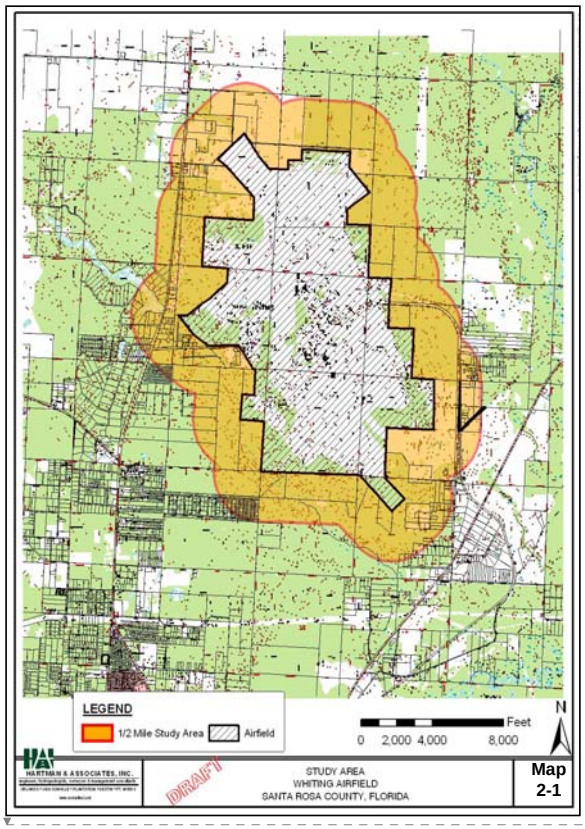
CHAPTER 2
NAS WHITING FIELD JLUS



Executive Summary

Primary Airfield Use	Naval aviation training facility since 1943, instructing student aviators in primary and intermediate phases of fixed-wing aviation, and in advanced phases of helicopter training.
Airfield Facilities	Two separate and unique airports with control towers and lighted runways; North Field used for fixed-wing aircraft; South Field used for helicopters and instrument approaches.
Time of Use	Day and night use; year-round
Other Uses	Flight instruction from classroom and simulators; aircraft maintenance and ground units supporting NAS Whiting Field and 14 Navy Outlying Landing Fields (NOLFs).
Planned Uses	Continuation of flight training with transition into JPATS program; also Navy's unmanned aerial vehicle flight training school

Study Area Population	**Current**	**Potential**
	427	8,915

Study Area Issues and General Recommendations

Responsible for 10% of the USN/USMC flight hours world wide and a substantial portion of flight training for the US Navy, NAS Whiting Field assumes a vital role in this nation's defense program, and also represents a major participant in Santa Rosa County's local economy and job base.

Recommendations: Apply multiple approaches to growth management including density reduction, transfer of development rights, cluster development, and strategic land acquisition.

Chapter Contents

Note: with exception to Map 2-1 above, maps referenced in this chapter are placed in Appendix 2A located in the back of this chapter.

Deleted: ¶
¶

Deleted: ¶

SECTION 1
INTRODUCTION AND STUDY BACKGROUND

1.1 Study Purpose

In 1973, the United States Department of Defense (DoD) created the Air Installation Compatible Use Zones (AICUZ) program to encourage local governments to manage growth and development in a manner compatible with present and future military installation operations. The program evaluates existing land uses, identifies potential conflicts between growth and military operations, and offers recommendations for compatible growth patterns. Program emphasis is placed on areas most susceptible to noise impacts and safety concerns associated with military operations. To accomplish this program's objective, noise contours and accident potential zones have been established for all military airfields, including Naval Air Station (NAS) Whiting Field and its fourteen NOLFs.

The Commanding Officer (CO) at NAS Whiting Field recognizes that any successful plan to realize compatible growth near airfields requires involvement by the Santa Rosa County Board of County Commissioners (BCC). While NAS Whiting Field leadership can manage military activity at its airfields, the BCC holds authority to manage land use and development on properties outside of military installations and within unincorporated Santa Rosa County. By working together, mutually acceptable growth management strategies can be developed to avoid conflicts between NAS Whiting Field's mission and Santa Rosa County's desired growth patterns and quality of life.

This joint endeavor involves a two-step process. Once a joint land use study (JLUS) has identified compatible land uses and growth management guidelines, the second step will involve formation of specific development regulations and land management implementation programs. This report addresses the first step -- a joint land use study. All together, a JLUS has been prepared for seven US Navy (USN) airfields (North and South combined) and the County Airport, Peter Prince Field. These eight separate and distinct studies comprise the Santa Rosa JLUS. The seven USN installations evaluated in the Santa Rosa JLUS are NAS Whiting Field (North and South) and six of its fourteen NOLFs; Choctaw, Harold, Holley, Pace, Santa Rosa, and Spencer. This chapter addresses both airports at NAS Whiting Field – North and South.

1.2 NAS Whiting Field Location

Located approximately three miles north of Milton, NAS Whiting Field is supported by fourteen NOLFs spread throughout Santa Rosa County, Escambia County and the counties of Baldwin, Conecuh and Escambia in southern Alabama. Major roads near NAS Whiting Field include State Road 87 and County Road 191. General location of NAS Whiting Field as well as its proximity to other airfields in Santa Rosa County is shown in Map 1-1 of Chapter 1. NAS Whiting Field's location places it about eight miles northwest of the Eglin Air Force Base airspace and 27 miles northeast of NAS Pensacola.

The US Navy organizes air space into operation "areas" within the Federal Aviation Administration (FAA) designated Alert Area 292. NAS Whiting Field is located in Area 3H of Alert Area 292. The boundaries of Alert Area 292 and Area 3H appear in Map 2-2. Helicopters are generally allocated to Area 3H and fixed-wing aircraft to Area 3.

1.3 Whiting Field Study Area

The study area boundaries for NAS Whiting Field JLUS (hereafter Whiting Field Study Area) are illustrated in Map 2-1, which is located on the first page of this chapter. The Whiting Field Study Area boundary extends one-half mile from the airfield's perimeter, covering an area approximately 12 square miles. All property within the Whiting Field Study Area is situated in unincorporated Santa Rosa County and not within any municipal boundaries.

The Whiting Field Study Area includes all areas adjacent to military property that are designated as Accident Potential Zones or located within Noise Level Contours, both of which were established by the existing Air Installation Compatibility Use Zones (AICUZ) study for NAS Whiting Field. To take into consideration lands outside the AICUZ that may also be affected by military operations, study boundaries were expanded to encompass non-military lands one-half miles from the airfield. Local flight patterns for fixed-wing and helicopters rely on airspace within one-half mile to navigate into position and altitude when entering the airfield for landing or when engaging departure flight paths to leave NAS Whiting Field for other airfield destinations.

The NAS Whiting Field JLUS presented in the chapter emphasizes evaluation of non-military lands within its study area boundaries. The Whiting Field Study area covers 7,919 acres, or approximately 12 square miles. Non-military lands – the area where evaluation will be emphasized in the NAS Whiting Field JLUS -- account for 4,450 acres, or 56% of the entire study area. Acreage defining the boundaries of the Whiting Field Study Area is shown in Table 2-1 according to study area components explained below. Note that acreage for the total study area will not equal a summation of its components. This anomaly occurs because some areas in the Noise Level Zone overlap with the Accident Potential Zone, creating a double counting of acreage if sub-categories are added together. Also note that both current and proposed Noise Level Zones are evaluated in this chapter. Noise contours for NAS Whiting Field are currently under evaluation by USN community planners.

Table 2-1
Study Area Components
Whiting Field Study Area

Component	Acres
Total Study Area (Map 2-1)	*7,919*
Non-Military Property	*4,450*
Noise Level Zone (Current)	514
Noise Level Zone (Proposed)	3.528
Accident Potential Zone	973
Clear Zone "A"	39
APZ-I "B"	389
APZ-II "C"	545
Military	*3,470*

A. **Clear Zones (Class A)** Aviation history has shown that property along primary flight paths and immediately beyond the ends of runway have a higher potential exposure to aircraft accidents than areas further out from an airfield or flight path. Created as part of the AICUZ program, Clear Zones are intended to delineate areas exposed to higher risk. Intended to serve as guidelines only, Clear Zones function to heighten the general public's awareness to areas where higher risks occur. The Clear Zone is an area that possesses a high potential for accidents and is located just past the end of a runway. It has been labeled "A" to enable easier depiction on maps.

B. **Accident Potential Zones. (CLASS A)** Beyond the Clear Zone is an area along the flight path that possesses a significant potential for accidents. Created as part of the AICUZ program, Accident Potential Zones (APZ) are intended to delineate areas exposed to higher risk. Intended to serve as guidelines only, APZs function to heighten the general public's awareness to areas where higher risks occur. They also help local governments to identify where to direct zoning regulations and land use standards designed to reduce potential conflicts between airfield operations and civilian populations.

Accident Potential Zones (APZ's) are divided into two (2) designations based on accident potential. The zone closest to the Clear Zone is referred to as APZ-I. It has been labeled "B". APZ-II (labeled "C") is typically furthest from the runway in terms of the flight path and it has a measurable potential for accidents. Approach or departure flight paths will turn into or away from a runway. Therefore, APZ's I and II may curve away from the end of a runway as well has leading straight out. Based on designated airport flight paths for approach and departure, some areas in a APZ-II zone may actually be closer to a runway than portion of the APZ-I.

Fixed-wing aircraft and helicopters takeoff or land into the wind. Landing or takeoff against the wind provides optimal aerodynamic conditions to lift aircraft and gain altitude. Flight paths leading toward an airfield, called an entry pattern, frequently enter from a course not aligned with the upwind runway or landing approach. In such situations, aircraft must fly an established local pattern until aligned with the upwind direction or the runway best aligned with the upwind direction. Likewise, takeoff direction does not always align with the intended departure direction, resulting in left or right turns shortly after takeoff in order to enter the departure pattern. APZ boundaries will bend to acknowledge left and right turning movements used to align with departure or landing patterns. Most APZ-I "B" and APZ-II "C" boundaries curve for this reason.

Landing and takeoff patterns differ between helicopters and fixed-wing aircraft because of their separate aerodynamic requirements. Having a greater dependence on wind direction, helicopters takeoff and landing facing oncoming wind. Flight paths for helicopters will vary with changes in the direction of the wind. APZ boundaries for helicopters may be aligned with prevailing or normal wind conditions. Fixed-wing aircraft are limited to a runways course, making flight path more predicate. Boundaries and size of APZ vary from airport to airport to address field conditions as well as unique and separate needs differentiating helicopters and fixed-wing aircraft. At NAS Whiting Field, most APZ boundaries and designations (i.e., APZ-I "B" and APZ-II "C") established for the south airfield were specifically designed for helicopter needs. APZ's for runway 32 were designed for fixed wing due to the number of Radar approaches. APZ boundaries and designations for the north airfield are attributed to flight characteristics and historical

experiences for fixed-wing aircraft. The clear zones for individual runways at south were developed using fixed wing criteria for a Class A airfield.

Operating procedures established by Commanding Officers direct all aircraft to arrive or leave the north or south airfield according to pre-determined flight patterns and rules.

C. **Noise Level Zone.** In addition to addressing safety concerns, the AICUZ also addresses noise exposure to non-military lands near military installations. Noise exposure can create conflicts with public welfare and quality of life for those living or working near airfields. For the NAS Whiting Field JLUS, noise level contours extending from the airfield are incrementally measured from the highest typical decibel (dB) generated within a military installation to 50 dB within non-military property. Within the Whiting Field Study Area, non-military lands inside the 50 db contour are referred to as the Noise Zone.

Similar to aircraft operational conditions described above for APZs, helicopters must face oncoming wind to create optimal conditions for safe take-off and landing. Subject to aerodynamic wind effects, landing and take-off flight paths for helicopters experience wider variations than flight paths for fixed-wing aircraft, which must aligned with the runway course. Helicopter approach and departure to and from an airfield follow pre-determined flight paths referred to as the "normal flight path." Deviation from a normal helicopter flight path occurs to take advantage of safer flight paths created by wind direction or to accommodate air traffic. Noise patterns for helicopters can vary for the dynamic conditions stated. A Noise Zone for helicopters must allow for more flexibility than that for fixed-wing aircraft because of its unique aerodynamic and safety requirements.

