

AIR INSTALLATIONS  
COMPATIBLE USE ZONES:  
AN ASSESSMENT OF THE  
DEVELOPMENT OF THE DEPARTMENT OF DEFENSE POLICY  
AND THE  
IMPLEMENTATION BY THE DEPARTMENT OF THE NAVY

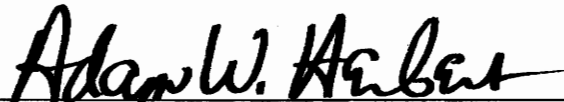
by

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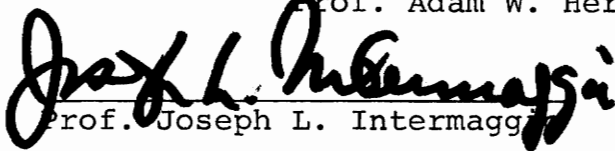
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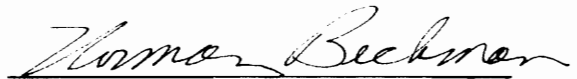
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NOTE

The author has sole responsibility for the following work. The views expressed do not necessarily represent the opinion of the Department of Defense, the Department of the Navy or any other governmental organization.

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## FORWARD

In this study of the development of the Department of Defense (DOD) policy on Air Installations Compatible Use Zones (AICUZ) and the Department of the Navy's implementation of it, there will appear a number of gaps in what is otherwise intended to be a logical and sequential analysis. These gaps are the result of the unavailability and/or inaccessibility of certain data due to a number of reasons. Certain information was classified for security reasons and, as such, could not be included in this analysis. A more frequent reason for the gaps was that some information was available only from people who had since either left their former employment for other positions, or had retired and could not be reached for interviews. In addition to the above causes, it should be noted that some data escapes the eye of even the most diligent researcher. Nevertheless, these gaps have been kept to a minimum and it is considered that they do not severely effect this study in an adverse way.

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## CHAPTER I

### INTRODUCTION

#### TOPIC JUSTIFICATION

Department of Defense Instruction No. 4165.57, which became effective July 30, 1973, is the Department's official policy statement in regard to Air Installations Compatible Use Zones. This Instruction defines:

(a) required restrictions on the uses and heights of natural and man-made objects in the vicinity of runways to provide for safety of flight to assure that people and facilities are not concentrated in an area which is susceptible to aircraft accidents and, (b) desirable restrictions on land use to assure its compatibility with the characteristics, including noise, of air installations.<sup>1</sup>

By October 28, 1973, (90 days from the policy's effective date), each of the three military services (Army, Navy, and Air Force) is required to establish programs to implement this policy. Within 15 months of the date of this Instruction, each military department is required to affect its programs and prepare recommendations for all air installations. Ultimately, the Navy's program will affect 81 naval air facilities in the

Continental United States, Alaska, and Hawaii, and its territories and trusts.

Recommended actions to be accomplished as part of the AICUZ policy implementation process include the development of communication and cooperative efforts between local military air base commanders and local, regional and state planning agencies. The AICUZ policy marks the formal entry of the Department of Defense (DOD) into the planning processes of other levels of government. The AICUZ policy also focuses attention on an area of land use planning which has not yet received wide attention by the civilian planning community. The lack of planning for the location, development, and expansion of local air transportation systems relative to existing land use and proposed land use plans, if they exist, is a major problem facing urban areas today. The search for a method to expand the air transportation facilities of the New York region for example, has been going on for over ten years and is not yet resolved. Many sites have been proposed for a fourth jetport since development adjacent to the existing three regional jetports (Kennedy, LaGuardia, and Newark) has precluded their further expansion as initially proposed by

some groups. No site has yet been selected and the problem intensifies as regional development continues, and buildable land increases in cost while decreasing in availability. The Miami area has experienced similar expansion problems when it attempted to enlarge its air transportation facilities with a new jetport in the Florida Everglades. The proposal was eventually rejected with much credit for the defeat going to environmental groups which feared an upset to the subtle balance of nature in the Everglades area.

Although the Federal Aviation Administration of the U. S. Department of Transportation has the responsibility to assist public agencies in airport master planning, their efforts have been limited in this area. The Executive Branch of the federal government currently has no guiding policy on land use planning around airports. The AICUZ policy may well initiate the development of such a guiding policy. The AICUZ policy has recently been discussed by the Senior Review Group of the Federal Property Council which was created, in part, to foster the development of more effective national policies regarding use of federal properties, on 13 June 1974. The FAA was

represented at the meeting and has indicated an interest in the development of a similar policy for the civilian airports under its jurisdiction.

The DOD is currently involved in a pioneering effort in airport system land use planning which has the potential to provide a significant data base for local, regional, and state planning agencies to draw upon as they begin to address this type of planning. The AICUZ policy's implementation program will, hopefully, also generate a new climate of cooperation between the DOD and the planning agencies of other levels of government.

The AICUZ policy has been selected for analysis not only because of its potential relationship to the development of urban areas, but also because it affords an excellent opportunity to critically evaluate some of the policy-making structures in the Department of Defense and there is the potential for some practical application of the study's findings. While certain technical data will be considered, it is the intent of this paper to focus on the development and implementation process of the AICUZ policy.

ANALYSIS METHODOLOGY

AICUZ, as has already been noted, is the official DOD policy regarding restrictions on the use of land in the vicinity of naval air installations and in the immediate vicinity of runways. This study is an analysis of the AICUZ policy and its implementation by the Department of the Navy. Research for this study has been immeasurably aided by the cooperation of many people in the Naval Facilities Engineering Command. Extensive interviews were conducted with persons directly involved with the design and final preparation of the AICUZ policy. The personal correspondence files of these people provided much additional background information which greatly assisted in the preparation of this analysis.

While there is no apparent planned sequence of events which brought the Department of Defense to focus its attention on land use control, the Department does have a history over the last 20 years of sporadic involvement in this area. Although these past events do not appear to have been so sufficiently related as to be considered forerunners of the AICUZ policy, they may well have provided the vocabulary and bureaucratic climate

which made the development of the policy possible. This chronological history, which comprises the first major section of this study, will be general in scope, in order to reveal broad underlying themes and concepts. In the second part of this study, the final events which led to the development of the AICUZ Instructions will be discussed in some detail because of their current pragmatic relevance to contemporary planning theory and practice.

The actual Instructions of the Department of Defense and the Secretary of the Navy which, respectively, declare and promulgate the AICUZ policy are detailed in the next section. While it was anticipated that the Instructions from the Chief of Naval Operations and the Commandant of the Marine Corps, which further execute the DOD Instruction, would be issued during the course of this study, delays occurred which have prevented their issuance. Drafts of these Instructions were made available for this study and they are discussed in this section as well.

The fourth, and last major section of this study contains an analysis of the AICUZ Instructions and recommendations regarding their continued utilization.

Each component of the policy is analyzed, both within the context of the Instructions themselves and relative to the broader planning themes illustrated in the background section. During the analysis, it became apparent that the AICUZ policy related to the stated policies and actions of organizations in all three branches (executive, legislative, and judicial) of all levels of government (federal, state, regional, and local) as well as to the activities of various independent groups including associations of civilian airport owners and managers. The details of the policy's interface with the various policies of other public and private groups are presented in this section as well. Studies are currently underway as a result of the two initial AICUZ Instructions. These studies are, as of this writing, in their preliminary development stages and therefore offer only a limited experience of the AICUZ policy in operation. The section and this study concludes with an exposition and analysis of the Navy's macro-planning. This part of the study is intended to provide some insight into the integration of the AICUZ policy and the large scale planning efforts of the Navy.

## GENERAL BACKGROUND

### The Beginning of Encroachment

In the post-war years of the late 1940's, and through the early 1950's, the Department of Defense began to experience the ill-effects of incompatible development immediately outside the boundaries of its installations. This encroachment situation was generally viewed by the Department as the result of increasing suburbanization, with ever-expanding residential areas being a particular problem. Encroachment evidenced itself in different ways. As some airfields, physical obstructions such as television towers were located in flight paths resulting in interference with air operations. Extensive runway lengthening projects were being undertaken after World War II to accomodate new aircraft, and resistance to base expansion plans was not uncommon. During this transitional period, there were few noise problems that were perceived, although the noise levels of the new jet airplanes were significantly higher than those of their predecessors, the propeller-driven aircraft. This lack of noise complaints is attributable, at least in part, to many airfields being located in what were then still rural areas.

With increasing frequency, some installations, once located in seeming isolation, were now finding themselves with new, and often incompatible neighbors. Proposed air installations were typically welcomed by local communities as new and stable sources of local employment and as inducers to further development. As the anticipated development occurred, however, the bases took on a reduced importance corresponding to their decreasing contribution to the total local communities' economic activity. The increasingly reduced relative importance of a base to local officials might not have proved, in and of itself, to be an insurmountable obstacle to the protection of the installation's capability to perform its assigned mission. However, "(h)istorically, military base commanders have had their effectiveness judged by how well they could defend and hold every square inch of their bases."<sup>2</sup> In addition, local base commanders tended to disregard any event which occurred outside their bases' boundaries as having no potential ill-effects on them.

These three conditions tended to foster a sense of self-sufficiency and isolation within the military bases. With base commanders not perceiving, and therefore not

vocalizing, their interests in events outside the confines of their bases, it could hardly be expected that local community leaders would perceive the military's best interests and promote them in any official decision-making procedures.

### New Sources of Encroachment Pressure

Following the residential development boom of the 1940's and the 1950's, new sources of encroachment pressure on installations appeared and developed along with existing conditions to create an even more unsatisfactory situation for those charged with ensuring mission capability. New demands for land for park, recreational, commercial, and industrial use developed. There were increased demands by local citizens to enlarge the real estate tax base by bringing in new commerce and industry and thereby, hopefully, relieve the tax burden on home owners. The land occupied by military bases is, of course, tax exempt (although certain compensatory allocations are made to local communities to cover such expenses as education if military and civilian dependents attend local schools.) Hence, military bases, which increasingly had

less local economic importance, and could be acquired from a single owner, tended to become prime targets for local acquisition.

The Federal Highway Program also impacted military bases. Its effect was not so much its demands for land but rather the effect the program had of opening up areas which were heretofore relatively inaccessible. Suburbanization cannot occur in areas where access does not exist. The existence of roads and the availability of utilities are two of the prime prerequisites for development to begin.

As air travel became a more popular mode of transportation, there developed an increasing demand for airspace by civilian commercial (passenger and cargo) and general aviation. The quantity of airspace is relatively fixed. As the demand increased for this relatively fixed supply, military air installations received additional pressures to partially and/or permanently curtail their operations. Permanent base closure pressures developed in cases where civilian and military airfields were close-by each other and the demands for airspace were intense. Sometimes, the demand for land for civilian airport

expansion triggered base closure efforts by local citizens. These three later events combined with previously existing ones to create an extremely difficult climate within which to maintain an air installation's operational capability.

With this brief background in mind, the following chronicle of events is presented to set the final stage upon which the AICUZ policy developed. The incidents are related to the Department of Defense's initial attempts to deal with reduced station potential for satisfactory mission completion due to activities by the civilian sectors on adjacent or nearby properties. The events do not appear to have been strongly related except in subject matter. This lack of synthesis and integration of the written communication of groups working on similar problems will be discussed later on in this study.

Some of the events are solely related to the Department of the Navy. These were included as it is the Navy's implementation procedures of the DOD Instruction which will be studied. Other tri-service efforts in which the Navy participated will also be discussed. There will be some minor comparisons of the Army's and the Air Force's responses to the DOD Instruction with that of the Navy, but,

for the most part, this study will concern itself solely with the development of the DOD Instruction and the Department of the Navy's implementation of it.

1956: Bureau of Naval Weapons Program

In 1956, the Bureau of Naval Weapons (BUWEPS), which later, in 1967, became the Naval Ordnance Systems Command and the Naval Air Systems Command, began to implement a \$23 million program to identify physical obstructions to the operations at naval air installations and to purchase easements. The Bureau of Yards and Docks, which later became the Naval Facilities Engineering Command, was involved as real estate purchases were part of the implementation procedure. Under the program, land was acquired at the Naval Air Station (NAS) at Fallon, Nevada. Land was about to be acquired at NAS Moffett Field in California when the Bureau of the Budget, now the Office of Management and Budget, rejected the idea as it believed the purchase was not necessary. "From that point on, the program unravelled."<sup>3</sup> The program is not considered to have been very successful in accomplishing its aims. The program suffered in large measure because

of the general attitude of many persons that little or nothing needed to be done as "we've lived with these conditions for years."

From time to time, various proposals emerged for the protection of station capability to perform their missions. For instance, one proposal required the purchase of all land within 12 miles of every air installation.<sup>4</sup> Each proposal apparently emerged, and submerged, soon after.

In 1964, the Bureau of Naval Weapons again tried to ensure the operational capability of its air facilities by establishing an Aircraft Noise Abatement Program. Citing continuing residential encroachment around naval air stations and the intensification of aircraft noise due to the more frequent use of larger and more powerful jet aircraft as the "straw that broke the camel's back," BUWEPS Instruction 11019.1 was issued on 21 January 1964. The background section of the Instruction further stated that

(o)nly a small percentage of the Navy's airfields have sufficient land or easements to satisfy existing criteria, and it is now questionable whether standard criteria will afford complete protection from community complaints and damage suits.<sup>5</sup>

At that time, Department of Defense policy precluded the purchase of land against encroachment. In order to protect the Navy's aviation shore establishment, which was then valued at over three billion dollars, from flight curtailments or relocation actions, a program to reduce aircraft noise was undertaken. The program was a modest one with local management of it being assigned as a collateral duty and was, essentially, a short-term response to a much more extensive, long-term problem.

In the decade following the BUWEPS 1956 program, no evidence was found of any substantial Pentagon-level interest in what occurred beyond the boundaries of naval stations of any type, either in terms of the Navy's effect on the surrounding community or the adjacent community's relationship to the installation.

#### 1966: Project Safeguard

It was not until 6 May 1966 that the problem of safeguarding the investment in naval bases from external, unsympathetic development again reached a flash point. A memorandum from the then Vice Chief of Naval Operations (VCNO) requested the Deputy Chief of Naval Operations

(Logistics), the Chief of Naval Material (CNM), and the Commander of the Naval Facilities Engineering Command, with the Deputy Chief's direction, to conduct a study which would develop a plan of action for

safeguarding our investments in many of our bases by acquiring land which, if it were put to industrial or other uses, would jeopardize the effective performance of the mission of the base or installation.<sup>6</sup>

The VCNO states that the suggestion for the study came from the then Under Secretary of the Navy who cited a

pre-emptive buy of land at Andros Island (in the Bahama Islands) to prevent the development of tourist hotels and other activities which would reduce the security and the effectiveness of AUTECH (Atlantic Underwater Test and Evaluation Center).<sup>7</sup>

The VCNO also cited problems at MCAS Cherry Point, North Carolina; NAS Norfolk, Virginia; and the Naval Weapons Station at Concord, California. At the Weapons Station, land was purchased which was encompassed by the explosive quantity distance arcs which are safety distances for inhabited buildings from quantities of certain types of explosives. The purchase included agricultural land, swamp land and the Town of Port Chicago, a small residential area. A chemical plant was not purchased as it

posed more of a danger than the Weapons Station.

The VCNO memorandum was followed by a letter dated 30 September 1966 from the Chief of Naval Operations (CNO) requesting all Systems Commands, Bureaus, and Offices to review their interference problems at the local level and to report back to his Office (OP44) by 1 December 1966.<sup>8</sup> Two types of interference were cited. One type involved interference by the civilian community with the use by the Navy of its property. The other type concerned Navy interference with the civilian use of civilian property. However, in the supplied report format the conditions which could cause interference all involved physical obstructions and related solely to civilian interference with Navy operations. The three given examples of such conditions were physical obstructions to aircraft and other operations, electronic interference or construction in radiation hazard areas and development within an explosive safety zone.<sup>9</sup>

The Naval Facilities Engineering Command was requested to have its Engineering Field Divisions aid local base commanders in the development of the requested data and to forward an integrated analysis to the CNO (OP-44)

as soon as completed. To meet the 1 December 1966 deadline, the Naval Facilities Engineering Command requested receipt of local reports by 15 November 1966.

### Initial Project Safeguard Findings

Despite the relatively short time frame within which to conduct the study, 355 of the 902 activities canvassed replied with a total of 515 specific instances noted as follows:

<u>Type of Problem</u>	<u>Existing Problem</u>	<u>Potential Problem</u>	<u>Total</u>
aircraft/ aviation	100	70	170
electronics	18	24	42
safety	25	36	61
real estate	61	138	199
public reaction	14	13	27
security	4	7	11
nuisance	5	0	5
	<u>227</u>	<u>288</u>	<u>515</u>

Geographically, the problems in the 5th, 6th, and 11th Naval Districts and the Pacific Area accounted for 45% of the total.<sup>10</sup> (See Figure 1.)

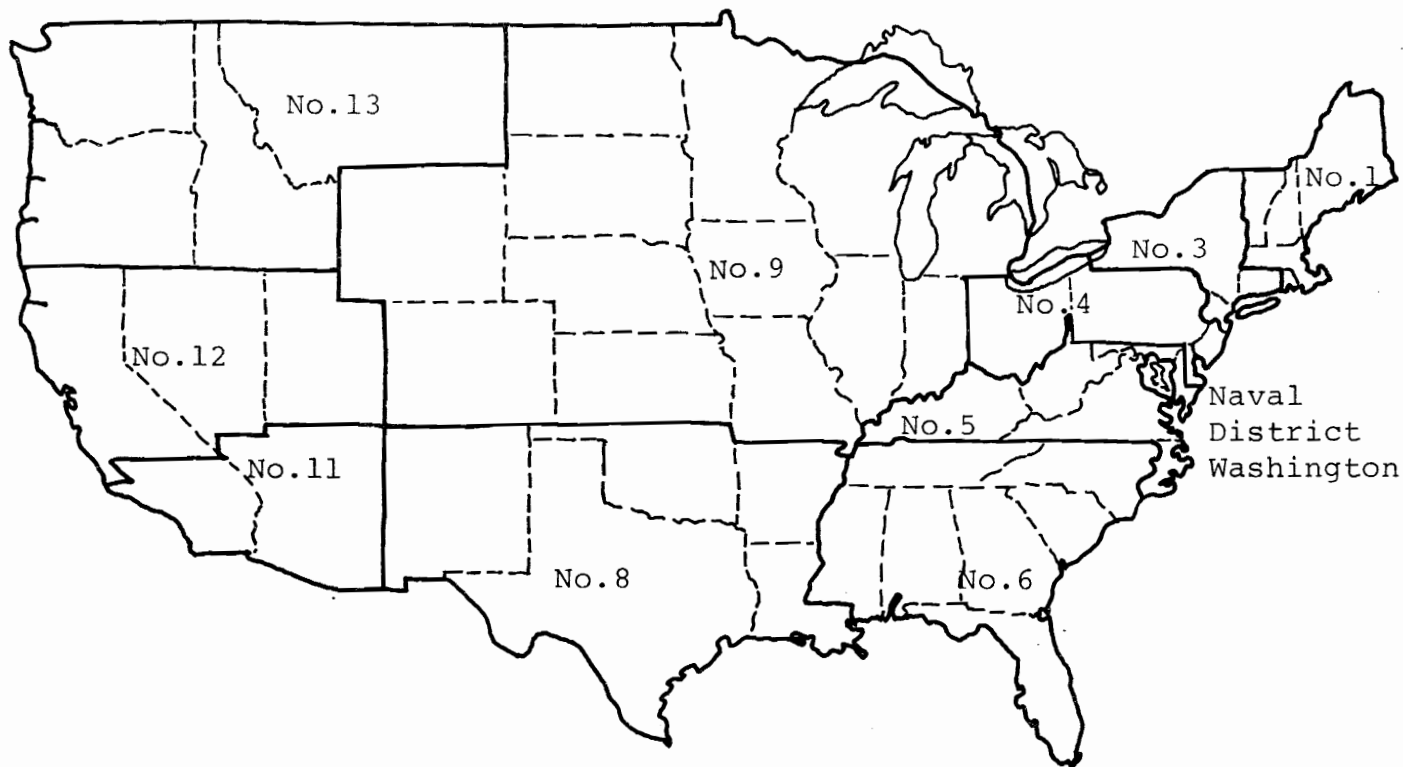


FIGURE 1

NAVAL DISTRICTS IN THE CONTINENTAL UNITED STATES

Responses to Surfaced Problems

A list of the most critical cases was forwarded to CNO for case by case action. Interest in what was originally a VCNO project dwindled after one year of displays at the Office of the CNO. No one wanted to create a CNO-level task force group to handle problem solving on a continuing basis as this would create another bureaucratic layer and would require collateral duty by all concerned.<sup>11</sup>

By a CNO letter of 26 September 1967, the Naval Facilities Engineering Command (NAVFACENGCOM) was directed to make a continuing effort to identify encroachment problems Navywide, to determine funding, and to determine legislative requirements or other means of solving encroachment problems.<sup>12</sup>

Project Safeguard, now called Project Guardian, is currently a bookkeeping effort as most problems are now resolved at the local level and their mention at the Pentagon now only provides "Washington Visibility" for those involved. It is the responsibility of local level officials to recognize problems, propose solutions, and to program for them. There is currently no higher level

review of alternative solutions due to a lack of sufficient staff. Problems typically do not reach the Washington level unless they are extensive and their appearance is sudden.

#### Analysis of Project Safeguard (Project Guardian)

Project Safeguard was designed to surface encroachment problems at all types of naval installations, including airfields. It is significant that of the seven problem type categories, the one with the largest number of problems was "aircraft/aviation." That almost a majority of all the instances of interference reported were within costal naval districts is not surprising, as many naval installations were located on the east and west coasts of the country in order to be in proximity to the operational naval forces they serve.

The immediate concern and attention devoted to the most critical encroachment cases is fairly typical of the governmental pattern of dealing with crises on a priority basis. Equally typical of a bureaucracy is the sudden disinterest in a program upon the resolution of the immediate critical problems, and/or the transfer/

resignation/retirement of the program's top-level sponsor. The ease with which the program could be shifted into a maintenance phase was, in part, related to the lack of an established administrative machinery dedicated directly to the program's implementation.

In its current status, Project Guardian documents encroachment problems once they have already surfaced and have usually been attended to by local commanders. One of the program's main weaknesses is that it contains no mechanism for the projection of anticipated problems so that they can be resolved prior to their reaching a crisis stage.

