

ENVIRONMENTAL ASSESSMENT

ALTERNATIVES FOR USE OF THE MILL VALLEY AIR FORCE SITE

GOLDEN GATE NATIONAL RECREATION AREA

NOVEMBER 1, 1983



# United States Department of the Interior

## NATIONAL PARK SERVICE

GOLDEN GATE NATIONAL RECREATION AREA  
FORT MASON, SAN FRANCISCO, CALIFORNIA 94123

IN REPLY REFER TO:

L76 (WR-GOGA)

November 3, 1983

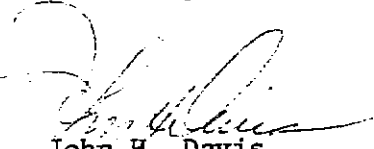
Dear Reviewer:

Enclosed is a copy of the Environmental Assessment of Alternatives for Use of the Mill Valley Air Force Site. Comments on the assessment and the proposed alternatives should be addressed to the General Superintendent, Golden Gate National Recreation Area; Building 201, Fort Mason; San Francisco, California 94123.

The public review period will end on January 9, 1984. A joint public meeting will be held with the Golden Gate National Recreation Area Citizens' Advisory Commission and the Board of Directors of the Marin Municipal Water District to take public testimony on the alternatives. The meeting will be held December 7, 1983 at 7:30 P.M. in the Students Center, Tamalpais High School, Mill Valley. After that date all comments and testimony received will be considered together with the assessment.

If you have any questions about this proposal or the review process, contact Doug Nadeau at 556-0111.

Sincerely,

  
John H. Davis  
General Superintendent

Enclosure

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## INTRODUCTION

In March, 1983, 103 acres leased by the U.S. Air Force for the Mill Valley Air Force Station was declared excess and transferred to the National Park Service (NPS). (Figure 1, Area Map and Figure 2, Site Map) This lease expires in 2005 when the site will revert to its owner, the Marin Municipal Water District (MMWD).

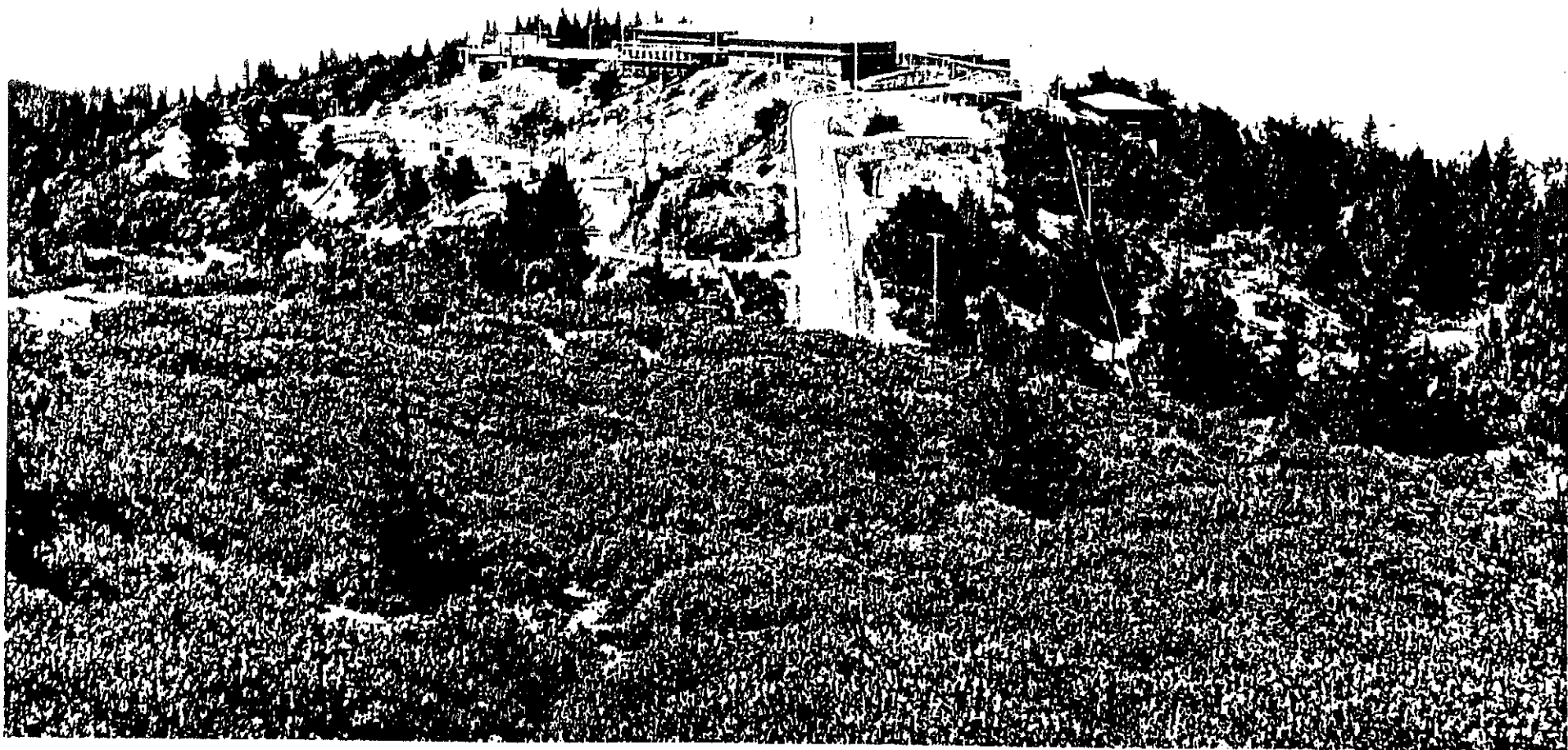
There are 40 vacant buildings on this site. They were constructed in the early 1950s and have no historic value. Many of these buildings are starkly visible on the most prominent ridge of Mount Tamalpais. The abandonment by the military has prompted many individuals and organizations to call for their removal. Under the terms of the lease the Air Force is not legally obligated to restore the site to its former condition.

