the area now occupied by Ault Field contained cropland, pasture countryside and wooded areas. There were no residential, commercial or industrial developments. The area now occupied by the Seaplane Base was predominantly farmland, interspersed with wooded areas and a few isolated structures.

As of 1990, the Air Station was valued at over \$836 million. Averaged out over its entire 7,122 acres, this equals over \$117,000 per acre and demonstrates the extremely high value placed on the land and facilities. If and when the Air Station does close down, the Navy will attempt to sell off as much of this land as possible in order to recoup its approximate market value. This may have the effect of limiting the potential of the land for future agricultural use, as it may be considered "too valuable" for farming.

3. LAND USE IN THE AREA SURROUNDING NAS WHIDBEY ISLAND

The area surrounding the Air Station is made up of the city of Oak Harbor, private businesses, residences, farmland and woodland. Most of the land is privately owned, although the State does own and operate Deception Pass State Park, which lies less than two miles north of Ault Field. The nearest private residences lie immediately adjacent to the western boundary of the Seaplane Base, in the city of Oak Harbor.

Whidbey Island: "Whidbey Island is one of the larger islands in the northern end of Puget Sound and serves as a gateway to the San Juan Islands. It is located just east of the Straits of Juan de Fuca. Whidbey Island is a narrow island 40 miles long. The island is an increasingly popular tourist location serving thousands of campers, boaters, and others seeking recreation during the summer months. Washington State's most heavily used state park — Deception Pass State Park — and popular Cranberry Lake, are located on the northern end of the island, roughly 10 miles north of the city of Oak Harbor and about two miles from the northern point of Ault Field. The island's natural beauty encompasses miles of sand and gravel beaches, acres of forests and rolling hills, and many quaint farms. Beach combing, fishing, crabbing, boating, and clamming are popular island activities. Although aquaculture growth is a controversial issue in the community, mussels grown

Whidbey Island Naval Air Station 1990. Published by MARCOA Publishing Inc., San Diego, CA. 1990. Page 3.

commercially in Whidbey Island's Penn Cove are becoming increasingly popular at Washington restaurants."

The job market on the Island is characterized by NAS Whidbey Island documents as "very tight," with the Air Station being the major employer. The economy of northern Whidbey Island is heavily dependent on the Air Station.

Oak Harbor: "The city of Oak Harbor is the community nearest to NAS Whidbey's Ault Field and the Seaplane Base. Approximately eight square miles in size, Oak Harbor is located just south of Ault Field and west of the Seaplane Base on the northern end of Whidbey Island. Incorporated in 1915, Oak Harbor is the island's largest population center with a population of 15,540. The city's population has grown steadily since 1940 when the population was about 400 to the present day population. Population projections estimate an increase in population to 28,400 by the year 2000 (reference: City of Oak Harbor Comprehensive Plan, October 6, 1987).... Economic dependence on the Navy has been a way of life for Oak Harbor since the 1940s. Many businesses, such as hotels, restaurants, and retail shops which serve tourists and NAS personnel, thrive along the busy state highway (Highway 20) that bisects the town. In more recent years, tourism has provided an increasing source of revenue to Oak Harbor."

Coupeville: "The town of Coupeville lies about 15 minutes south of Oak Harbor just off of State Highway 20. Coupeville was founded in 1852 by Thomas Coupe, a sea captain with the distinction of being the only man to sail a full-rigged ship through Deception Pass. Coupeville is one of the oldest towns in the state. Within the last few years, Coupeville has become a haven for tourists with its brightly painted Victorian houses and antique shops along the waterfront. Coupeville is the Island County government seat. Coupeville residents, among other Whidbey Islanders, have recognized the impacts of tourism and business growth on their communities in recent years. In response to some of the growth the island has experienced, citizens have formed the Citizen's Ground Water Management Advisory Committee which advises the county on

⁵Remedial Investigation Project Plans: Community Relations Plan, for Naval Air Station Whidbey Island Oak Harbor, Washington. Submitted by: HAZWRAP Support contractor Office, Oak Ridge, TN 37831. Revision 1, August 1989. Page 17.

Whidbey Island Naval Air Station 1990. Published by MARCOA Publishing Inc., San Diego, CA. 1990. Page 5.

⁷Updated estimate. Source: 1990 Economic and Demographic Almanac of Washington Counties and Cities. By James R. Fox and Christopher Hodgkin. Published by The Information Press. Page 116.