1969: Project WIRE  
(Western Installations Requirements Evaluation)

Partially as the result of problems identified by Project Safeguard, but mainly due to the initiatives of the then Assistant Secretary of Defense for Installations and Logistics, Project WIRE was begun in September, 1969, in apparent response to increasing civilian encroachment around military installations. A tri-service team with representatives of the Departments of the Army, Navy, and Air Force was appointed by the Assistant Secretary of Defense (Installations & Logistics)

to conduct a study of all military installations in the ten southern counties in southern California and the military installations in the vicinity of Yuma, Arizona.<sup>13</sup>

The Navy was designated executive agent of the project.

The Phase I Report was published in July 1970, and addressed itself exclusively to air installations. Phase II was published in July 1971, and concerned itself with all remaining Department of Defense installations in the study area.

Project WIRE was the first regional functional overview of the installations of all three military services. The reports were never officially published by the Department.<sup>14</sup> This may have been due to the internal departmental politicking which often accompanies a study which crosses over and/or into various areas of power and authority. Project WIRE was one of the first efforts in recent times to address the planning requirements of all the installations of all the military services within a region.<sup>15</sup> By design, a regional study tends to cover such numbers of areas and installations as are represented by several power structures. To work within a single local power structure will typically preclude the possibility of programming any regional study due to the limited scope of

authority of any one local commander. Regional studies identify existing interdependencies among local units and propose new ones in order to promote the economic utilization of existing natural, physical, and fiscal resources. Such interdependencies can take the form of shared facilities which may be under one local commander's jurisdiction rather than another thus reducing the latter's autonomy. Such a common facility may require the entrance of a new operating authority into the region as now occurs in many Navy regional medical facilities. The potential upset to the existing local power structure generated by the execution of regional plans often creates internal negative attitudes towards their implementation. There is also the possibility that the WIRE team's recommendations concerning base consolidation, closure, and relocation caused persons outside the DOD who are sensitive to political pressures to attempt to delay or stop official publication of the Project WIRE Reports.

The Project WIRE team developed a concept whereby facilities and installations were identified as being strategically or environmentally situated. Activities which were not so located were identified and their eventual

relocation to more suitable sites was considered. The initial concept was expanded to propose that proceeds from the sale of such facilities be designated for support of the development of new facilities at new locations. Previously, monies accrued from the sale of such properties went directly to the general fund of the U. S. Treasury or the properties were given free of charge to local interests. With either method, the Navy Department did not receive direct credit for such transactions.

Project WIRE is important not only as evidence of the problems incurred by regional planning efforts, but also because of the interface which occurred during its development between the WIRE Project Team and representatives of the General Services Administration (GSA) who were implementing Executive Order 11508. This interface is discussed in the following two sections.

#### February 1970: Executive Order 11508

On 10 February 1970, President Nixon signed Executive Order 11508. It provided for the identification by all executive agencies of unneeded federal real property. Specifically, it required the head of each

agency to:

- (1) institute immediately a vigorous and complete survey of all real property under his control; and
- (2) make a report to the Administrator of General Services within sixty days of the date of this order, listing any such property or portion thereof, and state whether it is not utilized, is underutilized, or is not being put to its optimum use.<sup>16</sup>

The Administrator of General Services was given the task to

establish uniform standards and procedures for the identification of real property that is not utilized, is underutilized, or is not being put to its optimum use<sup>17</sup>

within sixty days of the date of the order. At that time he was to begin, on a continuing basis, a survey of all the real property of all executive agencies and report all properties which fit the above described characteristics to the President via a Property Review Board.

The Property Review Board was to consist of the Director of the Bureau of the Budget, the Chairman of the Council of Economic Advisors, the Chairman of the Council of Environmental Quality, the Administrator of General Services, and any other members of the Executive branch that the President may designate. The Board was to review

the reports made by the Administrator of General Services, and to make recommendations for the disposition of specific parcels.

The Federal Property Management Regulations Subpart 101-47.8 provides definitions for "not utilized," "underutilized," and "not being put to its optimum use," as well as guidelines and procedures to be followed by an agency during the course of its annual review of its real property holdings.

On 25 June 1973, President Nixon signed Executive Order 11724 which superseded Executive Order 11508, and Executive Order 11560 of 23 September 1970, which amended E. O. 11508 in a minor way. Executive Order 11724 established a Federal Property Council within the Executive Office of the President. The Council assumed the responsibilities of the Property Review Board and was further charged to develop and review federal real property policies. The major change in the Council's composition from that of the Board it replaced, is the omission of the Administrator of General Services from its ranks. There may have been some sense of a "conflict of interest" in that the Administrator was responsible for

surveys that he also passed final judgment upon prior to presidential review. The Administrator is now relegated to an advisory role.

1971: Project WIRE and Executive Order 11508

Project Safeguard, Project WIRE and Executive Order 11508 have been introduced because, in large measure, their interaction led to the events which eventually gave final impetus to the development of the AICUZ policy.

During the conduct of the WIRE study, the project team encountered a problem with regard to buffer strips which are necessary for various installations (air, ammunition, communications, tactical, and classified.) These strips of land protect the operational capability of the installations by preventing incompatible adjacent development, such as the permanent siting of any inhabited structure within explosive safety areas or the establishment of certain electronic equipment near communications facilities.

Generally, the military does not need the buffer strips for active use. Rather than letting the land lay idle, it outleases the land for agricultural or

recreational purposes. Normally, these are long-term leases. These actions appear to be in accord with existing Department of Defense policy on maintaining installation operational capability.

The DOD will expand whenever possible the present practice of multiple use of military facilities and land, water, and air areas when not in conflict with essential military operations. ...In following this policy then the installation commanders might be expected to out-lease or otherwise allow joint use of essential but not physically occupied real estate, such as buffer zones or ordnance quantity-distance arcs. As long as the real estate was utilized in a manner compatible with the military activity at the installation, an arrangement of this nature would seem to be advantageous to both the DOD and the civilian organization.<sup>18</sup>

The regulations developed in support of Executive Order 11508 required buffer zones to be kept to a minimum.

The problem, however, is that GSA under Executive Order 11508 schedules a survey of the installation that has the buffer strip . . . . Under Executive Order 11508, the buffer strip can be classified under-utilized or not being put to optimum use. Furthermore, the survey team can conclude that if the buffer strip can be out-leased for longterm periods of 20 to 25 years, the land is not absolutely essential to the operation of the installation, and therefore, the buffer strip should be reported excess.<sup>19</sup>

During meetings between the Project WIRE team and the GSA regional office survey team, the question was raised that if the buffer strips are necessary to protect the installation's operational capability, would GSA report them excess for recreational use or agree to a long-term lease for any compatible use? The problem was forwarded from the field to the Washington "headquarters level" for resolution. By May 1971, negotiations between the Assistant Secretary of the Navy (Installations and Logistics) and the Administrator of GSA were underway. Part of these discussions involved a proposal for the creation of an ad hoc group to analyze the problem and to establish guidelines for evaluating the utilization of buffer zones and safety clearances.<sup>20</sup> In June, the Administrator expressed interest in such a group.

An understanding of the Navy's acquisition criteria for the specific area and estate required for each kind of buffer zone would enable GSA survey personnel to evaluate all Navy facilities within the same framework.<sup>21</sup>

In this entire background section, this is the most critical point that will be mentioned. The lack of specific criteria officially adopted by the Department

of Defense in regard to buffer strips for land use compatibility precluded any determination as to their proper size or utility or the degree of interest to be purchased once the areas had been determined. An ad hoc group was established in July 1971 to investigate criteria for buffer zones and land use in naval shore installations. It was the work of this group that appears to have been the prime motivating factor in the development of the AICUZ policy.

The events which culminated in the adoption of the AICUZ policy by the Department of Defense now began to occur with a higher frequency and a greater intensity. Before beginning discussion of these events, however, a few more actions which did or can impact the AICUZ policy will be noted in order to provide a more complete historical picture. As the final AICUZ policy is still in its evolutionary stages, the cutoff point for this historical account is 31 March 1974. Incidents which occurred after that date have not been included. (See Figure 2.)

1940	1950	1960	1970
*World War II (1941-45)	*Korean Conflict (1950-53)	*Vietnam Conflict (1965-72)	
	*Jet engines commercially introduced		*Supersonics commercially introduced
*Surge of suburbanization			*Areas outside SMSA central cities gain population pre-eminence
	*BUWEPS Identification of physical obstructions (1956)	*BUWEPS Noise Abatement Program (1964)	
		*Project Safeguard (1966)	
		*Project Blue Air (1969-72)	
		*Project WIRE (1969-71)	
		*E.O. 11508 (1970)	
		*E.O. 11560 (1970)	
		*Project FRESH (1971)	
		*E.O. 11724 (1973)	
		*DODINST 4165.57 (1973)	
		*NEPDB (1973)	

FIGURE 2  
BACKGROUND TIME LINE

1971: Project FRESH

Project FRESH (Facilities Requirements Evaluation, State of Hawaii) was initiated

to determine landholdings required to support the long-range Department of Defense (DOD) presence in the State of Hawaii, and to determine which landholdings could be released by the Department of Defense in consonance with Executive Order 11508, issued by President Nixon in February 1970.<sup>22</sup>

Project FRESH was a release and retain, functional, conceptual plan rather than a land use-oriented master plan. Although Executive Order 11508 gave final impetus to the initiation of Project FRESH, there was previously, a rather constant pressure by local groups and officials for the government to release part of its real property holdings. Land is a limited and increasingly precious commodity in the island state.

Hawaii's political and economic center is on the Island of Oahu and military activity is also most intense on this island where almost 25% of the land is controlled by the Department of Defense. Over half of the Island of Oahu is in the hands of seventeen large landowners who, "generally are unwilling to sell their

holdings and prefer to make long term leases at very high annual charges."<sup>23</sup> The State controls 15% of the land and only 2% is in other private hands. This existing land ownership situation, fueled by a growing need for land to accommodate urban expansion and a desire to preserve existing agricultural lands, has caused intensive pressures to be exerted on the military to release some of its holdings. Executive Order 11508 gave additional impetus to these excessing pressures.

Project FRESH was initiated following a Memorandum from the Assistant Secretary of Defense (Installations and Logistics) dated 27 August 1971.<sup>24</sup> Following a Memorandum from the Deputy Assistant Secretary of Defense (Installations and Logistics) dated 29 September 1971, a Steering Committee was formed, the Department of the Navy was designated DOD agent for the Project, the Pacific Division of the Naval Facilities Engineering Command was designated as the local Defense Agent for the Study, and a Study Group began work on 11 October 1971.<sup>25</sup>

There has been an interesting recent development in the implementation of Project FRESH. Discussion began

at the Federal Property Council to declare a moratorium on the disposal of federal real property holdings except by exchange in the State of Hawaii. An issue paper prepared by the Federal Property Council stated that

(t)here seemed to be a consensus (among a nine member House Armed Services and Property Review Board Inspection Committee) that the best interest of the United States can be served by retaining its surplus fee properties, now and in the future, for land exchanges to meet Federal requirements rather than seeking appropriations for that purpose, particularly with land values increasing so rapidly.<sup>26</sup>

The recommendation to acquire land by exchange was an original recommendation of Project FRESH, but not to the extent suggested above. Action was initiated in February 1973, soon after the release of Project FRESH, to acquire by exchange approximately 1,200 acres of land lying within Q-D arcs from the West Loch Branch of NAD Oahu. This exchange is still in progress. Other areas where an exchange would be desirable are Waikele Branch of NAD Oahu where Q-D arcs extend beyond station boundaries and NAS Barbers Point where the AICUZ is violated.<sup>27</sup>

The subject of land exchange as an implementation procedure of the AICUZ policy will be discussed later in this study.

1969-1972: Project Blue Air<sup>28</sup>

In December 1969, a letter from the Chief of Naval Operations alerted various naval agencies to the initiation of the Blue Air Study by the Center for Naval Analyses, a non-profit research organization with a thirty year history of providing the Navy and Marine Corps with scientific support. The Study was to determine

on an area-by-area basis, the present usage and projected needs of airspace by the Navy and the Marine Corps, and the relationship of these needs to the needs of other airspace users.<sup>29</sup>

The Study was then to

identify specific problems that can reasonably be expected to emerge from the growing demands for airspace, and their implications with regard to base loading, base location, modified or new training concepts, joint civil/military base use, and inter-agency procedure and control system relationships.<sup>30</sup>

The growing demands for the fixed volume of airspace and increasing encroachment of civilian housing and industry around air installations in areas which were previously greenbelts were cited as the prime reasons for the initiation of this study by the Chief of Naval Operations in his letter. Project Blue Air, however,

ignored suburbanization/urbanization as a factor affecting airport operations and concentrated on increasing civilian use of a limited commodity, namely airspace, as the study's prime motivating source.

The Blue Air Study, in essence, is a study of the effects upon Naval aviation of the future demand for airspace by its several users and the potential conflicts arising therefrom.<sup>31</sup>

An Analysis of Naval Airspace Usage (Project Blue Air) was published in October 1971, and distributed to various naval agencies on 3 March 1972. The significance of Project Blue Air to the AICUZ policy will be discussed in the policy analysis section of this study.

#### 1973: Navy Environmental Protection Data Base

Since 1966, the Naval Facilities Engineering Command has had Navy-wide responsibilities for the environmental programs . . . in air, water and land pollution control. The program has been expanded to include noise pollution control at shore activities and oil spill control/cleanup in inland harbors and port waters.<sup>32</sup>

Part of this program includes the development and management of the Navy Environmental Protection Data Base.

The Navy Environmental Protection Data Base (NEPDB) is a centralized System to collect, process and disseminate environmental data to document the extent to which the environment is affected by Navy facilities (vessels, aircraft, installations, etc.) and operations. As designed, the System is integrated into existing Navy programs and organizations and provides the Department of the Navy a single technical support service to meet evolving environmental data requirements in a cost-effective manner. It will permit all elements of the Navy to identify actions required to comply with federal, state and local environmental standards.<sup>33</sup>

The NEPDB is an outgrowth of the National Environmental Policy Act approved by Congress in January 1970. Passage was followed by the President's issuance of Executive Orders 11507 and 11514 of February and March 1970 respectively which mandated

'that heads of agencies shall maintain review and surveillance to insure that (environmental) standards are met on a continuing basis.' Agencies also were directed to 'identify potential air and water quality problems associated with the use and production of new materials.'<sup>34</sup>

Directives and Instructions followed down the chain of command within the Department of Defense until January 1971, when the EPDB program was established by the Assistant Secretary of the Navy (Research and

Development). In April 1971, the Chief of Naval Material assigned the Naval Facilities Engineering Command with overall responsibility for the EPDB. A two year research and development effort began in July 1971. The program became operational in July 1973. As of this writing, there is no final official relationship between the EPDB and the AICUZ policy. The Data Base, like Project Blue Air, will be critiqued relative to the AICUZ policy later on in this study.

## CHAPTER II

### POLICY FORMATION

#### AD HOC GROUP FORMATION

In the previous section, the establishment in September, 1971 of an ad hoc group to investigate criteria for buffer zones and land use in naval shore installations was mentioned. The work of this group will now be discussed in more detail in this section as it appears that its efforts were a primary input to the development of the AICUZ policy.

Following the proposal for the creation of an ad hoc group to provide guidance on buffer zones during negotiations begun in May, 1971, between the Assistant Secretary of the Navy (Installations and Logistics) and the Administrator of the General Services Administration (GSA), additional support for the creation of such a group mounted. On 3 September 1971, the Chief of Naval Training (CNTRA) recommended the immediate study of the encroachment problem "with the goal of developing new airfield criteria to minimize the encroachment problems

associated with jet aircraft operation."<sup>35</sup> Encroachment on naval air stations was cited as a long standing problem. Generally, clear zones around runways had previously been retained through the use of easements in lieu of fee simple ownership. But it was now believed that as clear zones were not so much a matter of aircraft safety as protection against encroachment, it was necessary for new criteria to be developed to reflect both these aspects. CNTRA went on to say that the Report of the GSA Field Survey of the Naval Air Station at New Orleans of 5 October 1970, recommended that considerable real estate at the ends of the runways be excessed with hold harmless covenants to relieve the Navy of responsibility for aircraft operations or noise damages. CNTRA feels that once development is permitted, pressures to force base closure, regardless of the Navy's legal position, would occur. He also suggests that the Air Force's "Greenbelt" Program may provide an excellent solution to the problem. He notes that the criteria of the greenbelt program have been used successfully by the Air Force to reduce GSA excessing recommendations.

Briefly, the Air Force Greenbelt program

establishes a buffer zone of about one mile on either side of each runway centerline and two to two and one half miles at the end of each runway. Within the Greenbelt the Air Force proposes an easement which would preclude the use of the land other than for agricultural, recreational or non-smoke producing industry. The Air Force plans to compare the cost of the easements at each base to the replacement cost of the base. If the ratio of easement costs to replacement value is reasonably low, the Air Force plans to program MCON (Military Construction Program) dollars to acquire the easements. Where the easement costs are relatively high, the Air Force will continue the status quo and accept the fact that they may be required to close the base at some future time.<sup>36</sup>

On 18 September 1971, the Chief of Naval Material (CNM), in a letter to the Chief of Naval Operations (CNO), cited "the need for improvements of Navy airfield standards and criteria which would apply to program development"<sup>37</sup> similar to the Air Force "Greenbelt" policy. He proposed an ad hoc working group to review current criteria and standards, to determine problems and suggest follow-up studies, and to formulate new criteria and standards for naval air installations.

An intra-office memorandum<sup>38</sup> from the Director of the Aviation Programs Division to the Deputy Chief of Naval Operations (Air Warfare), mentioned the letters

from CNTRA and CNM and went on to recommend that CNO establish an ad hoc committee to examine the "Greenbelt" concept.

On 29 September 1971, CNO, in a letter to CNM and the Commandant of the Marine Corps, formally established the ad hoc group with a member of the CNO's staff designated chairman.

#### FIELD INITIATIVES

While discussions about the ad hoc committee were underway, local community encroachment pressures were growing. Concurrently, with the initiation of Headquarters action on the problem, local field initiatives to deal with their encroachment problems evidenced themselves.

On 18 October 1971, the Commandant of the Eleventh Naval District whose jurisdiction includes Southern California, the southern tip of Nevada, and the State of Arizona, issued Instruction No. 11010.1A. The Instruction in support of Project Guardian is intended to alert his personnel to

the tremendous acceleration of community encroachment upon the Navy's shore activities; to furnish information on types of community development proposals which should be kept under constant surveillance;

and to establish procedures which will ensure that the Commandant is kept informed of such development while the proposals are still in the early planning stages, to the end that potential problems can be resolved before a conflict of interests, with accompanying adverse public relations, arises.<sup>39</sup>

The types of development to be monitored include residential development, flood control channels, construction involving electro-magnetic interference, variances on existing height or zoning ordinances, and the construction or improvement of freeways, highways, and bridges. The Instruction requires all Commanding Officers of installations within the Eleventh Naval District to forward all information from any source which pertains to the types of development noted above to the District Civil Engineer, who is to review the data and report back to the Commanding Officers.

#### AD HOC GROUP EFFORTS

Although the ad hoc committee was not formally established until 29 September 1971, work began on an informal basis in July, 1971, soon after the initial discussions between the Navy and GSA. A preliminary draft of a "Report on Criteria for Buffer Zone and Land Use in

Naval Shore Installations" was completed on 30 July 1971. It expanded the area of study to include facilities other than airfields, such as ordnance storage and handling facilities, firing and bombing ranges, and communication facilities. The Report further suggested the consideration of family housing and hospitals as well. Buffer zone criteria would be based on noise, interference, and safety, and would hopefully provide justification for the retention of existing land and the purchase of additional land and/or easements as required. Existing criteria relating to the governing factors of buffer zone criteria were noted. Noise factors included absolute level, spectrum, maximum tone, noise duration, aircraft type, aircraft mix, number of operations, runway utilization, flight paths (normal, touch and go, and/or mirror landing), operating procedures, and time of day. The current Navy criteria was based on the composite noise ratings (CNR) method. At that time, application of the noise exposure forecast (NEF) method was being developed by the Air Force.

Currently, there is no standard, universally accepted method for quantitatively and qualitatively measuring aircraft noise on or in the vicinity of airports

by either governmental or private agencies. NAVDOCKS P-98, the tri-service manual on "Land Use Planning with Respect to Aircraft Noise," is based on the perceived noise level rating system. The ratings are calculated from noise spectra and are related to man's subjective feeling of "noisiness." The system enables comparisons of noise produced by different types of aircraft in different modes of operation. The perceived noise levels do not, however, account for the duration or number of occurrences of a given sound. Correction factors are applied to the perceived noise level contour to yield the composite noise rating which can be used to predict community responses.

The effective perceived noise level (EPNL), expressed in units of EPNdB, is a measurement of the instantaneous perceived noise level corrected for spectral irregularities. This measurement procedure was developed by the private firm of Bolt, Beranek and Newman which has been under contract to the Federal Aviation Administration (FAA) of the Department of Transportation (DOT). From these calculated measurements, noise exposure forecast (NEF) contours are developed. Unlike the CNR

system, the NEF system reflects signal time duration. There is no formula relationship between the CNR and NEF systems although rough approximations are possible. Both methods are recognized by the Department of Defense and by the Courts.

California uses Community Noise Equivalency Levels (CNEL) to measure aircraft noise. This system is based on summation of average sound levels, sometimes called the equivalent continuous noise level, over a 24 hour period with weightings for exposure during evening and night periods.<sup>40</sup> The Environmental Protection Agency is currently considering the adoption of day-night average sound levels.<sup>41</sup>

The FAA has developed an Aircraft Sound Description System (ASDS).<sup>42</sup> The system does not include subjective interpretation such as annoyance factors, and while it may prove effective for certification of aircraft, it may have limited applicability for land use planning. It is not as yet certain if the Environmental Protection Agency will concur in the system's adoption.<sup>43</sup>

Existing formal Navy criteria on airfields concerned the runways and prescribed flight clearance zones

were based on safety and interference data but this is not specifically stated.<sup>44</sup> Existing standards and criteria on land requirements for runway clearances were limited principally to:

specified areas within the 50:1 approach surfaces, and the 7:1 transition surfaces. There are no specific provisions at present for the acquisition by fee or easement of privately owned land adjacent to Navy and Marine Corps Airfields to assure that development of urbanization in such adjacent areas will not be incompatible with Navy and Marine Corps flight operations.<sup>45</sup>

The areas described above are specifically detailed in NAVFAC Definitive Drawing Nos. 1291800, 1291801, and 1291802 in Definitive Designs for Naval Shore Facilities, NAVDOCKS P-272, Part One and it is anticipated that further definition will soon be provided in Facility Planning Factors for Naval Shore Activities, NAVFAC P-80.