The transfer of the Mill Valley Air Force Station to the NPS presents the opportunity to look carefully at what is on the site and at its potential as a scenic, recreational and natural resource. The result of the process will be a plan for management and use of the site during the remaining term of the lease.

The 3 acre Federal Aviation Administration (FAA) site was not included in the transfer and will continue its joint surveillance function with the Air Force. There are eight structures on the FAA site, including the two "golf ball" radar domes. These buildings are not affected by the transfer and will remain. Water, sewage treatment and automobile access will continue to be supplied to the FAA facility.

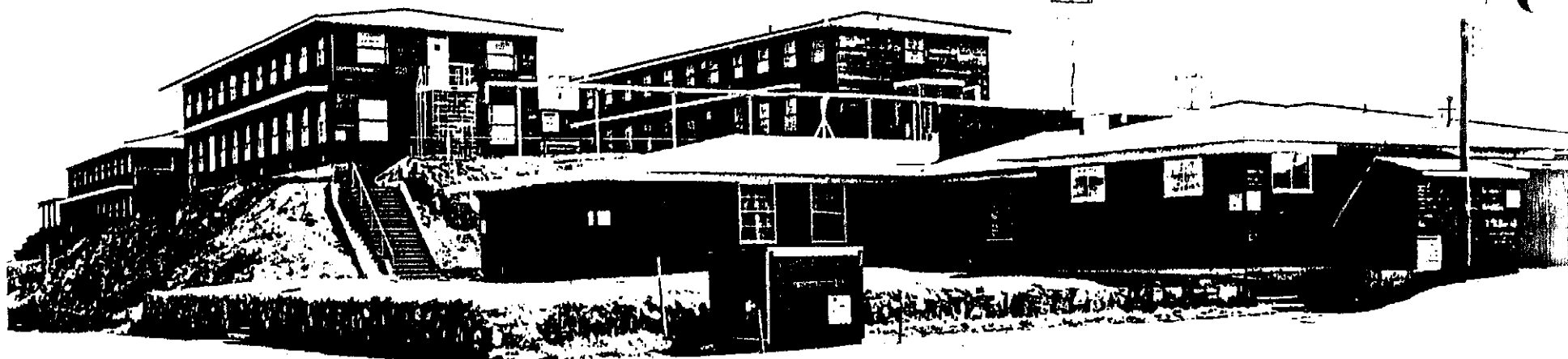
This assessment discusses seven alternatives for use of the site. If a selected use has potential for impacts not adequately discussed here, it will be the subject of a more detailed and specific environmental assessment.

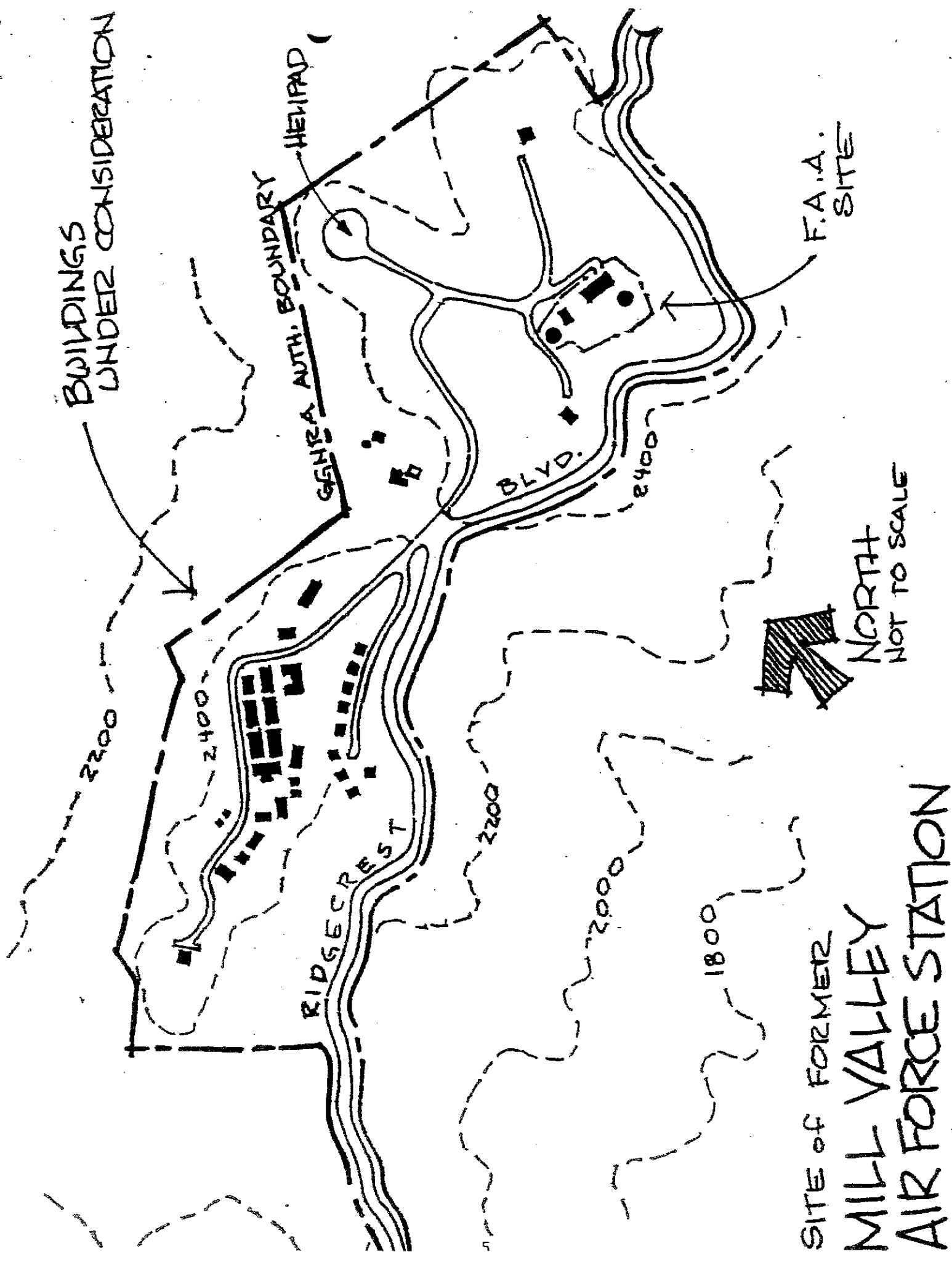




Golden Gate NRA - U.S. Department of the Interior, National Park Service

MILL VALLEY AIR FORCE STATION SITE





BUILDINGS  
UNDER CONSIDERATION

GEN. AUTH. BOUNDARY

HELIPAD

BLVD.

