

AD-A276 319



2

NAVAL POSTGRADUATE SCHOOL Monterey, California

S DTIC
ELECTE
MAR 07 1994
F **D**



THESIS

FINANCIAL AND PROGRAMMATIC ANALYSIS
OF REALIGNMENT AND CLOSURE OPTIONS
FOR NAS WHIDBEY

by

RICHARD L. DAWE

December, 1993

Thesis Advisor:

Professor L.R. Jones

Approved for public release; distribution is unlimited.

0288

94-07384



DTIC QUALITY INSPECTED 3

94 3 4 032

**Best
Available
Copy**

Unclassified

Security Classification of this page

REPORT DOCUMENTATION PAGE

| | | | |
|---|---|--|------------------------|
| 1a Report Security Classification: Unclassified | | 1b Restrictive Markings | |
| 2a Security Classification Authority | | 3 Distribution/Availability of Report | |
| 2b Declassification/Downgrading Schedule | | Approved for public release; distribution is unlimited. | |
| 4 Performing Organization Report Number(s) | | 5 Monitoring Organization Report Number(s) | |
| 6a Name of Performing Organization Naval Postgraduate School | 6b Office Symbol (if applicable) 36 | 7a Name of Monitoring Organization Naval Postgraduate School | |
| 6c Address (city, state, and ZIP code) Monterey CA 93943-5000 | | 7b Address (city, state, and ZIP code) Monterey CA 93943-5000 | |
| 8a Name of Funding/Sponsoring Organization | 8b Office Symbol (if applicable) | 9 Procurement Instrument Identification Number | |
| 8c Address (city, state, and ZIP code) | | 10 Source of Funding Numbers | |
| | | Program Element No | Project No |
| | | Task No | Work Unit Accession No |
| 11 Title (include security classification) FINANCIAL AND PROGRAMMATIC ANALYSIS OF REALIGNMENT AND CLOSURE OPTIONS FOR NAS WHIDBEY (UNCLASSIFIED) | | | |
| 12 Personal Author(s) Dawe, Richard L. | | | |
| 13a Type of Report Master's Thesis | 13b Time Covered From To | 14 Date of Report (year, month, day) December, 1993 | 15 Page Count 99 |
| 16 Supplementary Notation The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government. | | | |
| 17 Cosati Codes | | 18 Subject Terms (continue on reverse if necessary and identify by block number) | |
| Field | Group | Military Base Closure, Base Realignment, NAS Whidbey | |
| | Subgroup | | |
| 19 Abstract (continue on reverse if necessary and identify by block number) | | | |
| <p>This study provides an analysis of the base closure and realignment process. It examines the Base Realignment and Closure Commission (BRAC) and Navy Base Structure Committee (BSC) functions and actions. Naval Air Station Whidbey Island, Washington is employed as a case analysis to gain insight into the process of evaluating the various factors that must be considered in the decision whether a base should be closed. The study also assesses the most likely and best options for NAS Whidbey in future rounds of base closure and realignment.</p> <p>This thesis draws upon previous research conducted by government, military and private organizations in analysis of the base closure process. It attempts to provide insight into the significant economic dependencies of many civilian communities on income generated by military bases. The conclusions and recommendations drawn from this research hopefully will prove useful to students of the base closure and realignment analysis and decision process in future years.</p> | | | |
| 20 Distribution/Availability of Abstract __ unclassified/unlimited __ same as report __ DTIC users | | 21 Abstract Security Classification Unclassified | |
| 22a Name of Responsible Individual L.R. Jones, Professor | 22b Telephone (include Area Code) (408) 656-2537 | 22c Office Symbol 36 AS/JN | |

DD FORM 1473, 84 MAR

83 APR edition may be used until exhausted

security classification of this page

All other editions are obsolete

Unclassified

Approved for public release; distribution is unlimited.