The 30 July preliminary draft of the "Report" noted that specific data on accident distribution were available from the Navy Safety Center in Norfolk, Virginia, although access is restricted due to the sensitive nature of the information. The study further noted that the Air Force's current "Greenbelt" project might be a source of data on buffer zone land use criteria. Apparently there

were sufficient data on electronic interference criteria available from NAVFAC P-80, Facility Planning Factors for Naval Shore Activities and the Naval Electronics Systems Command and no additional criteria were required. After investigation, criteria on other activities, except air operations, were also considered to be satisfactory.

Caution was given to anyone who might think airfield buffer zones would be standard. Each of the criteria factors, the report warned, could distort the space of the zones. It was already appreciated that the Air Force's initial one mile by two mile rectangular greenbelt was too rough a description and that use of one of the more sensitive noise measurement systems described earlier would be required. The issue of the cost and economic feasibility of the establishment of the buffer zones around naval air installations was mentioned but not discussed in any depth.

#### AIR FORCE'S "GREENBELT" CONCEPT

A letter from the Chief of Naval Material (CNM) to the Commander, Naval Facilities Engineering Command (COMNAVFACENGCOM) on 28 June 1971, directed the Commander

to evaluate the Air Force "Greenbelt" concept and to advise to CNM on the feasibility of developing a similar proposal for the Navy and the Marine Corps.<sup>46</sup> The evaluation was to be coordinated with the Commander, Naval Air Systems Command for CNM to present for approval by the Chief of Naval Operations and the Commandant of the Marine Corps. Both functional and legal analyses of the "Greenbelt" concept were then undertaken.

In addition to the criticism of the simple rectangular definition of the "Greenbelt," other problems surfaced during this time. A letter on 6 August 1971, from COMNAVFACENGCOM to the CNM stated that Naval and Marine Corps air operations "differ significantly"<sup>47</sup> from the Air Force's operations. The need for modifying factors to account for the extensive use of rotary-wing aircraft operations, propeller-driven aircraft operations, and carrier landing practice operations were anticipated.

An internal letter from the Legal Counsel of the Naval Facilities Engineering Command to the Real Estate Division on 1 October 1971, was a legal critique of the Air Force's "Greenbelt" concept. The acquisition of rights in lands adjacent to stations to protect communities

from the noise nuisance is questioned. Specifically, it is asked, "Why should Federal funds be used to protect communities that have sprung up around the station as a result of unscrupulous real estate promoters?"<sup>48</sup> Counsel also questioned the acquisition of flight clearance easements without also acquiring avigational easements as well. While the Navy had been acquiring avigational easements when deemed necessary, the Air Force had not been doing so, citing federal legislation which recognizes the "public right of freedom of transit through the navigable air space of the United States"<sup>49</sup> as justification.

However, Counsel cautioned that

(w)hile the Congress has defined what is considered 'navigable airspace' and has also included the air space needed to insure safety in take-off and landing, such action does not give 'carte blanche' authority to the Government to appropriate whatever airspace it desires to insure safety in take-off and landing.<sup>50</sup>

Counsel cites legal actions taken against the United States under provisions of the Tucker Act alleging that the Government has taken an avigational easement due to low and frequent flights on take-off and landing. While recognizing the public right to take-off and landing in navigable airspace, they also recognize the rights of property owners to be reasonably compensated for

operations that "immediately and directly limit the exploitation of their properties."<sup>51</sup> Counsel's third point is also one of caution. It is suggested that restraint be exercised in the utilization of zoning ordinances to protect the Government's airfields as Counsel believes such practices invite litigation.

By the end of 1971, the use of the term "Greenbelt" was being questioned. It was apparently believed that the term had the connotation of open fields and did not fully convey either their importance to the maintenance of operational capability at air installations or the broader concept of compatible land use. An acronym, that perennial favorite Washington word form, was substituted in place of "Greenbelt." AICUZ (pronounced  $\overline{\text{AY}}$  -  $\text{C}\ddot{\text{U}}\text{Z}$ ) was selected and stands for Air Installations Compatible Use Zones.

#### INTERACTION WITH OTHER FEDERAL AGENCIES

An Air Force Memorandum of 2 September 1971, revealed some interesting information about other public and private agencies interested in the airfields criteria problem. On 15 April 1971, the Federal Aviation

Administration of DOT requested background information from the Air Force on developing criteria on aviation and clearance easements as they were in the process of developing a plan to protect civil airports. The Bureau of Land Management of the Department of the Interior had apparently expressed agreement with the "Greenbelt" concept and a willingness to implement a land exchange plan in a letter dated 10 August 1970. They later reversed themselves and "would take no action to implement the exchange plan until Congressional authorization is obtained."<sup>52</sup> At a meeting between representatives from the Air Force and the Office of Management and Budget (OMB) on 26 July 1971, OMB expressed concern about the encroachment problem but was more concerned about the total amount of funds required to prevent this trend and the lack of a priority list of bases.

The Airport Operators Council International (AOCI), a private group representing owners and operators of airports which serve certified air carriers, has agreed in principle with the "Greenbelt" concept and considers it the best proposal to date for protecting airfield operations.<sup>53</sup>

Circular 1390.2 of the Department of Housing and Urban Development (HUD), dated 4 August 1971, deals with Departmental policy on noise abatement and control. The

Circular defines noise to be a major source of environmental pollution and states that it is departmental policy

to encourage land utilization patterns for housing and other municipal needs that will separate uncontrollable noise sources from residential and other noise-sensitive areas; and to prohibit HUD support to new construction on sites having unacceptable noise exposures.<sup>54</sup>

The National Environmental Policy Act of 1969 (PL 91-190) is cited as providing partial authorization for this policy. Particular emphasis is placed on the importance of compatible land use planning in relationship to airports. Interdepartmental coordination is expressly required, with particular mention of military base commanders among others.

At a meeting held in Washington, D. C. on 5 October 1971, it was confirmed that it was the policy of both the Federal Housing Administration of HUD and the Veterans Administration, to disapprove any new developments in noise areas where normal conversations was interrupted or sleep disturbed.<sup>55</sup> These noise levels correspond approximately to CNR Zone 3.

### CHAPTER III

#### POLICY EXPOSITION

The ad hoc group which reviewed the current airfield criteria and standards and formulated new criteria and standards was established in September 1971. Their initial efforts revealed the need for new criteria and work began on its development. By June 1972, the Department of Defense Instruction (DODINST) promulgating an Air Installations Compatible Use Zones (AICUZ) Program had been prepared. Concurrently, Code 20 (Facilities Planning) of the Naval Facilities Engineering Command had prepared, and was coordinating, the reviews of the drafts of the Secretary of the Navy's (SECNAV) and the Chief of Naval Operations' (OPNAV) Instructions implementing the AICUZ Program within the Navy.<sup>56</sup> The review process continued into early 1973. DOD Instruction 4165.57 is the Department of Defense's official policy on establishing compatible land uses around all military air installations. The Instruction was issued on 30 July 1973.

DEPARTMENT OF DEFENSE INSTRUCTION 4165.57

The DOD Instruction is divided into six parts, each of which corresponds to some of the various standard components of any public policy. Parts I and II, Purpose and Applicability, present the goals of the policy. Part III, Criteria, is the most important part of the policy for it provides the methodology for quantifying the objectives which are in Part IV, Policy. Part V, the Air Installations Compatible Use Program, and Part VI, Effective Date and Implementation, require the implementation of the AICUZ policy by the military services within a given time schedule. Review will apparently be effected by the Assistant Secretary of Defense (Installations and Logistics) as Part VI requires copies of documents promulgating the policy and establishing the programs required to be sent to his office. A copy of the actual Instruction has been included in this study as Appendix A.

The stated goals of the AICUZ Instruction are

to provide for safety of flight, ...to assure that people and facilities are not concentrated in an area which is susceptible to aircraft accidents, ... (and) to protect the operational capability of the DOD active military airfields.<sup>57</sup>

Part III of the DOD Instruction acknowledges that

(c)urrent airfield and airspace clearances may not provide sufficient space around air installations to assure that all possible uses of land in the vicinity of the air installation are compatible with aircraft operations.<sup>58</sup>

Compatible land use has been primarily defined in terms of safety and noise of aircraft operations. NAVDOCK P-98, Land Use Planning With Respect to Aircraft Noise, is cited as a source of noise criteria. NAVDOCK P-98 relies on composite noise ratings (CNR) although the Instruction also permits the use of NEF values.

Policy objectives and methodologies are defined in Part IV. They are on a graduated scale of focus, relative to problem intensity, areas of direct control, and cost. As a first step, measures are to be taken on base to reduce aircraft noise. These measures are intended to include the siting of engine test and runup facilities, the use of sound suppression equipment and adjustments to traffic patterns. All these steps will tend to reduce the size of the AICUZ, and hence the area over which the DOD would require some degree of land use influence. The next series of steps relate to off-base measures in order

to insure compatible land uses in the area generally within CNR Zone 3, and areas of high accident potential, although each specific area may vary as local conditions require. Prior to the acquisition of rights to land within the AICUZ, work with local agencies to achieve sympathetic zoning, and work with state bodies to achieve supporting legislation in order to provide controls on the use of land, is to be attempted. The purchase of interests in land within the AICUZ may be obtained through donation, land exchange, or purchase. However, it is recognized that the cost of acquiring rights which will protect operational capability may approach the cost of fee title. Should this situation occur, it will be necessary to evaluate other options such as installation relocation, installation mission change, or installation closure. The specific rights to be acquired are detailed in this section.

Part V of the Instruction requires the Secretaries of the Military Departments to develop and implement a plan to investigate and study all air installations in necessary order of priority to develop an Air Installations Compatible Use Program for each air

installation. Based on these studies, each Military Department is required to develop implementation plans for the AICUZ program for approval by the Secretaries of the Military Departments within 15 months of the effective date of the Instruction (30 July 1973).

Part VI requires copies of documents promulgating the Instruction to be sent to the Assistant Secretary of Defense (Installations and Logistics).

#### SECRETARY OF THE NAVY INSTRUCTION 11010.9

The Department of Defense typically requires its directives to be executed through its chain of command. (See Appendix C for organizational charts.) The DOD Instruction directs the Secretaries of the Military Departments to action. Drafts of the Secretary of the Navy's Instruction (SECNAVINST) on AICUZ were prepared by the Naval Facilities Engineering Command. (See Appendix B.) On 14 November 1973, the Secretary of the Navy signed SECNAVINST 11010.9 to implement the AICUZ Program within the Department of the Navy. The Instruction directs the next level in the chain of command, the Chief of Naval Operations (CNO) and the Commandant of the Marine

Corps (MARCOR) to:

- a. Promulgate planning criteria and technical guidance to air installations on the AICUZ Program.
- b. Investigate and study air installations in compliance with the requirements of enclosure (1) (i.e. DOD Instruction 4165.57).
- c. Develop an AICUZ Plan for each Navy and Marine Corps air installation comprising the following three basic elements:
  - (1) Reduction in aircraft noise pollution, both on and off-station.
  - (2) Establishment of a compatible land-use plan(s) for lands within the AICUZ
  - (3) Establishment of a positive plan for coordinating with state and local officials and maintaining public awareness of the Navy AICUZ Program.
- d. Prepare an integrated time-phased fiscal year AICUZ Program for each Navy and Marine Corps air installation.
- e. Submit the integrated Navy and Marine Corps AICUZ Program to the Assistant Secretary of the Navy (Installations and Logistics).<sup>59</sup>

Instructions by the Secretary of the Navy do not, generally, provide detailed instructions, but, rather, delegate responsibility to the next lower echelon of authority. It is significant, however, that this Instruction does require an integrated Navy and Marine Corps AICUZ Program. While the Marine Corps enjoys a certain autonomy within the Department of the Navy, the

Navy often provides planning assistance to the Marine Corps.

CHIEF OF NAVAL OPERATIONS (OPNAV)/

COMMANDANT OF THE MARINE CORPS (MARCOR) INSTRUCTION

The OPNAV and the MARCOR Instructions providing for the implementation of the AICUZ Program as required by DODINST 4165.57 and SECNAVINST 11010.9 were in the final stages of preparation during the first half of 1974. In their currently proposed form, these two Instructions will be jointly issued. They will provide the final detailed guidance for the rest of the Naval and Marine Corps chains of Command with respect to their responsibilities for the implementation of the AICUZ Program.

Prior to the issuance of the Joint Instruction, contracts were awarded to two private architectural/engineering (A/E) firms for the completion of seven AICUZ studies by November 1973. Four of the studies were on stations within the jurisdiction of the Western Engineering Field Division (WESTDIV) of NAVFACENGCOM and three were within the area serviced by the Southern Division (SOUTHDIV). Specifically, the Naval Air Station (NAS)

Miramar and NAS North Island (San Diego, California), NAS Moffett (California), and NAS Whidbey Island (Seattle, Washington) were studied under contracts supervised by WESTDIV and AICUZ studies were prepared for NAS Oceana (Virginia), NAS Jacksonville (Florida), and NAS Pensacola (Florida) under contracts managed by SOUTHDIV. In addition, a prototype study on NAS Cecil Field (Jacksonville, Florida) was done in-house by a master planning team of the NAVFACENGCOM Headquarters.

It was anticipated that there would be problems arising from the lack of an official OPNAV/MARCOR Instruction implementing the AICUZ Program, the A/E's inexperience in preparing such studies, and the Field Divisions' inexperience with the requirements of such studies.<sup>60</sup> Nonetheless, it was believed that such studies should be undertaken prior to the issuance of the Joint Instruction in order to surface problems relative to the current thinking on the form and content of the forthcoming directive.

As expected, problems did arise. Some were due to the time required for the initial education of the A/E and Field Division personnel. Indeed, the necessity of

this educational process was the prime reason for the selection of only two Field Divisions, out of a total of six, for inclusion in this initial study phase in order to avoid a total teaching effort at one time. WESTDIV and SOUTHDIV were selected due to the encroachment problems currently being experienced by installations they serve. To reduce the teaching time required additionally, each Field Division awarded all the contracts it was responsible for to a single A/E firm.

Some further delays were due to change orders to the contracts which increased the scope of the original studies. Three Outlying Fields (OLFs) were added to the list of installations to be studied when it was determined that their activities had significant influence on operations at nearby air stations. Some of the preliminary studies had no plottings of accidents which were later required. Preliminary drafts of the AICUZ studies were received by NAVFACENGCOM Headquarters in April, 1974 although the initial deadline was November, 1973. The study on NAS Miramar was received earlier as required by the Navy. It is anticipated that the eight final studies will be effective planning tools upon completion. Prior

to publication of the studies in their final form, they have already significantly affected the development of the SECNAVINST and the OPNAVINST/MARCORINST.<sup>61</sup> The four WESTDIV studies were funded with NAVFACENGCOM's overall Operation and Maintenance monies. The three SOUTHDIV studies were funded with "Z" Preliminary Planning monies. "Z" funds are a fixed amount each year and are permitted to accumulate over time. The "Z" funds expended in support of these studies were later reimbursed by the Navy's Pollution Abatement Program.

The Joint SECNAV/MARCOR Instruction has not, as of this writing, been officially issued. It is anticipated that the Chief of Naval Operations in conjunction with the Commandant of the Marine Corps will reserve program responsibility for funding and implementing the Department of the Navy AICUZ Program for themselves. Funding will probably continue to be coordinated with the Navy's Environmental Protection Program. It is expected that the Chief of Naval Operations will delegate his responsibilities in this area to the Deputy Chief of Naval Operations (Logistics). In addition, the Deputy Chief of Naval Operations will probably be required to monitor and coor-

dinate application of the policies and principles of the AICUZ Program, and to prepare an integrated Navy AICUZ Program for acquisition of facilities, noise suppression equipment, and land interests, in order of priority for submission to the Assistant Secretary of Defense (Installations and Logistics).

It is further anticipated that the Deputy Chief of Naval Operations (Air) will be given the task of establishing priorities for conducting AICUZ studies for all fleet support and training air installations as well as establishing fiscal year priorities for corrective projects. The Deputy Chief of Naval Operations (Research and Development) and the Commandant of the Marine Corps will probably be given a similar task with respect to all Navy research and development air installations and Marine Corps air installations respectively.

It is expected that the Chief of Naval Material will be required to accomplish the AICUZ studies for Navy and Marine Corps air installations within the Navy Environmental Protection Program, and to provide technical direction and support for the reduction of noise emanating from aircraft operations.

The Chief, Bureau of Medicine and Surgery will likely be required to provide technical direction and assistance in evaluating and validating health related requirements in the implementation of the AICUZ Program.

Major Claimants will probably be responsible for providing command direction, priorities, and recommendations on AICUZ Plans submitted by Air Installation Commanders under their cognizance. Major Claimants, of which there are 23 in the Department of the Navy, have general responsibility for planning and project submittals to meet deficiencies on bases within their jurisdictions.

Finally, Air Installation Commanders are expected to be required to become familiar with the Navy's AICUZ and Noise Pollution Abatement Programs. The Commanders will actively participate with state and local planning officials to achieve their objectives concerning the maintenance of base operational capability. They will provide assistance in conducting AICUZ Studies and develop an AICUZ Plan for each installation under their jurisdiction on the basis of the approved AICUZ Study, and will submit it to the Chief of Naval Operations/Commandant of the Marine Corps via the chain of command.

In order for the Joint Instruction to be effective, it will have to provide further detailed guidance to supplement these assigned tasks. It is expected that the Joint Instruction will provide definitions of terms associated with the final implementation of the DOD AICUZ Program similar to those listed below.<sup>62</sup>

AICUZ: land areas upon which the government requires an influence on land uses in order to safeguard the safety, health, and welfare of the public from noise exposure and aircraft accident potential, and to ensure full operational capability of the installation through compatible land use.

noise exposure: Noise measurement surveys using either the composite noise rating method or the noise exposure forecast method based on either actual measurements or calculated forecasts will be used in the initial determination of the AICUZ. The AICUZ area will comprise lands within CNR Zone 3 (which has the approximate equivalent of a NEF rating of 40) and all or part of CNR Zone 2 (NEF 30-40). The minimum portion of CNR Zone 2 land to be included in the AICUZ will generally be the lands adjacent to the CNR Zone 3 contour and out to approximately one quarter the distance to

the CNR Zone 2 contour. The boundaries will be modified relative to current and anticipated encroachment pressures from incompatible development which may result in frequent individual complaints because of noise pollution.

aircraft potential zones: The zones are determined for fixed wing only as an analysis of rotary wing aircraft accident data show no requirement to extend criteria beyond current approach-departure zones as set forth in NAVFAC P-272. The zones will vary relative to the predominant types of fixed wing aircraft and missions using the runway. There will be two accident potential zones (APZ) designated at the ends of runways beyond the clear zones established by applicable service criteria.

clear zone: most critical accident potential area and normally will be acquired in fee, maintained free of all construction and major vegetation at all major air installations.

APZ I: less critical than the clear zone but still may possess an identifiable potential for accidents.

APZ II: less critical than APZ I but still may possess potential for accidents, particularly for aircraft of the attack/trainer/fighter series. The need for APZ I and II shall be determined by analysis of the accident records and flight operations at each individual air installation relative to general accident potential zones (which will be detailed elsewhere in the Instruction.) When no accident potential statistics exist for the type of aircraft assigned, only the clear zone will be included in the AICUZ.

Modifications of APZ I and II may be considered if:

The runway is infrequently used.

The prevailing winds are such that a large percentage (i.e. over 80%) of the operations are in one direction.

Aircraft do not overfly the APZ during normal flight operations.

Local accident history further justifies such consideration.

Other unique conditions exist.

compatible land use: On the basis of the level of noise exposure and accident potential, the AICUZ shall be divided into a pattern of compatible land use zones. A weighted matrix of general land use types vs. accident potential and noise intensity levels will be provided as a guide. Full consideration must be given to assemblage of people, density of development and activities, and the provision of sound attenuation to permit maximum utilization of land consistent with the particular level of noise and accident potential.

AICUZ Study: A determination of the AICUZ for specified Navy and Marine Corps air installations, a complete list of which will be provided including master jet stations, other fleet air stations, training stations, research, development and testing air installations, and reserve training stations. (See Appendix D.)

AICUZ Plan: A three part methodology to be employed by each installation to reduce the size of the AICUZ by reducing noise and accident potential via physical and operational modifications, to indicate the degree of

interests in various areas to be acquired and the funding methodology to be utilized by the Navy to effect compatible use zones and to develop a public awareness strategy. Time-phased fiscal year schedules shall be developed for implementation.

physical and operational modifications: As a first priority, all reasonable, economical, and practical measures should be taken to reduce and/or control noise from flying and flying related activities. Typical measures may include resiting and/or reorienting engine test and run-up facilities; provision of sound suppression equipment and enclosures; adjustment of traffic patterns and glide/climb angles; operational restrictions on after burner and engine run-ups; and reduction of night operations. Physical modifications that impair operational effectiveness or reduce air safety shall not be made. Further, all proposed physical modifications must be supported by an economic analysis of facility cost versus costs for acquiring rights in the adjacent lands to ensure that future uses are

compatible with aircraft noise and accident potential.

compatible use zones/AICUZ land rights and interests: On the basis of effecting all

reasonable, economical and practical measures to reduce noise and accident potential at the air installation, those land areas upon which the Government requires an influence on future uses will be subdivided into compatible use zones.

The Plan will identify those lands which, because of existing land use trends, may be protected in the future from incompatible development through local zoning of other land use controls, and those which may not be protected through zoning changes. Zoning regulations are subject to constant pressures for change as population centers and economic factors change. Therefore, zoning normally will be relied on to control incompatible development only in instances where the land use patterns and configurations clearly indicate a continuation of compatible development. When current or anticipated development trends in

the area indicate that pressures will develop to rezone lands within the AICUZ for incompatible use, restrictive easements will be acquired to prevent such rezoning. Rights or interests also may be acquired on certain developed lands within the AICUZ to ensure that pending redevelopment of these lands will be compatible. (Specific examples of typical rights to be acquired will be indicated.) Rights to non-Navy owned land within the AICUZ will be obtained to the extent feasible by exchanging excess DOD land (per Executive Order 11724) and/or Department of the Navy land within the installation AICUZ which is excess to mission requirements and required solely to prevent incompatible development for which fee ownership is not essential. Restrictions as required to ensure compatible development will be imposed on Navy and Marine Corps lands within the AICUZ when they are exchanged or released. Lands which are required in fee for aircraft operation, as specified in NAVFAC P-272, FAA regulations and pertinent NAVAIR Directives, shall be included

in the AICUZ regardless of other considerations.

public awareness strategy: A public awareness

strategy will be prepared to provide on a

continuing basis, information to local govern-

ments, citizens groups, and the general public on:

the requirements of Navy and Marine Corps

flying activities;

the complexities of air installation

operations; and

the efforts underway and planned to reduce

noise exposure, ensure compatible development,

and alleviate undesirable external effects.