Noise contours are delineated by computerized simulation of aircraft activity at each installation and integrate operational data specific to the types of aircraft using a particular airfield. The methodology used to identify noise counters takes into consideration flight paths, frequency and time of operation, as well as the type and mix of aircraft.

SECTION 2
AIRFIELD OPERATIONS AND NAVY GROWTH OBJECTIVES

This section inventories and analyzes current air and ground operations performed at NAS Whiting Field. Any current conflicts with military operations, whether air or ground, are also identified and described.

2.1 Airfield Use and Mission – Current and Future

NAS Whiting Field's mission is to provide service and material supporting the training of U.S. Navy, Marine, Air Force, Coast Guard, and international student aviators in the primary and intermediate phases of fixed-wing training and in the advanced phases of helicopter training.

NAS Whiting Field has performed flight-training since its opening in July, 1943 to meet pilot training demands of World War II. Sixty years later NAS Whiting Field's primary purpose remains to facilitate pilot training. This mission has broadened over the last few years to encompass advanced flight technologies demonstrated by the successful military application of unmanned aerial vehicles (UAV). The Navy's home for its UAV school is at NAS Whiting Field and NOLF Choctaw.

NAS Whiting Field will play an important role in the Joint Primary Aircraft Training System (JPATS), which includes the T-6A aircraft, Ground Based Training Systems (GBTS), Computer Aided Instruction (CAI), Courseware and logistic support designed to meet USN and USAF aircrew requirements. JPATS emerged from a need to update current aircraft and supporting ground-training facilities utilized by the Navy and Air Force. Age of the current training system covers more than two decades. The principal JPATS mission is to train entry-level USN/USAF student pilots in primary flying skills to a level of proficiency enabling them to transition into an advanced pilot training path leading to qualification as military pilots, navigators, and Naval Flight Officers. JPATS components consists of the T-6A Texan II turboprop aircraft, simulators and associated ground-based training devices, a training integration management system, instructional courseware, and contractor logistics support.

Implementation of JPATS will result in the eventual replacement of the USN T-34C aircraft and its supporting ground-based training systems (GBTS) currently applied at NAS Whiting Field. While the T-6A aircraft and the GBTS equipment will be placed at NAS Whiting Field, Whiting Field will primarily serve as the home base for the aircraft in order that they may use the NOLFs to practice touch and go landings and other flight training for aviation students

Serving as the home field for flight training activities, NAS Whiting Field supports classroom and flight simulator instructions, administration and management for flight training and related programs, and maintenance of equipment and aircraft. Most flight training activities using actual aircraft occurs at the NOLFs or in airspace within or surrounding Alert Area 292. Only 11% of total flight operations occur at NAS Whiting Field. Aircraft are based at NAS Whiting Field when not in use. Training Air Wing FIVE serves as the Navy's command unit stationed at NAS Whiting Field. Nineteen independent contracts also provide services to NAS Whiting Field, primarily in support of aircraft maintenance, simulator instruction and maintenance, and base building and equipment maintenance. Primary Navy programs and activities (tenants), both flight and support related, are listed below:

- Training Wing FIVE, Commanding Element for five squadrons
- Naval Training Meteorology & Oceanography Detachment
- Naval Air Warfare Center Training Systems Division
- Marine Aviation Training Support Group Administrative Detachment
- Chief of Naval Air Training Detachment
- Naval Criminal Investigative Services
- Naval Air Maintenance Training Support Group Detachment
- Unmanned Aerial Vehicle School
- Aviation Maintenance Officer School
- Medical and Dental Clinics
- Defense Commissary Agency (DECA)
- Naval Reserve Detachment 0167

In 2003, the total number of military, civilian contractor, and private industry personnel or students reached 2,875.

The Florida Division of Forestry also stations firefighting helicopters at NAS Whiting Field.

2.2 Facilities and Aircraft

NAS Whiting Field provides two separate airports with control towers and 186 buildings. Each airfield has two lighted runways 6,000 feet long by 200 feet wide. Despite similar runway layout, the north airfield is primarily allocated for fixed-wing aircraft while the south field accommodates helicopter operations. South Field is used by fixed-wing aircraft for transient aircraft, instrument approaches and weekend cross-country recoveries. Both airfields support day and night operations.

NAS Whiting Field North is capable of supporting day or night prop and turbo-prop fixed-wing aircraft. The two runways are paved and will serve as the home field for the JPATS aircraft, the T-6A Texan II. NAS Whiting Field South serves as the primary recovery airport for both the north and south airfields. Approach lights were recently installed on the runway 32 approach at South airfield. Each airfield has its own control tower. Emergency response facilities and equipment are available to serve both airports as well as the NOLFs.

Buildings at NAS Whiting Field support flight training instructions, simulator training, military installation administration, maintenance for aircraft and equipment, student housing, and other uses. Buildings support the training programs and military units listed under sub-section 2.1.

NAS Whiting Field is supported by fourteen NOLFs -- nine primarily used for fixed-wing flight training and five primarily used for helicopter (rotary-wing) flight training. The Santa Rosa County JLUS includes six of these fourteen NOLFs.

For fixed-wing aircraft, the primary training airplane is the Raytheon/Beech T-34C Mentor, which has a turboprop engine. The T-34C eventually will be replaced by the Raytheon T-6A Texan II turboprop. The primary training aircraft used for primary and advanced helicopter flight training is the TH-57 Sea

Ranger. Appendix 2C provides illustrations of the training aircraft and other aircraft using NAS Whiting Field over the past two years.

The US Navy has a capital improvement program to schedule and budget infrastructure and equipment at its military installations and facilities. This program is known as the Military Construction Program, or MILCON. In preparation for the JPATS program, MILCON includes several military construction projects to upgrade NAS Whiting Field and a number of its NOLFs. Additionally, several projects are on the Special Project listing that will enhance the airfields. Reconstruction of the south field parking aprons is number one on the list and will commence in the next few months. All runways for both the north and south airfields at NAS Whiting Field were resurfaced in recent years.

2.3 Airfield Operations and Procedures

The Commanding Officer of NAS Whiting Field administers policy consistent with all Federal Aviation Administration (FAA) Regulations and the Office of the Chief of Naval Operations Instructions (OPNAVINST's) procedures regarding safe aviation operations, flight altitudes, and noise abatement. Commanding Officers are sensitive to the effects of noise at all NAS Whiting Field airfields as well as its NOLFs, including impacts on surrounding communities. When appropriate, actions are taken to reduce aircraft noise. Operating procedures are in place for fixed-wing and helicopter aircraft to reduce and avoid noise impacts to non-military lands as well as to promote public safety. To this endeavor, operating procedures and policy have been established to address specific circumstances associated with conditions unique to each airfield, including the character of the adjacent community.

A. **Operation Areas and Flight Planning** West Florida and South Alabama are home to numerous USN and USAF air bases generating substantial air traffic. The US Navy organizes air space into "areas." NAS Whiting Field is located in Area 3H of Alert Area 292. The boundaries of Alert Area 292 and Area 3H appear in Map 2-2. NAS Whiting Field is responsible for managing airspace in Alert Area 292. To implement safety objectives, officers and personnel at NAS Whiting Field manage aircraft flight patterns, altitudes, and traffic volumes within its control areas through standard operating procedures and authorized flight plans. All flights must be authorized by a Commanding Officer.

   Student aviators follow trainings programs set forth as part of an approved curriculum. Flight training follows specific flight plans.

B. **Flight Patterns.** While Whiting Field supports helicopter and fixed-wing flight training, the field and surrounding air space in Area 3H are allocated for helicopter training activities. Standard operating procedures and flight patterns have been established for Training Wing-5 fixed-wing aircraft and helicopter operations. Current standard operating procedures are based on the T-34C aircraft requirements. NAS Whiting Field will evaluate, and if necessary, revise standard operating procedures to address needs for the JPATS and T-6A aircraft.

   1) **Fixed-Wing Flight Patterns**. Separate flight patterns are established for aircraft entering and departing NAS Whiting Field airspace. Fixed-wing aircraft follow designated airspace channels when flying between NOLFs and NAS Whiting Field. Once in the vicinity of NAS

Whiting Field, fixed-wing aircraft follow a designated local pattern to align with the assigned runway.

2) **Helicopter Flight Patterns**. Helicopters departure patterns occur at the southeast and west/ southwest corners of NAS Whiting Field South. Figure 2-3 illustrates normal departure patterns. Local patterns conducted by helicopters at the south airfield are illustrated in Figure 2-4. Helicopters approach NAS Whiting Field following designated air channels. Helicopters conduct both night and day operations.

2.3 Current Air Operation Conflicts

Air and ground operations conducted at NAS Whiting Field impact non-military lands within the Whiting Field Study Area. Entry, departure, and local flight patterns rely on airspace above adjacent lands. This situation is demonstrated by the extent of APZ and Noise Zone falling on non-military lands. Conflicts appear to be more apparent to the west, south, and southeast of NAS Whiting. Most existing residential developments in the study area are concentrated in these areas.

SECTION 3
COMMUNITY PROFILE AND DEVELOPMENT CHARACTERISTICS

3.1 Study Area Profile

Within the Santa Rosa Study Area, military property comprising NAS Whiting Field amounts to 3,470 acres, or approximately 44% of the entire study area. Non-military lands cover 4,450 acres of the total 7,919 acres comprising the Whiting Field Study Area. Nearly 81% of non-military lands are used for agriculture or silviculture or occur as vacant property. Table 2-2 provides a summary profile for existing land uses within the non-military lands within the Santa Rosa Study Area. Map 2-3 shows existing land uses appearing in the Whiting Field Study Area, Clear Zone, Accident Potential Zone, and the Noise Zone.

Table 2-2
Existing Land Use Profile by Acreage
Whiting Field Study Area

Existing Land Use	Study Area[1]		Clear Zone/Accident Potential Zone				Noise Zone[3]
	Acres	Percent	A	B	C	Total	
Agriculture	2,131	47.9%	5	185	314	509	1,412
Vacant	1,011	22.7%	34	34	28	97	586
Silviculture	456	10.2%	0	91	46	137	615
Agriculture, Homestead	293	6.6%	0	39	63	103	377
Single Family Residential	264	5.9%	0	32	33	65	254
Right-of-Way	120	2.7%	a	6	17	24	123
Industrial	80	1.8%	0	a	32	33	80
Publicly Owned Property	43	1.0%	0	0	0	0	28
Uncategorized	22	0.5%	0	0	3	3	24
Multi-Family Residential	22	0.5%	0	0	0	0	17
Institutional	8	0.2%	0	1	3	4	10
Commercial/Office	0.3	0.01%	0	0	a	a	a
Study Area	4,450	100%	39	389	545	973	3,528

Source: Santa Rosa County, 2003.
[1] Land uses and acreages appearing in the table are for non-military lands within the Whiting Field Study Area.
[2] Includes single family, townhouses, or condominiums
[3] Acreage relates to the proposed Noise Zone, which covers a larger ground area than the current Noise Zone.
a -- Less than one acre.

An estimated 182 residential units occur within the Santa Rosa Study Area. All but approximately 12 to 15 residential homes are located west or south of NAS Whiting Field. The industrial land use appearing on Map 2-3 is actually used as a borrow pit or similar related surface excavation. Santa Rosa County owns 30 acres adjacent to the east airfield boundary. Other than a warehouse building covering a floor area of about 10,000 sq. ft. (another 10,000 sq. ft. is currently under construction), no commercial or industrial buildings currently are located within the study area. The warehouse is

currently expanding and is located along the entry road to the main gate of NAS Whiting Field. A manufacturer of optical lens for military use is developing a manufacturing site across the road from the warehouses. A small cemetery is located at the southeast corner of the study area. The State of Florida owns an abandoned rail line that is now the Blackwater Heritage Trail (hiking, walking, horseback, bicycle trail) that passes through the southeast corner of the study area as well. No schools or institutional uses constituting public assembly occur within the study area, with exception to the previous mentioned cemetery.

Land subdivision surrounding NAS Whiting Field predominantly exhibits tracts exceeding 40 acres. In the southeast, west, and northwest portions of the study area, some lands have been subdivided into lots five acres or less in area. However, the cumulative area of these parcels is small compared to the overall boundaries of the study area. Except for a parcel owned by the County and the regional trail owned by the State, few parcels outside the military installation are owned by a government agency. Map 2-4 illustrates the distribution of land according to parcel size.