**FINANCIAL AND PROGRAMMATIC ANALYSIS OF REALIGNMENT
AND CLOSURE OPTIONS FOR NAS WHIDBEY**

by

Richard L. Dawe
Lieutenant Commander, United States Navy
B.S., Southern Illinois University, 1980

Submitted in partial fulfillment
of the requirements for the degree of

MASTER OF SCIENCE IN FINANCIAL MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL

December 1993

Author:

R L Dawe

Richard L. Dawe

Approved by:

L.R. Jones

L.R. Jones, Thesis Advisor

Jerry McCaffrey

Jerry McCaffrey, Associate Advisor

D.R. Whipple

D.R. Whipple, Chairman
Department of Administrative Sciences

| | |
|--------------------|-------------------------------------|
| Accession For | |
| NTIS CRA&I | <input checked="" type="checkbox"/> |
| DTIC TAB | <input type="checkbox"/> |
| Unannounced | <input type="checkbox"/> |
| Justification | |
| By | |
| Distribution / | |
| Availability Codes | |
| Dist | Avail and/or Special |
| A-1 | |

ABSTRACT

This study provides an analysis of the base closure and realignment process. It examines the Base Realignment and Closure Commission (BRAC) and Navy Base Structure Committee (BSC) functions and actions. Naval Air Station Whidbey Island, Washington is employed as a case analysis to gain insight into the process of evaluating the various factors that must be considered in the decision whether a base should be closed. The study also assesses the most likely and best options for NAS Whidbey in future rounds of base closure and realignment.

This thesis draws upon previous research conducted by government, military and private organizations in analysis of the base closure process. It attempts to provide insight into the significant economic dependencies of many civilian communities on income generated by military bases. The conclusions and recommendations drawn from this research hopefully will prove useful to students of the base closure and realignment analysis and decision process in future years.

TABLE OF CONTENTS

| | |
|--|----|
| I. INTRODUCTION | 1 |
| A. BACKGROUND | 1 |
| B. OBJECTIVE | 4 |
| C. RESEARCH QUESTIONS | 6 |
| D. SCOPE | 7 |
| E. LITERATURE REVIEW AND METHODOLOGY | 8 |
| F. CHAPTER OUTLINE | 8 |
| II. BASE CLOSURE HISTORY | 10 |
| A. BACKGROUND | 10 |
| B. BASE REALIGNMENT AND CLOSURE COMMISSION | 12 |
| 1. BRAC Selection Criteria | 13 |
| 2. BRAC-91 | 14 |
| 3. BRAC-93 | 17 |
| C. THE NAVY PROCESS | 19 |
| 1. Background | 20 |

| | | |
|------|--|----|
| 2. | Base Structure Evaluation Committee (BSEC) | 20 |
| D. | NAS WHIDBEY ISLAND | 23 |
| 1. | Description of Mission | 23 |
| 2. | 1991 BSEC and BRAC Findings | 25 |
| 3. | 1993 BSEC and BRAC Findings | 29 |
| III. | CASE STUDY | 31 |
| A. | NAS WHIDBEY ISLAND | 34 |
| 1. | Air Station Assets | 35 |
| 2. | City of Oak Harbor, Washington | 38 |
| 3. | Air Operations and Training Environment | 46 |
| 4. | Environmental Issues | 49 |
| B. | BSEC AND BRAC DECISIONS | 52 |
| C. | SUMMARY | 56 |
| IV. | ANALYSIS AND PROJECTIONS FOR 1995 ROUNDS | 58 |
| A. | ANTICIPATED STATUS OF NAS WHIDBEY FOR 1995 ROUNDS | 58 |
| 1. | Air Station Assets | 62 |