Particular emphasis should be placed on existing programs of cooperation with local authorities.

This strategy will also include procedures for

effecting continuing liaison with local zoning

boards, planning commissions, and similar bodies

to ensure that Navy interests are considered in

local planning and that local interests are

considered in Navy planning.

STUDY TIME FRAME

When this study of the DOD AICUZ Program was first proposed, it was anticipated that the last major step in the initial implementation process, the OPNAV/MARCOR Instruction, would have been signed and operative as of this writing. However, due in part to delays already discussed, the Instruction has not yet been officially issued. It is still in the final review stage. Hence the cutoff point of this section appears somewhat abrupt and unsatisfactory. Yet, in a critique of any on-going policy and its implementation program, the cutoff point probably always seems a bit premature. Nonetheless, the AICUZ policy's development process, and its first steps towards achievement, have been detailed and give full opportunity for evaluation. An analysis of these events now follows.

## CHAPTER IV

### POLICY ANALYSIS AND RECOMMENDATIONS

In evaluating the Department of the Navy's implementation of the Department of Defense's AICUZ policy, it is useful to analyze the set of three Instructions as a single piece of policy (micro-planning) and to also assess their relationship to general installation planning in the Navy (macro-planning). The policy cannot be studied relative to its final implementation actions at the local level as that phase has not yet begun. It will be recalled that the OPNAV/MARCOR Instruction has not yet been released as of this writing. Therefore, this analysis will address the internal logic of the policy and weigh the degree to which its stated or implied values, criteria and standards, goals, objectives, and evaluation procedures are sympathetic to each other. Then the scale of consideration will be enlarged to permit an evaluation of the AICUZ policy and its interface with the larger scale naval planning efforts. But first, the analysis will begin with a discussion of the development phase of the AICUZ policy.

POLICY ANALYSIS AND RECOMMENDATIONS - POLICY DEVELOPMENT

The formulation of the AICUZ policy is essentially based on the acknowledgement by the Office of the Secretary of Defense of the need to develop and utilize new airfield criteria in order to protect the operational capability of military air installations. There is a history of individual Naval Bureau-level interest and local, Naval District Commandant-level interest in such criteria beginning in the 1950's and continuing into the early 1970's. One can recall the efforts of the Bureau of Naval Weapons and the Commandant of the Eleventh Naval District during that period. The broader problem of protecting the operational capability of all types of naval installations received only relatively intense attention from the Office of the Chief of Naval Operations (CNO) during the initial phases of the Project Safeguard program in 1966 and 1967. However, as was indicated earlier, interest in the program waned and the problem was again buried for a time.

Policy Development - Lack of Continuity and Coordination

The Department of Defense has, as do many

bureaucracies, a fairly strong pyramidal organizational structure. Policy is made at the top and filters down the chain of command. As in the case of the AICUZ policy, events and reports of local crises typically filter in and up from the units at the bottom of the structure to the head of it which eventually responds in some fashion. Responsibility is fragmented at the lower levels and hence it is only persons around for a very long time in the same or related job positions who develop a comprehensive understanding of a given situation. More often than not, people move about within the federal bureaucracy and lack of continuity and coordination develops. Administrative reorganizations, staff reassignments, inter-departmental transfers and retirements are all major causes of shifts in personnel and are deterrents to comprehensive understanding of problems by persons at the lower levels of the organization.

The problem of a lack of lower-level continuity and coordination is both real and pronounced. It is both the cause of the duplication of effort and the cause of a lack of proper interfaces between units. It is significant that not one piece of the correspondence which was

available for the purpose of this study, which was written during the development of the three Instructions, contain any mention of any of the Navy's past efforts and actions in regards to the control of noise and land uses in and around naval installations. Such information would have been useful in assessing the potential effectiveness of alternative proposals for achieving the aims of the Instructions during their preparation stages at the staff level. The Blue Air Study is another case in point. Although the "continued encroachment of civilian housing and industry around naval air stations in areas which were formerly 'greenbelts'"<sup>63</sup> was cited along with a fixed volume of airspace and the constantly growing demand for it as the rationale for the Study, only the latter problem was addressed in the final report. As a research effort, the report would have had far more reaching effects had it attempted to deal with the problems of encroachment, as this is a very much neglected problem area. However, data on the volume of airspace and projected demands for it are much more easily quantified and compared than the effects of urbanization/suburbanization on the operational capability of air installations. It

appears one of the research aims of the Department was either not in good contact with "field" problems or the need to publish quickly and noncontroversially was paramount.

#### Policy Development - Generalist vs. Specialist

The problem of continuity could be remedied if data could be passed on from the current job holder to his successor. Ironically, Civil Service Commission regulations do not permit the advertising of a job opening and the replacement of an employee until the job is vacated. Hence, the opportunity for the passage of knowledge lies almost solely in personal files, word-of-mouth, and whatever can be gleaned from manuals. In order to develop a staff base with a broad expanse of knowledge in many areas, it is necessary to have the widest possible dissemination of knowledge. The history of the Blue Air Study is again a good case in point. Distribution of the final report in March 1972 was limited and apparently never filtered down the chain of command to the lower staff levels. The existence of information without its fullest exposure and availability is wasteful and should

be avoided.

It could be argued that such a policy would cause personnel to spend too much of their time keeping abreast of a myriad number of events to the detriment of their special duties. However, some balancing of the specialist with a general background seems essential lest the organization become too highly evolved and dysfunctional.

#### Policy Development - Intra-Governmental Stimulus to Action

Another interesting observation about the development of the AICUZ policy is that while there is over a twenty year history of incidents of civilian encroachment pressures at military installations, it was another branch of the federal government which eventually provided the final motivation for the Department of Defense to respond to the problem. Executive Order 11508 required the excessing of all federal lands which were not utilized, underutilized or not being put to their optimum use. The interface between the survey team from the General Services Administration (GSA) implementing the Executive Order and the tri-service Project WIRE team eventually caused the problem of encroachment to receive top-level,

Defense Department attention. It could, of course, be argued that the Executive Order itself was the result of the public demand for the release of federal lands. Notwithstanding, the issuance of Executive Order 11508 remains one of, if not the, prime stimulus to action.

The interest the Project WIRE-GSA interface developed in aircraft criteria could only have been encouraged by the Congressional passage of Public Law 92-574, the Noise Control Act of 1972, which was implemented within the federal government by Executive Order 11752. PL 92-574 and the Occupational Safety and Health Act (OSHA), PL 91-596, recognize noise as a potentially dangerous environmental polluter. The Occupational Safety and Health Act focuses on working conditions and as such has the most direct impact on base personnel, while the Noise Control Act has a broader orientation and covers noise received both on and off-station. These two laws could only help to provide increasing evidence to DOD officials of the growing necessity for steps on their part to deal with noise generated at military air installations.

The AICUZ policy, then, can be seen, in part, as the direct result of the need for new airfield criteria as

evidenced by the excessing pressures of GSA. As such, it is a reaction to an external stimulus and is primarily responsive in nature. It is therefore susceptible to being designed as a "stop-gap" measure. It will be recalled that interest in Project Safeguard dwindled down after the most critical cases were attended to. It is also prone to being limited in scope and not well related to the total naval planning effort. This aspect of the policy will be discussed further in the macro-planning critique.

#### Policy Development - Limited Scope of Study

One could criticize the fact that the Instructions only address encroachment at air installations and not the entire problem of encroachment at all military installations. It will be recalled that the July 1971 Draft Report investigated all types of installations with requirements for buffers. However, it was apparently the staff consensus that only the criteria for airfields were insufficient to protect operational capability.

#### POLICY ANALYSIS AND RECOMMENDATIONS - THE INSTRUCTIONS

The AICUZ program reflects the realization that existing airfield criteria were not sufficient to protect

mission capability and the need for the development and application of new criteria to existing air installations. Prior to the generation of the AICUZ criteria, only the existing airfield criteria could be used to justify the purchase of land and/or easements. The new criteria are primarily based on aircraft noise and accident potentials. The AICUZ is then to be determined relative to these new criteria. There are a number of serious problems associated with the use of such data. One set of problems relate to data obsolescence while another concerns the incompleteness of available data.

#### The Instructions - Data Obsolescence

Data is often made obsolete over time. This is a more critical problem in the military departments than in the civilian sector as missions are subject to rapid change and often do. Mission changes result in new numbers of aircraft in use at the installation and often in the type of aircraft in use as well. Engine noise and flight patterns are directly related to aircraft type and mission. Data is further rendered obsolete by technological changes in aircraft which effect noise levels and

areas required for takeoff and landing.

#### The Instructions - Data Incompleteness

Considerable variability exists in the noise environment. Even given a static mission requirement, the number of operations may show daily, weekly, quarterly, or seasonal variations. Differences in humidity, temperature and winds may also effect noise propagation. Noise generation on the ground is somewhat dependent on temperature and humidity. Winds effect noise levels by affecting an aircraft's takeoff and landing inclines which in turn affects the area covered by the aircraft's noise.

Data incompleteness is compounded as there are few or no projections included in the present system to reflect aircraft currently under design or construction. This is at least, in part, due to the reluctance by manufacturers to release information fearing duplication by competitors. This lack of coordination between designers and users has negative effects similar to those created by the lack of coordination between researchers and users. The lack of advance knowledge of proposed

aircraft characteristics precludes planning for their arrival and their potential increased noise levels.

In addition, accident and noise studies do not yet reflect alternatives available with modifications to flight paths, landing methodologies, number of aircraft, number of operations per day, etc. A computer program is currently being developed by the Navy to generate such alternatives.<sup>64</sup> Finally, the use of accident data may generate problems in the courts. Land could now be designated as being within an accident potential area. If the land was not previously so designated, there is the chance that the courts may term this designation a "taking" of land "without just compensation" by the federal government. Naval legal counsel is not of this opinion.

#### The Instructions - CNR and NEF vs. Original Greenbelt

This analysis would be remiss in not pointing out the advancement the use of noise and accident criteria in determining the AICUZ represents over the initial "one by two and one half mile rectangle" suggested by the Air Force's "Greenbelt" Program. The rectangle, in

its rigidity, could not encompass a very precise land area in terms of the Navy's needs. Such a simple description either covered more land than required to protect an air installation or too little, for while the runway itself may be rectilinear in form, noise propagation and accident potential areas rarely are so geometrically perfect.

In addition, the rectangular "Greenbelt" did not allow for a varying definition of the degree of interest in the land to be acquired. The rectangular boundaries required a rather "all-or-nothing" approach. Were it to be partially implemented, one would be well put to determine which parts of the area to protect first and to what degree. (See Figures 3, 4, and 5.)

The Composite Noise Ratings and the Noise Exposure Forecast Systems permit a more sensitive AICUZ to be developed. The noise zones, when combined with accident data, provide a significant advancement over the intuitive dimensions of the "Greenbelt's" rectangle in determining the area over which the Government requires an interest.

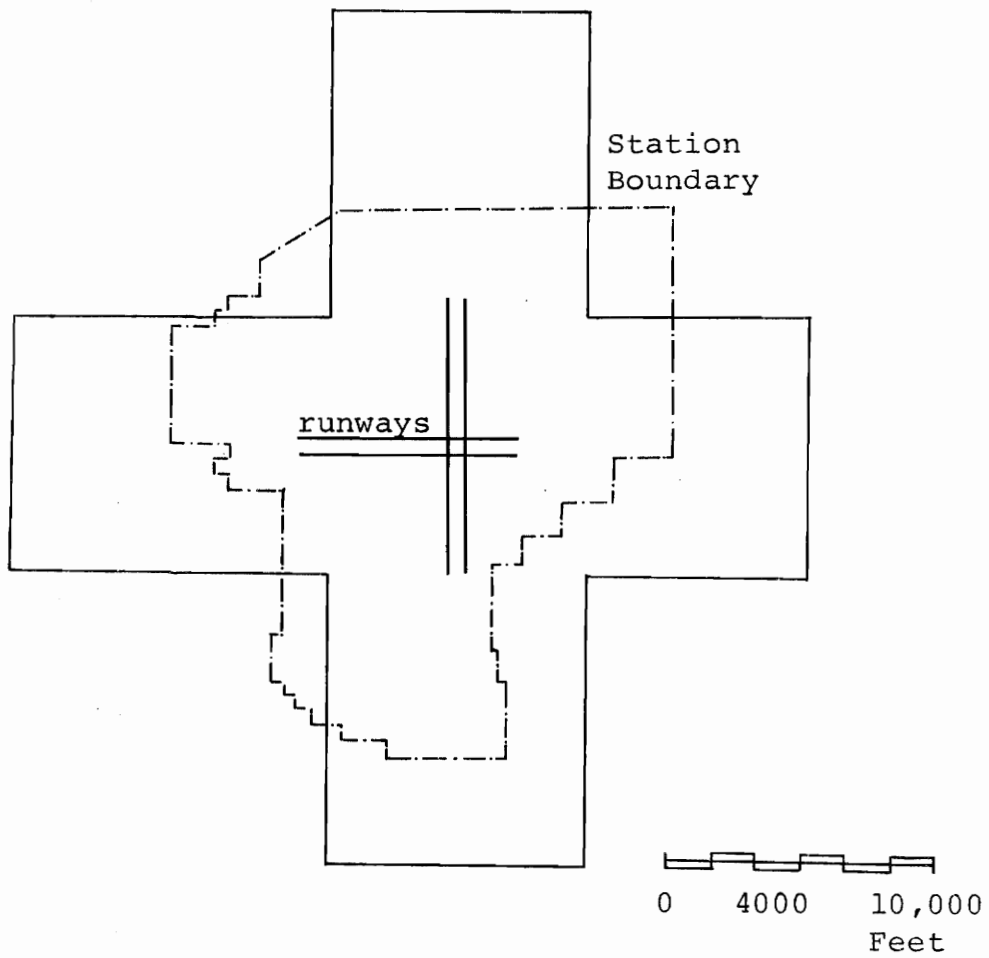


FIGURE 3  
TYPICAL "GREENBELT"  
FOR A NAVAL AIR STATION

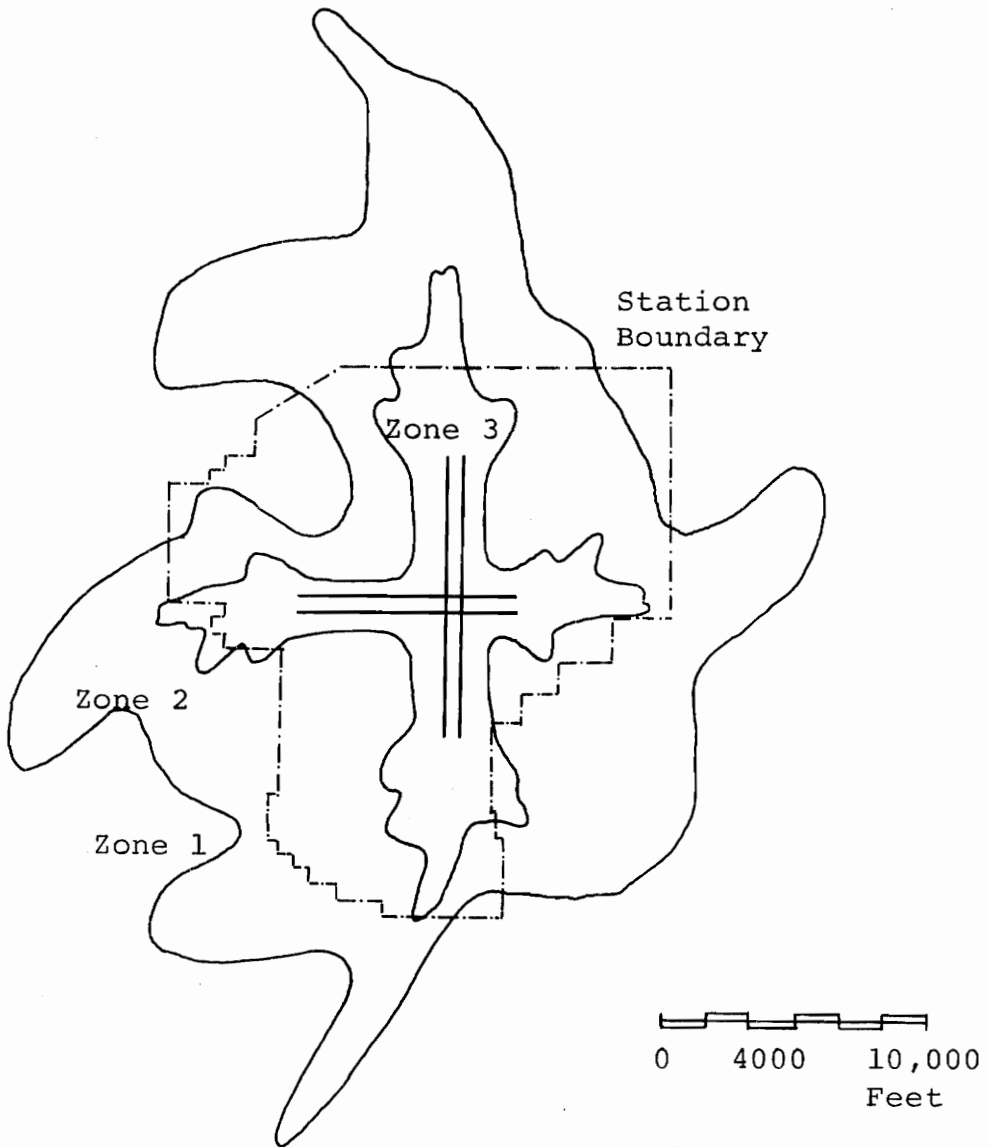


FIGURE 4

TYPICAL COMPOSITE NOISE RATING  
CONTOURS FOR A NAVAL AIR STATION

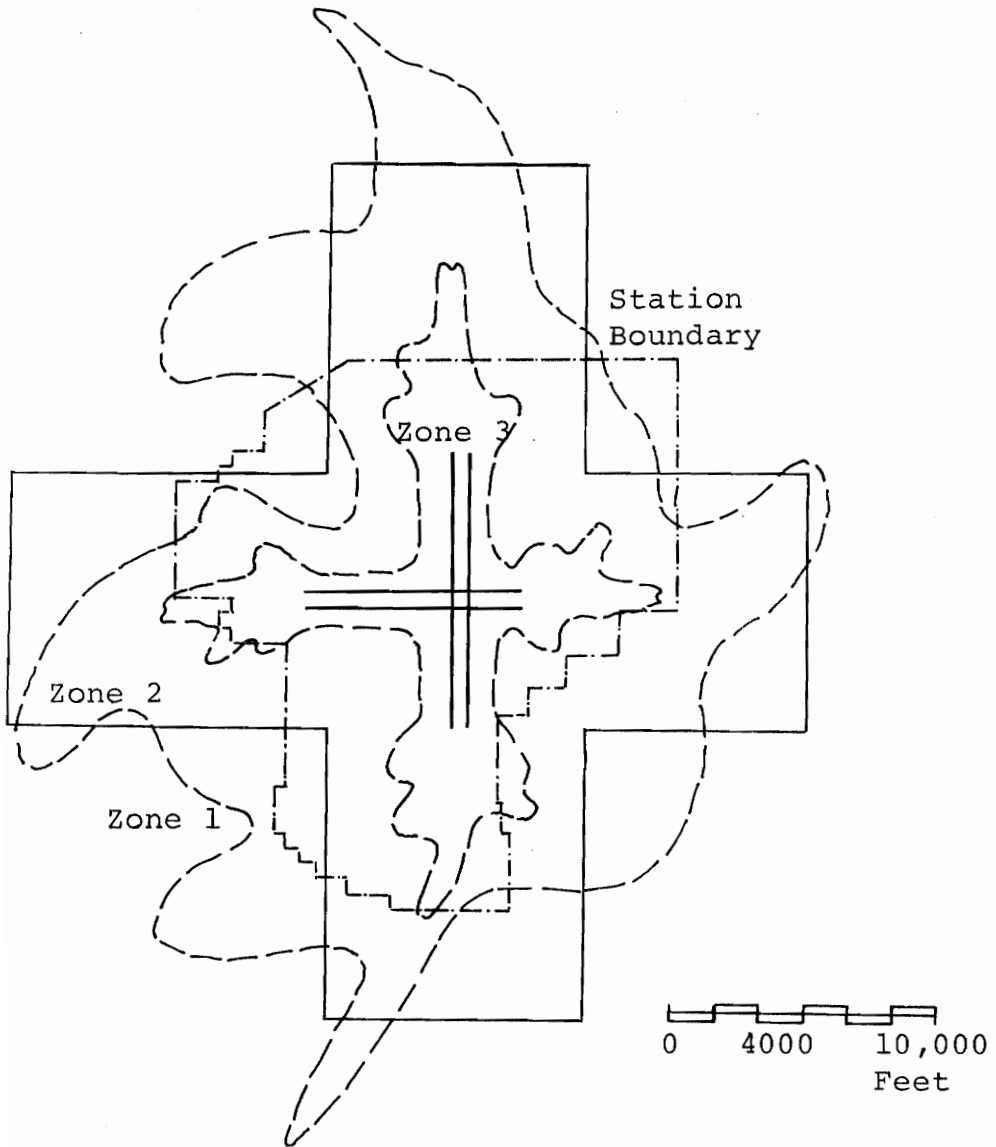


FIGURE 5

TYPICAL GREENBELT AND COMPOSITE NOISE  
RATING CONTOURS FOR A NAVAL AIR STATION

The Instructions - Narrow Basis of Criteria

The rather narrow basing of the criteria on two aspects of aircraft operations limits the ultimate utility of the criteria. The selection of noise and accidents is understandable given that they are probably the prime source of complaints about air installation operations and pressures for their curtailment. However, there are other types of environmental quality factors associated with air installations, such as air pollution, water runoff and percolation areas, amount of loss to local tax base through removal of land from the taxrolls, and base energy and utility demands, which are also sources of inspiration for local base closure efforts. A more broadly based set of criteria would have given the policy based on it a more comprehensive outlook and a greater purpose. While it is recognized that many of the aforementioned environmental criteria are used to determine compatible land uses once the AICUZ has been defined by noise and accident criteria, they are then secondary criteria and some of them are more important than that and might significantly effect the size of the AICUZ were they considered along with noise and accidents initially.