⁸Community Relations Plan, page 17. (See footnote 5 for full citation.)

ground water issues involving both Whidbey Island and Camano Island."9

The growth rate for the area is among the fastest in the state of Washington, with the population of the county having increased about 34 percent in ten years (from 44,048 in 1980 to 59,200 in 1990). Growth rates for individual cities are given below:

<u>City</u>	Growth Rate	Population/Years
Oak Harbor	27% in ten years	12,271 (1980) to 15,540 (1990)
Coupeville	34% in ten years	1,006 (1980) to 1,350 (1990)
Langely	22% in ten years	654 (1980) to 800 (1990)

With respect to land ownership, of Island County's 135,680 acres, private ownership accounts for over 85 percent (116,588 acres). The Federal government owns 6.1 percent (8,287 acres); State government owns 5.0 percent (6,719 acres); and County government owns 3.0 percent (4,086 acres).

4. PROJECTIONS FOR CONTINUED NAVY OWNERSHIP OF NAS WHIDBEY ISLAND

NAS Whidbey Island was commissioned on September 21, 1942 and has operated continuously ever since. The Air Station will celebrate its 50th anniversary next year.

The future of the base is uncertain. The Air Station is one of 31 military bases that the Pentagon recommended for closure to the 1991 Base Closure Commission. The Commission agreed that 25 of the bases should be closed, but it rejected the closure of NAS Whidbey Island. For the time being, therefore, the Air Station will remain open. However, the Commission will make new closure recommendations by July 1993 and again by July 1995. All military installations will be subject to review for closure at these times.

Part of the uncertainty in the Air Station's future is due to the fact that the A-6 Intruder warplanes based there are scheduled to be phased out and replaced by the AX fighter, which is now in the early stages of development. It is not yet known where the AXs will be based.

⁹Remedial Investigation Project Plans: Community Relations Plan, for Naval Air Station Whidbey Island Oak Harbor, Washington. Submitted by: HAZWRAP Support contractor Office, Oak Ridge, TN 37831. Revision 1, August 1989. Page 18.

¹⁰Source: Washington State Atlas and Databook: 1990 Edition. Published by The Information Press, 1990. Page 15.

5. SCENARIOS FOR FUTURE LAND USE AT NAS Whidbey Island

a) <u>Politics</u>: When the Air Station at Whidbey Island is eventually closed, the process of transferring the land and facilities to new owners is likely to be very political. The land and facilities are extremely valuable (over \$117,000 per acre, according to the Navy estimate cited on page 2) and are suitable for many purposes: scenic parks; marinas; sites for valuable housing, condominiums or residential developments; business or industrial parks; a municipal airport; and farms, among many other uses.

The Navy will attempt to sell the land and facilities at fair market value; the local governments of Oak Harbor and Island County will attempt to acquire properties for free or below market value and will try to control reuse scenarios through the local zoning ordinances; there will be political and economic pressure to bring in businesses and industries to replace the 1,750 civilian jobs lost from the Air Station's closure; there will be special interest groups lobbying for wildlife preserves, parks and other public uses; and there will likely be funding shortages as state and local groups examine the cost of maintaining the extensive facilities at the Air Station.

The experience of current base closures (including those at Pease, Norton, George, Mather and Chanute Air Force Bases) suggests that the local community's reuse plan heavily influences the outcome of a base transfer. Such plans typically are not formulated until after a base is announced for closure. In the case of Whidbey Island, neither the city of Oak Harbor nor Island County have investigated reuse scenarios, although both were very active in lobbying to keep the Air Station open during the period in which it was being considered for closure.

The reuse process is likely to involve lengthy negotiations and numerous compromises. The scenarios that are suggested in section (e) below represent possible outcomes based on current conditions and facilities, but the final result is virtually impossible to predict beforehand.

b) <u>Parceling</u>: In addition to the political process described above, the transfer of Air Station land and facilities to new ownership will depend on certain legal issues. One of the key such issues is the extent to which current law will allow clean parcels of sites on the National Priority List to be separated from contaminated parcels and subsequently transferred to new ownership. For example, if the areas of groundwater contamination at NAS Whidbey Island must be fully remediated before any uncontaminated land can be transferred to new owners, then the Navy will be forced to maintain ownership of the entire Air Station well into the next century until remedial pump-and-treat operations are completed.