The predominant land cover surrounding the airfield is forested land or pasture. General land use coverage for the Whiting Field Study Area, as delineated by the Northwest Florida Water Management District, is illustrated in Map 2-5. In 1996-1997 FNAI conducted a survey to identify the endangered, threatened, and rare vertebrate and plants species occurring at NAS Whiting Field and all but one of its NOLFs. Rare plants documented at NAS Whiting Field site the spoon-leaf sundew, Florida anise, Coville's rush, primrose-flowered butterwort, Rose pogonia, and the whitetop pitcher plant. FNAI also observed rare vertebrates consisting of gopher tortoise, eastern diamond back rattlesnake, Henslow's sparrow, snowy egret, great egret, and the little blue heron.

Less than 7% of the non-military land is currently used for residential uses. Nearly 93% of the study area (non-military lands) is assigned an agriculture zoning category.

3.2 Current Housing and Population

In 2003, residential development only comprises 182 dwellings, most of which are located western or southern areas of the Whiting Field Study Area. Current population is estimated at 427 persons. Tables 2-3 and 2-4 summarize population levels and the number of housing units by study area location and dwelling type.

Population and housing estimates were determined by comparing land use records from the Santa Rosa County Property Appraiser's Office with statistical data from the 2000 U.S. Census. Statistical data pertaining to the average number of persons per household for Santa Rosa County were applied to the number of estimated occupied housing units. Occupancy rates for Santa Rosa County were applied to the total number of residential units documented in the Whiting Field Study Area to obtain occupied housing unit figures.

Table 2-3
Existing Housing Unit Profile
Whiting Field Study Area

Residential Type	Housing Units					
	Study Area	Clear Zone/Accident Potential Zone				Noise Zone[1]
		A	B	C	Total	
Single Family	100	0	7	10	17	201
Mobile Home	69	0	3	13	16	31
Multiple Family	13	0	0	0	0	2
Total	182	0	10	23	33	234

[1]Acreage represents proposed Noise Zone, which covers a larger ground area than the current Noise Zone

Table 2-4
Existing Population
Whiting Field Study Area

Residential Type	Population					
	Study Area	Clear Zone/Accident Potential Zone				Noise Zone[1]
		A	B	C	Total	
Single Family	235	0	16	23	39	472
Mobile Home	162	0	7	30	37	73
Multiple Family	30	0	0	0	0	5
Total	427	0	23	53	76	550

[1]Acreage represents proposed Noise Zone, which covers a larger ground area than the current Noise Zone

3.3 Clear Zone/Accident Potential Zone (APZ) Profile

A Clear Zone is located at each end of NAS Whiting Field's runways. Within the Whiting Field Study Area, the Clear Zone/Accident Potential Zone covers 1,633 acres. Approximately 60% of the Clear Zone/APZ, or 973 acres, falls on non-military lands. As shown in Table 2-2, 846 acres of non-military lands inside the APZ are currently vacant or used for agriculture or silviculture purposes. Residential development amounts to 33 single family or mobile homes, housing 76 residents. No commercial or institutional structures occur within the APZ, but an excavation site west of the north airfield and a cemetery south of the south airfield do encroach its boundaries.

Land ownership within the APZ in presently established in large tracts typically 35 acres or greater is size. Despite a small number of lots reaching as low as five acres, the predominant land subdivisions character in the APZ is larger tracts used for agriculture or vacant property.

3.4 Noise Zone Profile

NAS Whiting Field has both an existing and proposed Noise Zone. Only considering non-military lands, the proposed Noise Zone covers an area nearly seven times larger than the current Noise Zone.

The proposed Noise Zone impacts 3,528 acres of non-military property compared to 514 acres impacted by the current Noise Zone. Boundaries for the proposed Noise Zone, as shown in Map 2-3, extend beyond the one-half mile study are boundary. For this reason, current population and housing units reach greater numbers than experienced inside the study area boundaries. Current population within the Noise Zone is 549 residents while housing amounts to 234 units.

Existing land uses within the Noise Zone is predominantly agriculture.

3.5 Summary of Existing Airfield and Land Use Conflicts

Currently, 33 dwelling units are located in a parcel within or extending into the APZ. For the Noise Zone, this number is 234 dwelling units. No other significant habitable structures appear to occur on non-military lands within the APZ or Noise Zone.

For NAS Whiting Field North, a few residential homes within the study area do lie in overflight areas for entry and departure flight patterns. These homes are located northwest of the north airfield. For the south airfield, local flight patterns overfly residential areas to the west, south and east vicinities of the study area. Residential units in the southeastern corner of the study area occur within or near the APZ and within the Noise Zone.

SECTION 4
FUTURE DEVELOPMENT POTENTIAL AND ASSESSMENT OF FUTURE LAND USE CONFLICTS

People living or working near a military airfield can expect impacts such noise, smoke, and dust generated from ground and air operations. Quality of life for those living or working near an airfield can be negatively affected when these impacts reach levels creating a nuisance. A potential risk to public safety also exists from the possibility of aircraft crashing at or near an airfield. The extent and frequency of negative impacts affecting people living near airfields will vary based on the type of aircraft, airfield operating hours, airfield ground activities, frequency of flight and ground training activities, and proximity to the airfield. Future residents choosing to live within the Whiting Field Study area will be impacted by flight and ground activities at NAS Whiting Field.

Population growth and certain types of non-residential development, such as commercial retail and professional/medical office uses, are considered to create future potential conflicts between airfield operations and the civilian population's expectations for the enjoyment and use of privately-owned property, particularly a residential home environment. The purpose of this section is to identify potential population and non-residential development that could occur within the Whiting Field Study Area as well as inside Noise Zone and APZ boundaries, the areas where airfield impacts are known to create the greatest potential land use conflicts.

4.1 Housing and Population Methodology

Population and housing estimates were prepared using maximum residential densities allowed by the Santa Rosa County Comprehensive Plan, future land use designations assigned to property within the Whiting Field Study Area, occupancy rates and average persons per household for Santa Rosa County in the 2000 US Census, and Article 11 (Airport Environs) of the Santa Rosa County Land Development Code. Housing and population figures estimated for year 2005 through 2020 are based on an annual growth rate of 3.4%, which is identical to the growth rate applied in the Santa Rosa County Comprehensive Plan to project population through 2020. Population and housing methodology apply a ratio of 2.63 for average number of persons per household and a housing occupancy rate of 89.2%. Both figures were obtained from the US Census 2000 for Santa Rosa County.

For purposes of this study, build-out potential represents development of all land according to its assigned zoning category, as determined by the Santa Rosa County Land Development Code and official zoning map. Article 11 of the County's Land Development Code establishes specific development densities for property located with the APZ or Noise Zone. When Article 11 is applied to the population and housing methodology, the number of homes and population within an APZ or Noise Zone becomes less than that which is otherwise allowed by the Santa Rosa County Comprehensive Plan.

Other factors that were considered to estimate housing and population include environmental characteristics. Few wetlands occur within the Whiting Field Study Area. Soil characteristics, based on the US Soil Conservation Service's most recent Soil Survey for Santa Rosa County, are generally sandy or loam sand. Development potential will likely not be affected be environmental constraints.

Study area evaluation of development potential also involved a review of records for any documented occurrence of endangered or threatened species. Data from the Florida Natural Areas Inventory (FNAI) were obtained and reviewed. No occurrences were presently documented for the Whiting Field Study Area. If any occurrences were identified, as some were for a few NOLFs, Map 2-5 will identify general site locations where an endangered or threatened species was observed. Also, roads and stormwater management facilities must support new development. As part of the methodology for estimating build-out potential, developable land area was reduced by 10% to acknowledge right-of-way and drainage needs. Population and housing estimates could be higher or lower based on land needs to accommodate infrastructure.

Future land use designations and zoning categories assigned to property with the Whiting Field Study Area appear in Maps 2-6 and 2-7, respectively.

4.2 Study Area Development Potential

Currently, an estimated 487 residents live among 182 homes located within the Whiting Field Study Area. Lands assigned an Agriculture zoning category comprise 93% of the non-military lands. Based on lands that could potentially accommodate new development, population in the Whiting Field Study Area has a potential to reach an estimated 8,915 or more. The number of homes could rise to as many as 3,800 or more dwelling units. Tables 2-5 and 2-6, respectively, list the number of homes and their occupants that could potentially locate within the Whiting Field Study Area in the future. Table 2-7 lists acreage according to zoning categories and summarizes methodology utilized to estimate development potential. Future land use designations and zoning categories assigned to non-military property within the study area are illustrated in Maps 2-6 and 2-7.

Nineteen acres within the study area are zoned for highway commercial development. Based on a one-story building with a floor area ratio of .2 (i.e., the floor area would cover 20% of the lot), development potential could result in an estimated 175,000 square feet of commercial or office buildings within the study area.

Table 2-5
Potential Future Population
Whiting Field Study Area

	Year				
Residential Unit	**2005**	**2010**	**2015**	**2020**	**Build-Out Potential**
Single Family[1]	423	491	558	626	8,420
Multiple Family	33	38	43	48	495
Total	456	529	601	674	8,915

[1] Includes mobile homes.

Table 2-6
Potential Future Housing Units
Whiting Field Study Area

Residential Unit	Year 2005	2010	2015	2020	Build-Out Potential
Single Family[1]	178	207	235	264	3,589
Multiple Family	12	14	16	18	211
Total	191	221	252	282	3,800

[1] Includes mobile homes.

Table 2-7
Build-Out Potential for Dwelling Units and Non-Residential Floor Area
Whiting Field Study Area

Zoning Category	Development Density/ Intensity	Acres	Adjusted Zoning Acreage[2]	Dwelling Units	Clear Zone "A" Acreage[3]	APZ-I "B" & APZ-II "C" Acreage[3]	Dwel Uni	
Residential	**Max. U/A[1]**							
Agriculture/Rural Residential (AG)	1/1	4,097	3,218	2,589	39	840		
Agriculture (AG2)	1/15	42	0	0	0	42		
Single Family Residential (R-1)	4/1	56	56	202	0	0		
Mixed Residential Subdivision (R1M)	4/1	10	7	25	0	3		
Medium Density Residential (R2)	6/1	39	39	211	0	0		
Total								
Non-Residential	**FAR[4]**	**Acres**	**Adjusted Zoning Acreage[2]**	**Floor Area** (sq. ft.)		**Acres**	**Flo Ar** (sc	
Commercial Highway	.20 per acre	19	18	156,816	0	1	2(	

[1] Maximum units per acre.
[2] Area within the APZ was subtracted from the total acreage for the zoning category. APZ located on State-owned lands was also not included in tl
[3] Dwelling unit projection based on maximum density of one unit per five acres for APZ-I "B" or APZ-II "C" and no units within Clear Zone, the Airport Environs Ordinance.
[4] For analysis purposes, analysis assumes ground floor coverage equal to 20% of parcel area and one-story building.
[5] Article 11, Santa Rosa County Land Development Code, restricts the type of industrial that can occur within APZ.

4.4 APZ and Noise Zone Development Potential

Based on zoning assigned to lands within the APZ, an estimated 773 homes could be constructed within its boundaries, housing an estimated future population of 1,813 residents. Based on commercially zoned property, building floor area could likely exceed 20,000 square feet. Table 2-7 lists potential population and housing that could occur if all lands within the APZ.

For a build-out situation, the proposed Noise Zone could support a population of 667 and 284 dwelling units. Based on current lands assigned a commercial land use designation, an estimate 68,215 square feet or more of building floor space could be developed.

4.5 Other Development Issues

Boundaries for NAS Whiting Field do not possess uniform and flush edges as most of its NOLFs. Its meandering boundaries create more potential for conflicts with future development adjacent or very near airfield boundaries because some properties can be bordered on two sides by airfield boundaries. The serpentine perimeter also contributes to the confluence of APZ boundaries in non-military property north of NAS Whiting Field.

The southern perimeter of the study area, particularly the southeast corner, is close to County Road 191. Also, the west side of the study area is accessible to SR 87. Access to regional roadways will likely bring development pressures to these areas sooner than northern and northwestern portions of the study area.

Population levels estimated for build-out conditions shown above could be expected to generate market demand for commercial retail and services. Such demand could lead to development pressures demanding modification to currently established zoning and future land use inside the Whiting Field Study Area.