| | |
|--|----|
| 2. City of Oak Harbor, Washington | 63 |
| 3. Air Operations and Training Environment | 65 |
| 4. Environmental Issues | 66 |
| B. MATRIX ANALYSIS OF OPTIONS FOR NAS WHIDBEY | 68 |
| C. POLITICAL ENVIRONMENT | 72 |
| 1. NAS Whidbey | 73 |
| | |
| V. CONCLUSIONS AND RECOMMENDATIONS | 75 |
| A. CONCLUSIONS AND RECOMMENDATIONS | 76 |
| 1. Conclusion (1): | 76 |
| 2. Conclusion (2): | 78 |
| 3. Conclusion (3): | 79 |
| B. AREAS FOR FURTHER STUDY | 80 |
| | |
| APPENDIX A: FINAL SELECTION CRITERIA | 83 |
| | |
| APPENDIX B: NAS WHIDBEY HAZARDOUS WASTE EVALUATION CRITERIA | 85 |
| | |
| APPENDIX C: EPA's NINE EVALUATION CRITERIA | 86 |
| | |
| LIST OF REFERENCES | 88 |
| | |
| INITIAL DISTRIBUTION LIST | 91 |

I. INTRODUCTION

A. BACKGROUND

The United States is presently experiencing fiscal deficits of unprecedented proportion. Many of the nation's leading economists and financial experts predict inevitable dire fiscal and socio-economic consequences if prompt and decisive efforts are not taken to control government spending. The United States has become a debtor nation and unfortunately for its citizens, the current political system makes it easier for Congress and the President to continue the seemingly unbridled spending rather than make the difficult and usually unpopular choices of spending cuts and fiscal responsibility [Ref. 1].

Given the inherent shortcomings of the political system, the escalation of "mandatory" entitlement spending is not likely to change radically in the foreseeable future. One of the prime targets for budget reductions is the Department of

Defense. Without question, there are tremendous savings to be realized through the reduction of military forces and the closure of bases in both the United States and abroad. The so called "peace dividend" following the end of the cold war may help in the goal of reducing the deficit. However, will the reductions and closures be conducted efficiently and effectively with bases selected by unbiased parties or will decisions be made based more on politics and biased numbers that tend to present an inaccurate picture for decision makers? These questions must be addressed to ensure the reduction of forces, base closures and realignment of installations are conducted fairly and with minimal detrimental impact on the operational needs of the military and the economic well-being of associated communities.

Great care has been taken to establish policies and procedures that make the base closure screening and subsequent selection process both effective and efficient. November 5, 1990, Congress passed Public Law 101-510 as part of the FY 1991 defense authorization bill. This law mandated the

establishment of the defense Base Closure and Realignment Commission [Ref. 2]. Eight Presidentially-appointed members of the committee would analyze department of defense (DOD) proposals for closure and realignment in 1991, 1993 and 1995. After their review and subsequent amendment to the DOD recommendations, Congress then submits its list to the President. The President must either approve the list or submit his changes to the Congress for approval or disapproval of the complete list. It appears that there are aspects of the process that should be improved upon to ensure the operational requirements of the military are met and that fair and unbiased decisions continue to be made in downsizing the military.

In determining which bases should be closed or realigned, there are a number of factors used to present an accurate overall picture. The primary issue has been, and should continue to be, the operational needs of the Department of Defense. Present and projected future needs for the installation, including excess capacity issues, must be

assessed. Excess capacity is calculated differently by the different service branches. The next factor is initial closure costs and the "payback period", or the amount of time projected to pay back the initial cost of closure given the estimated annual savings. Correct quantitative input of dollar values is crucial if this is to be an accurate analysis and a useful decision tool. The other main category of issue is the estimated impact on the local communities. This must be carefully studied to ensure an accurate analysis of the base in question. If a community is largely dependent on the base for employment and associated tax support and has few or no other major source of income, it may likely be decimated by a closure decision. Therefore, it is crucial that Congress and the DOD continue to take measures to ensure the process is unbiased and as equitable as possible for all concerned.

B. OBJECTIVE

This thesis will provide an analysis of the processes involved in the determination of which installations should be closed or realigned and which should remain open. The

primary areas that will be analyzed are operational value to the Department of Defense, closure costs and associated pay-back periods, impact on the local economy, significant environmental concerns and any political considerations.