F.A.A.  
SITE

NORTH  
NOT TO SCALE

RIDGE CREST

SITE OF FORMER  
MILL VALLEY  
AIR FORCE STATION



## I. BACKGROUND

Information on the natural characteristics of the site together with an analysis of traffic conditions, existing uses, condition of the buildings and costs of their maintenance, use or removal, provides the background and constraints to evaluate each alternative. This information is summarized here.

### Natural Factors:

The soils that have developed on the underlying serpentine and Franciscan Melange formations are shallow and rocky. There are large areas of exposed rock surface. Approximately 20 acres of the site was leveled to create a plateau for construction of the Air Force Station, and the removed material was pushed downslope. The slopes below the structure are steep (20 - 50%) and sparsely vegetated. Soils within the site present severe limitations for any kind of use because of these steep gradients. The erosion hazards are identified as moderate to very high.

Coastal chaparral is the predominant vegetation type. Although no rare or endangered plants have been identified on the site, there are six known rare or endangered plant species in the Mount Tamalpais area. Because of the limited accuracy of current mapping, a field survey will be conducted in the spring to determine whether these plants occur here. No rare or endangered animal species are known to inhabit the Mount Tamalpais area.

The site is within the headwaters of the MWWD watershed, draining north into the Water District lakes and south into Redwood Creek, a significant salmon and steelhead spawning stream. The average annual precipitation at the site is 38 - 40 inches per year. Winter storms bring periods of intense rainfall and high winds which accelerate deterioration of the buildings.

Mount Tamalpais is the dominant landform of Marin County. Its peaks, including the transferred site can be seen from around the Bay Area. Although East Peak is natural appearing from a distance, the radar domes and military structures on West Peak are highly visible and detract from distant views of the mountain and the appearance of the site.

The panoramic view from East Peak make it the most visited site on Mount Tamalpais. The views from the Mill Valley Air Force station are also unique and sweeping. They encompass watershed and park lands to the north and south as well as distant views of the Bay Area and beyond.

### Traffic and Existing Visitation:

Traffic constraints are one of the most severely limiting factors in planning for the Mount Tamalpais area. Route 1 west of Highway 101, and Panoramic Highway are often extremely congested, particularly on summer weekends and holidays. The intersection of Ridgecrest Boulevard and Panoramic Highway is one of the points of greatest congestion.

Approximately 45% of the 1 million annual visitors to the State Park go to East Peak via Ridgecrest Boulevard and according to the Mount Tamalpais General Plan, this road is heavily congested on 30 - 50 days each year. Accidents involving injuries occur frequently both on Panoramic Highway and on Ridgecrest Boulevard.

Public transportation exists on weekends only, along Panoramic Highway. Visitors with destinations in the East Peak area must use their cars or hike from Pan Toll (3.6 - 4.7 miles on trails, 4 miles by road from Pan Toll to East Peak). Although both the GGNRA and Mount Tamalpais plans call for eventual shuttle service to East Peak, the realities of funding do not appear to make this a viable option for consideration in short term planning.

### Utilities:

During its full scale operation, more than 300 people lived and worked at the Mill Valley Air Force Station. All utility systems were designed for this level of use, including a tertiary sewage treatment plant, water storage tanks and steam heating system. These systems are still functional, and could be scaled down or replaced with alternate systems appropriate to any level of use that is approved. MMWD has an agreement to continue to supply water as needed to supplement a well on the site. Electrical and telephone service is supplied by overhead lines.

### Site Development:

Approximately 20 acres of the site are developed with asphalt paving, roadways, 1-2 story wood frame buildings and support structures. The buildings on the transferred site were used by the Air Force until 1980 and were maintained by them in their vacant state until they were transferred to the NPS. Their condition varies, but ranges from fair to good. Basic costs of maintaining these buildings range from a minimal level of approximately \$85,000/year to \$160,000/year for preservation of the buildings and site.

## Relevant Plans and Policies:

The policies guiding the development of alternatives considered in this assessment are contained in the General Management Plan for GGNRA, the Mount Tamalpais State Park General Plan and the MMWD Protection Policy for the Mount Tamalpais Watershed.

These plans and policies are in basic agreement regarding restriction of use and development of Mount Tamalpais and preserving its natural, scenic, recreational and historic values.

The General Management Plan for GGNRA states that the Mount Tamalpais area is already in excess of desired capacity, and that use will hopefully decrease as recreational opportunities are improved elsewhere. It proposes dispersed, small scale development for Marin County north of Rodeo Valley and encourages locating facilities in existing buildings and already disturbed sites. Within the southern limits of Mount Tamalpais, a hikers' campground and hostel are recommended.

The State Park's general plan for Mount Tamalpais contains specific proposals for the West Peak area. Although it recommends eventual restoration of the site to a natural scene, temporary uses it suggests are:

- an outdoor residential environmental education camp
- overflow parking for the Mountain Theatre
- park operation uses (staff residences, minor maintenance and storage area, information office).

The MMWD's Protection Policy for the Mount Tamalpais watershed is primarily concerned with maintaining and enhancing the quality and supply of water. To accomplish this, the policy stresses retaining lands in their natural condition or returning them to it. Uses that are mentioned as being compatible with the water district's management objectives include scenic open space and limited recreational activities that are not attractions in themselves, but limited to essential public services and incidental to the primary purposes of the watershed and enjoyment of the land in its natural condition. The MMWD Board of Directors has taken the position that the Mill Valley Air Force site should eventually be returned completely to its natural condition.