SECTION 5
STUDY RECOMMENDATIONS

5.1 Density Reduction and Airfield Compatibility

A. **Findings.** NAS Whiting Field is the most critical component of the US Navy's flight training program located in Santa Rosa County. Its role supporting the Nation's defense and its contribution towards Santa Rosa County's local economic and employment bases justify an effective growth management plan to protect airfield operations from future additional conflicts with adjacent development. Such conflicts could jeopardize efficiency and effectiveness of NAS Whiting Field's mission.

Approximately 93% of non-military land in the study area is assigned an agriculture land use and zoning category. Development densities allowed by the agricultural zoning and land use categories could promote large lot residential subdivisions providing one-acre typical lots. Development at this scale is too intensive to promote compatibility with fixed-wing and helicopter operations at NAS Whiting Field, particularly since the advent of the JPATS program is expected to increase flight activities.

B. **Recommendation.** The maximum residential density within the Agriculture (AG) zoning classification should be reduced to accommodate lower density residential development. Either a new agriculture future land use designation should be established or an overlay district should be assigned to lands within the Whiting Field Study Area. In either case, the maximum residential density would be limited to one unit per five acres. However, as explained under Recommendation 5.2 and 5.3 below, a residential density of one unit per acre would be acceptable if residential homes are clustered away from the airfield perimeter or Accident Potential Zones.

5.2 The Fifty-Percent Line

A. **Findings**. NAS Whiting Field's perimeter is surrounded by large tracts typically greater than 35 acres. The physical size of these lots allows for residential development that could occur on the parcel's half closest to the airfield to be clustered onto the parcel half furthest from the airfield. The line splitting the property is generally referred to as the "Fifty Percent Line." The undeveloped half of the property could be retained for agricultural or silviculture uses. Generally, this area is delineated by the red dashed line in Map 2-8. Some flexibility may need to occur with the placement of the line dividing portions of a parcel into equal open space areas and development areas. Such flexibility is also necessary to take into consideration location of Accident Potential Zones, Noise Zones, or other concerns raised by NAS Whiting Field.

Recommendation 5.1 above suggests that areas zoned Agriculture within the Whiting Field Study Area should have a maximum density of one unit per five acres to establish compatible residential densities and population levels near the airfield. As an incentive to encourage clustering residential development away from the north or south airfields at NAS Whiting Field, land owners of agriculturally zoned property could retain the existing density of one unit per acre if fifty-percent of the land – the parcel half nearest the airfield -- is dedicated to open space or agriculture uses.

Moving potential residential development from half the parcel on to its other half would result in a maximum density of two residential units per acre on portions of the parcel furthest from the airfield while no development could occur in the portion nearest the airfield.

B. **Recommendations.** The County should establish an overlay district that requires parcels zoned Agriculture and which also abut NAS Whiting Field to cluster or move potential residential development away from the airfield boundary, Clear Zone/APZ boundaries, or Noise Zone. If the parcel half closest to the airfield is retained as open space or placed under an agriculture easement, a density bonus should be granted to the parcel half furthest from the airfield. By clustering potential residential development for an entire parcel onto the half furthest from the airfield, a property owner would achieve an overall maximum density of one unit per acre, which is the same maximum residential density allowed under the Agriculture zoning category.

A small number of agriculturally zoned properties abutting the airfield boundaries are too small to make clustering a practical planning technique. For such parcels, clustering potential residential development away from the airfield would not achieve significant benefits towards limiting encroachment. These smaller parcels, generally less than 35 acres in size, should be placed on a schedule for acquisition by the County or NAS Whiting Field. Perhaps two or three parcels would have difficulty applying the Fifty-percent Line approach.

Map 2-8 identifies the areas potentially subject to this recommendation, as denoted by the R1 symbol.

5.3 Cluster Residential Homes Away from Airfield and Study Area

A. **Findings.** Several large tracts straddle the Whiting Field Study Area. Sufficient land area exists on the portion of the parcel furthest from the airfield. Residential development on parcels straddling the study area boundary would be required to move residential homes currently allowed within the study area to portions of the same parcel located outside the study area boundary. In most cases, applicable properties are zoned under the Agriculture category, which allows a maximum residential density of one unit per acre. Areas likely subject to this recommendation are delineated with a blue dashed line in Map 2-8. Other areas along the study area boundary may also qualify for inclusion for this growth management approach after a more detailed parcel-by-parcel evaluation is conducted.

B. **Recommendations.** The County should establish an overlay zone or comprehensive plan policies that require fringe parcels to cluster development outside the study area but within the same parcel. Map 2-8 identifies potential areas where this application could apply. The symbol “R2” denotes these areas as well.

5.4 Land Acquisition and Economic Development.

A. **Findings.** The Santa Rosa County Economic Development Council has indicated that a demand is emerging in northwest Florida for available industrial or commerce sites accessible to airfields by aviation related industries. Properties adjacent to the southeast corner of NAS Whiting Field

appear to be a logical location for an aviation technology and industrial park because of convenient accessibility to NAS Whiting Field and to Munson Highway (County Road 191).

A need for industrial land adjacent to NAS Whiting Field is likely supported by the introduction of new programs at NAS Whiting Field. The JPATS program will introduce new aircraft and supporting ground technology to NAS Whiting Field. The US Navy's new home for its unmanned aerial vehicle (UAV) training program will be stationed out of NAS Whiting Field as well. Contractors supporting these programs may need additional industrial land near NAS Whiting Field. UAV is a growing technology that likely will experience expanded applications by the Department of Defense as well as by private sector enterprise. With the US Navy's UAV program housed at NAS Whiting Field, a window of opportunity opens for Santa Rosa County to target research and technology firms specializing in robotic aviation. However, for this economic development opportunity to move from vision to reality, the County must make land near NAS Whiting Field available for the aviation industry.

B. **Recommendations.** Consistent with the NAI Halford study (April 2003), the County should pursue acquisition of approximately 237 acres abutting the southeast corner of NAS Whiting Field's perimeter. The County should also evaluate potential use of this site for an industrial or commerce park that can access and use airfield facilities at NAS Whiting Field. Part of the site's land use evaluation should include coordination between the County and NAS Whiting Field regarding use of NAS Whiting Field's runways by private sector industries locating within any adjacent future industrial lands. In addition, the County should evaluate the economic development potential and acquisition feasibility of other parcels adjacent to Whiting Field.

5.5 Land Acquisition for Conservation Purposes.

A. **Findings.** Clear Creek has it's headwaters to the northwest of Whiting Field. This creek runs south-southeast along the eastern and southern borders of Whiting Field. The northeast corner of NAS Whiting Field is less than two miles west of Coldwater Creek and lands within the Blackwater River State Forest. By acquiring land surrounding NAS Whiting Field, an opportunity exists to create wildlife corridors, preserve pristine lands, provide recreation opportunities, and reduce future stormwater runoff from entering these creeks. Waters within Clear Creek and Coldwater Creek flow to the Blackwater River and eventually into Pensacola Bay. Acquisition of properties near NAS Whiting Field for conservation purposes is also supported by the NAI Halford study (April 2003) prepared for Santa Rosa County.

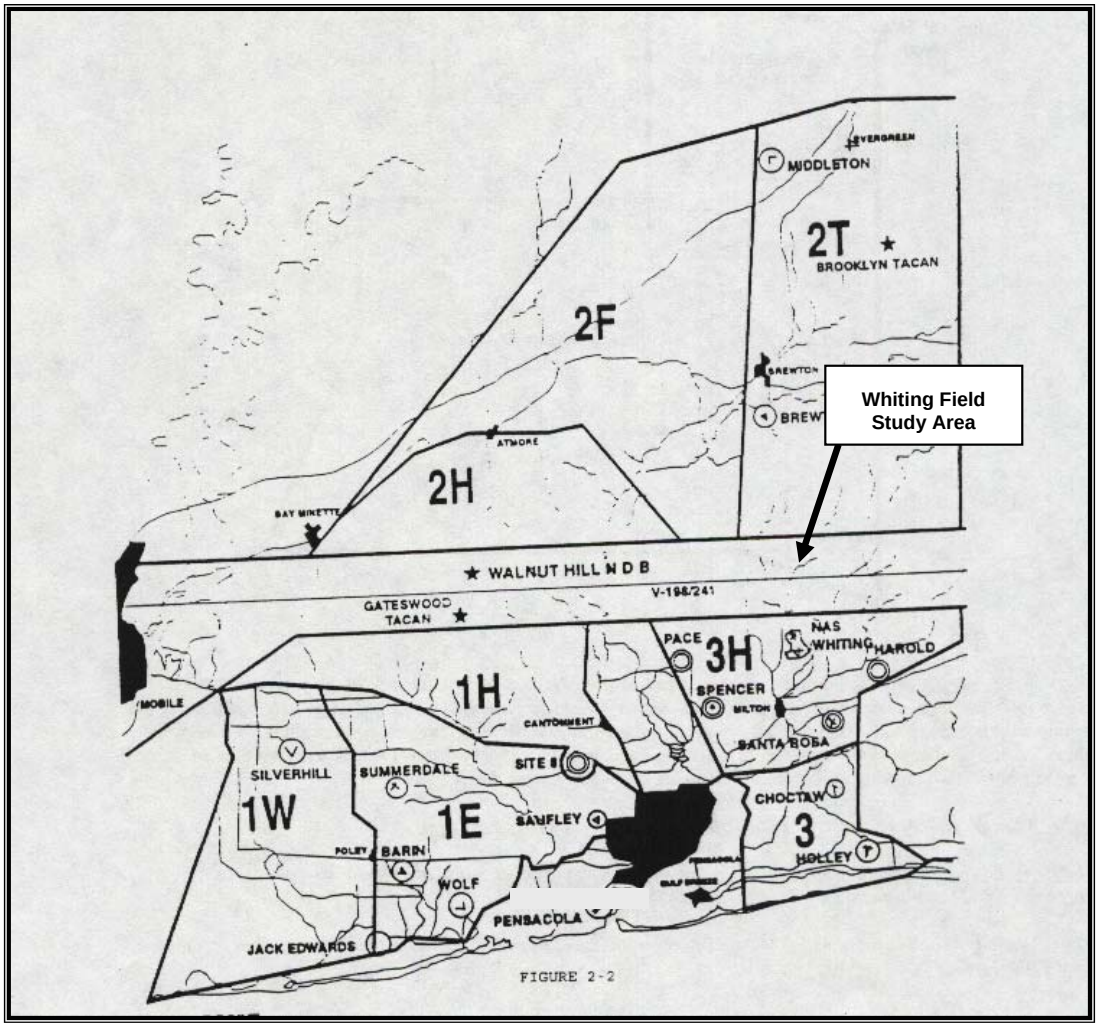
B. **Recommendations.** Consistent with the NAI Halford study (April 2003), the County should pursue grant funds from the Florida Forever land acquisition program to purchase land abutting NAS Whiting Field. Based on the large area surrounding NAS Whiting Field, the County should also explore other funding sources, prioritize potential acquisition sites surrounding the airfield, as well as coordinate with adjacent property owners to identify willing sellers.