In order to quantify the above areas for analysis, the case of Whidbey Island Naval Air Station in Oak Harbor, Washington will be the focus of this research. It has been determined by the congressionally-appointed Base Closure and Realignment Commission in both 1991 and 1993 that Whidbey would remain open. Given that NAS Whidbey is one of the three "master jet bases" on the west coast, as opposed to only two on the east coast, and with the aging but still effective A-6E Intruder slated for eventual retirement, it and other facilities with excess capacity will continue to be considered for closure in upcoming years.

This research will provide an updated and independent assessment of NAS Whidbey, following the Commission's findings in 1993, and evaluate the closure selection process and the

weighting given to the variables related to fairness, efficiency and effectiveness.

C. RESEARCH QUESTIONS

This research will provide an independent assessment of NAS Whidbey Island's status following the 1993 Base closure and Realignment findings. The existing methodology for base closure and realignment decisions will be examined for equity and efficiency by a review of the case history of NAS Whidbey Island. The following will be addressed herein:

1. Following the 1993 BRAC Commission hearings and subsequent Congressional action, what is the assessment for NAS Whidbey Island's standing as the 1995 BRAC hearings approach?
2. What are the most likely options to be considered for NAS Whidbey in 1995 and what are the best solutions concerning considering operational requirements?
3. What are the costs and benefits involved in Whidbey's likely options for 1995?
4. Does it appear that the closure and realignment selection process has worked as designed in the 1991 and 1993 rounds and what should be done to improve the process?
5. Has the economic impact on the local community been given adequate consideration by the DoD and Congress?

Conclusions from this thesis are expected to be useful in providing those involved in the future in the closure and realignment process with an up-to-date analysis of the status of NAS Whidbey Island. It should serve to provide insight to those invoked with the critical nodes of the decision process in the Department of Navy and the Base Closure and Realignment Commission.

D. SCOPE

This thesis is intended to provide an in-depth look at the closure and realignment process used by the DON, DOD and the Base closure and Realignment Commission (BRAC). NAS Whidbey Island, Washington will be the focus of the research, primarily considering historical and expected future events of the closure decision process. Any differences between the DON, DOD and BRAC will be analyzed with attention drawn to any difficulties that may have been encountered as a result of the differences.

NAS Whidbey's situation will be the case analysis but its situation will not be compared to that of other bases. There

will also not be an in-depth study of environmental impact associated with NAS Whidbey.

E. LITERATURE REVIEW AND METHODOLOGY

This thesis is primarily descriptive. It is based on information gathered through personal interviews with DON, DOD and local government officials. Interviews with City of Oak Harbor and Whidbey Island business and civic leaders were invaluable to the success of this research. Following the interviews, bibliographic sources listed were obtained and current related articles were studied to ensure currency and accuracy of information. Retired Navy Captain and currently Washington State Representative of the tenth district, Barry Sehlin and retired Navy Commander Stan Stanley, CEO of Business Development Associates in Oak Harbor were especially generous in their support of this research.

F. CHAPTER OUTLINE

This thesis consists of five chapters. Chapter II presents a history of the base closure and realignment

process. It will provide an understanding of how the various committees and commissions evolved a background of decisions that have been made relating to NAS Whidbey Island Washington.

Chapter III provides a case analysis of NAS Whidbey with detail of the many operational and cost variables which are crucial to the determination of closure and realignment criteria. Various historical studies will be used in the composition of this chapter.

Chapter IV assesses the projected costs of closure or realignment for NAS Whidbey if this were the result of the 1995 BRAC. This information will be presented in a matrix format which should provide a conclusive picture of both operational and financial costs of the various options.

Chapter V provides the thesis summary and conclusions. It summarizes the most efficient and effective options for NAS Whidbey based on its status as the 1995 decision evolution approaches.

II. BASE CLOSURE HISTORY

A. BACKGROUND

The Department of Defense recognized in the 1960's that many of its bases had become obsolete or possessed excess capacity and were no longer useful to the military. Because of these inefficiencies, many installations were closed by authority of the DoD [Ref. 3]. The early 1970's saw an end of the Vietnam War which further enforced the need for reduction in overhead costs of unnecessary facilities. The DoD carried out these early closures with virtually no guidance or consultation from Congress¹. Political fallout because of the early closures proved to be far greater than Congress had thought possible. As a result, Congress enacted Section 2687 of Title 10, United States Code. This law required congressional notification if an installation became targeted for closure or realignment. It also required involved and

¹The majority of the 1960 and early 1970 closures were viewed very negatively by Congress as they continued to feel the political fall-out from their constituents [Ref.3].

lengthy environmental studies for closure candidates that all but stopped the closure of military bases [Ref. 3].