## The Special Significance of Mount Tamalpais:

In their book "The Crookedest Railroad in the World" Theodore Wurm and Alvin Graves open with the following description of the mountain and what it means to people:

"North across the bay from San Francisco, in the very heart of "marvelous" Marin County, rises impressive Mount Tamalpais. From its tip, 2600 feet above the bay, one views almost a third of California, in return, a person looking westward can see the "sleeping maiden" outline of friendly Tamalpais rising like a silhouette at the very ocean's edge.

The mountain got its unusual name from the Miwok Indian tam'-mal (bay country) and pi'-is (mountain). Right up to the present day it has been to the city folk around the bay almost what Fujiyama is to the people of Japan, an object of devotion. It has held in their affections the place of an ever-ready comrade with whom to spend a happy holiday. Beloved alike by the hardy hob-nailed hiker and the sophisticated, it is dedicated democratically to the Sunday picnicker, the painter and the poet and the dramatist."

The mountain's role as a popular recreation resource as well as a key landmark contributing to the unique scenic quality of the bay region has earned it what many people consider to be status as a sacred place. Although it is impossible to quantify, this natural/social value must always be a major consideration in planning and management activities relating to it.

## II. ALTERNATIVES

Alternatives proposed for consideration for use of the transferred Mill Valley Air Force site are:

1. Temporary use of existing structures for a residential youth work program.
2. Temporary use of an existing structure as a youth hostel.
3. Temporary use of existing structure as an educational center.
4. Temporary use of existing structures for agency administrative needs.
5. Temporary commercial use of existing structures.
6. Restoration of site to a natural appearance with minor recreational improvements; no temporary use of structures.
7. Restoration of the site to a natural appearance maximizing recreational uses; no temporary use of structures.

A final plan could include a combination of two or more of these alternatives, with user groups sharing some facilities.

Because of the cost of restoration and maintenance of the buildings, the physical constraints of the site and the plans and policies guiding its use, no alternative for use of all of the buildings on the site would be appropriate. Traffic alone from full use of the buildings would be unacceptable, adding up to 500 vehicle trips per day to already congested routes. Restoration costs for basic repairs to make all of the buildings habitable would cost over \$300,000. Annual maintenance and operation of all of the buildings would exceed \$500,000. The alternatives considered in this assessment consider a range of levels of use, but none envision retaining all of the buildings.

The alternatives have several things in common:

- Removal of some of the buildings on the site. Depending on available funding, as many as 35 excess structures would be removed and up to 15 acres of developed land restored under alternatives 1-5. Paving and utilities excess to approved uses would also be removed and those portions of the site would be restored to a natural appearance by grading and planting with native plants. Figure 3 indicates the buildings that are not being considered for any uses.
- Continued provision of water, sewage treatment and access to the FAA site.
- Temporary use of some of the buildings. All but the 6th and 7th alternatives would use some of the buildings. Selection of buildings to be retained for approved uses would intend to minimize visibility and rehabilitation costs and seek the most appropriate structure for the intended use.
- Increased public access. Because the site has been closed to non-military personnel, its transfer to the NPS for park use will allow a significant increase in public access. Possible actions include removing fencing and restoring trails to the site.

#### Description of the Alternatives:

##### 1. Youth Work Program:

Under this alternative 3-4 buildings would be used as residential and shop space for a youth work program similar to the California Conservation Corps, Marin Conservation Corps or the Youth Conservation Corps.

BACHELOR  
AIRMEN  
QTRS.

POOL

ADMIN.  
BLDG.

2 STORY  
BARRACKS

MESS  
HALL

SINGLE FAMILY  
RESIDENCES

MAINT.  
SHOP

CONSOLIDATED  
OPEN MESS

# LEGEND

- - BUILDINGS UNDER  
CONSIDERATION FOR USE
- ▨ - BUILDINGS PROPOSED FOR  
IMMEDIATE DEMOLITION



NORTH  
NOT TO SCALE

SITE OF FORMER  
MILL VALLEY  
AIR FORCE STATION

FIGURE 3

Crews would work on conservation projects on adjacent public lands as well as work on the site to remove buildings and begin restoration to a natural appearance. Program size could vary between 15-40 participants and staff, and may be year-round or summer only, depending on its funding and flexibility.

Transportation to the site would be provided by vans or trucks. 3-6 vehicles required for the program would make between 9-18 trips each day to and from the site.

## 2. Youth Hostel:

A hostel could be located in 1-2 of the smaller, less visible buildings on the site providing up to 40 beds and parking for 10-15 cars and generating up to 30 vehicles trips/day. Hostel hours would limit arrival and departure times to morning and evening hours. (Hostels are typically closed between 9:30 and 4:30 PM.)

This location is approximately 17 miles from the Golden Gate Hostel, 24 miles from the Point Reyes Hostel and 5 miles from the proposed Kent Canyon Hostel (10 miles by trail).

## 3. Educational Center:

This alternative provides for using existing structures as a small training center for the National Park Service, Bay Area emergency service providers (Coast Guard, Fire and Sheriff departments, Red Cross) and other agencies and organizations. The State Park's proposed residential environmental education camp could also be included, sharing facilities with the other users.

An educational center would utilize a barracks building and 1-3 other support buildings for classroom and dining facilities. The swimming pool would be retained for lifesaving and Scuba training. This facility could have the capacity for 30-60 participants. It would require parking for up to 20 cars unless shuttle service to the site is provided. Carpooling or shuttle service to park locations for training could generate 20-30 vehicle trips/day. An educational facility at this location would provide training in a park setting with easy access to the types of conditions under which the participants would be providing emergency and other services.

A variation of this alternative could include an "Asilomar-type" facility that would provide training or conference facilities for a broader range of participants and double the capacity of the educational center. This facility could generate revenue.

4. Agency Administrative Needs:

Golden Gate National recreation Area, Mount Tamalpais State Park and Marin Municipal Water District all have needs for minor use of the site, including employee housing and a small maintenance facility. Other agencies have a need to continue use of the California Highway Patrol repeater station located on the site.