5.6 General Recommendations

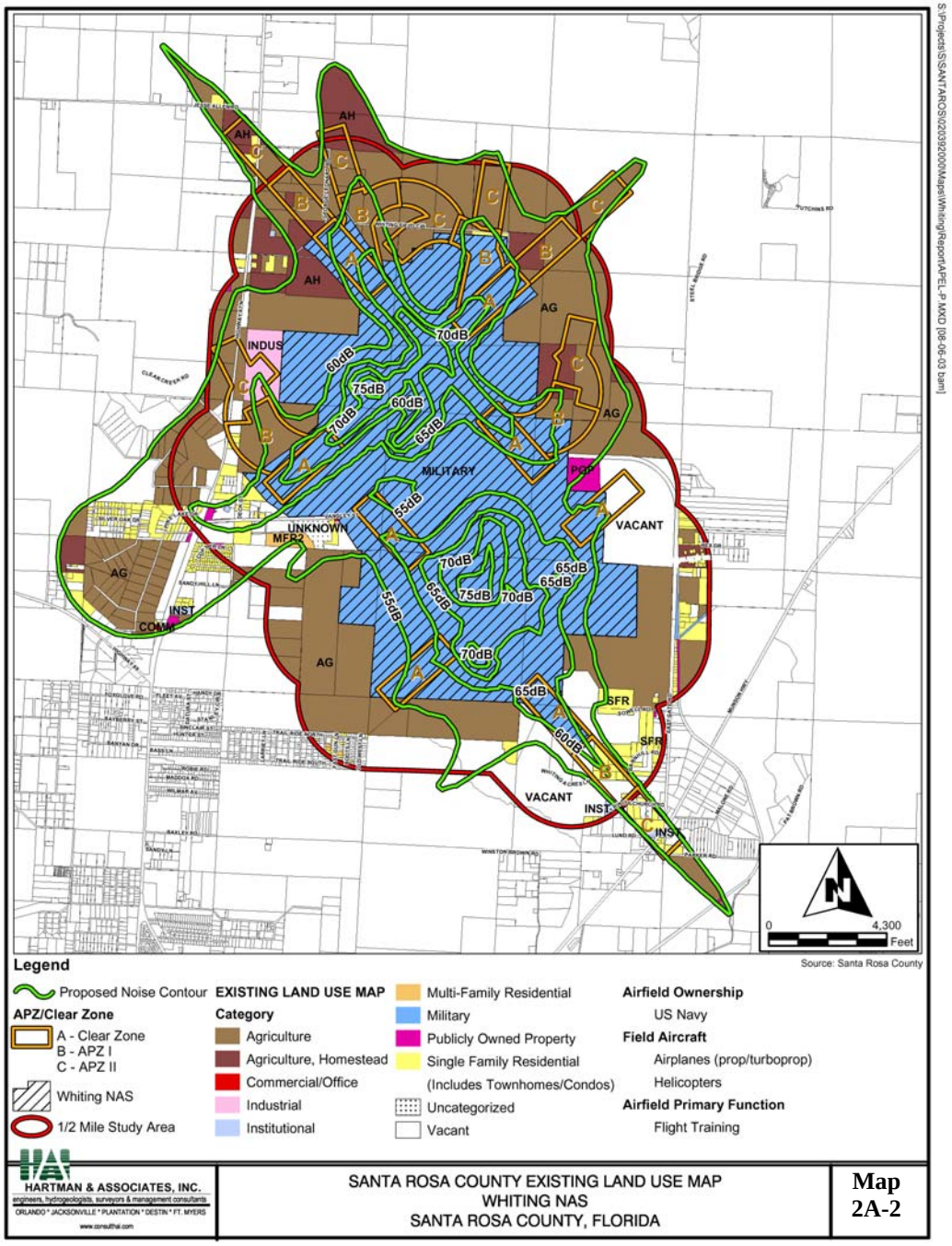
Chapter 1 may include additional recommendations affecting the use of land or construction methods applicable to areas near all or a number of airfields evaluated as part of the Santa Rosa Joint Land Use Study.