- A related issue is whether current law will allow the Navy to transfer land overlying areas with groundwater contamination after remedial equipment has been installed and remediation begun (but before remediation has been completed). If not, then once again the Navy will be forced to maintain ownership of such land well into the next century, until remedial ground water pump-and-treat operations are completed.
- c) Additional complications due to groundwater. For the purposes of the baseline risk assessment, four categories of land use are applicable: Residential, Industrial, Recreational, and Agricultural. These categories apply to any surface area in or around the affected site. For subsurface areas, and particularly for groundwater, the applicability of these separate categories becomes less clear due to the complications caused by the natural movements of the underlying aquifer.

For example, in section [d] below it is suggested that the airfield at NAS Whidbey Island will continue to be used for aviation, for which the Industrial classification is applicable. The underlying groundwater, however, may be more appropriately classified Agricultural or Residential, since these are likely scenarios for the surface areas adjacent to the airfield. The extent to which such distinct classifications can overly the same property is unclear. In such cases, it may be necessary to assign both surface and subsurface areas of the property to the same classification, selecting the classification which corresponds to the greatest exposure level — in this case Residential. However, no recommendation for resolving this issue is made in this memorandum. The issue is raised here because it needs to be resolved before the assignment of future use categories can be finalized.

- d) <u>OEA survey</u>. A survey conducted by the Department of Defense's Office of Economic Adjustment (OEA) offers some insight into possible future uses of NAS Whidbey Island land and facilities. Entitled "25 Years of Civilian Reuse," the survey gives 100 examples of base closures and their subsequent uses. ¹¹ The results of this survey were used to help formulate the scenarios suggested below.
- e) <u>Likely scenarios</u>. Based on the results of the OEA survey and the characteristics of NAS Whidbey Island and the surrounding area, the following future scenarios are suggested:
- O Multiple uses are likely. NAS Whidbey Island contains runways, housing, warehouses, a hospital, shopping center, marina, numerous other buildings, and large amounts of vacant

¹¹See: 25 Years of Civilian Reuse: Summary of Completed Military Base Economic Adjustment Projects, 1961-1986. Published by the Office of Economic Adjustment (Department of Defense), Washington, D.C. April-May 1986.

land. It is unlikely that all of these facilities and land will be dedicated toward a single use in the future. In OEA's survey, 81 percent of former bases listed more than one new occupant after transfer to the civilian sector. At least 66 percent show distinct categories of occupant and use -- a municipal airport and an industrial park, for example, or a community college and a housing center.

- O There is a strong possibility that the runway facilities will continue to be used for aviation after transfer. In OEA's survey, of the 54 former Air Force Bases and Naval Air Stations with runway facilities, 41 (or 76%) listed aviation as one of their current uses.
- O Unless deed restrictions or other institutional controls are employed, a Residential scenario cannot reasonably be ruled out for the areas containing houses and base barracks. In OEA's survey, about one quarter (26%) of the former bases contained residential developments. In no case was a residential development the only use of a former base.
- A likely use for the remaining buildings on site is some form of industrial park. (Seventy-four percent of the former bases surveyed in OEA's study were at least partially devoted to business or industrial parks). Adding weight to this scenario is the fact that the economy of northern Whidbey Island is heavily dependent on the base, which serves as a major area employer. This means that, locally, there will be substantial economic and political pressure to bring in substitute employers should the base ever be closed.
- O For the peripheral areas of the base, as of yet undeveloped, there will be competing interests. Possible scenarios include the full spectrum of options, including parks¹², preserves, agricultural use, housing, or industrial use. The 1988 NAS Whidbey Island Master Plan suggests that residential use may be the most appropriate classification for much of these areas:

"Because of the natural attractiveness of the countryside, there has been a continual interest in home building away from town, particularly along the waterfront. Neither agriculture nor forestry is

The State Parks and Recreation Commission commented that the Air Station would <u>not</u> be an area of major interest for acquisition into the state park system were it to close in the future. The reasons given were high maintenance costs of the accompanying facilities, and the fact that the Commission considers other Whidbey Island lands south of the Air Station as offering better park potential. (Contact: Andy Kramer, Site Planning and Acquisition, tel: (206) 753-2018.)

strong enough in the area to effectively compete with the residential growth pattern and much of the island is becoming increasingly popular for recreational second homes and retirement property." 13

Figure 3 on page 11 shows that existing residential land use is scattered more or less evenly throughout northern Whidbey Island.