Under this alternative those administrative needs would be assessed and space would be allocated for valid uses that are necessary to the management and protection of the site and adjacent lands. Structures used for these purposes could include 3-6 units of the family housing and a maintenance shop building. Additional traffic contributed by this use would include 10-15 vehicles making 25-40 trips/day. Additional people at the site would include 9-18 residents and 5-10 agency staff people.

Interest has also been expressed by a non-profit organization in using a small building on the site for communications purposes. This use could add another 2-5 persons and 1-2 cars making 2-4 trips/day.

5. Commercial uses:

This alternative would convert several of the existing structures for use as a hotel and/or restaurant. It would require up to 4 buildings, possibly including a barracks, mess hall, officers' club and bachelor officers' quarters. These facilities could serve park visitors seeking accommodations other than campgrounds or hostels, and eating facilities more elaborate than the existing concession on East Peak. They would be intended to produce revenue for the National Park Service, and eventually the Marin Municipal Water District, if retained by them after expiration of the lease.

A restaurant at this site would serve lunch and dinner to park visitors. It would seat up to 100 persons at a time. A hotel would provide modest accommodations for a maximum of approximately 40, or if operated as a bed and breakfast, a maximum of 20. A total of up to 140 persons at a time would be accommodated in these facilities. Parking would be required for 55 cars at the highest level of use. Because of turnover at the restaurant, the number of vehicle trips/day could be 320.

6. Restoration of site to natural appearance with minor recreational improvements; no temporary use of structures:

This alternative provides for total restoration of the site to begin as early as possible, with no temporary uses



of existing buildings. Work would begin immediately on a detailed restoration plan and seeking funding to carry it out.

Site restoration work would include demolition and removal of all structures and paving not needed as support for the FAA site, grading, and revegetation with native plants. Minor recreational improvements could be provided, possibly including restoration of trails through the site.

Actual commencement of work would depend on availability of funding and may be delayed for several years. During this time, only minimal maintenance to the buildings would be done to provide for visitor safety.

7. Restoration of the site to a natural appearance maximizing recreational opportunities; no temporary use of structures:

This alternative is similar to Alternative 6, but would provide for a variety of recreational opportunities at the site. These could include a small walk-in campground (10 sites), a small picnic area (10 sites) parking for 30 cars and a vista point. A total of up to 100 people could use the site, generating 280 vehicle trips/day during peak use times.

Facilities developed under this alternative would be located in previously developed areas and sited to minimize their visibility. Parking and access would use existing paved areas.

### III. IMPACTS OF THE ALTERNATIVES

#### A. Impacts common to all alternatives:

1. Each alternative would involve removal of some of the buildings with the following impacts:

- Temporary Construction Impacts - Noise, dust and traffic generated by building demolition and removal of materials from the site would disturb visitors and wildlife. Work would be done on weekdays when visitation is lowest and traffic congestion is not a problem. Wildlife will tend to move away from the area during demolition but return later. There will be a short term increase in erosion potential from runoff. Erosion controls and re-establishment of plant cover will provide mitigation.

- Since the portion of the site that would be affected by demolition and grading was significantly altered during construction of Air Force facilities, there will be minimal additional disturbance of soil profiles. The amount of land

available for percolation of surface water into the water table will be increased by restoration of 15-20 acres of land.

- Revegetation will emphasize use of native plants and increase wildlife habitat.

- There will be a long term loss of the social and economic potential for future use of the buildings that are removed.

- Preliminary indications are that building removal cost exceeds the salvage value. Therefore, their removal will depend on available funding to accomplish this work (estimated at \$400,000 for total removal). There could be an indefinite delay before buildings are actually removed and restoration work begins. Buildings not intended for any uses would be minimally maintained, allowed to deteriorate and would be closed to the public pending their removal.

- Removal of structures, particularly those most visible on the site, grading and revegetation will make it more visually compatible with the surrounding public open space.

2. Temporary use of some buildings would result in the following impacts:

- Increase in auto traffic and congestion as well as activity levels at the site and on adjacent land ranging from minimal (youth hostel, work program) to significant (restaurant and hotel or combination of several alternatives). At no time would the level of use of the site be as high as it was during its peak operation by the Air Force.

- Delay in restoration of that portion of the site.

- Official presence resulting in increased security for the area.

- Possible conflict with need for State Park control of night time access to the mountain.

- Increased use of the undeveloped portions of the site with potential for trampling of vegetation and compaction and erosion of soil, with potential effects on water quality.

3. Impacts of increased public access:

- Restoration of trails through the site would require removal of vegetation. Appropriate drainage structures and gradients along the restored trail length would control

erosion.

- Increased visitation will result in greater potential for human-caused fires.

## B. Impacts of Each Alternative:

In addition to impacts already discussed, each alternative will have specific and unique impacts. These are discussed below and quantifiable impacts are compared in Table I.

### 1. Youth Work Program:

- Noise - youth work program activity on the site beyond restoration work could include use of a carpentry shop for minor support of other projects on adjacent lands. This would be an infrequent occurrence and limited to weekdays.

- Duration of demolition/restoration activity - depending on the site of the program and its funding, the demolition and restoration work could take longer than if it were contracted or done by park personnel devoting full time to the project. A youth work program will be able to salvage materials for re-use on other park projects.

### 2. Youth Hostel:

- Because the proposed Kent Canyon hostel may open in 1984, there is a potential conflict with locating another one such a short distance away. If the Kent Canyon hostel is delayed, a hostel at the Air Force site would provide a needed facility between the Golden Gate and Point Reyes hostels, a distance of 40 miles.

### 3. Educational Center:

- This alternative would have benefits for the agencies and organizations that would participate in training programs utilizing park resources, providing a convenient location and resulting in better trained personnel. In addition to those previously discussed, its impacts are primarily increases in visitor use and traffic. (See Table I.)