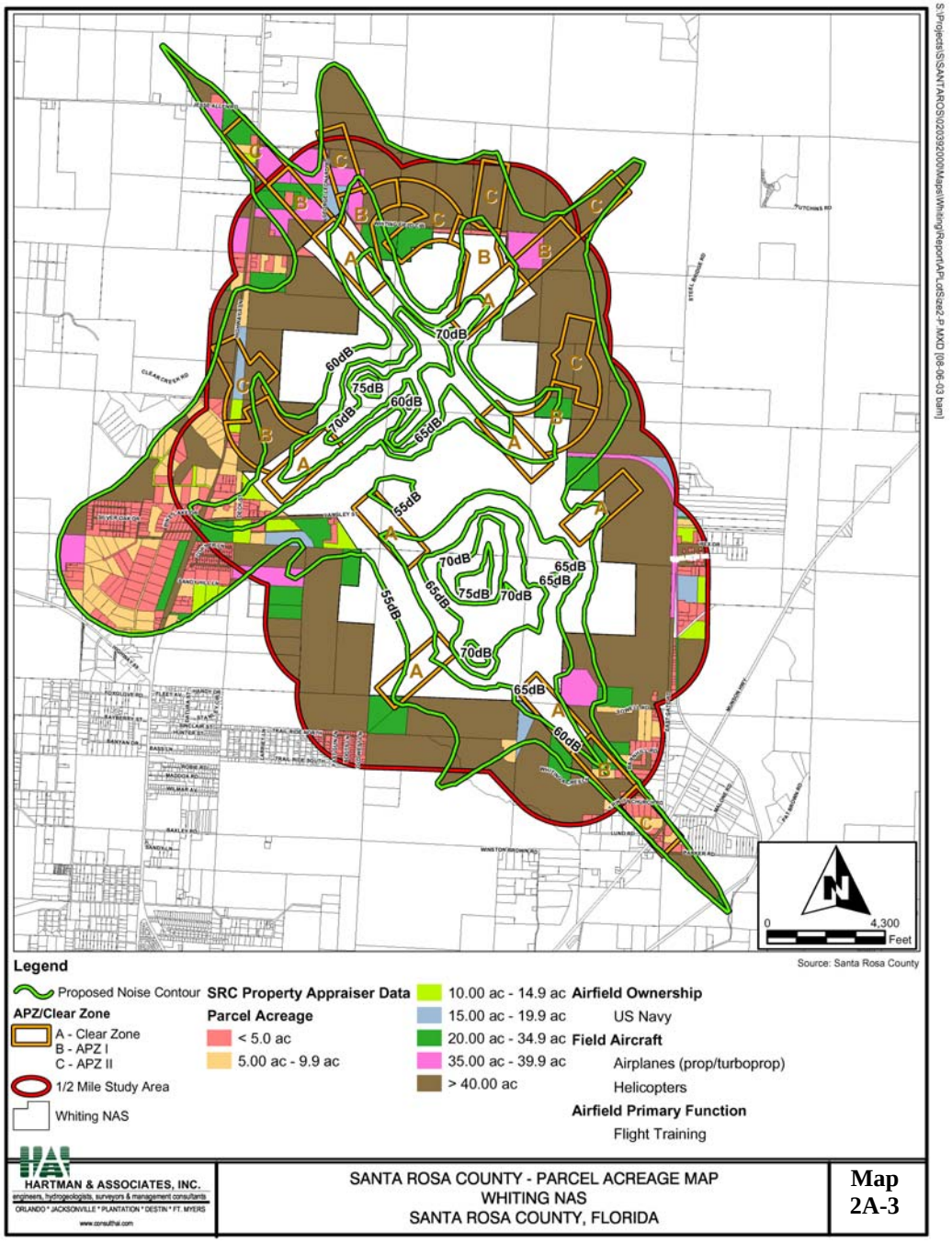
APPENDIX 2A

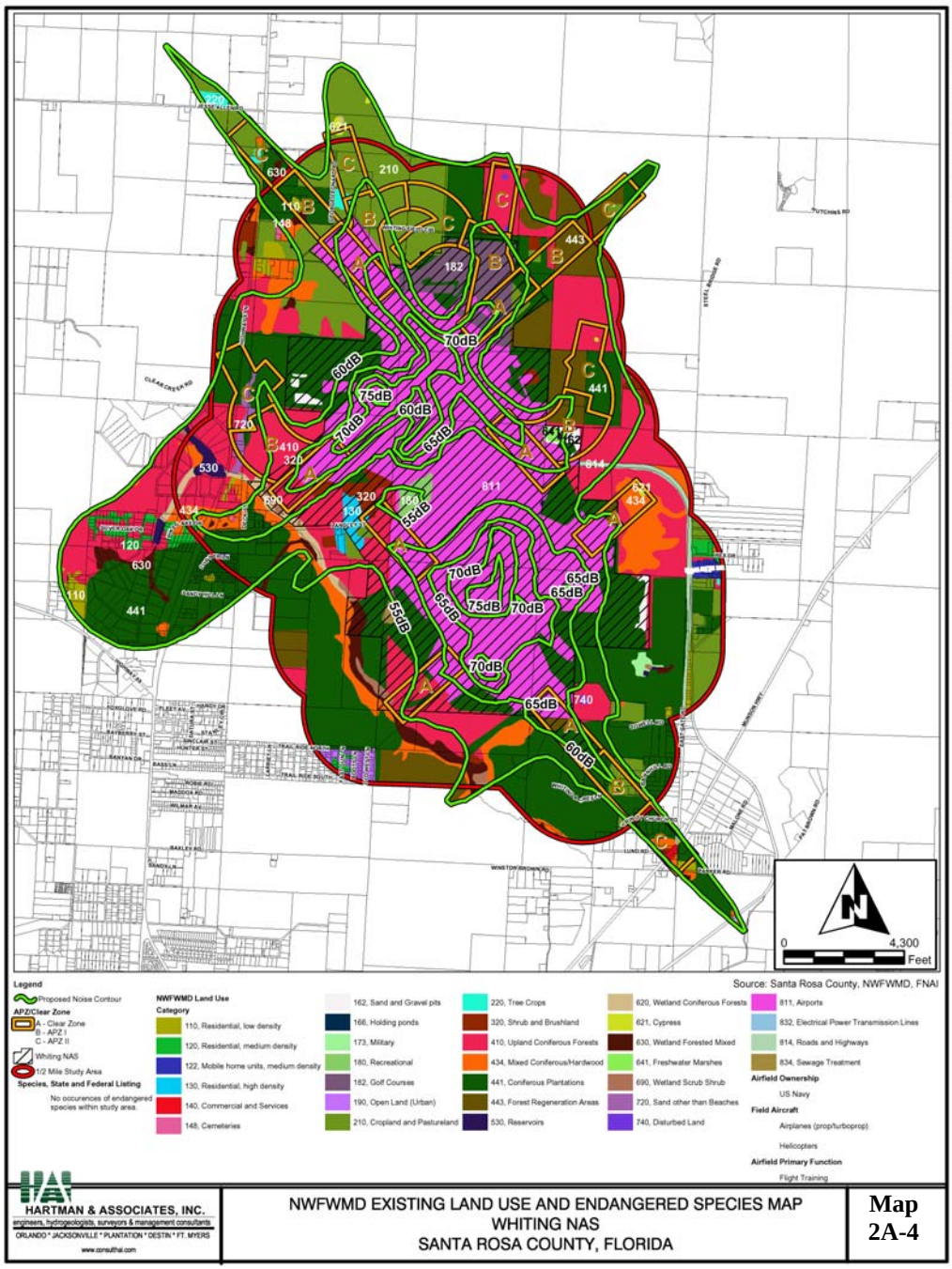
NAS WHITING FIELD JLUS MAPS

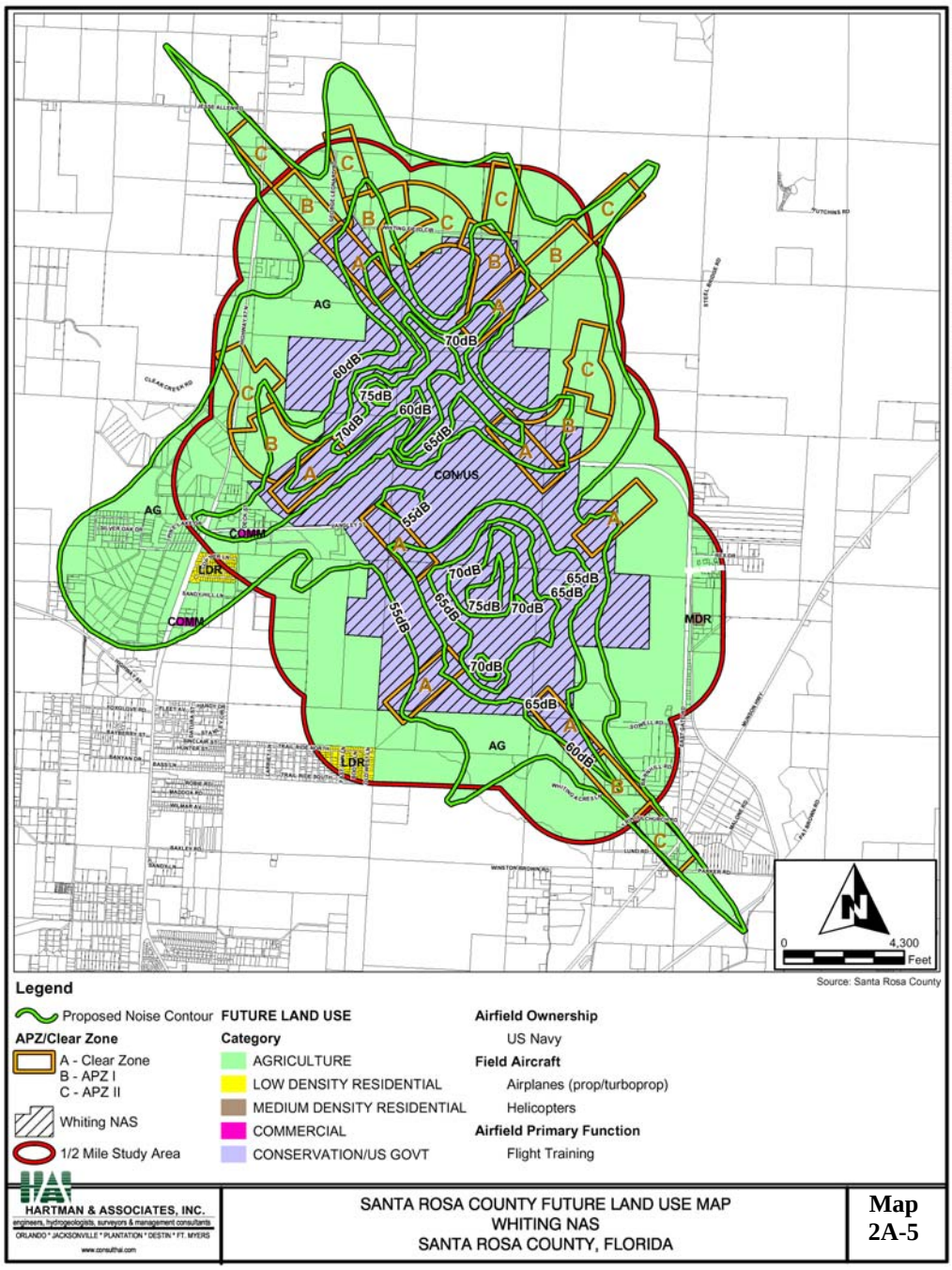


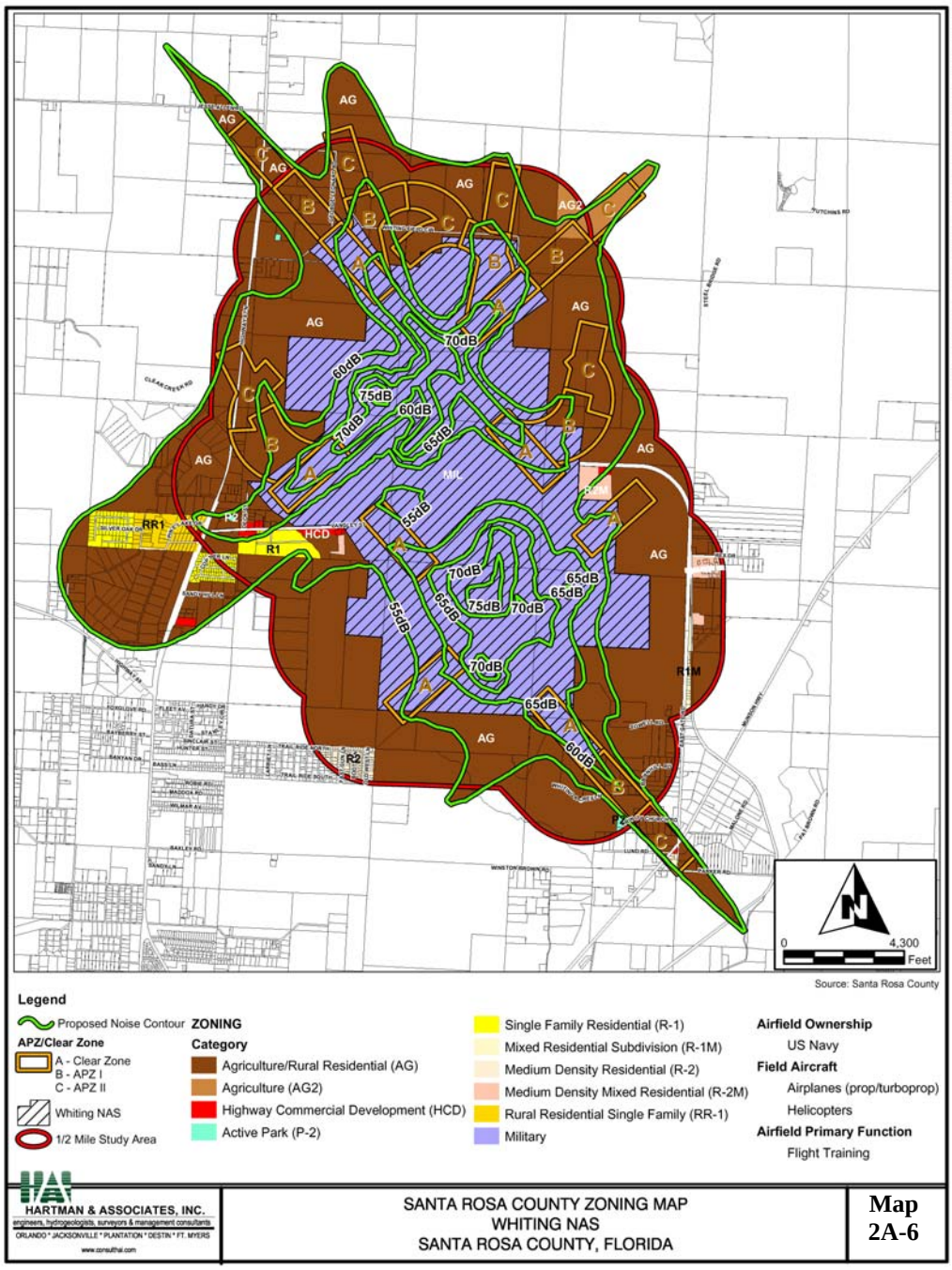
US NAVY ALERT AREA NO. 292	Map 2A-1

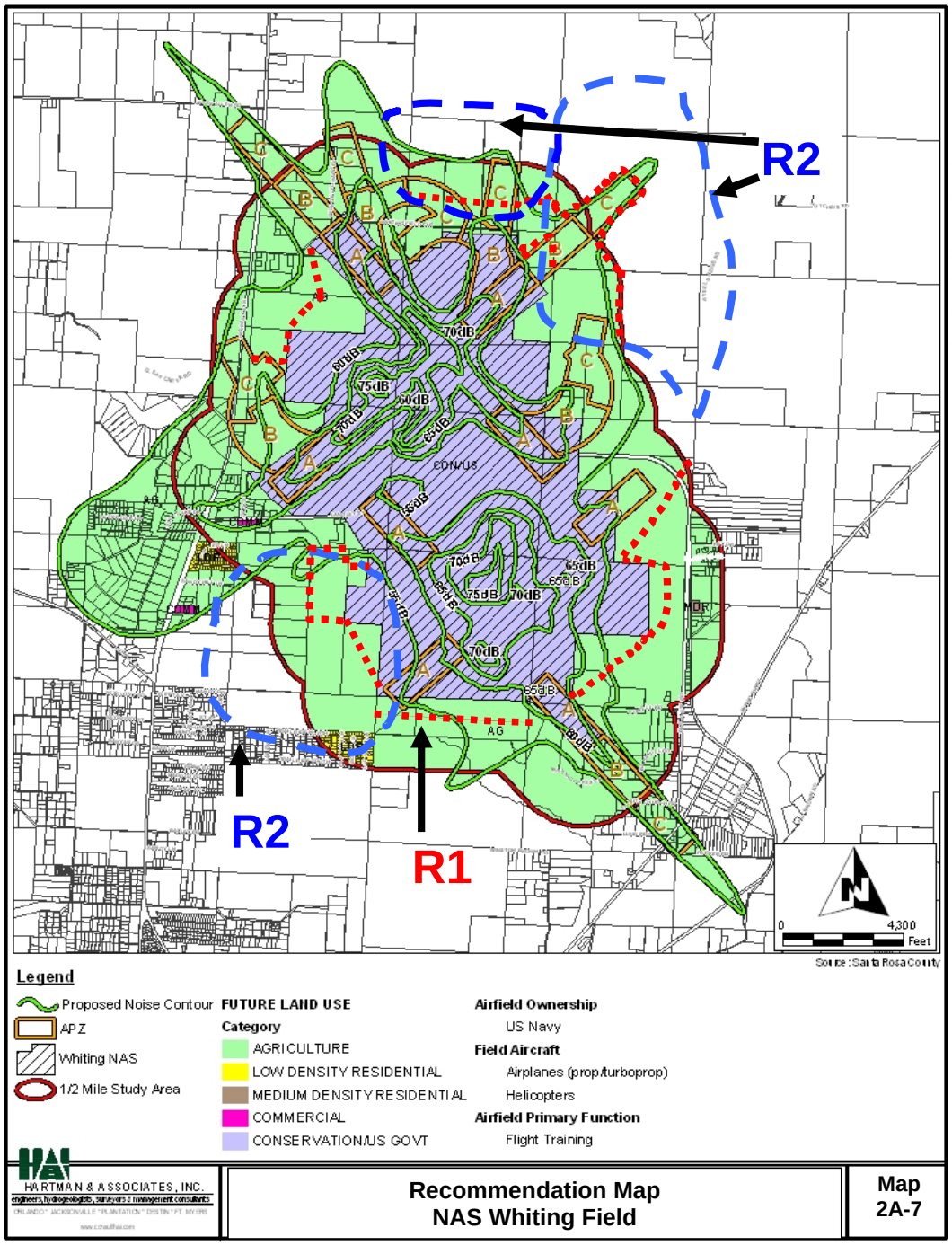

S:\Projects\SIS\SANTAROS\02039200\Maps\Whiting\Report\APEL-P.MXD [08-06-03 bam]
AH
AG
INDUS
MILITARY
PUD
VACANT
UNKNOWN
MFR2
COMM
INST
SFR
70dB
65dB
60dB
75dB
55dB
0
4,300
Feet
Source: Santa Rosa County
Legend
Proposed Noise Contour
APZ/Clear Zone
A - Clear Zone
B - APZ I
C - APZ II
Whiting NAS
1/2 Mile Study Area
EXISTING LAND USE MAP
Category
Agriculture
Agriculture, Homestead
Commercial/Office
Industrial
Institutional
Multi-Family Residential
Military
Publicly Owned Property
Single Family Residential
(Includes Townhomes/Condos)
Uncategorized
Vacant
Airfield Ownership
US Navy
Field Aircraft
Airplanes (prop/turboprop)
Helicopters
Airfield Primary Function
Flight Training
HARTMAN & ASSOCIATES, INC.
engineers, hydrogeologists, surveyors & management consultants
ORLANDO * JACKSONVILLE * PLANTATION * DESTIN * FT. MYERS
www.consulthai.com
SANTA ROSA COUNTY EXISTING LAND USE MAP
WHITING NAS
SANTA ROSA COUNTY, FLORIDA
Map
2A-2


S:\Projects\SIS\SANTAROS\02039200\Maps\Whiting\ReportAPLotSize2-P.MXD [08-06-03 bam]
70dB
60dB
75dB
70dB
60dB
65dB
55dB
70dB
65dB
65dB
75dB
70dB
55dB
65dB
70dB
65dB
60dB
0
4,300
Feet
Source: Santa Rosa County
Legend
Proposed Noise Contour
APZ/Clear Zone
A - Clear Zone
B - APZ I
C - APZ II
1/2 Mile Study Area
Whiting NAS
SRC Property Appraiser Data
Parcel Acreage
< 5.0 ac
5.00 ac - 9.9 ac
10.00 ac - 14.9 ac
15.00 ac - 19.9 ac
20.00 ac - 34.9 ac
35.00 ac - 39.9 ac
> 40.00 ac
Airfield Ownership
US Navy
Field Aircraft
Airplanes (prop/turboprop)
Helicopters
Airfield Primary Function
Flight Training
HARTMAN & ASSOCIATES, INC.
engineers, hydrogeologists, surveyors & management consultants
ORLANDO * JACKSONVILLE * PLANTATION * DESTIN * FT. MYERS
www.consulthai.com
SANTA ROSA COUNTY - PARCEL ACREAGE MAP
WHITING NAS
SANTA ROSA COUNTY, FLORIDA
Map
2A-3