It should be remembered, however, that the criteria selected can be quantified by various methods and the data collection processes are not prohibitively costly. Also, there is a mechanism available within the current organizational structure, namely the Environmental Protection Data Base, which can generate and maintain such data for the Department, thus reducing the cost of the total AICUZ program as the data base is separately funded.

#### The Instructions - Military Operations In a Civilian Environment

One of the basic problems not addressed in the current criteria is the conflict generated by the location and use of military aircraft within a civilian, and often residential, environment. Military aircraft are designed for speed, maneuverability, ordnance capacity, ease of maintenance and low cost. Noise reduction is rarely a prime factor. Neither noise-suppression nor air pollution control devices would ordinarily be added to military aircraft at the expense of any of the five factors previously noted. In recognition of this problem, military

aircraft have typically been exempted from certain FAA regulations on such matters. The Air Force is currently involved in a research and development effort to design acceptable noise reduction measures for military engines. The problem is compounded for the Navy as it has located a major portion of its shore installations near the coasts of the United States so as to be close to the fleet they serve. These sites have proved to be major growth areas. From 1960 to 1970, the national growth rate of Standard Metropolitan Statistical Areas (SMSAs) was 16.6%. The average growth rate of SMSAs containing naval air stations was 26.3%!<sup>65</sup> Such accelerated growth only serves to compound an already difficult situation.

#### The Instructions - Applicability of Criteria to Civilian Use

Given the limited scope of the AICUZ criteria, there is seen to be the possibility of its application to civilian use for the protection of commercial and general aviation airports. As was mentioned in the Introduction to this study, the FAA is developing an increasing interest in land use planning around airports. However, modifica-

tions would be required as there are differences between military and civilian flight operations. Military flight patterns tend to be more complex, often reflecting their training and research missions, whereas civilian airports tend to have relatively simple, straight "in and out" flight patterns. The patterns, in turn, affect flight altitudes and hence noise. Military and civilian airports also differ in the degree of visible, direct benefits they represent to the public. Civilian airports provide direct transportation services to the general public and hence are not as susceptible to the pressures exerted on military air installations whose benefits are more remote and difficult for the general public to assess. With the cooperation of local planning agencies being a prime objective of the AICUZ implementation process, the public concept of the need for the military air installation is most important.

Military and civilian airports also differ on the degree of their impact on and integration into the local infrastructure. Civilian airports generate significantly more local traffic than their military counterparts with their often extensive tie-ins to roads,

railways and shipping lines. Civilian and military air facilities are similar in their need for adjacent compatible land uses but are distinct in many ways. A policy that services the military air installations will not necessarily serve the civilian sector equally well.

#### The Instructions - Towards a Development-Oriented Policy

Part of the encroachment problem is due to the change in aircraft engine types following World War II. The relatively quiet propeller-driven aircraft were replaced with noisier "turbo-props," turbo-jets ("fan jets"), and jet aircraft. Residences which were previously located at satisfactory distances from noise generation areas suddenly found themselves much too close for comfort. Instead of damning technology for the problems its utilization created or civilians for not embracing the fruits of technology, it might be wise to attempt to utilize other technologies to solve the problems created by others without, hopefully, generating a new set of difficulties.

The Instructions do address sound attenuation and resiting of noise generators, but they do not propose

or attempt to coordinate with research to reduce noise at the source, i. e. the engine itself.

(T)he development of aircraft which generate less noise (is one approach to aircraft noise reduction). Another approach to noise reduction is through the establishment of special flight operating techniques and procedures. The third principal control technique which merits serious consideration is the planning for land use in areas near airports so as to make such use compatible with aircraft operations. This is a matter largely within the province of State and local governments. While all of these techniques must be thoroughly studied and employed, the first order of business is to stop the escalation of aircraft noise by imposing standards which require the full application of noise reduction technology.<sup>66</sup>

Part of the reason behind the lack of consideration given to the aircraft engines themselves is that the abatement of noise through equipment procurement is the responsibility of the Naval Air Systems Command (NAVAIR) rather than the Naval Facilities Engineering Command which prepared the OPNAV/MARCOR Instruction. NAVAIR is currently very interested in techniques for the suppression of noise on the ground. Although the Instruction will address noise suppression, the Instruction should require coordination with NAVAIR in this regard. The National Aeronautics and Space Administration (NASA) also gives

high priority to its aeronautics research and technology program which relates to all types of aircraft, including military. Some form of coordination with NASA in this area is also a possibility.

Another potential solution lies in the redesign of airfields themselves, especially ones which would require less land than the current linear, crossed runways. If a new, "tighter" runway configuration could be designed that would replace existing patterns, the perimeter of the stations could become new greenbelts where the previous ones had been eroded by development. One of the major advantages of this concept is that it provides for the protection of the operational capability of an air station without the purchase of any new interests in land.

In September 1969, designer Michael Blanc proposed a combination of circular and straight runways. The straightaways were for air-land transition and the circular portion was banked for acceleration and deceleration.

A departing aircraft accelerates on one half of the circular portion and then enters the straightaway for lift-off. Landing aircraft do just the opposite, using the other half of the circle for deceleration, then entering

the nearest taxiway, which leads to an assigned loading-unloading station on the wide apron.<sup>67</sup>

Blanc declared that runways in this configuration would require only one-third the usual space. There are innumerable questions about such a scheme. What is the safety factor using banked runways? What kind of air patterns would such a runway configuration create? Can this configuration handle equal or larger volumes of traffic than the conventional system? The design is not presented as a solution but rather as an indication of the areas which the Instructions do not, but could and should, address.

#### The Instructions - On Working With Local Governmental Agencies

The Instructions advocate the working with local governmental agencies in order to achieve compatible zoning measures and with state legislatures to achieve compatible land use controls. There is no history of a desire for a significant dialogue between local governments and the Department of Defense by the Department. Rather, the DOD has tended to demonstrate a distinct lack

of concern for events outside its direct jurisdiction. Times have changed and the DOD must change with them or risk being damaged in the assault. Localities are familiar with the Departments of Housing and Urban Development, Agriculture, Health, Education and Welfare, and others. Localities are relatively unfamiliar with the Department of Defense and it will be difficult to construct an initial dialogue as most of the other departments are offering power, grants-in-aid or matching funds of one sort or another. The DOD is offering the more elusive rewards of an adequate national defense posture and the beneficial impact of the base and its personnel on the local economy in terms of contracts, jobs, retail sales, etc. A step in establishing a relationship with state governments was made by the General Counsel of the DOD on 27 February 1973 in a letter to the Director of the Office of Management and Budget.<sup>68</sup> The letter contained a proposal concerning zoning in suburban areas near airports for consideration by state legislatures. As with any zoning legislation, this legislation would allow for the separation of incompatible land uses. The letter was sent in response to an OMB request for submissions of

legislative proposals for state legislatures in their 1974 sessions.

Strong support for close relations between the federal and local governments come from the National League of Cities which has adopted goals of intergovernmental relations as part of their National Municipal Policy. One of the League's goals is "a smooth working intergovernmental system" which necessitates "cooperative working relationships, understanding and communication between levels and units of government."<sup>69</sup> Citing the the scarcity of land, especially in urban areas, and the federal government as a major land owner in the country, the League supports the federal government's administering its holdings in order to promote quality environment and development. To achieve this end, the government is to

acquire, improve ... , and dispose of property in urban areas only in accordance with local planning, zoning, building and other land use regulations and to the best advantage of the general units of local government concerned.<sup>70</sup>

There is a current lack of expertise in dealing with the problems of airports. Following the suggestion in the Instructions for close air station-local governmental agency relations, the base commanders can turn the

reactive nature of the Instructions around and let the DOD be seen in a highly constructive, development-oriented light. The difficulty of adopting this role is compounded by the current lack of a national growth policy save one of "no policy." "There is no place in our country for any policy which arbitrarily dictates where and how our citizens will live and work and spend their leisure time."<sup>71</sup>

The absence of a federal growth posture makes the adoption of one by the Department of Defense difficult, at best, to justify. Yet, the lack of one perhaps poses even more danger. The AICUZ policy developed in an atmosphere of protectionism and conservationism, much like the current land use control legislation currently before the Congress. Yet if the future is to be addressed, growth and development must be considered. The concept of a life-cycle for military bases will be discussed in the macro-planning section.

#### The Instructions - Conflicts With Other Criteria

The AICUZ policy has no apparent conflicts with other Department of the Navy criteria or standards. The lack of coordination with the Naval Air Systems Command

has already been briefly discussed. The Naval Bureau of Medicine is charged with primary responsibility for personnel health and welfare. As such, the Bureau is concerned with actions inside the station's boundaries while the AICUZ policy is primarily concerned with the area outside the base's borders. The AICUZ program's requirement for the suppression of noise on base will tend to support the efforts of the Bureau to ensure proper employee working conditions.

The Navy is coordinating its efforts to implement the DOD Instruction with the other Military Departments. It is anticipated that there will be tri-service agreement in regards to the designation of accident potential zones. It should be noted, however, that the air operations of the Air Force and the Army do differ significantly from those of the Navy and the Marine Corps, and that a complete joint, tri-service instruction would not, at present, be practical. However, it does seem reasonable to expect the Departments to agree on a single method of noise measurement. The Air Force is currently using the NEF system while the Navy clings to the CNR method. The Air Force appears to be in the forefront in this area.

It is also anticipated that a common agreement will be reached by the three services with respect to accident potential zones. There is still division in regard to the implementation procedures to be followed. The Air Force, which is currently administering its own AICUZ program as directed by the DOD Instruction, favors heavy reliance on zoning while the Navy, due to the uniqueness of its operations, believes other solutions may be applicable as well.

The Federal Aviation Administration of the Department of Transportation has responsibility for regulating noise emissions from civilian aircraft. They are themselves in the process of adopting a new aircraft sound description system.

The Federal Aviation Administration is charged with regulating air commerce to foster aviation safety; promoting civil aviation and a national system of airports; achieving efficient use of navigable airspace; and developing and operating a common system of air traffic control and air navigation for both civilian and military aircraft.<sup>72</sup>

The FAA cannot, with all its assigned responsibilities, prevent the construction of incompatible buildings or the development of incompatible land uses adjacent to airports.

Their influence comes to bear when their disapproval of such construction or development results in high insurance rates to the building's owner(s). The FAA has a history of being industry-oriented and hence one would anticipate few problems for the Navy developing from the Administration's action.<sup>73</sup>

The FAA has not demonstrated a strong concern for public objections to aircraft air and noise pollution.

Key personnel in the FAA and in the Department of Transportation, according to reports of the Conservation Foundation, 'have indicated in the past that aviation noise is not one of their primary concerns.' . . . Economic development of the aircraft industry has been a preference by DOT officials. Former Secretary of Transportation Allan S. Boyd earlier commented, 'Noise is a very unfortunate and disturbing thing, but we do learn there is room for more tolerance of noise in the field of aircraft.' A similar position is shared by many current departmental officials.<sup>74</sup>

The FAA is currently responsible for the accomplishment of two seemingly contradictory goals - providing for the safety and welfare of the public while encouraging the use and development of the aircraft industry.

The Environmental Protection Agency was created to permit coordinated and effective governmental action on behalf of the

environment. EPA endeavors to abate and control pollution systematically, by proper integration of a variety of research, monitoring, standard setting, and enforcement activities. As a complement to its other activities, EPA coordinates and supports research and anti-pollution activities by State and local governments, private and public groups, individuals, and educational institutions. EPA also reinforces efforts among other Federal Agencies with respect to the impact of their operations on the environment.<sup>75</sup>

The EPA appears to be potentially the most influential external influence on the AICUZ policy. The EPA published a study report, "Military Aircraft and Airport Noise and Opportunities for Reduction Without Inhibition of Military Mission" on 27 July 1973. The Department of Defense was, however, well represented in the Task Group membership and the report only supports the objectives of the AICUZ policy. But future efforts by EPA to control aircraft and airport noise may not be so favorably disposed to the DOD position.

The Department of Housing and Urban Development has established noise exposure policies and standards to be utilized in the approval/disapproval of all HUD projects. There are not, currently, a great number of programs being administered by HUD and hence their

influence in controlling development is limited. HUD, through its Office of Research and Technology and its Office of Community Planning and Management has published guidelines for local agencies to use when attempting to deal with the impact of aircraft noise of their communities.<sup>76</sup> Such publications should help to make local governmental agencies more knowledgeable and better equipped to deal with local base commanders in their efforts to maintain station operational capability.

The Veterans Administration, as was noted earlier, also wields significant power in regard to mortgage approvals and the location of homes in high noise zones. Close liaisons with both HUD and VA Headquarters and Field Offices should be maintained by the Navy so as to provide existing lines of communication should their intervention and/or assistance be needed.

#### The Instructions - Objectives and Implementation

The AICUZ program attempts to insure operational capability through a series of on-station and off-station efforts. The on-station program includes reducing the area affected by aircraft noise through changes in siting of

ground run-up pads and engine test pads, use of sound suppression devices, and utilization of alternate flight patterns. These methods have been used in the past and have been proven successful in achieving a certain degree of reduction in noise pollution levels. But it is not anticipated that such efforts will preclude the necessity of achieving land use controls within the AICUZ. Such controls are to be achieved via close-working relationships with local governmental agencies.

Liaisons between DOD representatives and local planning officials will be a new experience for both groups. The "A-95 Clearing Houses" encouraged by the OMB may provide an initial framework within which to begin these efforts. OMB Circular A-95 requires intergovernmental coordination for the planning and construction of federal buildings and installations to assure that any such federal plan is compatible with state, regional and/or local development plans and programs. The DOD Construction Criteria Manual requires coordination with state and local community agencies in accordance with the requirements of OMB Circular A-95. It is anticipated that a proposed revision of the standards for the preparation of master

plans for Navy and Marine Corps shore activities will address the "A-95 review process." Policy has been established to coordinate planning with state, regional, and local planning agencies which have jurisdiction of lands adjacent to naval installations and to permit review of Navy and/or Marine Corps master plans by these agencies.

Land use controls in this country are also a relatively new phenomenon in themselves. Indeed, there is very little history to look back on for determining if such controls are the best method for protecting the Navy's investment in its air facilities. It is not the intention of such controls to prevent development of land but merely to manipulate growth in order to maintain or achieve ambient relationships. The English have been operating under a system of comprehensive land use controls for the past 25 years. Their system is similar in intent to the system currently espoused in this country, although certain variations are notable.

For instance, whereas in this country, the right of compensation is guaranteed by the Consitution (Fifth Amendment), compensation in England is statutory.

While English courts stoutly maintain that property shall not be compulsorily acquired without full compensation, compensation is nonetheless not payable for restrictions on the use of property unless Parliament so provides.<sup>77</sup>

The English system is, however, still considered similar enough to our own proposals to permit qualified conclusions to be drawn about the potential of our own proposed system.

Although the results are by no means conclusive, a random sample of some of England's leading property developers revealed some common conclusions about the land use control system in their country.

By far the most uniform agreement came with respect to compensation and its place in the development of land. None of the developers considered the virtual absence of compensation for planning law restrictions a detriment to land development.<sup>78</sup>

Not all developers were so positive in their evaluation of the system. Developers also expressed impatience with time delays due to the controls and the competence and authority of local planning officers. The latter complaints already exist in this country. Land controls can reduce local revenues from property taxes and therefore adversely effect local prosperity. "The English

system of land use controls apparently provides no impediments to the English land developer."<sup>79</sup>

Other European countries, such as West Germany, also have a history of land use controls. However, their experiences have less applicability in the U. S. due to socio-economic and political differences. West Germany has been actively engaged in the city planning process for nearly three decades. The complete destruction of almost 80% of the central portion of many cities during World War II made the country a prime candidate of the benefits of comprehensive planning. In West Germany today, there is little haphazard zoning and plentiful green spaces and parks.

The Federal German government does comprehensive national planning and legislates state, regional, and local planning. States do comprehensive state planning and review and approve all local plans for conformity to state and national policies. The state has the power to designate land within localities to be preserved as open space. Cities control development through master plans. Cities have absolute control over suburban development. There is explicit use of all land, with little, if any,

"left-over" or underutilized land.

Yet, the lessons to be learned in this country from the German planning experience must be qualified as the "entire German social, political, economic and governmental environment is different than that of the US."<sup>80</sup> West Germany is an older country which has more completely exploited its resources and recognizes the need for controls on the use of land. Most of these controls on growth restrict development without addressing the problems of air and water pollution. There are no air pollution controls in West Germany and water pollution controls are just beginning to be applied. The United States, although younger and without a similar history of governmental control of growth, is actively engaged in environmental pollution control. German public agencies have substantially more regulatory power to control and guide development. The degree of difference between the two countries is perhaps best exemplified by their different attitudes towards the compensation to land owners for restrictions placed on their land. In the United States, just compensation for land interests is guaranteed by the Constitution itself while no compensa-

tion whatsoever is given to German landowners whose property is designated as forest, open space or a protected landscape feature in a master plan. There are limits to what can be learned from foreign experiences with land use controls.

The land use controls proposed in the AICUZ program will not, it seems, have a deleterious effect on development. But it is not proven, either way, whether such controls actually foster a higher level of development than could be achieved with their absence. Ultimately this question needs to be addressed. There are, in this country, many areas with few or no restrictions on the development of land, and their physical environment does not differ substantially from places with a long history of zoning and building codes. Houston, Texas, is often cited as a prime example of a large American city which has no zoning restrictions on development. Houston, without any such constraints, has still evolved into a urban form similar to cities which have adopted zoning ordinances. Newness itself does not justify the use of a process. Eventually, the product the process is responsible for must be superior to its predecessor.

Controls are to be achieved via zoning, easements, fee title, and land exchanges. The problems associated with zoning are many but nothing puts the argument quite so well as the following remark. "Zoning is worth what you pay for it!" Zoning decisions by local authorities can be overturned in one day and are a poor guarantee as protection on a multi-billion dollar investment. Easements and fee title are fine if relatively unlimited funds are available.

In purchasing land, the government is at a distinct disadvantage. Once the government is known to be the potential buyer, the price usually immediately increases. While one could argue that officials could invoke the right of eminent domain, such procedures are costly both in terms of money and time. In addition, once a purchase price is agreed upon by the parties involved, Congress must approve the purchase and allocate funds. By the time congressional authorization and allocations are given, inflation has raised the price upward and the government official has to return to Congress and ask for more money. This seemingly never-ending cycle can be broken with the "advance optioning

procedure" where the government buys the right to purchase the land within the next eighteen to twenty-four months with the option payment applied to the total cost of land. Unfortunately, there is no incentive to sell options and fix the price as the seller cannot increase the price due to inflation.

It has also been difficult to convince authorities to purchase land before a crisis stage is reached. As was demonstrated in the "Project Safeguard" narrative, once the critical cases have been attended to, it is difficult to maintain a high level of interest in a situation.

Land exchanges may help reduce the cost of land acquisition although the process has recently been redefined and has not, as yet, been widely used.<sup>81</sup> Public Law 93-166 gave land exchange authority to the General Services Administration for the first time. Previously, land swaps had to have specific authorization from Congress for each project. The DOD can now work through GSA to effect land exchanges. Previously, GSA did not have such authority for a military project.

The AICUZ policy also requires an in-house

educational program to keep naval personnel well informed on methods of achieving compatible zoning. The courses will be conducted by a group of technical and administrative experts from NAVFACENGCOM. Such efforts could be used to keep base commanders aware of recent developments around the country.

In summary, the three-pronged approach to achieve policy goals appears to hold promise although the relationship between land use controls and development in this country is not yet clear.

#### The Instructions - Funding

The Composite Noise Rating and Noise Exposure Forecast systems are both tied to land planning. At one time, in the early stages of policy implementation, it was thought that the AICUZ studies could be incorporated into the master planning effort of the Naval Facilities Engineering Command or funded as a separate program.<sup>82</sup> The eight initial studies did not receive direct project funding as the justifying instructions had not yet been signed which could have been cited when seeking individual program funding. Recently the Office of the Secretary of Defense

elected not to fund the AICUZ studies as a separate program but rather to integrate them into the Navy's Environmental Protection Data Base Program which was discussed earlier. Projects in support of the AICUZ studies' findings would be funded via the traditional Military Construction (MCON) process in a separate Pollution Abatement section of the MCON Program. The funding program, as of this writing, is being re-worked and more detail cannot be provided at this time. AICUZ is a DOD policy, not a congressional law, and as such has no public monetary appropriation attached to it. Such appropriations are made by the Congress. The two of the three Instructions which are already public documents, do not contain estimates of the implementation costs. Such omissions are typical of these types of DOD policy statements. However, in a classified report to the Office of Management and Budget, the Navy Department detailed its funding requirements for implementation of the AICUZ program. The "Noise Pollution Control Report," a quarterly submission to OMB, is one of three such reports developed in support of the Navy's Pollution Abatement Program. (The other two reports concern water and air pollution control.) In the "Noise Pollution Control

Report" of 31 December 1973, funding totaling slightly under four million dollars was proposed for AICUZ planning studies for fiscal years 1973 and 1974. The estimated costs of the studies for each of the Navy's and the Marine Corps' air installations is detailed. However, such data is not made public as these studies are to be done by private architectural/engineering firms on contract and knowledge of such information by the public would severely limit the government's position during price negotiations.

The overall cost of implementing the AICUZ program has been estimated at \$400 - 500 million. Again, no detailed breakdown of this estimate has been made public. This course of action has been taken so as to not eliminate the chance for compatible local zoning actions. If it were known that the government was willing to spend money to protect its investment, there would be little local incentive for zoning decisions favorable to the Navy Department. Additionally, public knowledge of the specific dollar amounts allocated for each base might well have the effect of driving the price of interests in lands adjacent to air installations up,

perhaps even beyond normal market rates.

The omission of detailed, time-phased cost estimates makes a public evaluation of the AICUZ policy difficult as one does not know the relative importance of this policy to others in specific monetary terms. Yet, due to the policy's required implementation process, which includes efforts to achieve compatible zoning, and AICUZ studies to be accomplished via contracts with private firms, it may well be asked if immediate public disclosure of such data is in the public interest. Under the present system of restricted access to cost estimates, responsibility for insuring the public accountability of the DOD lies with the Congress.