- An "Asilomar-type" facility at this location would increase the traffic impacts if combined with the training center. Although it could potentially generate revenue, existing and planned facilities of this type in the Bay Area may affect its economic viability. Additional market study would be necessary before committing facilities to this use.

4. Agency Administrative Needs:

- Depending on the type of maintenance activity, noise levels at the site on weekdays would increase. Activities with high levels of noise would be restricted.

- Since employees occupying the residences would have responsibilities for visitor and resource protection, security at the site would be improved.

5. Commercial Use:

- Peak use of hotel and restaurant facilities would coincide with peak visitation and add to congestion at these times and during mountain theatre events.

- Revenues generated could be used to restore the remainder of the site. Preliminary estimates indicate that revenue from hotel and restaurant facilities could range from \$15-\$40,000/year.

- This alternative would provide services to many park users. It may compete with nearby existing services, utilizing valuable parking space for facilities that could be better located elsewhere.

- This alternative would create the greatest amount of traffic and have the highest requirements for parking (See Table I). It violates existing plans and policies of Mount Tamalpais State Park, National Park Service and Marin Municipal Water District. Implementation of this alternative would require plan revisions.

6. Restoration of site to a natural condition with minor recreational improvements; no temporary uses:

- If funding is available in the short term this alternative would result in the most immediate restoration of the site to its natural appearance and provide for public access to trails on the site.

- Since this project would not be high in NPS funding priorities, competing with a backlog of historic preservation and critical natural resource management needs, it could be several years before funding is received. Even with annual budget funds diverted from other projects for this work, it would take many years to see satisfying results. If this occurs with no proposed temporary uses of the buildings, they would be allowed to deteriorate. Minimal maintenance for visitor safety and to prevent vandalism would be done. Public access could be restricted from portions of the site.

7. Restoration of site to a natural condition maximizing recreation opportunities; no temporary use of buildings:

- Impacts would be similar to those of Alternative 6, with greater visitation and traffic impacts. Increased recreational opportunities such as camping and vista points would generate additional use of Mount Tamalpais as well as divert users from other destinations in the area. There would be some loss of vegetation from trampling in addition to compaction and erosion of soil resulting from greater recreational use.

#### IV. CONSULTATION AND COORDINATION WITH OTHER AGENCIES AND THE PUBLIC

During preparation of this assessment, these agencies and organizations were contacted:

Marin Municipal Water District  
Mount Tamalpais State Park  
California Department of Parks and Recreation  
Bay Area Office  
Soil Conservation Service  
California Native Plant Society  
Federal Aviation Administration  
United States Air Force

Copies of the assessment will be sent for review to the above and:

Marin County Planning Department  
American Youth Hostels, Golden Gate Council  
Representative Barbara Boxer  
California Alpine Club  
Tamalpais Conservation Club  
Marin Conservation League  
Tamalpais Runners  
Tourist Club  
Berkeley Hiking Club  
Marin Conservation Corps  
California Conservation Corps  
Sierra Club, Bay Chapter  
Irate Taxpayers of Marin  
Marin Coalition  
Marin Audubon Society  
Mill Valley Public Library  
Marin United Taxpayers  
California Coastal Commission  
GGNRA Citizens' Advisory Commission

A press release announcing the availability of this assessment will be sent to local daily and weekly newspapers.

TABLE I

## QUANTIFICATION OF VISITATION/TRANSPORTATION IMPACTS

(\*at one time/peak day)

		<u>VISITATION/ PARTICIPANTS</u>	<u>BLDGS. USED</u>	<u>PARKING SPACES</u>	<u>VEHICLE TRIPS/DAY (Round Trips)</u>	<u>TIME OF PEAK USE</u>
<u>ALTERNATIVES:</u>						
1)	Youth Work Program	15-40	3-4	3-6	9-18	Weekdays
2)	Youth Hostel	40	1-2	15	30	Summer - Weekends
3)	Educational Center	30-60	2-4	10-20	20-40	Weekdays
	"Asilomar Type" Facility	30-60	2-4	10-20	20-40	Weekdays
4)	Agency Administrative Needs					
	Residents	9-18	3-6	None (Garages)	18-36	Weekdays
	Maintenance Staff	4-10	1		6-15	
	Non-Profit Communications Facility	2-5	1	1-2	2-4	N/A
5)	Commercial Uses					
	Hotel	20-40	2-4	10-20	20-40	Summer - Weekend
	Restaurant	100		35	280	
6)	Restoration to Natural Appearance:					
	Minor Recreational Improvements	15	0	0	0	Summer - Weekends
7)	Restoration to Natural Appearance:					
	Maximum Recreation Opportunities	105	0	30	180	Summer - Weekends

\*With exception of vehicle trips which is figured for entire day/peak times

MILL VALLEY  
AIR FORCE  
STATION

BUILDINGS  
UNDER CONSID.

GENRA AUTH. BOUNDARY

HELIPAD

109

BLVD.

2400

2200

2000

1800

RIDGECREST

F.A.A. 600 CAT 3

TAMMINS JEWEL HOWER  
(SPECIALTY'S GLOVES) SFA  
DITCHED

NORTH  
TO SCALE

of FORMER  
L-VALLEY  
FORCE STATION

MILL VALLEY  
AIR FORCE  
STATION

BUILDINGS  
UNDER CONSID.