S:\Projects\SIS\SANTAROS\02039200\Maps\Whiting\ReportAPCC_CN-P.MXD [08-06-03 bam]
70dB
75dB
60dB
65dB
55dB
0
4,300
Feet
Source: Santa Rosa County, NWFWMD, FNAI
Legend
Proposed Noise Contour
APZ/Clear Zone
A - Clear Zone
B - APZ I
C - APZ II
Whiting NAS
1/2 Mile Study Area
Species, State and Federal Listing
No occurences of endangered species within study area.
NWFWMD Land Use Category
110, Residential, low density
120, Residential, medium density
122, Mobile home units, medium density
130, Residential, high density
140, Commercial and Services
148, Cemeteries
162, Sand and Gravel pits
166, Holding ponds
173, Military
180, Recreational
182, Golf Courses
190, Open Land (Urban)
210, Cropland and Pastureland
220, Tree Crops
320, Shrub and Brushland
410, Upland Coniferous Forests
434, Mixed Coniferous/Hardwood
441, Coniferous Plantations
443, Forest Regeneration Areas
530, Reservoirs
620, Wetland Coniferous Forests
621, Cypress
630, Wetland Forested Mixed
641, Freshwater Marshes
690, Wetland Scrub Shrub
720, Sand other than Beaches
740, Disturbed Land
811, Airports
832, Electrical Power Transmission Lines
814, Roads and Highways
834, Sewage Treatment
Airfield Ownership
US Navy
Field Aircraft
Airplanes (prop/turboprop)
Helicopters
Airfield Primary Function
Flight Training
HARTMAN & ASSOCIATES, INC.
engineers, hydrogeologists, surveyors & management consultants
ORLANDO * JACKSONVILLE * PLANTATION * DESTIN * FT. MYERS
www.consulthai.com
NWFWMD EXISTING LAND USE AND ENDANGERED SPECIES MAP
WHITING NAS
SANTA ROSA COUNTY, FLORIDA
Map
2A-4

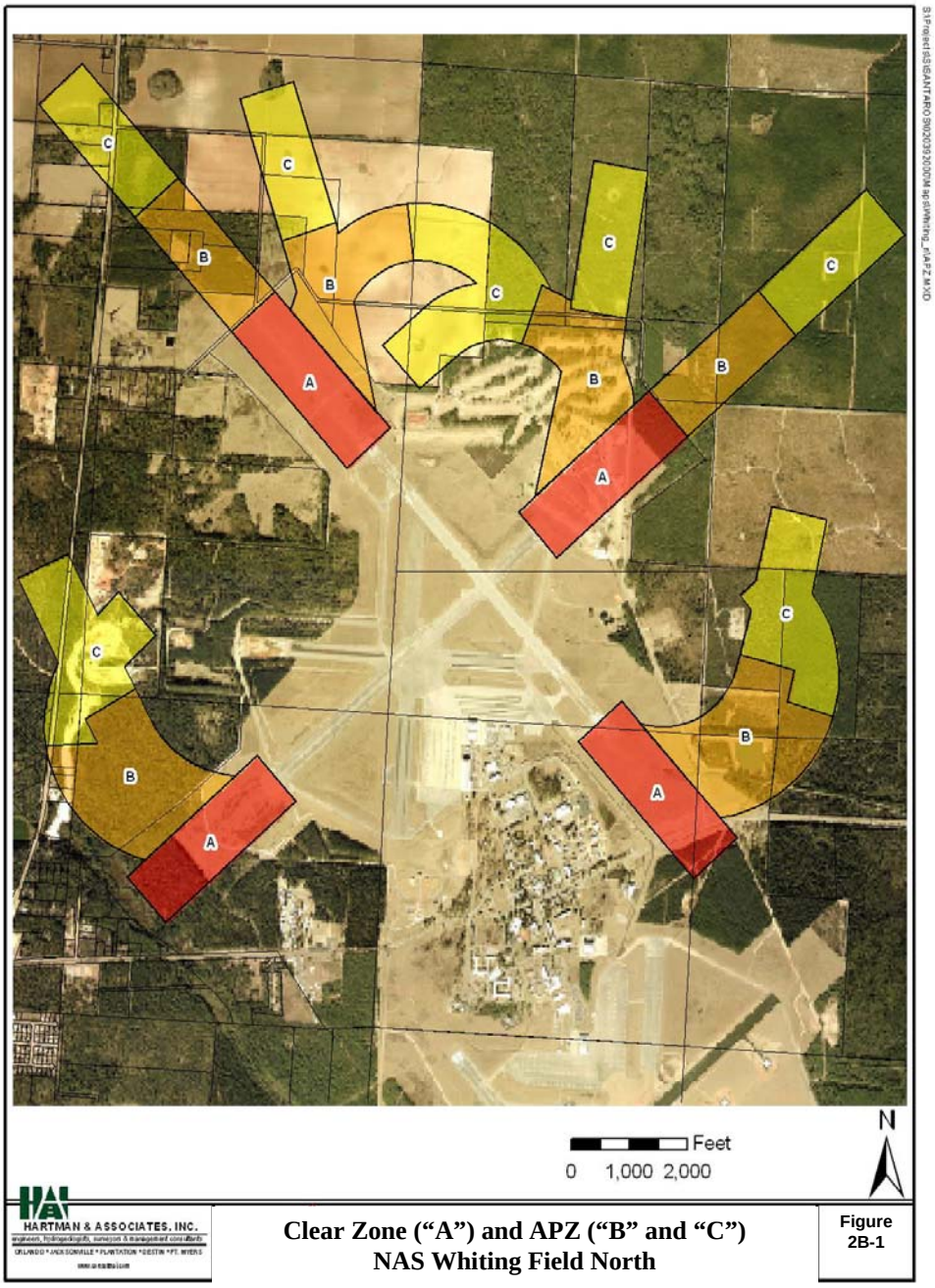

S:\Projects\SIS\SANTAROS\02039200\Maps\Whiting\ReportIAPFLP.MXD [08-06-03 bam]
AG
COMM
LDR
MDR
CON/US
70dB
60dB
75dB
65dB
55dB
0
4,300
Feet
Source: Santa Rosa County
Legend
Proposed Noise Contour
APZ/Clear Zone
A - Clear Zone
B - APZ I
C - APZ II
Whiting NAS
1/2 Mile Study Area
FUTURE LAND USE
Category
AGRICULTURE
LOW DENSITY RESIDENTIAL
MEDIUM DENSITY RESIDENTIAL
COMMERCIAL
CONSERVATION/US GOVT
Airfield Ownership
US Navy
Field Aircraft
Airplanes (prop/turboprop)
Helicopters
Airfield Primary Function
Flight Training
HARTMAN & ASSOCIATES, INC.
engineers, hydrogeologists, surveyors & management consultants
ORLANDO * JACKSONVILLE * PLANTATION * DESTIN * FT. MYERS
www.consulthai.com
SANTA ROSA COUNTY FUTURE LAND USE MAP
WHITING NAS
SANTA ROSA COUNTY, FLORIDA
Map
2A-5


S:\Projects\SIS\SANTAROS\02039200\Maps\Whiting\ReportAPZ-P.MXD [08-06-03 bam]
AG
AG2
HCD
R1
RR1
R2
R1M
MIL
70dB
65dB
60dB
75dB
55dB
0
4,300
Feet
Source: Santa Rosa County
Legend
Proposed Noise Contour
APZ/Clear Zone
A - Clear Zone
B - APZ I
C - APZ II
Whiting NAS
1/2 Mile Study Area
ZONING
Category
Agriculture/Rural Residential (AG)
Agriculture (AG2)
Highway Commercial Development (HCD)
Active Park (P-2)
Single Family Residential (R-1)
Mixed Residential Subdivision (R-1M)
Medium Density Residential (R-2)
Medium Density Mixed Residential (R-2M)
Rural Residential Single Family (RR-1)
Military
Airfield Ownership
US Navy
Field Aircraft
Airplanes (prop/turboprop)
Helicopters
Airfield Primary Function
Flight Training
HARTMAN & ASSOCIATES, INC.
engineers, hydrogeologists, surveyors & management consultants
ORLANDO * JACKSONVILLE * PLANTATION * DESTIN * FT. MYERS
www.consulthai.com
SANTA ROSA COUNTY ZONING MAP
WHITING NAS
SANTA ROSA COUNTY, FLORIDA
Map
2A-6


R2
R2
R1
70dB
75dB
65dB
CONVUS
AG
0
4,300
Feet
Source: Santa Rosa County
Legend
Proposed Noise Contour
APZ
Whiting NAS
1/2 Mile Study Area
FUTURE LAND USE
Category
AGRICULTURE
LOW DENSITY RESIDENTIAL
MEDIUM DENSITY RESIDENTIAL
COMMERCIAL
CONSERVATION/US GOVT
Airfield Ownership
US Navy
Field Aircraft
Airplanes (prop/turboprop)
Helicopters
Airfield Primary Function
Flight Training
HARTMAN & ASSOCIATES, INC.
engineers, hydrogeologists, surveyors & management consultants
Recommendation Map
NAS Whiting Field
Map
2A-7