It is important to note that the justification for the proposed spending of up to \$50 million per year for the next ten years is based in large measure on protecting the Navy's current \$13 billion investment in jet capable airfields. (The figure reflects the costs of replacing existing facilities in place and not the cost of real estate.)

Master Jet	\$ 1.6 billion
Other Fleet Air Operations	6.2
Training	1.4
Reserve	.4
Research and Development	3.4
	<u>\$13.0 billion</u> <sup>83</sup>

The total value figure presupposes that if a brick building exists on a base, its replacement will be a duplicate brick building. The cost of the building is known at the time of construction and cost escalation factors are applied each year to keep the replacement price current. The problem with this method is that in time, it might be more efficient or economical to replace the brick building with another type of structure or perhaps not at all if it is sufficiently underutilized. Also, alternative uses which could upgrade the value of the building are not reflected in the replacement costs. These qualifications to the total replacement value figure suggest some of the problems associated with the Navy's current method of assessing the value of its real property holdings. A review of this procedure, while beyond the scope of this evaluation, appears warranted.

#### The Instructions - Evaluation Procedures

There are no evaluation procedures mentioned in either the DOD, SECNAV, or OPNAC/MARCOR (Draft)

Instructions. The effectiveness of the actions required by the Instructions should be studied periodically after the beginning efforts at implementing the AICUZ plans. Among many items which should be analyzed, it would be interesting to study the effectiveness of zoning as a tool to reduce or prevent encroachment pressures.

As the history of land use controls in this country is relatively new, a critique of the effectiveness such controls on preventing incompatible development would also be a valuable research effort. It would be useful during future budget decision-making procedures to have some idea about the effectiveness of on-base measures in reducing the size of the AICUZ. The number of base commanders who recommend mission changes or ultimate base closure will be most important to know and, if large enough, may suggest a more complete review of the location of all units within the naval air system.

The components of an evaluation of the Navy's AICUZ program can be numerous and need to be much more critically defined. Eventually, such an evaluation would probably be conducted by the Office of Management and Budget. It seems in the best interests of the Department

to not wait until such a time so that it may learn from its own current undertakings and thus better utilize its fiscal resources.

It is not the intention of the previous discussion to suggest that progress reviews do not occur. They, of course, do. The problem appears to be that, as public policy, the AICUZ program should be as clear and specific as possible for all to understand. During one such review it became obvious to the Deputy Assistant Secretary of Defense (Installations and Housing) that the Navy would not be able to meet the 15 month completion deadline for all Navy AICUZ studies as required in the DOD Instruction. The 15 month deadline was based on understandings by the Office of the Assistant Secretary of Defense (Installations and Logistics) relative to the percentage of studies which had already been completed prior to publication of the Instruction, the percentage of studies to be done by staff personnel rather than by contract and the delivery date on an Air Force computer program designed to aid individual base programs.

A time extension for development of Navy AICUZ programs was permitted providing priority was given to

those installations with the most serious encroachment problems. Here again is evidenced the "take care of the crises" syndrome. Just as in the initial phases of "Project Safeguard," critical cases are to be given priority attention. There is no evidence that such a general policy is really cost effective or even functionally effective. Such a general policy could, perhaps, be justified by the results of a comprehensive evaluation process.

Acceptance of the concept that providing as complete protection as possible for installations which are not experiencing severe encroachment problems might be a better long-term investment of public funds has not yet been realized. An example of a lack of support for a seemingly unthreatened base is the recent events concerning the Naval Air Station, Barbers Point in Hawaii. It was proposed that rights to land adjacent to the runways be purchased in order to protect the operational capability of the facility. The project was rejected because there were "just pineapples off the runway" although the cost of such rights at the time of the initial proposal would have been relatively low. The "deal with the crisis first"

attitude needs to be re-studied, particularly in relation to its cost effectiveness.

The rather specific delineation of responsibility to various segments of the Department of the Navy in regard to the AICUZ program should help during a general evaluation of the program's implementation process. There does not appear to be any overlapping of responsibility and all tasks necessary for effective immediate policy implementation appear to have been assigned. But as responsibility has been decentralized, the requirements for periodic evaluations becomes all the more critical, in order to establish that all the parts are working harmoniously and to what degree they are achieving their aims.

#### The Instructions - Values and Goals

The omissions of an evaluation procedure and cost estimates in the Instructions are joined by the omission of any discussion of the values which the goals of the Instructions are intended to foster. The AICUZ policy goals are:

to provide for safety of flight, . . . to

assure that people and facilities are not concentrated in an area which is susceptible to aircraft accidents, . . . and to protect the operational capability of the DOD active military airfields.<sup>84</sup>

The values represented by the goals are implicit but should be an explicit part of any public policy. The goals of the policy support many traditional values of our society, among them being the fullest use of technology as a symbol of unleashed progress, and the concept of land as an investment and a private good. What is more exciting are the shifts in values demonstrated by the AICUZ policy.

Previously, physical development of any type was conceived of as a sign of a vital and growing economy. Now, certain types of development are determined to be incompatible with existing functions and such incompatible development is to be contained and limited. The policy also reflects a new attitude by the military establishment towards the civilian community. Recognizing the deleterious effects their previous lack of interest in events outside their stations' boundaries had on mission capability, base commanders have begun to maintain liaisons with local community leaders and to lobby for the interests of their installations.

The AICUZ policy puts the Department of Defense in the forefront of environmental airport planning. Coupled with the Pollution Abatement and Environmental Data Base Programs, the AICUZ program demonstrates the commitment of the DOD to securing the benefits of the earth for man through the proper utilization of resources. The program represents a significant commitment to planning at a time when national leadership in this area is limited. Thus the program gives the Military Departments a unique opportunity to demonstrate the creative aspects of their missions.

#### POLICY ANALYSIS AND RECOMMENDATIONS - MACRO-PLANNING

A Navy AICUZ Plan is intended to reduce the size of the AICUZ, indicate the interests to be acquired and their funding methodology and increase public understanding and sympathy for the Navy position. It is anticipated that both on-base noise suppression measures and the acquisition of interests in land may require funding via the Military Construction Program.

The Navy uses a multi-year programming system to develop its Annual Military Construction Program. The

current system deals with a five year time span. As deficiencies of the types noted above are determined by activity commanders, they submit project requests to correct the deficiencies to the local Engineering Field Division (EFD) of the Naval Facilities Engineering Command (NAVFACENGCOM) for review. Following approval, the project requests are forwarded to the sub-major claimants more commonly called the "type" commanders. Upon their approval, the requests are forwarded to the major claimants.

There are currently 23 major claimants in the Department of the Navy. They are sometimes defined areally, sometimes functionally, and sometimes by a combination of the two methods. There are seven major claimants who receive project requests for air installations. They are the Commander, Atlantic Fleet, the Commander, Pacific Fleet, the Commander-In-Chief, Naval Forces Europe, the Chief of Naval Education and Training, the Chief of Naval Material, the Chief of Naval Reserves, and the Commandant of the Marine Corps. The sub-major claimants tend to be functionally oriented. The sub-major claimant for the Commander, Pacific Fleet who would receive project requests from air installation commanders would be the Commander, Naval Air

Forces Pacific.

Based on criticality, the "type" commander establishes a priority list for all projects which he then forwards to the major claimant. The evaluation procedure utilized has not been determined.

The major claimant assigns project priorities for all the projects he receives from all his sub-major claimants by investment categories. There are currently nineteen investment categories which are listed below:

1. Aviation Operation Facilities
2. Communication Operational Facilities
3. Waterfront Operational Facilities
4. Other Operational Facilities
5. Training Facilities
6. Aviation Maintenance/Production
7. Shipyard Maintenance/Production
8. Other Maintenance/Production
9. Research, Development, Testing and Evaluation
10. POL Supply/Storage
11. Ammunition Supply/Storage
12. Other Supply/Storage
13. Medical

14. Administrative
15. Troop Housing/Messing
16. Other Personnel Support and Service
17. Utilities
18. Real Estate
19. Continuing Authority

The investment categories are groupings of like facilities utilized functionally to support specific requirements.

The major claimants submit their priority list of projects to the Chief of Naval Operations (CNO).

Code 21, Military Construction Programming, of the Naval Facilities Engineering Command acts as CNO's manager for the Military Construction (MCON) Program. The Navy Department can only program annually relative to the MCON dollars in the anticipated budget. (There is currently a backlog of eight billion dollars in valid military construction projects.)<sup>85</sup> The total MCON dollars are allocated to the various investment categories prior to project selections. This process is intended to ensure the general upgrading of all types of facilities over a five year period rather than the bolstering of one type to the detriment of others. The initial breakdown by investment

categories is based on:

1. the dollar amount of deficiencies,
2. the average age of the plant for facilities in each category, and
3. whether deficiencies are for new construction or replacement/rehabilitation.

Having established the dollar amounts for each investment category, projects for that year are selected by categories. Each project receives an item rating value which is based on five common factors:

1. type of deficiency (road, building, etc.),
2. degree of deficiency (percent existing),
3. primary mission of activity,
4. economic analysis, and
5. major claimant priority.

The five factors are weighted, with the major claimant's priority rating receiving special attention, and related via an exponential function so as to achieve a wide spread of numerical ratings. Projects are then listed by investment categories by priorities. Relative to the dollar amounts previously established for each category, a cut-off point on the list is determined.

The process is accomplished via computer. The direct human element is then reintroduced into the process. A list of major claimants with allocated projects by investment categories is developed. The major claimant's original priority list is now reviewed and projects are programmed for that original list by investment categories. Hence, the projects which earned the major claimant investment category dollars are not necessarily the projects which get built. The major claimant's priorities are thus paramount although the CNO's dollar allocations to investment categories do not change. That part of the process is not negotiable.

This "first look" at the Navy's MCON Program is then presented annually to a Navy Military Construction Review Board which is composed of representatives of the major claimants. The representatives may trade approved projects among themselves but the total dollar amounts by investment categories remain constant in order to maintain a balanced facility inventory. A unified Navy MCON Program is then reviewed by the Comptroller of the Navy and by the Office of the Secretary of Defense in conjunction with the Office of Management and Budget. The MCON Program is then

reviewed by four Congressional Committees. Authorization is required from the Senate and House Armed Services Committees and appropriations approval is required from the Senate and House Appropriations Committees. Then the Program goes before the Congress for final approval.

The Navy's MCON budget represents only 3% of the Navy's total budget and receives a degree of Congressional scrutiny far above that which seems warranted by the dollar amount involved. This year's Navy MCON budget, some \$800-odd million dollars, while not a small sum, does not quite seem worth the extensive efforts required presently to develop the Program and get it approved. The main reason for the Congressional interest seems to be one of self-interest. The Military Construction Program may well be one of the largest and best pieces of "pork barrel" legislation. As such, operational considerations can be overridden by political ones and the total planning effort suffers accordingly. There does not appear to be any way that the Department of Defense can extricate itself from this situation short of requesting very strong White House support which at this time in history might be difficult to secure.

The most interesting observation one can make about the entire planning/programming process described above is that it is operational planning only. At no time is any land use planning done at a broad level. Neither is there a plan for the naval air system. As such, even functional planning could hardly be considered comprehensive. Each major claimant does operational and functional planning for the activities under his cognizance and no doubt include concepts such as encroachment pressures when assigning priorities to project submittals. But neither the major claimants nor CNO do land use planning on a functional basis. One might anticipate that the Naval Air Systems Command (NAVAIR) would engage itself in such an undertaking for naval air facilities. However, their main task is to provide technical support and they have never seen fit to begin such broad, long-term planning. However, it should be remembered that NAVAIR is a technical advisor and does not have direct responsibility for most air installations.

The lack of comprehensive, land use planning for the naval air system is typical of the behavior patterns previously described. The Navy Department, and the DOD,

are usually reaction-oriented. They tend to avoid long-term planning, often citing ever-changing requirements as providing impenetrable barriers to such thinking ahead. Thus if it was determined that an air installation had to be relocated, a thorough planning effort would first require the development of a plan for the naval air system. Such a situation has previously arisen and, unfortunately, no such plan was developed.

The lack of a comprehensive air systems master plan and the problems this deficiency causes is demonstrated each time there is a round of base closures. As the total U. S. military force is reduced, funds to maintain the shore establishment which supports the active forces are similarly reduced. The base closures are economy moves in response to the budget cuts. The decisions upon which bases to close and where and what missions to consolidate or change are often the result of operational planning as opposed to functional land use planning. Thus, decisions are made without a full understanding of existing conditions. An air base where current mission requirements have not generated any or few encroachment pressures can suddenly find itself burdened with new squadrons with

noisier jets. Air base property size, proximity to residential areas and potential community responses are rarely considered during base closure decision-making. The main constraints which cause this exclusion are time and the politically sensitive nature of the effort. But any negative results of base closure decisions will be experienced by the base commanders later on.

Again, as with the Military Construction Program, political considerations are evident. Base closure actions have resulted in aircraft being transferred from installations which were closed, though they experienced no encroachment pressures, to bases where problems already existed due to proximity to a large city.<sup>86</sup> As with the MCON Program, it appears it would be most difficult to remove the extensive political inputs to the base closure decision-making process. However, it should be noted that a master plan for the naval air system might tend to indicate locations for projects other than in the precincts of the chairmen and co-chairmen of the congressional committees.

Neither end of a base's life cycle receives the planning inputs it should in order to maximize the

utilization of resources. Bases are established and closed without the full benefit of existing planning techniques. Evaluations are not formalized and therefore are subject to less public scrutiny. The entire process needs to change. It is time for the Navy to address the entire life cycle of its installations. The complete initiation - growth - maturation - renovation - decline - closure process needs to be studied. As a base begins to decline, and if its mission is still valid and will not be transferred to another installation, a replacement site survey should be initiated at once. The practice of thinking of bases as "going on forever" is out-of-date. Reality demonstrates that a positive, aggressive planning initiative is required. The AICUZ policy is a strong first step towards this goal.

## FOOTNOTES

<sup>1</sup>Department of Defense Instruction No. 4165.57, "Air Installations Compatible Use Zones," 30 July 1973, pp. 1-2.

<sup>2</sup>William H. Point, "Outline of Remarks," (Correspondence Files of Code 202, "Encroachments (Safeguarding Investments)"), p. 1.

<sup>3</sup>Roger O'Donoghue, Naval Facilities Engineering Command, Interview, 13 March 1974.

<sup>4</sup>Ibid.

<sup>5</sup>Chief, Bureau of Naval Weapons, "Aircraft Noise Abatement Program, establishment of," BUWEPS Instruction 11019.1 to Distribution List, 21 January 1964, (Correspondence Files of A. D. Lewis, "AICUZ, January 1972 through May 1972 (sic)"), p. 1.

<sup>6</sup>Admiral Horatio Rivero, USN, Vice Chief of Naval Operations, "Safeguarding our investments in Navy Bases," Memorandum for OP-04, CNM, and COMNAVFACENGOM, 6 May 1966, (Correspondence Files of Code 202, "Encroachments (Safeguarding Investments)"), p. 1.

<sup>7</sup>Ibid.

<sup>8</sup>Commander, Naval Facilities Engineering Command, "NAVFAC NOTICE 11011," 17 October 1966, (Correspondence Files of Code 202, "Encroachments (Safeguarding Investments)"), Enclosure 1, p. 1.

<sup>9</sup>Ibid., Enclosure 1 to Enclosure 1, p. 1.

<sup>10</sup>"Safeguarding our Investment in Real Property; Status report," Memorandum for the Vice Chief of Naval Operations, 17 June 1967, (Correspondence Files of Code 202, "Encroachments (Safeguarding Investments)"), Enclosure 1, p. 1.

<sup>11</sup>Harold G. Lewis, Naval Facilities Engineering Command, Interview, 19 February 1974.

<sup>12</sup>Chief of Naval Operations, "Safeguarding Navy Investments in Real Property," Letter to Naval Facilities Engineering Command, 26 September 1967, (Correspondence Files of Code 202, "Encroachments (Safeguarding Investments)"), Enclosure 1, OP-04 Memorandum to OP-09, Ser 1428 of 14 September 1967.

<sup>13</sup>A. D. Lewis, "Buffer Zone and Land Use Criteria," Memorandum, 30 July 1971, (Correspondence Files of A. D. Lewis, "AICUZ, November 1968 through December 1971"), Enclosure 8, p. 1.

<sup>14</sup>LCdr. L. A. Fermo, Naval Facilities Engineering Command, Interview, 19 February 1974.

<sup>15</sup>Ibid.

<sup>16</sup>Executive Order 11508 - Providing for the Identification of Unneeded Federal Real Property, 10 February 1970, p. 1.

<sup>17</sup>Ibid.

<sup>18</sup>A. D. Lewis, "Buffer Zone and Land Use Criteria," Enclosure 9, p. 1.

<sup>19</sup>Ibid., Enclosure 8, p. 5.

<sup>20</sup>Ibid., Enclosure 6, p. 1.

<sup>21</sup>Ibid., Enclosure 3, p. 1.

<sup>22</sup>A Plan For Department of Defense Facilities - State of Hawaii, July 1972, revised December 1972, p. 2.

<sup>23</sup>C. R. Lane, Executive Secretary, Federal Property Council, Letter, 10 October 1973, (Correspondence Files of Harold Kreiser, "Project FRESH"), Enclosure 1, p. 2.

<sup>24</sup>Edward J. Sheridan, Deputy Assistant Secretary of Defense (Installations and Housing), Memorandum, 29 September 1971, (Correspondence Files of Harold Kreiser, "Project FRESH"), p. 1.

<sup>25</sup>Francis D. McGuire, Naval Facilities Engineering Command, Interview, 19 February 1974.

<sup>26</sup>C. R. Lane, Federal Property Council, Letter, 10 October 1973.

<sup>27</sup>T. M. Emmons, "Point Paper - Project FRESH," 29 March 1974, (Correspondence Files of Harold Kreiser, "Project FRESH"), p. 2.

<sup>28</sup>Formerly titled "Blue Air Study."

<sup>29</sup>Chief of Naval Operations, Letter to Naval Facilities Engineering Command Headquarters, 8 December 1969, (Correspondence Files of A. D. Lewis, "AICUZ, November 1968 through December 1971"), p. 1.

<sup>30</sup>Ibid.

<sup>31</sup>Lawrence E. Brumbach, Naval Airspace Usage: A Survey of Navy & Marine Corps Flight Activity, (Research Contribution 160), (Arlington, Virginia: Center for Naval Analyses - Institute of Naval Studies, 1971), p. 1.

<sup>32</sup>A. Y. Ping, Point Paper - Pollution Abatement at Naval Shore Activities, Naval Facilities Engineering Command, 25 February 1974, p. 1.

<sup>33</sup> Navy Environmental Protection Data Base, Final Report, Part I - NEPDB Development Report, (Washington, D. C.: Naval Facilities Engineering Command, October 1973), p. iii.

<sup>34</sup> Navy-Wide Environmental Protection Data Base, (Washington, D. C.: Naval Facilities Engineering Command), p. 5.

<sup>35</sup> Chief of Naval Training, "Encroachment at Naval Air Stations," Letter to Chief of Naval Operations, 3 September 1971, (Correspondence Files of A. D. Lewis, "AICUZ, November 1968 through December 1971"), p. 2.

<sup>36</sup> Ibid.

<sup>37</sup> Chief of Naval Material, "Proposed Greenbelt concept; Encroachment Control at Navy/Marine Corps Airfields," Letter to Chief of Naval Operations, 18 September 1971, (Correspondence Files of A. D. Lewis, "AICUZ, November 1968 through December 1971"), p. 1.

<sup>38</sup> Rear Admiral R. P. Coogan, USN, Director, Aviation Programs Division, "Proposed Greenbelt Concept - Encroachment Control at Navy/Marine Corps Airfields," Memorandum to the Deputy Chief of Naval Operations (Air Warfare), 28 September 1971, (Correspondence Files of A. D. Lewis, "AICUZ, November 1968 through December 1971"), p. 1.

<sup>39</sup> Commander, Eleventh Naval District, "COMELEVENINST 11010.1A, Community Encroachment upon Military Installations," 18 October 1971, (Correspondence Files of A. D. Lewis, "AICUZ, November 1968 through December 1971"), p. 1.

<sup>40</sup> Henning Von Gierke (Task Group 3 Chairman), Draft Report on Impact Characterization of Noise Including Implications of Identifying and Achieving Levels of Cumulative Noise Exposure for Environmental Protection Agency, Aircraft/Airport Noise Report Study, (Washington, D. C.: Office of Noise Abatement and Control, Environmental Protection Agency, 1973), Appendix III, p. I-4.

<sup>41</sup>Ibid., p. III-4-5.

<sup>42</sup>Federal Aviation Administration, Department of Transportation, "Aircraft Ground Description System (Draft Circular 7040)," 3 August 1972, p. 2.

<sup>43</sup>A. D. Lewis, Naval Facilities Engineering Command, Interview, 3 April 1974.

<sup>44</sup>Definitive Designs for Naval Shore Facilities, NAVDOCKS P-272 Part One, (Washington, D. C.: Naval Facilities Engineering Command), Drawing Nos. 1291800, 1291801 and 1291802.

<sup>45</sup>Chief of Naval Material, "Proposed Greenbelt Concept - Encroachment Control at Navy/Marine Corps Airfields," Letter to Commander, Naval Facilities Engineering Command, 28 June 1971, (Correspondence Files of A. D. Lewis, "Buffer Zones and Land Use Criteria"), p. 1.

<sup>46</sup>Ibid.

<sup>47</sup>Commander, Naval Facilities Engineering Command, "Proposed Greenbelt Concept - Encroachment Control at Navy/Marine Corps Airfields," Letter to CNM, 6 August 1971, (Correspondence Files of A. D. Lewis, "AICUZ, November 1968 through December 1971"), p. 1.

<sup>48</sup>Code 09CF, Naval Facilities Engineering Command, "Air Force Greenbelt Concept," Memorandum to Code 07A, 1 October 1971, (Correspondence Files of A. D. Lewis, "AICUZ, November 1968 through December 1971"), p. 1.

<sup>49</sup>Ibid., p. 2.

<sup>50</sup>Ibid.

<sup>51</sup>Ibid., p. 3.

<sup>52</sup>Elmo J. Ceconi, Air Force Civilian, "Greenbelt Concept Briefings," Memorandum For The Record, 2 September 1971, (Correspondence Files of A. D. Lewis, "AICUZ, November 1968 through December 1971"), p. 2.