The 1980's and early 1990's was a period of tremendous military spending increase spearheaded by the Reagan Administration followed by a contraction in military spending. Military reduction following the end of the "Cold War", demanded a continuance of the base closure process. As the military force structure was reduced, the issue of excess capacity continued to surface as a major source of cost reduction.

In October 1988, Public Law 100-526 was passed creating the Commission on Base Realignment and Closure. Many defenders of bases nominated for closure accused the process of being politically biased. Because of those concerns, Congress enacted Public Law 101-510, the Defense Base Closure and Realignment Act of 1990. Public Law 101-510 formed the Defense Base Closure and Realignment Commission (BRAC) and established procedures that the President, DoD, GAO and the BRAC were to follow through 1995 [Ref. 4]. Unlike the 1988

Commission, this new statute called for public hearings to be conducted for the bases considered by the Secretary. Records of the proceedings would now be open to full review by the public. The General Accounting Office (GAO) was required to conduct a thorough analysis of the DoD and BRAC Commission's selection processes. The Commission was directed to meet in the determination of base closure and realignment candidates in 1991, 1993, and 1995.

B. BASE REALIGNMENT AND CLOSURE COMMISSION

Congress formed the Defense Base Realignment and Closure Commission, "to provide a fair process that will result in the timely closure and realignment of military installations inside the United States" [Ref. 5]. The new process of looking for closure candidates was designed to be far less susceptible to political interests of individual contingents than previous processes. The GAO had the very important role of conducting an independent audit of the closure and realignment selection process. This measure also was designed

to ensure the establishment and maintenance of an appropriate "paper-trail" of justification for the process.

Public Law 101-510 called for the President to appoint eight members to the BRAC Commission, six of whom would be based on congressional recommendations [Ref. 4]. All appointees would be subject to Senate confirmation. The Commission chair was to serve through the 1995 rounds with all others serving only for the remainder of the congressional session when the appointment was made.

1. BRAC Selection Criteria

In accordance with Public Law 101-510, the following final selection criteria have been established, with items one through four categorized as (Military Value), item five (Return on Investment) and items six through eight (Impacts) [Ref. 4]:

1. The current and future mission requirements and the impact on operational readiness of the Department of Defense's total force.
2. The availability and condition land, facilities, and associated airspace at both the existing and potential receiving locations.

3. The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations.
4. The cost and manpower implications.
5. The extent and timing of potential costs and savings, including the number of years, beginning with the date of completion of the closure or realignment, for the savings to exceed the costs.
6. The economic impact on communities.
7. The ability of both the existing and potential receiving communities' infrastructure to support forces, missions and personnel.
8. The environmental impact.

The above criteria were also adhered to by the DoD and Navy Department in the determination of closure and realignment candidates.

2. BRAC-91

January of 1991, the BRAC Commission and its staff began work from its Washington office. Members had uniquely impressive credentials and professional histories. The 1991 BRAC Commissioners were:

1. Jim Courter, (chairman) - former representative, R-NJ, and member of the House Armed Services Committee; senior partner of a New Jersey law firm.
2. William L. Ball - former Secretary of the Navy and staff member of the Senate Armed Services Committee; President of the National Soft Drink Association in Washington, D.C.
3. Howard H. Calloway - former Secretary of the Army and Representative, R-GA; chairman of GOPAC in Washington, D.C.
4. General Duane H. Cassidy, USAF (Retired) - former Commander-in-Chief of the U.S. Transportation Command and of the Military Airlift Command; executive for CSX Corporation in Richmond Virginia.
5. Arthur Levitt, Jr. - Chairman of the Board of Levitt Media Company; former Chairman and Chief Executive Officer of the American Stock exchange.
6. James C. Smith, II - Executive for Brown and Root U.S.A., Inc., a Houston based engineering and construction firm, member of the 1988 Base Closure Commission and former Senate Armed Services staff member.
7. Robert D. Stuart - former Ambassador to Norway; past Chief Executive Officer of Quaker Oats Company.
8. Alexander B. Towbridge - former Secretary of Commerce and past President of the National Association of Manufacturers.¹

¹Resigned due to potential conflict of interest and was not subsequently replaced on the commission.