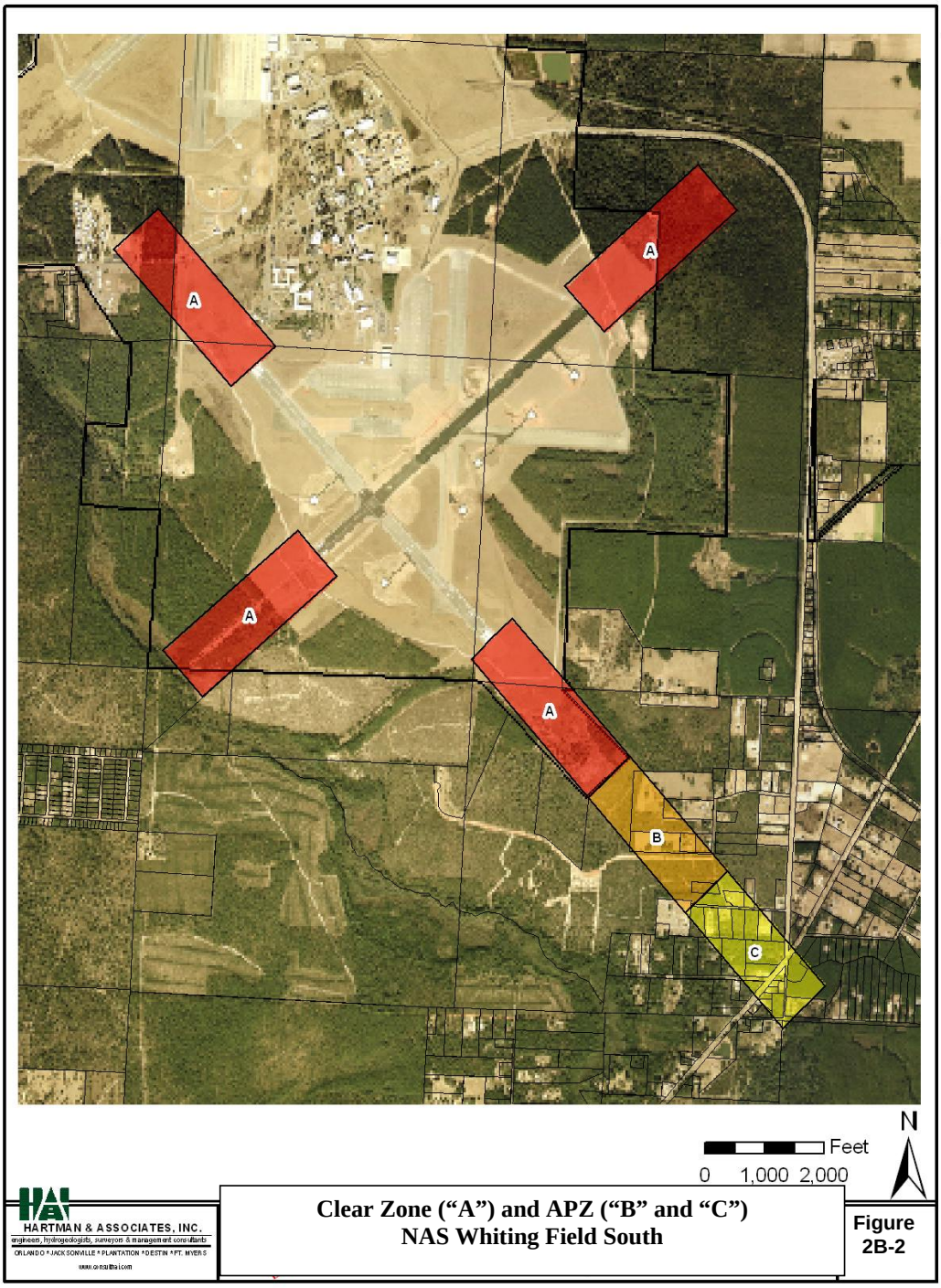
APPENDIX 2B

NAS WHITING FIELD JLUS AERIAL IMAGES AND FIGURES



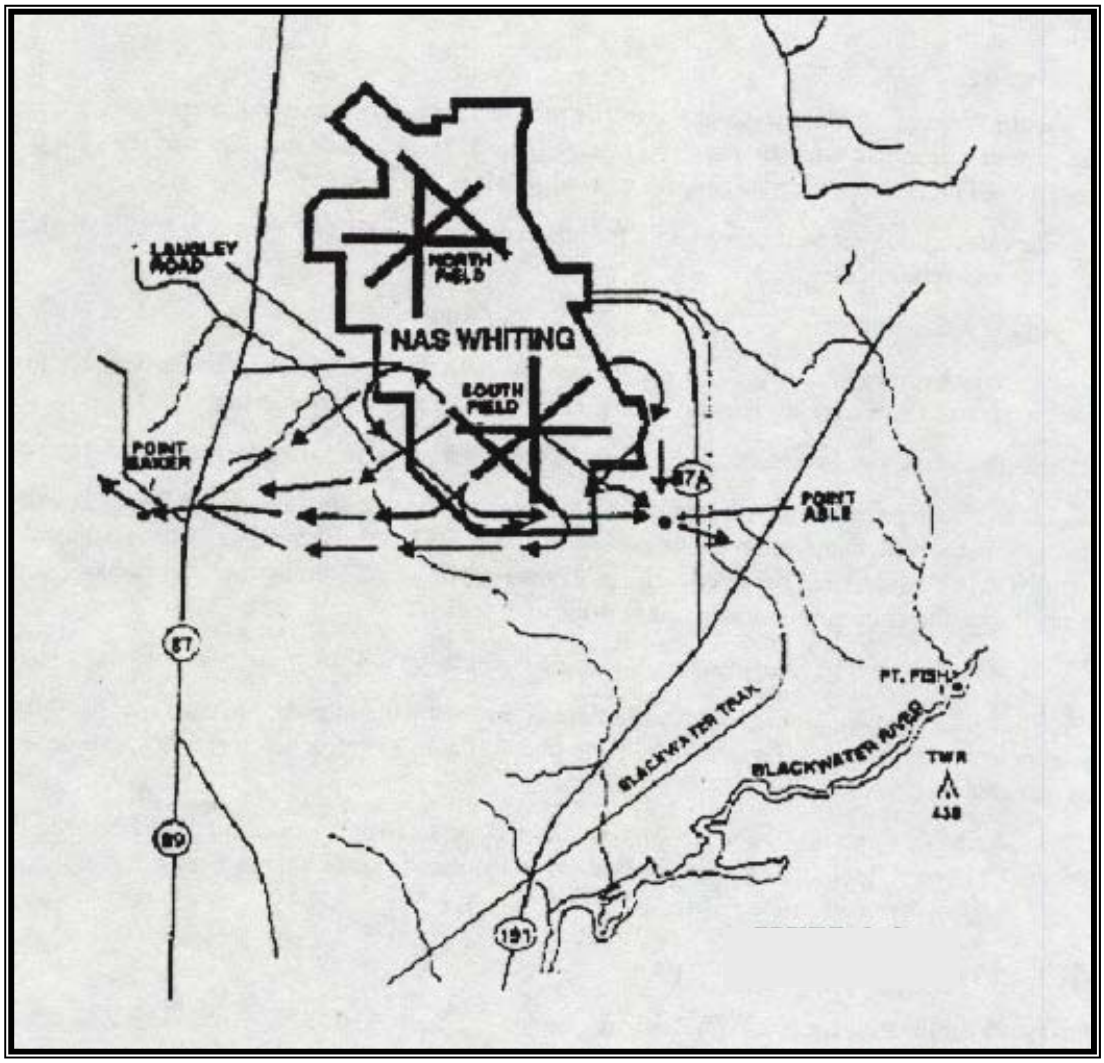
Clear Zone ("A") and APZ ("B" and "C")
NAS Whiting Field North

Figure 2B-1

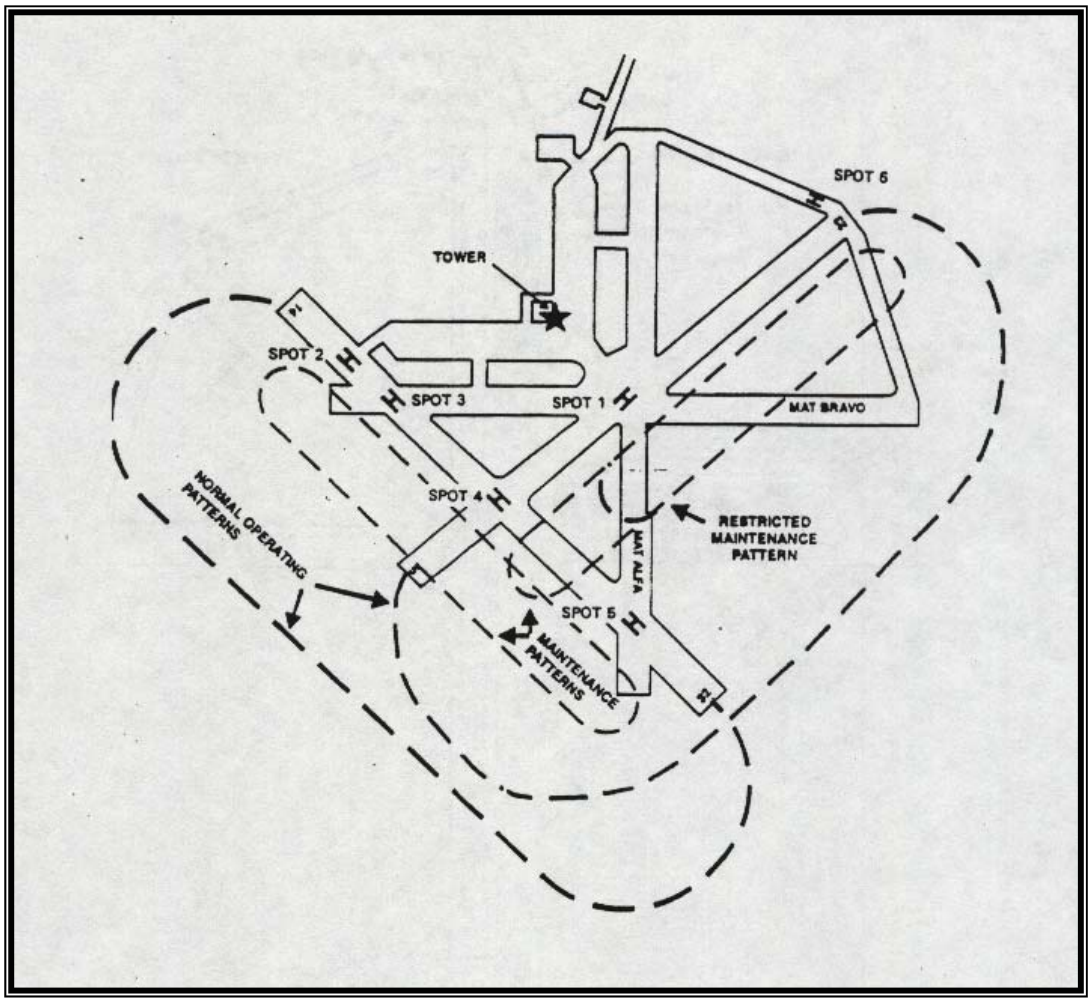


Clear Zone ("A") and APZ ("B" and "C")
NAS Whiting Field South

Figure 2B-2



Departure Flight Patterns For NAS Whiting Field South	Figure 2B-3



Local Flight Patterns
NAS Whiting Field South

Figure 2B-4

APPENDIX 2C

GLOSSARY OF MILITARY AIRCRAFT USING NAS WHITING FIELD

This appendix provides Santa Rosa County's civilian residents with illustrations of the type of aircraft frequently or occasionally using NAS Whiting Field. An aircraft classification, such as an F-18 aircraft or H-60 helicopter, may have been manufactured in different models, called variants, according to various specifications required by the branch of military using them. For example the H-60 helicopter has approximately 35 variants to function for cargo (CH-60), special electronic installation (SH-60), search and rescue (HH-60), multi-mission (MH-60), anti-submarine warfare (SH-60), utility (UH-60), and staff transport (VH-60). Appearance of aircraft will also vary based on military branch requirements, such as color and identification markings. Aircraft other than those shown below may also use NAS Whiting Field.

	**T-34C** *Mentor* is a single-engine, two-seat primary trainer designed to train student aviators. Engine type – turboprop. The *Mentor* will eventually be replaced by the T-6A shown below.
	**T-6A** *Texan II* is a single-engine, two-seat primary trainer designed to train Joint Primary Pilot Training (JPPT) students in basic flying skills common to U.S. Air Force and Navy pilots. Both Navy and Air Force primary training will eventually utilize the Texan II, which has special power management and automatic trim devices that make it handle much like a jet-powered aircraft.
	**C-12** *Huron* is a twin turboprop passenger and cargo aircraft.
	**T-44** *Pegasus* is the military version of the Beechcraft King Air 90 and is used as a twin turboprop advanced pilot trainer.

	**C-130** ***Hercules***, a four-engine turboprop aircraft, is the workhorse of the military services. Capable of landing and taking off from short, rough dirt runways, it is a people and cargo hauler and is used in a wide variety of other roles. It also used by the Blue Angles to haul support equipment to public air shows.
	**P-3** *Orion* was designed to perform as a land-based, long range anti-submarine warfare (ASW) patrol aircraft.
	**UAV** *Pioneer* is an unmanned aerial vehicle (UAV) system that performs a wide variety of reconnaissance, surveillance, target acquisition and battle damage assessment missions. The *Pioneer* is power by a two-cycle engine known for its distinct sound. NAS Whiting Field is the home for the Navy's unmanned aerial vehicle school. Flight operations are performed at NOLF Choctaw.
	**TH-57** *Sea Ranger* is primarily used for training, but also is used by the Navy for photo, chase and utility missions. At NAS Whiting Field and its NOLFs, the TH-57 is predominantly used for primary and advanced flight training.
	**H-67** *Creek* is a state-of-the-art helicopter used for initial entry rotary wing training. It replaced the aging UH-1H, which is a twin-engine, medium lift, utility or assault helicopter.

H-65A *Dolphin* is used by the US Coast Guard for missions of search and rescue, enforcement of laws and treaties, including drug interdiction, marine environmental protection including pollution control, and military readiness.

H-1 *Iroquois* UH-1 has been the quintessential all-purpose military helicopter for over three decades. It has been used by all four U.S. services, and international forces. At NAS Whiting Field its is primarily used as a freight or personnel transport helicopter. Designed by Bell Corporation, the H-1 was produced in two major models using either a single engine or twin engines.

H-3 *Sea King* is a twin engine, all-weather helicopter. The Navy and Air Force uses this helicopter for multiple purposes.

H-46 *Sea Knight* is a twin-turbine tandem-rotor cargo transport helicopter. This aircraft's primary mission areas in the Navy and Marine Corps include Combat Logistics Support and Vertical Replenishment (VERTREP), Search and Rescue, and Special Operations.

H-53 *Sea Stallion* is a medium lift helicopter designed to transport personnel, supplies and equipment in support of amphibious and shore operations.

	**H-60** *Black Hawk* is a twin-engine, medium lift, utility or assault helicopter.
	Conducting a water drop, a Florida Division of Forestry "*Firesnake*," formerly an Army **AH-1** *Cobra* gunship, was converted for aerial firefighting work. A detachment of these aircraft are based at NAS Whiting Field and operated by the Florida Division of Forestry.

Source: Text and pictures appearing in Appendix 2C were obtained from the United States Navy from various official Navy websites.