<sup>53</sup>Currently, the Council has approximately 160 members representing about 200 airports. The Council has no official position as yet in regard to AICUZ although they do appear to be favorably disposed towards the concept unofficially. The American Association of Airport Executives (AAAE), a group representing airport managers as individuals, has about 1200 members. The Association has not adopted any official attitude towards the AICUZ concept due more to a lack of technical expertise at their staff level rather than any actual ideological differences.

<sup>54</sup>U. S. Department of Housing and Urban Development, Circular 1390.2 - Noise Abatement and Control: Departmental Policy, Implementation Responsibilities, and Standards, 4 August 1971, p. 1.

<sup>55</sup>Cdr. R. E. Paulsen, USN, "Meeting held in HUD Building, Washington, D. C., on 4 October 1971 on Residential Encroachment," Memorandum to File, 5 October 1971, (Correspondence Files of A. D. Lewis, "AICUZ, November 1968 through December 1971"), p. 1.

<sup>56</sup>Code 20, Naval Facilities Engineering Command, "Air Installations Compatible Use Zones (AICUZ) Program; implementation of," Memorandum to Code 09P, 14 June 1972, (Correspondence Files of A. D. Lewis, "AICUZ, January 1972 to May 1972").

<sup>57</sup>Department of Defense Instruction No. 4165.57,  
p. 1-2.

<sup>58</sup>Ibid., p. 2.

<sup>59</sup>Secretary of the Navy, Secretary of the Navy Instruction No. 11011.9, (Washington, D. C.: U. S. Government Printing Office, 11 November 1973), p. 1-2.

<sup>60</sup> Harold G. Lewis, Naval Facilities Engineering Command, Interview.

<sup>61</sup> Ibid.

<sup>62</sup> Ibid.

<sup>63</sup> Chief of Naval Operations, Letter to Naval Facilities Engineering Command Headquarters, 8 December 1969, (Correspondence Files of A. D. Lewis, "AICUZ, November 1968 through December 1971"), p. 1.

<sup>64</sup> Harold G. Lewis, Naval Facilities Engineering Command, Interview.

<sup>65</sup> LCdr. L. A. Fermo, Naval Facilities Engineering Command, Interview, 22 March 1974.

<sup>66</sup> S. Rep. 1353, *supra* note 605 at 2690 as quoted in Michael M. Berger, "Nobody Loves An Airport," Southern California Law Review, Volume 43, Number 4, p. 630.

<sup>67</sup> "People and Planes: Can Airports Bridge the Gap?" Progressive Architecture, September 1969, p. 103.

<sup>68</sup> General Counsel of the Department of Defense (J. Fred Buzhardt), "Proposed airport zoning by state legislatures," Letter to Hon. Roy L. Ash, Director, Office of Management and Budget, 27 February 1973, (Correspondence Files of A. D. Lewis, "AICUZ January 1972 through May 1972").

<sup>69</sup> National League of Cities, National Municipal Policy, Chapter 3: Intergovernmental Relations, (Washington, D. C.: National League of Cities, 1973), p. 50.

<sup>70</sup> Ibid.

<sup>71</sup> Domestic Council Committee on National Growth, Report on National Growth 1972, The White House, February 1972, p. xi.

<sup>72</sup>Office of the Federal Register, National Archives and Records Service, General Services Administration, United States Government Manual 1973/74, (Washington, D. C.: U. S. Government Printing Office, 1973), p. 356.

<sup>73</sup>Jack Anderson, "House Report Criticizes CAB, FAA," The Washington Post, 12 January 1974, p. B11.

<sup>74</sup>"An Opening Attack on the Decibel Din: New Law Seeks to Control Aircraft Noise," Conservation Foundation Newsletters, August 30, 1968, pp. 4-5 as quoted in Clifford Bragdon, Noise Pollution - The Unquiet Crisis, (Philadelphia: University of Pennsylvania Press, 1971), p. 37.

<sup>75</sup>Office of the Federal Register, United States Government Manual 1973/74, p. 430.

<sup>76</sup>U. S. Department of Housing and Urban Development, Office of Research and Technology and Office of Community Planning and Management, Aircraft Noise Impact - Planning Guidelines for Local Agencies, November 1972.

<sup>77</sup>Davis L. Callies, English Land Use Planning Controls and the Effect on Development: Developers, Officials and Conservationists Speak Out, (Washington, D. C.: American Institute of Planners, 1973), p. 6.

<sup>78</sup>Ibid., p. 10.

<sup>79</sup>Ibid., p. 18.

<sup>80</sup>Calvin Hamilton, "Better City Planning, More Controls Offer Lessons for the U. S.," Landscape Architecture, Vol. 62, No. 3 (April 1972), p. 219.

<sup>81</sup>Code 20, Naval Facilities Engineering Command, "Retention of Department of Navy Land for Exchange," Memorandum to Code 09P, 20 December 1972, (Correspondence Files of A. D. Lewis, "AICUZ, January 1972 through May 1972").

<sup>82</sup>Code 20 (Capt. R. E. Anderson, CEC, USN), Naval Facilities Engineering Command, "Air Installations Compatible Use Zones (AICUZ) Program; implementation of," Memorandum to Code 09P, 14 June 1972, (Correspondence Files of A. D. Lewis, "AICUZ, January 1972 through May 1972").

<sup>83</sup>LCdr. L. A. Fermo, Naval Facilities Engineering Command, Interview.

<sup>84</sup>Department of Defense Instruction No. 4165.57.

<sup>85</sup>Kenneth Taylor, Naval Facilities Engineering Command, Interview, 30 May 1974.

<sup>86</sup>LCdr. L. A. Fermo, Naval Facilities Engineering Command, Interview.

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APPENDIX A

DEPARTMENT OF DEFENSE INSTRUCTION 4165.57

SUBJECT: AIR INSTALLATIONS COMPATIBLE USE ZONES

JULY 30, 1973

Number 4165.57

Date July 30, 1973

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DEPARTMENT OF DEFENSE INSTRUCTION

Subject: Air Installations Compatible Use Zones

- Refs:
- (a) DoD Directive 4165.6, "Real Property, Acquisition, Management and Disposal," September 15, 1955
  - (b) Army-Navy-Air Force Tri-Service Manual (AFM 86-5, TM 5-365, NavFac P-98), "Land Use Planning With Respect to Aircraft Noise," October 1, 1964 (See Section III of this Instruction for approval of amendments)
  - (c) Department of the Air Force Manual 86-8, "Airfield and Airspace Criteria," November 10, 1964 (See Section IV.C. of this Instruction for approval of amendments)
  - (d) Department of the Navy Publication, NavFac P-272, "Definitive Designs for Naval Shore Facilities," July, 1962 (See Section IV.C. of this Instruction for approval of amendments)
  - (e) Department of the Army Technical Manual, TM 5-803-4, "Planning of Army Aviation Facilities," March, 1970 (See Section IV.C. of this Instruction for approval of amendments)
  - (f) DoD Directive 6050.1, "Environmental Considerations in DoD Actions," August 9, 1971
  - (g) Office of Management and Budget Circular A-2, August 30, 1971, "Utilization, Disposition and Acquisition of Federal Real Property"
  - (h) Office of Management and Budget Circular A-95, February 9, 1971, "Evaluation, Review and Coordination of Federal and Federally Assisted Programs and Projects"

- (i) Office of Management and Budget Circular A-103, May 1, 1972, "Guidance for Agency Implementation of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970," which implemented P.L. 91-646 of January 2, 1971
- (j) DoD Manual 4145.27M, "DoD Ammunition and Explosives Safety Standards," March, 1969 (to be republished as DoD Standard 5154.4S)

## I. PURPOSE

This Instruction defines (a) required restrictions on the uses and heights of natural and man-made objects in the vicinity of air installations and in the immediate vicinity of runways to provide for safety of flight and to assure that people and facilities are not concentrated in an area which is susceptible to aircraft accidents, and (b) desirable restrictions on land use to assure its compatibility with the characteristics, including noise, of air installations operations. It describes the procedures by which Air Installations Compatible Use Zones (AICUZ) may be defined, and provides policy on the extent of Government interest in real property within these zones which may be retained or acquired to protect the operational capability of the DoD active military airfields (subject in each case to the availability of required authorizations and appropriations).

## II. APPLICABILITY

This Instruction applies to air installations of the Military Departments located within the United States, its territories, trusts, and possessions.

## III. CRITERIA

- A. Current airfield and airspace clearances may not provide sufficient space around air installations to assure that all possible uses of land in the vicinity of the air installation are compatible

with aircraft operations. In attempting to define compatible use, the safety and noise of aircraft operations are prime considerations. Establishment of criteria for acceptable degrees of noise is a complex task. The Army-Navy-Air Force Tri-Service Manual (AFM 86-5, TM 5-365, NavFac P-98), "Land Use Planning With Respect to Aircraft Noise," (reference (b)), is a basis for establishment of such criteria. Proposed changes in this Manual will be coordinated with the Assistant Secretary of Defense (Installations and Logistics) prior to publication. This Manual includes considerations of total noise intensity, frequency of exposure, length of the individual exposure, type of noise, and time of day the noise is produced, among other factors. It provides for development of three Composite Noise Rating (CNR) zones around an airfield. CNR Zone 3 is the smallest and loudest, and is that area in which the frequency of exposure and intensity of noise is such as to almost certainly produce difficulties in relation to some other possible uses of the area, particularly where the use or proposed use may be residential. CNR Zone 2 is a larger area in which similar problems with regard to other uses may occur. CNR Zone 1 is all land outside CNR Zone 2 -- an area in which essentially no such difficulties may be expected.<sup>1/</sup>

- B. The CNR zones vary extensively with the type of aircraft used. CNR Zone 3 could extend several miles beyond the end of a runway for frequent heavy bomber night flights, but less than one mile for moderate light aircraft use. Lateral distances from runways can vary from about

<sup>1/</sup> Equivalent Noise Exposure Forecast (NEF) values, computed by established techniques and considering similar factors, are acceptable and may be used interchangeably with CNR zones for the purpose of this Instruction. NEF values above 40 will be considered to be in CNR Zone 3; values of 30 through 40, in CNR Zone 2; and values below 30, in CNR Zone 1.

1,000 feet up to maximums of about one mile for CNR Zone 3, and 2-1/2 miles for CNR Zone 2. Topography, flight patterns, length and configuration of the runway system, local climatic conditions and engine maintenance power check operations will also affect the size and shape of the zones. Therefore, while map studies using the procedures of the Tri-Service Manual will provide a useful indication of the outlines of the zones at a site, precise determination must be based upon a detailed study of current and possible future flight operations at the site and may require an actual noise survey.

#### IV. POLICY

The Secretaries of the Military Departments will develop guidance for use by air installations under their jurisdiction which is consistent with the following:

##### A. General

As a first priority step, all reasonable, economical, and practical measures will be taken to reduce and/or control the generation of noise from flying and flying related activities (see V.C.2., below). Typical measures normally include siting of engine test and runup facilities in remote areas if practical, provision of sound suppression equipment where necessary, and may include additional measures such as adjustment of traffic patterns to avoid built up areas where such can be accomplished with safety and without significant impairment of operational effectiveness.

After all reasonable noise source control measures have been taken, there will usually remain significant land areas wherein the total noise exposure is such as to be incompatible with certain uses.

## B. Compatible Use Land

To maximize compatible uses in the AICUZ, it is desirable to acquire interests in land within CNR Zone 3 and areas of high accident potential, or by some other means to establish controls over this land which would allow the prohibition of some uses of the land and permit others subject to certain restrictions. Similar interests in portions or all of CNR Zone 2 may be desirable depending on local circumstances.

1. Where practical and advisable, necessary rights (see paragraph C, below) in land within the AICUZ will be obtained through land exchange, purchase, donation or other methods, or retained for the protection of the operational capability of air installations under the AICUZ program. However, the cost of acquisition of such rights may approach the cost of fee title. Therefore, whenever possible and within the framework of OMB Circular A-95 (reference (h)), attempts should be made to work with local governing bodies, planning bodies to alleviate the problems through means other than acquisition.
  - a. Local zoning regulations are, in many ways, the most desirable methods of controlling land use since they do not remove land from tax rolls and can achieve orderly development of land within minimum Federal involvement. Nevertheless, zoning regulations are not under the authority of the Federal Government and are subject to nearly constant pressures for change as population centers and economic factors change. Therefore, whenever zoning is selected as the method of land use control, responsible installation commanders must assure that constant attention is given to the actions of local zoning authorities. In addition, where zoning is the method of choice, positive and continuous programs

must be established and maintained to provide information to local governing bodies, civic associations and similar groups regarding the requirements of the flying activity, the noise problems, CNR and NEF data, what is being done to reduce the problems, and similar material in order that the citizenry may be fully informed and advised whenever matters affecting the air installations are under consideration. Local ordinances requiring that persons contemplating purchase, rent, or lease in high noise areas be fully informed of such noise, are very desirable.

- b. Agreements with local governing bodies affording the Federal Government the opportunity to meet with them and to present the circumstances existing with respect to the AICUZ and the AICUZ program whenever any proposed actions affecting land within the AICUZ are under consideration, are also desirable and should be sought. Testimony should be presented in open hearings and emphasis should be placed on compatible uses. Where statutes allow, comprehensive plans developed by local planning/zoning officials and with the cooperation of the Federal Government would be very desirable.
  - c. State legislation providing for necessary controls of land use is a possibility that could prove to be more permanent than the action of local zoning authorities and, if obtainable, would be highly desirable.
2. In situations where compatible use zones involve areas of high intensity land use, acquisition of necessary interests to protect the operational capability of the airfield may appear uneconomical. In such cases, a complete economic analysis and assessment of the future of the installation must be made.

- a. Costs of establishing and maintaining compatible use zones must be weighed against other available options, such as changing the installation's mission and relocating the flying activities, closing the installation, or such other course of action as may be available. In performing analyses of this type, exceptional care must be exercised to assure that a decision to change or relocate a mission is fully justified and that all aspects of the situation have been thoroughly considered.
  - b. When, as a result of such analysis, it is determined that relocation or abandonment of a mission will be required (see paragraph V, below), then no new construction shall be undertaken in support of such activities except as is absolutely necessary to maintain safety and readiness pending accomplishment of the changes required. Necessary changes should be accomplished as soon as budgetary considerations will permit.
3. Nothing in these criteria shall be used to justify solely for the AICUZ program either the acquisition of interests beyond the minimum required to protect the Government, or the retention of owned interests beyond the minimum required.
- a. Where the cost of acquisition of required interests approached closely the cost of fee title, consideration should be given to whether fee title would be to the advantage of the Government.
  - b. If fee title is currently held or subsequently acquired to an area where compatible non-Government uses could be developed and no requirement for interest in the land exists, save to prevent incompatible use, then disposal actions will

be instituted retaining only those rights and interests necessary to establish and maintain compatible uses.

- c. Any land acquisitions or dispositions will be carried out in accordance with the provisions of OMB Circulars A-2 and A-103 (references (g) and (i)).
- d. In general, the safety and noise restrictions which are necessary in clear zones and in approach/departure zones (as defined in references (c), (d) and (e), see paragraph C, below)) for a distance of 2,500 to 3,000 feet beyond the ends of runways, are so severe as to require ownership in fee of these areas, and fee title to these areas will normally be acquired and/or retained. Normally, fee title to the areas comprising the minimum lateral runway clearances prescribed in references (c), (d) and (e) will also be acquired and/or retained.

#### C. Rights and Interests Which May Be Obtained

- 1. The height of structures and safety clearances around runways and airfields should generally be as presently described in Air Force Manual 86-8, "Airfield and Airspace Criteria," (reference (c)), and the Navy's "Definitive Designs for Naval Shore Facilities," (NavFac P-272) (reference (d)). Proposed changes to these Manuals will be coordinated with the Assistant Secretary of Defense (Installations and Logistics) prior to publication. For flammable, explosive or other hazardous material sizing restrictions, see DoD Ammunition and Explosives Safety Standards, DoD 4145.27M (soon to be republished as DoD 5154.4S), (reference (j)).

2. For Army airfields to which are assigned only light aircraft or helicopters, the clearances and heights may be somewhat less stringent and are described in Department of the Army TM 5-803-4, "Planning of Army Aviation Facilities," (reference (e)). These requirements should not be adopted without full consideration of the possibility of heavier aircraft having to operate from the installation at some future time. Proposed changes to the above Manual will be coordinated with the Assistant Secretary of Defense (Installations and Logistics) prior to publication.
3. For noise problems, the rights to or interests in land located in CNR Zone 3 (and possibly in CNR Zone 2, as well as high accident potential areas) may be as follows depending on the circumstances. The right to:
  - a. Restrict the use of the area for human habitation and construction of dwellings, except as to pre-existing dwellings.
  - b. Restrict uses other than agriculture and nonspectator recreation use, mining, quarrying, and oil and gas production, manufacturing, warehousing, and wholesale merchandising, outside storage; scrap and wrecking yards, transportation terminals, maintenance, repair and overhaul facilities; except that uses not specifically identified may be approved subject to proper design, sound attenuation, and evaluation of the proposed use, and except that uses in conflict with local zoning ordinances should not be permitted.
  - c. Make low and frequent flights over such land.
  - d. Subject such land to the noise generated by aircraft, whether in flight or operating

on the ground, and by aircraft engines, whether in or out of aircraft.

- e. Be apprised of, to have access to, and to review specifications and drawings for construction of facilities proposed to be built upon such land, whether or not specifically permitted, and to prohibit the construction of facilities not having proper design features for insulation against sound or otherwise incompatible with use of the area.
4. In addition to the above, each individual case should be examined for the feasibility of extending certain safety of flight restrictions. This would include the right to prohibit the following:
- a. Release into the air of any substance which would impair visibility, such as steam, dust, and smoke -- except smoke from existing heating plants, incinerators and fireplaces.
  - b. Light emissions which might interfere with or impair pilot vision.
  - c. Electrical emissions that interfere with aircraft communication systems or navigational equipment.
  - d. Dumping of garbage, maintenance of feeding stations or facilities attractive to birds.
  - e. The erection of permanent structures unless they comply with the clearance, smoke, light and electronic emission requirements and are for uses compatible with airfield operations.

#### D. Environmental Impact Statements

1. Any actions taken with respect to safety of flight, accident hazard, or noise which involve acquisition of interests in land must be examined to determine the necessity of preparing an environmental impact statement in accordance with DoD Directive 6050.1, "Environmental Considerations in DoD Actions," (reference (f)).
2. All such environmental impact statements must be forwarded to appropriate Federal and local agencies for review in accordance with reference (f).
3. Coordination with local agencies will be in accordance with OMB Circular A-95 (reference (h)).

#### V. THE AIR INSTALLATIONS COMPATIBLE USE PROGRAM

- A. The Secretaries of the Military Departments will develop and implement a plan to investigate and study all air installations in necessary order of priority to develop an Air Installations Compatible Use Zone (AICUZ) program for each air installation. The plan will be designed to:
  1. Determine by detailed study of flight operations, actual noise surveys if necessary, and best available projections of future flying activities, the limits of CNR Zone 3 and 2, and any areas of high accident potential lying inside or outside of these zones.
  2. Realistically appraise land values and probable development in the near future and for the long term.
  3. Review the installation master plans to ensure that existing and future facilities siting is

consistent with the policies contained in this Instruction and other pertinent documents.

4. Give full consideration to joint use of air installations by activities of separate Military Departments and military/civilian joint use whenever such use will result in maintaining operational capabilities while reducing noise, real estate and construction requirements.
  5. Include recommendations for necessary minimum programs of acquisition, relocation, work with local zoning boards, or such other actions as are indicated by the results of their study.
- B. Based on the results of the above studies and within 15 months of the date of this Instruction, each Military Department will prepare recommendations for individual installations on AICUZ programs for approval as follows:
1. The Secretaries of the Military Departments or their designated representatives will review and approve the above indicated studies establishing the individual air installation AICUZ program.
  2. When relocation or abandonment of a mission or an installation is apparently required, the Secretaries of the Military Departments will submit the proposed plan for the installation, with appropriate recommendations, to the Secretary of Defense for approval.
  3. A time-phased fiscal year plan for implementation of the AICUZ program in priority order, consistent with budgetary considerations, will be developed for approval by the Secretaries of the Military Departments, or their designated representatives. These plans will serve as the basis for all AICUZ actions at the individual installations.

C. The Secretaries of the Military Departments will also take action to assure:

1. Development, or continuation with renewed emphasis of programs to inform local governments, citizens groups, and the general public of the requirements of flying activities, the reasons therefor, CNR and NEF data where available, the efforts which may have been made or may be taken to reduce noise exposure, and similar matters which will tend to develop a public awareness of the complexities of air installation operations, the problems associated therewith, and the willingness of this Department to take all measures necessary to alleviate undesirable external effects. Particular emphasis shall be placed on programs of cooperation with local authority in the case of joint military/civilian use air installations.
2. That as the first priority action in developing an AICUZ program, full attention is given to noise problems in all planning, acquisition and siting of noise generating items, such as engine test stands, and that full advantage is taken of available alleviating measures such as remote sites or sound suppression equipment, and that the noise exposure of on-base facilities and personnel are considered together with off-base problems.

D. Responsibilities for the acquisition, management, and disposal of real property are defined in DoD Directive 4165.5 (reference (a)).

E. The Deputy Assistant Secretary of Defense (Installations and Housing), Office of the Assistant Secretary of Defense (Installations and Logistics), will examine the program developed pursuant to this Instruction, and from time to time review the progress thereunder to assure conformance with policy.

# VI. EFFECTIVE DATE AND IMPLEMENTATION

This Instruction is effective immediately. Copies of documents promulgating the policy set forth and establishing the programs required herein will be forwarded to the assistant Secretary of Defense (Installations and Logistics) within 90 days from the date of this Instruction.

(Signed)

ARTHUR I. MENDOLIA  
Assistant Secretary of  
Defense  
(Installations & Logistics)

APPENDIX B

DEPARTMENT OF THE NAVY

OFFICE OF THE SECRETARY (INSTRUCTION 11010.9)

SUBJECT: AIR INSTALLATIONS COMPATIBLE USE ZONE PROGRAM

NOVEMBER 14, 1973

SECNAVINST 11010.9  
14 November 1973

SECNAVINST 11010.9

From: Secretary of the Navy

Subj: Air Installations Compatible Use Zones Program

Ref: (a) Noise Control Act of 1972 42 US C4901  
(b) DODINST 4120.14 of 14 May 1971  
(c) SECNAVINST 6240.6B of 2 Nov 1970

Encl: (1) DODINST 4165.57 of 30 Jul 1973

1. Purpose: To implement within the Department of the Navy the Air Installations Compatible Use Zones (AICUZ) Program established by enclosure (1) and direct compliance with reference (a).