RIDGE CREST

GEN. AUTH. BOUNDARY

HELIPAD

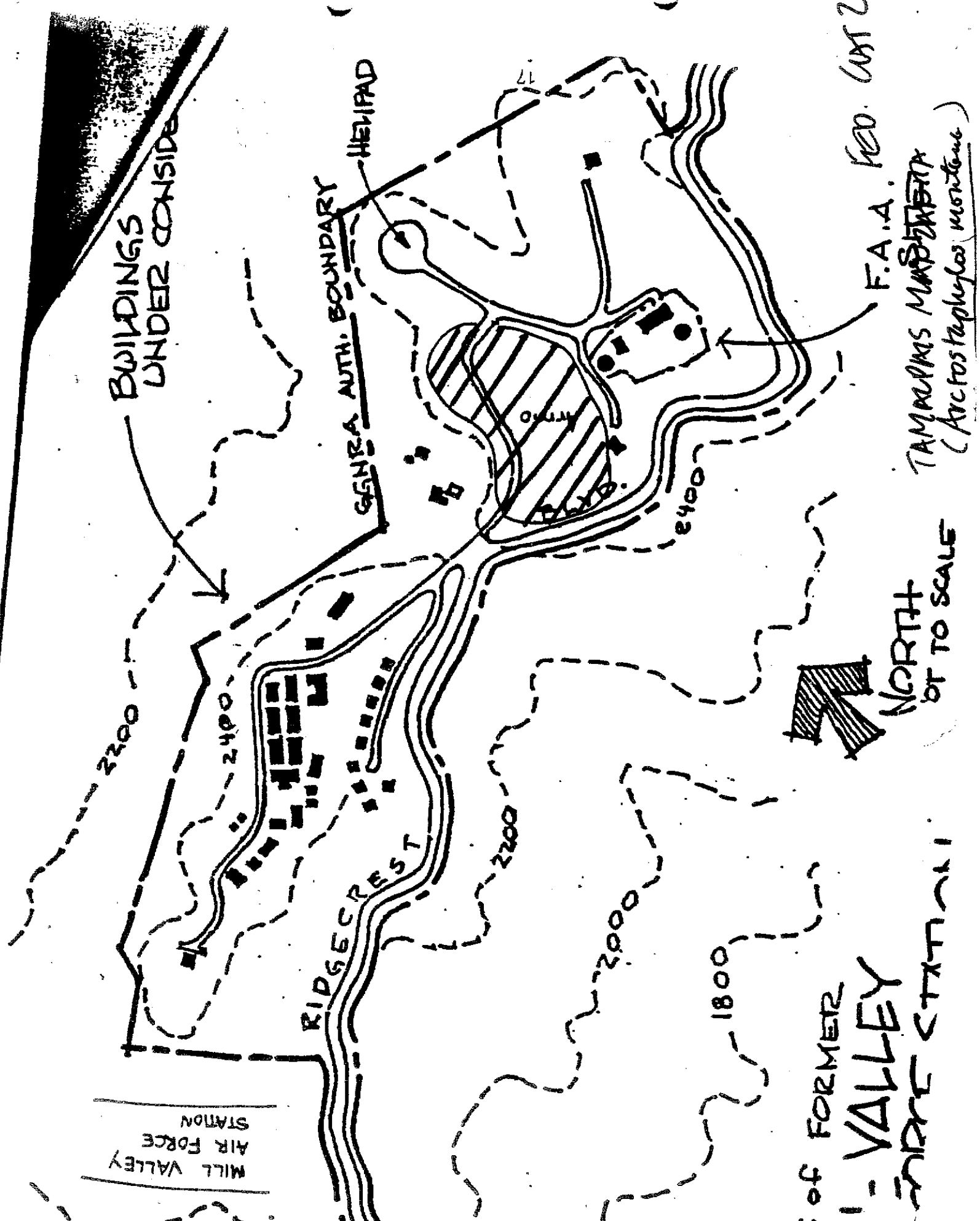
of FORMER

MILL VALLEY

NORTH  
OF TO SCALE

F.A.A. REC. CAT 2.

TAMMUNAS MOUNTAIN  
(Arctostaphylos montana)





AIR FORCE SITE, WEST PEAK OF MT. TAMALPAIS  
Prepared by Wilma Follette, Marin Chapter, CNPS

Marin Co.

May 10, 1984

El. 2400 ft.

<u>SPECIES</u>	<u>COMMON NAME</u>	<u>FAMILY</u>
Achillea borealis	Yarrow	Sunflower
Adenostoma fasciculatum	Chamise	Rose
Agoseris heterophylla	Dandelion	Sunflower
*Aira caryophylla	Silver Hair Grass	Grass
Allium amplexans	Onion	Amaryllis
Allium falcifolium	Onion	Amaryllis
*Anagallis arvensis	Scarlet Pimpernel	Primrose
Arctostaphylos glandulosa	Eastwood Manzanita	Heather
(R&E) Arctostaphylos montana	Tamalpais Manzanita	Heather
Arenaria douglasii	Sandwort	Pink
Aspidotis densa	Serpentine Fern	Fern
Astragalus gambellianus	Loco Weed	Pea
*Avena barbata	Slim Oat	Grass
Baccharis pilularis	Coyote Brush	Sunflower
var. consanguinea		
*Bromus diandrus	Ripgut Grass	Grass
*Bromus mollis	Soft Chess	Grass
*Bromus rubens	Foxtail Chess	Grass
*Bromus tectorum	Downey Chess	Grass
(R) Calamagrostis ophitidis	Serpentine Reedgrass	Grass
Calandrinia ciliata	Red Maids	Purslane
var. menziesii		
(R) Calochortus umbellatus	Sego Lily	Lily
Calystegia malacophyllus	Morning-glory	Morning-glory
Calystegia occidentalis	Morning-glory	Morning-glory
Cardamine californica	Milk-maids	Mustard
*Carduus pycnocephalus	Italian Thistle	Sunflower
Ceanothus foliosus	Indigo Brush	Buckthorn
Ceanothus ramulosus	Blue Buck-brush	Buckthorn
Ceanothus sorediatus	Jim Brush	Buckthorn
*Centaurea calcitrapa	Purple Starthistle	Sunflower
*Centaurea solstitiales	Barnabys-thistle	Sunflower
*Cerastium viscosum	Mouse-ear Chickweed	Pink
Chlorogalum pomeridianum	Soap Plant	Lily
Chrysopsis chrysophylla	Chinquapin	Beech
Clarkia gracilis		Evening Primrose
Claytonia perfoliata	Miners Lettuce	Purslane
Claytonia spathulata		Purslane
Collomia heterophylla		Phlox
Cupressus sargentii	Sargent Cypress	Cypress
Cynoglossum grande	Hound's Tongue	Borage
*Cynosurus echinatus	Dogtail	Grass
Cyperus eragrostis		Sedge
Danthonia californica	Oatgrass	Grass
Delphinium nudicaule	Red Larkspur	Buttercup
Dichondra donnelliana		Morning-glory
*Digitaria sanguinalis	Crabgrass	Grass