April of 1991 the DoD submitted to the Commission, based on recommendations submitted from military leadership and the respective service departments, 43 bases for closure and 29 for realignment consideration. The Commission subsequently nominated an additional 35 installations for closure or realignment. Following extensively publicized hearings, including visits by commissioners to communities under consideration, the President and Congress approved the final iteration. It recommended 34 bases for closure and 48 activities for realignment. This was projected to provide a net savings of \$2.3 billion with additional \$1.5 billion annual savings after a one time cost of \$4.1 billion. The 1991 round of closures provided great advances in increased efficiency. However, Public Law 101-510 was amended in 1992 to provide even more accountability of involved agencies and a better audit trail for future rounds of base closures.

3. BRAC-93

The 1993 round of the Base Closure and Realignment process operated very much like the 1991 process. The closure selection process was in accordance with Public Law 101-510 as amended. The appointed members of the 1993 commission were:

1. Jim Courter, (chairman) - 1991 BRAC Chairman; former Representative of New Jersey, and member of the House Armed Services Committee; senior partner of a New Jersey law firm.
2. Peter B. Bowman, USN (Retired) - Vice President of Quality Assurance for Gould, Inc., in Newburyport, Massachusetts.
3. Beverly B. Byron - former Representative of Maryland; former Chair of the House Special Panel on Arms Control and Disarmament.
4. Rebecca G. Cox - Vice President of Governmental Affairs for Continental Airlines; formerly served as assistant to the President and Director of the Office of Public Liaison for President Reagon.
5. General Hansford T. Johnson USAF (Retired) - former Commander-in-Chief of the U.S. Transportation Command and the Air Mobility Command; presently Chief of Staff for the United Services Automobile Association.
6. Harry C. McPherson, Jr. - partner in the law firm of Verner, Liipfert, Bernhard, McPherson and Hand in Washington, D.C.; formerly served as Deputy Under Secretary of the Army for International Affairs.

7. Robert D. Stuart, Jr. - 1991 BRAC Commission member; former Ambassador to Norway; past Chief Executive Officer of Quaker Oats Company.

In March, 1993, the BRAC received DoD's recommendation of 165 bases for closure and realignment. In accordance with Public Law 101-510, to change any DoD recommendations, the Commission had to prove substantial deviation from the Secretary's force structure plan and the final criteria approved by Congress, as stated in Public Law 101-510 (see appendix A).

The Commission made over 125 fact-finding visits to activities at each major closure candidate installation. They also held 17 regional hearings to hear from affected communities. On March 29, 1993 and May 21, 1993, the Commission added an additional 73 installations to the DoD list for further consideration as alternatives and additions for closure and realignment. In total, the commission recommended to the President that 130 bases be closed and 45 be realigned, providing a net savings of \$3.8 billion after a

one time cost of \$7.43 billion. This was estimated to provide for an annual savings of \$2.33 billion [Ref. 5].

C. THE NAVY PROCESS

The Department of Navy issued SECNAVNOTE 11000 on 22 April 1992. This DON regulation provided comprehensive guidance for the 1993 round of base closures and realignments for the Navy. It established the Navy's Base Structure Evaluation Committee (BSEC) as the principal organization to prepare recommendations to DoD and ultimately the BRAC, then Congress and the President, for Navy closures and realignments. The BSEC was to be an eight-person committee that would be chaired by the Assistant Secretary of the Navy (Installations and Environment). In January of 1993, the Acting Secretary of the Navy appointed Charles P. Nemfakos, who was then vice-chairman of the BSEC, as chairman of the BSEC. SECNAVNOTE 11000 established the Base Structure Analysis Team (BSAT) and charged it with providing support to the BSEC [Ref. 6].