2. Background: Reference (a) states the Congressional intent to promote an environment free from noise that jeopardizes health and welfare. Enclosure (1) provides policy on the extent of Government interest in real property which may be retained or acquired to ensure compatible development and protect the operational capability of military airfields. Further, the directive requires Military Departments to investigate and study all air installations located within the United States, its territories, trusts, and possessions and to prepare recommendations on AICUZ Plans for individual air installations.

3. Policy: The Department of the Navy will vigorously pursue full implementation of the AICUZ Program as delineated in enclosure (1). Every effort will be made, consistent with aircraft combat performance requirements, to reduce and/or control aircraft noise pollution in compliance with reference (a).

4. Action: The Chief of Naval Operations and the Commandant of the Marine Corps shall:

- a. Promulgate planning criteria and technical

guidance to air installations on the AICUZ Program.

- b. Investigate and study air installations in compliance with the requirements of enclosure (1).
- c. Develop an AICUZ Plan for each Navy and Marine Corps air installation comprising the following three basic elements:
  - (1) Reduction in aircraft noise pollution, both on and off-station.
  - (2) Establishment of a compatible land use plan(s) for lands within the AICUZ.
  - (3) Establishment of a positive plan for coordinating with state and local officials and maintaining public awareness of the Navy AICUZ Program.
- d. Prepare an integrated time-phased fiscal year AICUZ Program for each Navy and Marine Corps air installation.
- e. Submit the integrated Navy and Marine Corps AICUZ Program to the Assistant Secretary of the Navy (Installations and Logistics) with the Navy's quarterly OMB Air and Water Reports, required by references (b) and (c). Initial report to be submitted in compliance with the requirements of enclosure (1).

## APPENDIX C

### ORGANIZATIONAL STRUCTURES IN THE FEDERAL GOVERNMENT

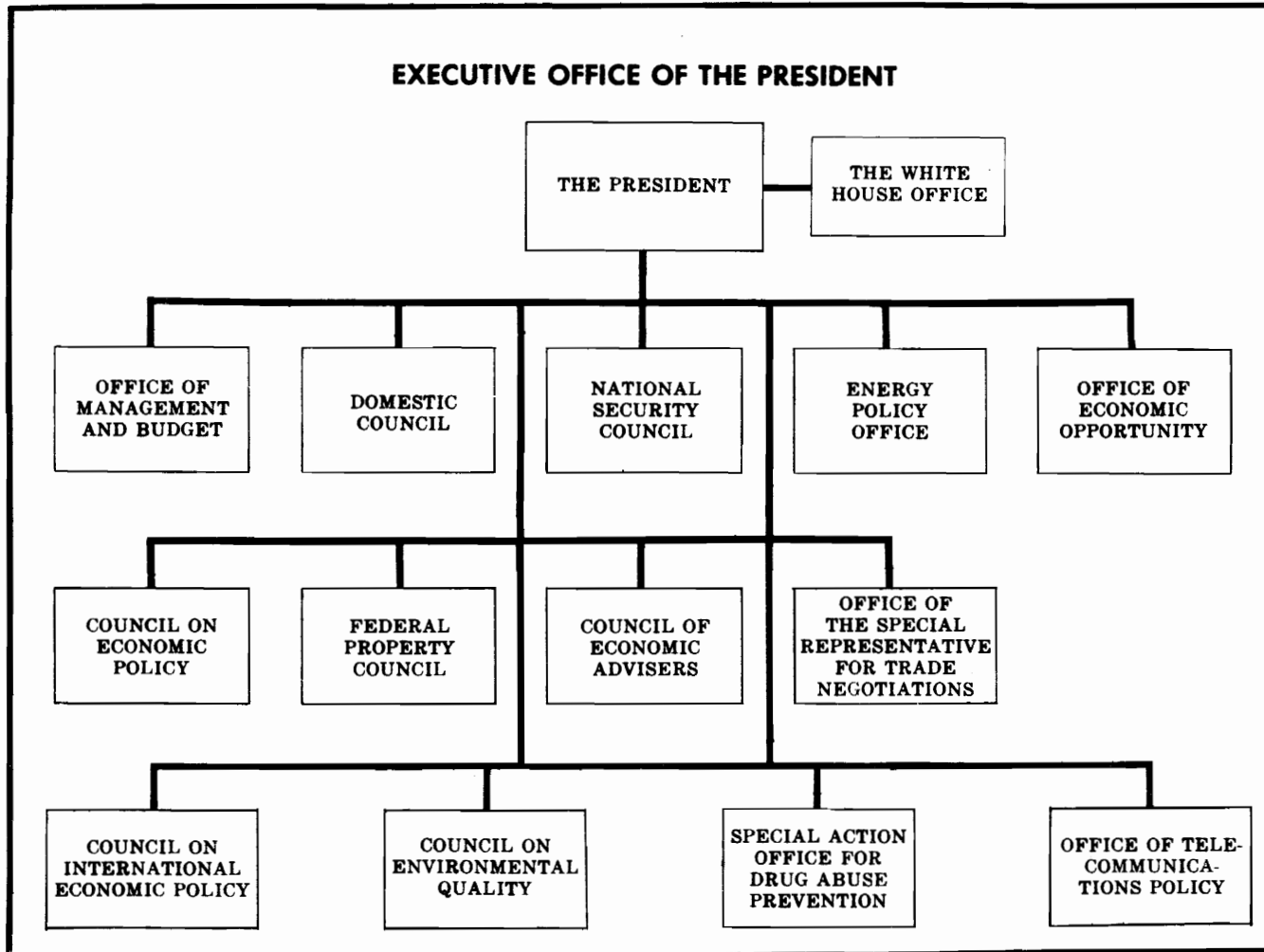
(United States Government Manual 1973/74. Office of the Federal Register, National Archives and Records Service, General Services Administration, pp. 21, 78, 149, 185.)

THE GOVERNMENT OF THE UNITED STATES

EXECUTIVE OFFICE OF THE PRESIDENT

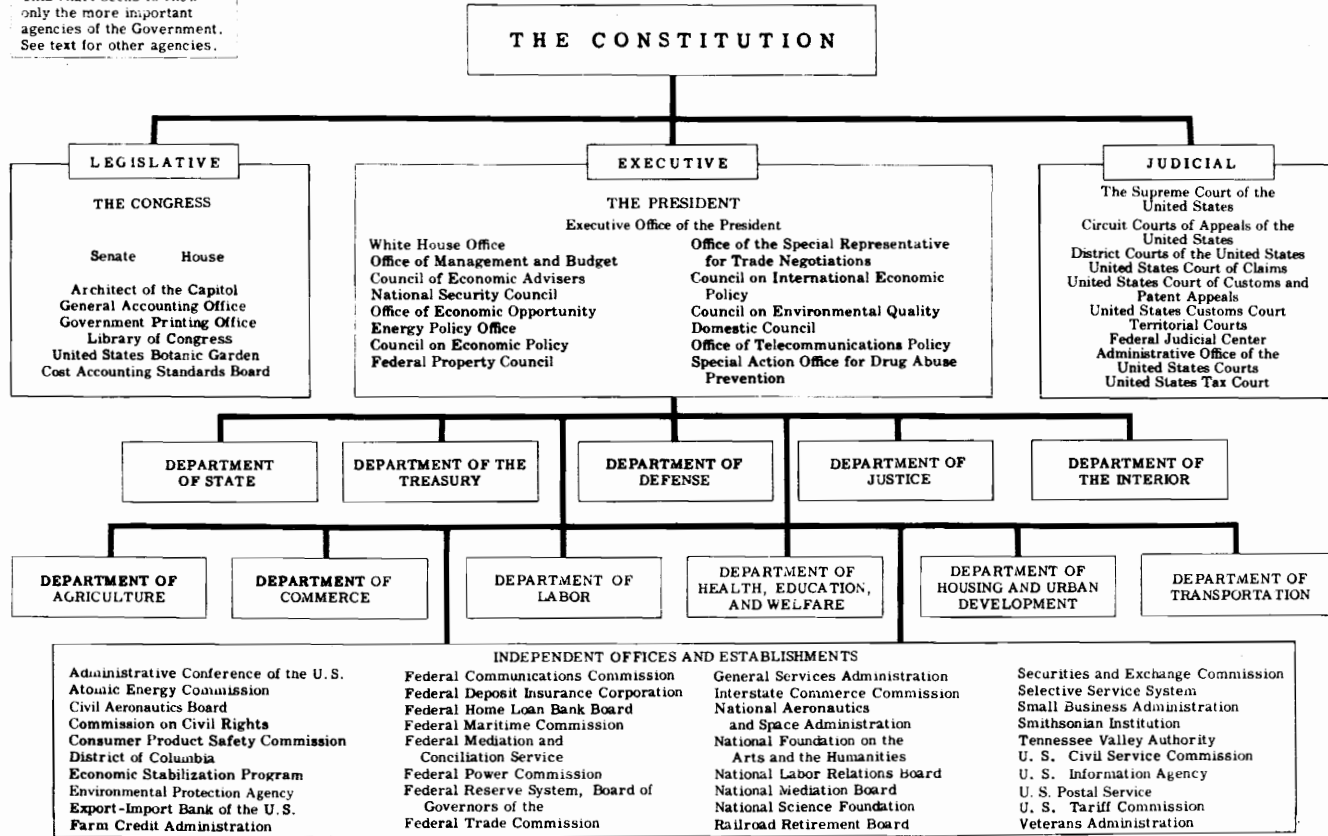
DEPARTMENT OF DEFENSE

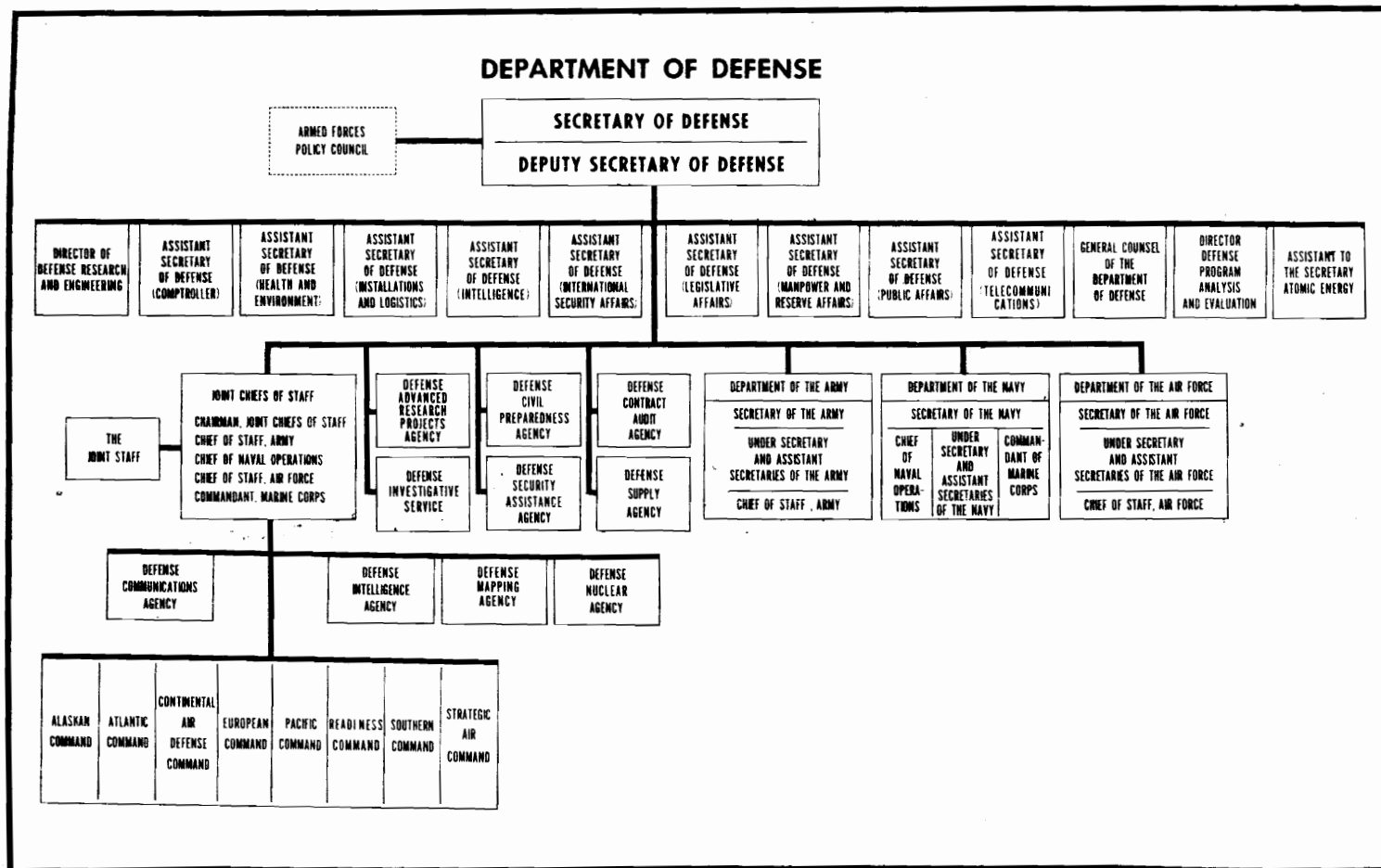
DEPARTMENT OF THE NAVY



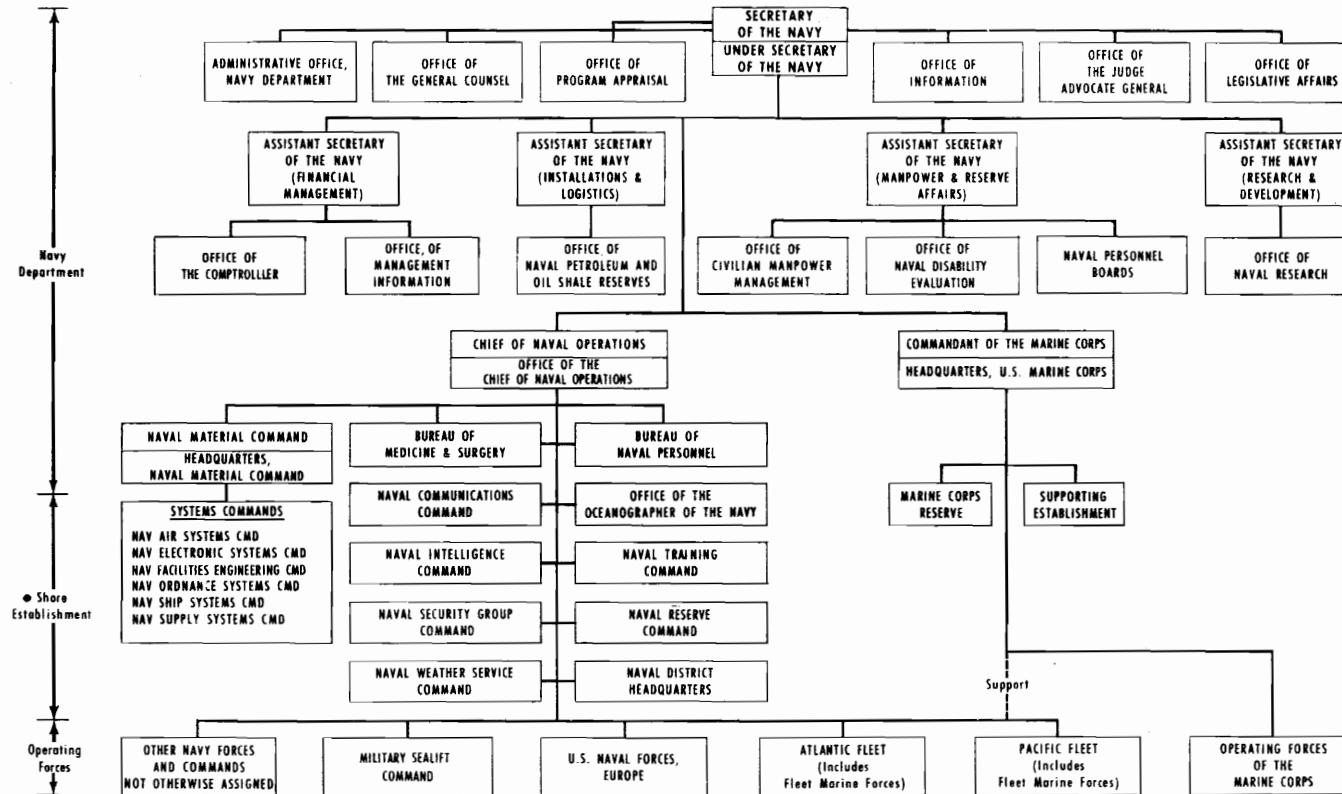
# THE GOVERNMENT OF THE UNITED STATES

This chart seeks to show only the more important agencies of the Government. See text for other agencies.





# DEPARTMENT OF THE NAVY



● ALSO INCLUDES OTHER DESIGNATED SHORE ACTIVITIES, NOT SHOWN ON THE CHART, WHICH ARE UNDER THE COMMAND OR SUPERVISION OF MANY OF THE ORGANIZATIONS DEPICTED.

## APPENDIX D

### NAVY AND MARINE CORPS AIR INSTALLATIONS

Master Jet Stations

NAS Oceana  
 ALF Fentress  
 NAS Miramar  
 NAS Cecil Field  
 OLF Whitelouse  
 NAS Lemoore

Other Fleet Air Stations

NAS Jacksonville  
 NAS Moffett Field  
 ALF Crow's Landing  
 NAS North Island  
 ALF Imperial Beach  
 NAS Whidbey Island  
 OLF Coupeville  
 MCAS El Toro  
 NAS Norfolk  
 NAS Brunswick  
 MCAS Kaneohe Bay  
 NAS Key West  
 NAS Lakehurst  
 MCAS Cherry Point  
 OLF Atlantic  
 ALF Bouge  
 MCAS Yuma  
 NAS Alameda  
 MCAS Beaufort  
 NS Mayport  
 NAS Barbers Point  
 NAF El Centro  
 NAS Fallon  
 NS Roosevelt Roads  
 MCAS (H) Santa Ana  
 NAS Agana  
 MCAS (H) New River  
 HOLF Oak Grove  
 HOLF Holly Ridge

Training Stations

NAS Pensacola  
 OLF Chocktaw  
 OLF Spencer  
 Site A  
 Site 5  
 Site B  
 Site C  
 OLF Canal  
 OLF Wolf  
 OLF Magnolia  
 OLF Kings  
 OLF Kaiser  
 OLF Silverhill  
 OLF Summerdale  
 OLF Faircloth  
 OLF Middleton  
 OLF Santa Rosa  
 OLF Holley  
 OLF Brewton  
 OLF Bronson  
 NAS Corpus Christi  
 ALF Cabaniss  
 ALF Waldron  
 NAS Whiting Field  
 NAS Memphis  
 NAS Kingville  
 ALF Orange  
 NAS Chasefield  
 OLF Goliad  
 NAS Meridian  
 OLF Alpha  
 OLF Bravo  
 NAS Saufley Field  
 ALF Barin

Research, Development & Testing  
Air Stations

NADC Warminster  
NATC Patuxent River  
PMR Point Mugu  
PMR Barking Sands  
NAF China Lake  
NWL Dahlgren  
MCAS Quantico  
Industrial Reserve Plant, Calverton  
(contractor funded)

Reserve Training Stations

NAS Glenview  
NAS Willow Grove  
NAS South Weymouth  
NAS Dallas  
NAS New Orleans  
AFRC Los Alamitos (Army funded)

Abbreviations

NAS - Naval Air Station  
OLF - Outlying Landing Field  
MCAS - Marine Corps Air Station  
ALF - Auxiliary Landing Field  
NS - Naval Station  
MCAS (H) - Marine Corps Air Station (Helicopter)  
HOLF - Helicopter Outlying Landing Field  
NADC - Naval Air Development Center  
NATC - Naval Air Training Center  
PMR - Pacific Missile Range  
NAF - Naval Air Facility  
NWL - Naval Weapons Laboratory  
AFRC - Armed Forces Reserve Center

## VITA

Daniel Jonathan Feil  
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Date of Birth: October 9, 1947

### Education:

Sept. 1961 - June 1964	Bronx High School of Science, New York
Sept. 1964 - May 1966	Cooper Union for the Advancement of Science and Art, School of Architecture, New York
Sept. 1966 - Feb. 1971	City College of New York, (CCNY), School of Architecture, New York
Feb. 1971	Bachelor of Science (CCNY)
Feb. 1971	Bachelor of Architecture (CCNY)

### Professional Experience:

The candidate has completed a professional training program developed by the Naval Facilities Engineering Command. The program has afforded him a wide range of experiences including working assignments overseas in Spain and Morocco. The candidate is currently a member of an interdisciplinary master planning team. The team prepares master plans and special studies for Navy and Marine Corps shore activities throughout the world.

*Daniel Jonathan Feil*

AIR INSTALLATIONS  
COMPATIBLE USE ZONES:  
AN ASSESSMENT OF THE  
DEVELOPMENT OF THE DEPARTMENT OF DEFENSE POLICY  
AND THE  
IMPLEMENTATION BY THE DEPARTMENT OF THE NAVY

by

Daniel Jonathan Feil

(ABSTRACT)

The Department of Defense's policy on Air Installations Compatible Use Zones (AICUZ) requires the protection of the operational capability of military air installations. The AICUZ policy includes an implementation program including on-base noise reduction and suppression procedures and off-base measures designed to control the use of land which is adjacent or in close proximity to military air installations so that land utilization is consonant with base operations and to protect the public safety, health and welfare. The AICUZ policy represents a significant change in attitude by the Department towards the communities surrounding its air installations in that

it requires an active military presence within the planning processes of the local community. The AICUZ policy also represents a major entrance by the Department of Defense into the field of off-station land use controls.

The Department of the Navy's implementation of the Department of Defense's AICUZ policy appears to hold much promise, although certain attitudes with potential for producing inefficient results are evidencing themselves. The most critical problems with the directives studied concern the lack of an explicit statement of values, the omission of an evaluation procedure and the absence of any cost estimates. It is recommended that all of these neglected areas be addressed and that the criteria which provided the basis for the policy be further studied and expanded.