Dodecatheon hendersonii	Shooting Star	Primrose
ssp. cruciatum		
Dryopteris arguta	Wood Fern	Fern
Dudleya cymosa	Rock Lettuce	Stone-crop
Elymus glaucus	Blue Wild-rye	Grass
Epilobium adenocaulon	Willow-herb	Evening-Primrose
var. occidentale		
Epilobium minutum	Willow-herb	Evening-Primrose
Erigeron inornatus	Pine Erigeron	Sunflower
var. angustatus		
Eriodictyon californicum	Yerba Santa	Waterleaf
Eriogonum nudum	Nude Buckwheat	Buckwheat
Eriophyllum confertiflorum		Sunflower
*Erodium cicutarium	Red-stem Filaree	Geranium
*Erodium moschatum	White-stem Filaree	Geranium
Erysimum capitatum	Wallflower	Mustard
Eschscholzia californica	California Poppy	Poppy
*Festuca arundinacea	Alta Fescue	Grass
Festuca californica	Fescue	Grass
Festuca reflexa	Fescue	Grass
*Filago gallica		Sunflower
Fritillaria lanceolata	Mission Bells	Lily
Galium nuttallii	Bedstraw	Madder
Galium sp.	Bedstraw	Madder
Garrya elliptica	Silk Tassel Bush	Silk Tassel
Geranium sp.		Geranium
Githopsis specularioides		Bellflower
Habenaria unalascensis	Rein-orchis	Orchid
Haplopappus arborescens	Golden Fleece	Sunflower
Heteromeles arbutifolia	Toyon	Rose
Hieracium albiflorum	Hawkweed	Sunflower
*Hordeum leporinum	Farmer's Foxtail	Grass
Hypericum anagalloides	Tinker's Penny	St. John's Wort
(SL) Hypericum concinnum	Gold Wire	St. John's Wort
*Hypochoeris glabra	Smooth Cats-ear	Sunflower
Iris douglasiana	Douglas Iris	Iris
Juncus effusus	Rush	Rush
var. pacificus		
Juncus patens	Rush	Rush
Lasthenia californica	Gold Fields	Sunflower
Lepechinia calycina	Pitcher Sage	Mint
Lithocarpus densiflorus	Tanbark Oak	Beech
*Lolium multiflorum	Italian Ryegrass	Grass
*Lotus corniculatus		Pea
Lotus humistratus		Pea
Lotus micranthus	Hill Lotus	Pea
Lotus scoparius	Deerweed	Pea
Lupinus propinquus	Lupine	Pea
Madia exigua	Tarweed	Sunflower
Madia gracilis	Tarweed	Sunflower
*Medicago polymorpha	Bur Clover	Pea
Melica torreyana	Melic grass	Grass
Microseris douglasii		Sunflower
Microseris linearifolia		Sunflower
Mimulus aurantiacus	Bush Monkey-flower	Figwort

	Mimulus glareosus	Monkeyflower	Figwort
(SL)	Monardella villosa	Pennyroyal	Mint
	Paronychia franciscana		Pink
	Pellaea mucronata	Birdfood Fern	Fern
	Perideridia sp.		Parsley
	Pickeringia montana	Chaparral Pea	Pea
	Pityrogramma triangularis	Goldback Fern	Fern
	Plantago hookeriana	Dwarf Plantain	Plantain
	var. californica		
	*Plantago lanceolata	Ribwort	Plantain
	*Polycarpon tetraphyllum		Pink
	Polygala californica	Milkwort	Milkwort
	Polypodium californicum	California Polypody	Fern
	Polystichum munitum	Western Sword Fern	Fern
	Pseudotsuga menziesii	Douglas Fir	Pine
	Pteridium aquilinum	Bracken Fern	Fern
	var. pubescens		
	Pterostegia drymarioides		Buckwheat
	Quercus chrysolepis	Canyon Live Oak	Beech
	Quercus durata	Leather Oak	Beech
	var. frutescens		
	Quercus wislizeni	Chaparral Oak	Beech
	Rhamnus californica	Coffee Berry	Buckthorn
	Rosa spithamea	Sonoma Rose	Rose
	var. sonomensis		
	*Rumex acetosella	Sheep Sorrel	Buckwheat
	Sanicula tuberosa	Turkey Pea	Parsley
	Senecio aronicoides	Butterweed	Sunflower
	*Senecio vulgaris	Common Groundsel	Sunflower
	*Sherardia arvensis	Field Madder	Madder
	*Silene gallica	Windmill Pink	Pink
	Sisyrinchium bellum	Blue-eyed Grass	Iris
	Sitanion jubatum	Squirreltail	Grass
	Soliva sp.		Sunflower
	Sonchus asper	Sow-thistle	Sunflower
	*Spergularia rubra	Sand Spurrey	Pink
	Stachys rigida	Hedge Nettle	Mint
	Stipa lepida	Needlegrass	Grass
	Stipa pulchra	Purple Needlegrass	Grass
(R&E)	Streptanthus glandulosus	Tamalpais Jewel-flower	Mustard
	Symphoricarpos mollis	Snowberry	Honeysuckle
	Tauschia kelloggii		Parsley
	Thermopsis macrophylla	False Lupine	Pea
	Toxicodendron diversilobum	Poison Oak	Sumac
	*Trifolium dubium	Shamrock	Pea
	Trifolium microcephalum	Maiden Clover	Pea
	Trifolium tridentatum	Tomcat Clover	Pea
	Umbellularia californica	California Bay	Laurel
	Vicia sp.	Vetch	Pea
	Viola pedunculata	Johnny-Jump-Up	Violet
	*Vulpia sp.		Grass
	Zigadenus fremontii	Star Lily	Lily

\* - introduced

R - rare

R&E - rare and endangered

SL - southern limit