1. Background

The Navy candidate selection process for the 1991 rounds fell under significant criticism from the BRAC and GAO. GAO observed, and the BRAC agreed, that there had been inadequate documentation of the Navy's decision making process and results of deliberation. The Navy committee stated that the input it received from their staff and the respective bases under consideration was biased in favor of keeping bases open rather than purely stating the facts relative to the closure criteria. The Commission indicated that the Navy recommendations could result in closure of bases and installations with higher military value than those chosen to remain open.

2. Base Structure Evaluation Committee (BSEC)

Charles P. Nemfakos, formerly Executive Director of the Base Structure Analysis Team, chaired the BSEC. The other members of the BSEC were:

1. VADM Stephen F. Loftus, USN (N4)

2. VADM L.W. Smith, Jr., USN (N3/5)
3. LtGen N.E. Ehlert, USMC (Code P)
4. LtGen R.A. Tiebout, USMC, (Code L)
5. RADM David Oliver, USN (N80)
6. MajGen R.D. Hearney, USMC (Code RP)

The BSEC was responsible for the following actions

[Ref. 6]:

1. The development of categories of installations;
2. The determination of whether excess capacity existed in any given category or subcategory;
3. Where excess capacity existed, the determination of the military value of each installation in the affected category or subcategory;
4. The evaluation of methodologies to reduce or eliminate excess capacity and, in the process, the evaluation of the return on investment, economic, community infrastructure, and environmental impacts resulting from proposed alternatives for closure or realignment; and
5. Based on the above analytical methodology, the development of a list of DoN installations recommended for closure or realignment.

There were two phases of the BSEC. Phase one involved development and validation of the Navy Base Structure Data Base (BSDB). This is a data base of all Navy bases with corresponding information relevant to closure. It was to be, "the sole and authoritative DON data base for making base closure and realignment recommendations" [Ref. 6]. The BSAT staff coordinated the data calls which were the means of acquiring the information needed for analysis by the BSEC. In phase two the BSEC used the BSDB for analysis, evaluation and determination of closure and realignment candidates.

Based largely on the criticisms of the Navy process in 1991, great measures were made by the BSEC to ensure a more than adequate "audit trail" existed following the 1993 rounds. Those involved in supplying information on their activities and bases were held accountable for accuracy at all levels within the commands. Because of the above measures, many involved in the process believe the Navy's 1993 base closure and realignment process was conducted with more precision and much more credibility than the 1991 process.

With the evolution of the closure and realignment process that has taken place to date, the vehicle for analysis used in this research is that of a case study. NAS Whidbey Island, Washington is arguably an appropriate case study due to its size and location as well as the economic and political factors involved concerning respective closure and realignment decisions.

D. NAS WHIDBEY ISLAND

1. Description of Mission

NAS Whidbey is on Whidbey Island, Washington located 45 miles north of Seattle. The local community is the city of Oak Harbor, Washington. NAS Whidbey is one of only three Navy "master jet bases" located on the west coast. The island is accessible from the mainland by Deception Pass bridge on the far north of the island and by a 15 minute ferry ride to Seattle on the south end of the island.

NAS Whidbey was commissioned on September 21, 1942. The station was originally used for seaplane patrol

operations, rocket firing training, torpedo overhaul and recruit training. Following World War II, the base was placed on reduced operating status. December of 1949, a program was initiated to increase the operations and capabilities of the station.

It is now home for all of the Navy's U.S. based EA-6B electronic warfare aircraft and all Pacific Fleet A-6E medium attack squadrons. There are also reserve EA-6B, P-3, and C-9 squadrons based at Whidbey.