Some combination of residential and other uses will undoubtedly result from the eventual closure of the Air Station, but predicting specific scenarios in advance for these peripheral areas is unlikely to yield reliable results due to the highly politicized nature of the selection process.

The diagrams on pages 12 and 13 show, in rough outline, how the above scenarios might be translated to a map of the base. It should be emphasized that the diagrams are merely suggestive and should not be interpreted as a final evaluation of future land use classifications or boundaries.

¹³ WAS Whidbey Island Master Plan, 1988. Prepared by the firms of Reid, Middleton & Associates, Inc. and Dean Wolf - Environmental Planning/Design. Prepared for Western Division, Naval Facilities Engineering Command, San Bruno, CA 94066. Page A-33.

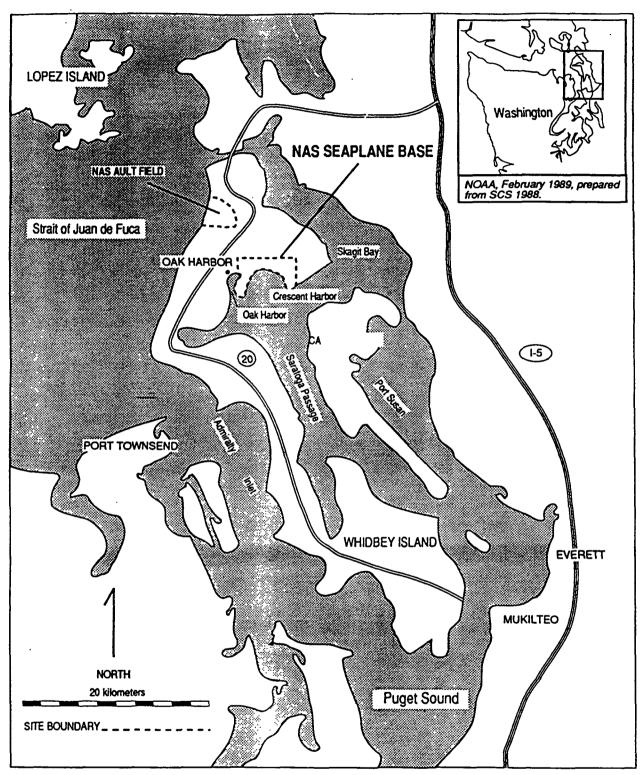
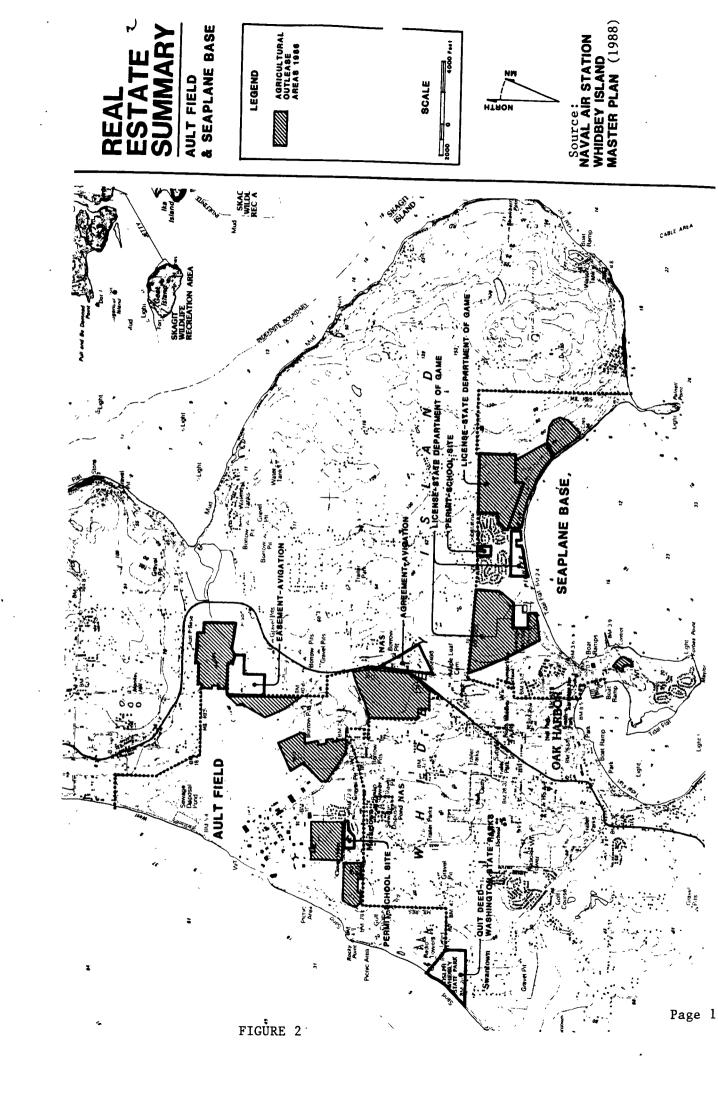
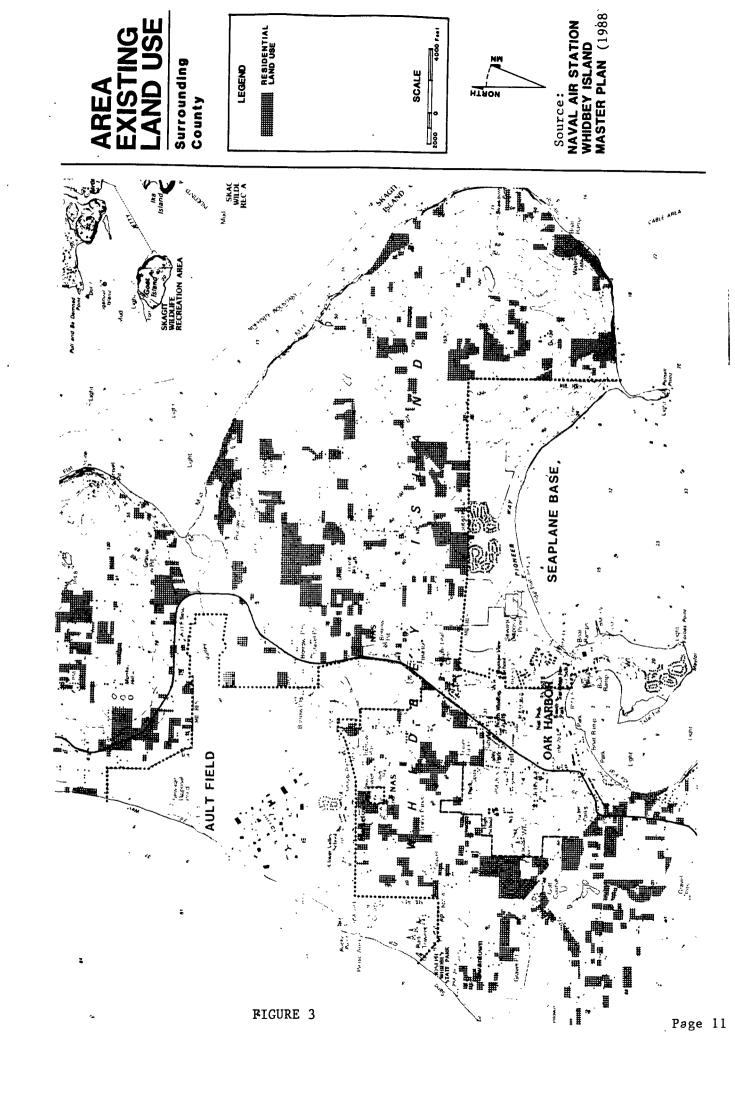


Figure 1. The Whidbey Island U.S. Naval Air Station (NAS) Seaplane Base study area on Whidbey Island, Washington.





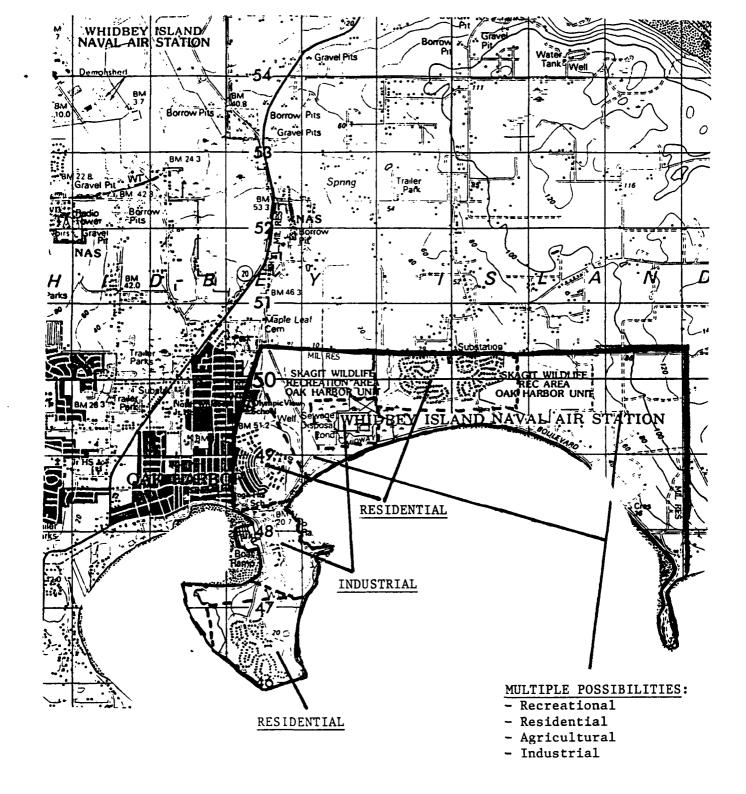


FIGURE 4: <u>SEAPLANE BASE</u>: Possible future uses of Seaplane Base (2,800 acres) property and facilities at NAS Whidbey Island. The scenarios presented here are merely suggestive and should not be construed as a final evaluation of future land use classifications or boundaries.

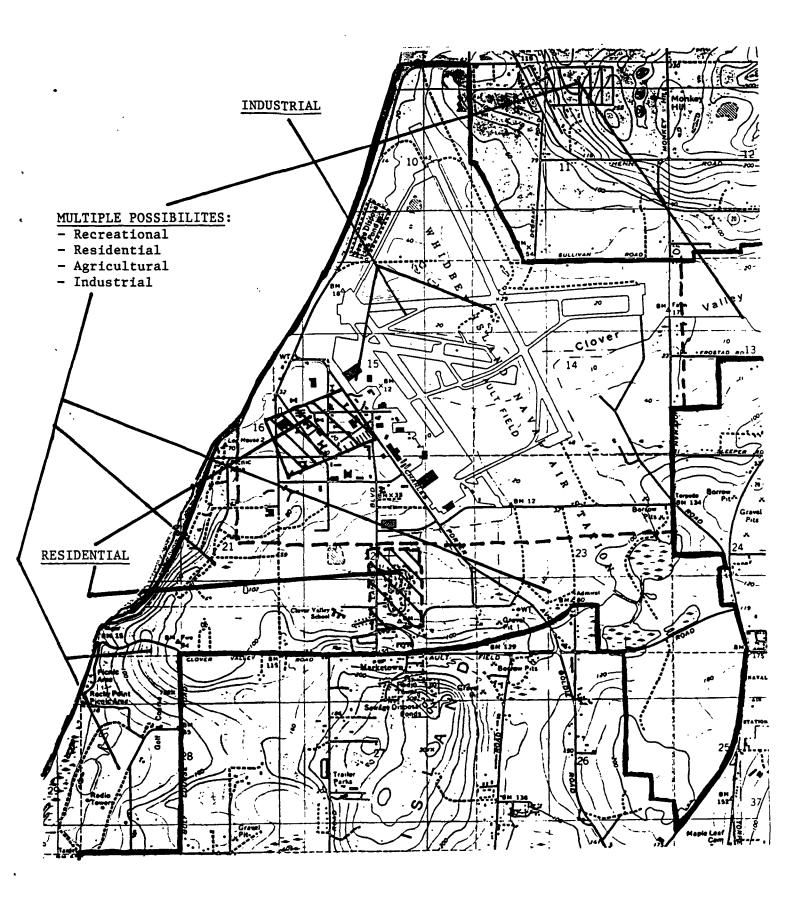


FIGURE 5: AULT FIELD: Possible future uses of Ault Field (4,36 acres) property and facilities at NAS Whidbey Island. The scenarios presented here are merely suggestive and should not be construed as a final evaluation of future land use classifications or boundaries.