As of the initial rounds of base closure and realignments in 1991, the Air Station was composed of the Commander, Medium Attack Electronic Warfare Wing, Pacific Fleet, COMMATVAQWINGPAC¹, consisting of two fleet replacement squadrons and 18 fleet squadrons, four reserve squadrons, a Naval Hospital, Naval Facility², for a total of 24 tenant commands and visiting units. In total, over 24,500 people

¹Commander, Medium Attack, Electronic Warfare Wing Pacific Fleet was disestablished in 1993; Medium Attack (A-6E) and Electronic Warfare (EA-6B) are now separate commands.

²The Naval Facility's mission at NAS Whidbey is basically to support the fleet with timely detection of surface and sub-surface naval contacts.

including civilian employees and dependents were employed at NAS Whidbey [Ref. 7]. As of 1991, NAS Whidbey provided a payroll of \$294 million to military and civilian employees working and living on or near the air station. Many of Island County's citizens are retired military, representing a significant economic influence within the community.

The station also maintains an auxiliary landing field at Coupeville, Washington. This outlying field (OLF) is for conducting field carrier landing practice (FCLP) in preparation for deployments onboard aircraft carriers. NAS Whidbey also maintains two target complexes for training of A-6E aircrews in weapons delivery. These complexes are located at Boardman, Oregon and Spokane, Washington.

2. 1991 BSEC and BRAC Findings

The 1991 Navy Base Structure Evaluation Committee recommended to the Department of Defense that NAS Whidbey and its hospital be closed. They further recommended the associated aviation activities be transferred to NAS Lemoore, California. The Naval Facility at Whidbey would remain open

and the weapons ranges were to remain in Navy custody. All land and associated facilities not transferrable to Lemoore would be disposed of by the Navy [Ref. 8]. NAS Whidbey was graded "low" in military value by the Navy's Base Structure Committee for the following reasons:

1. Available capacity at NAS Lemoore, California.
2. Single runway configuration at NAS Whidbey which limits operational flexibility and future growth.
3. Encroachment at NAS Whidbey outlying field.
4. Previous studies to relocate EA-6B squadrons to NAS Lemoore and eventually consolidate all west coast attack squadrons at NAS Lemoore.
5. Reduction of A-6E aircraft.
6. Substantial reduction in maritime patrol aircraft which were previously planned to backfill A-6E mission reduction at NAS Whidbey Island.

Following Department of Defense selection criteria, the Base Structure Committee determined the closure of Whidbey and the hospital would cause the loss of over 11,700 jobs with a 58.3% cumulative loss of employment in Island county. The

committee determined that additional facilities would be required at NAS Lemoore due to the movement of aviation squadrons and their families. There would be a \$492 million cost for implementing the BSEC decision, supported by the DoD, with a projected subsequent annual savings of \$76 million [Ref. 8].

The BRAC determined that the Navy recommendation for closing NAS Whidbey would have the most pronounced affect on a local community of any of its other proposed closings. The Commission further determined that DoD underestimated the costs of moving the aviation squadrons to Lemoore. There also was the issue of Whidbey's runways lacking the versatility required for future growth due to supposedly consisting of a single runway configuration. In fact, Whidbey consists of a dual runway configuration providing versatility with changing wind conditions.

The Commission determined that existing noise and encroachment issues evaluated in the Navy reaching their decision were not as severe as most of the other air stations

under consideration. There also had been no zoning in the community that would significantly impact future expansion of the air station. Another significant finding of the Commission, based on FAA studies, was that operating the EA-6B and training its aircrews in California would have a detrimental effect on the national air space system and would impact safety and efficiency [Ref. 9].

To change any of the DoD recommendations, Public Law 101-510 required the Commission to find substantial deviation from the Secretary's force structure plan and the final criteria approved by Congress [Ref. 3]. In the case of NAS Whidbey for the 1991 round of base closures, the Commission made the following recommendation based on their findings:

The commission finds that DoD deviated substantially from the force-structure plan and from criteria 1 and 3 by not accurately focussing on the current and future mission requirements of the carrier medium-attack mission; it also inaccurately assessed the availability of land, facilities, and air space at the current location and the full impacts on facilities and air space at Naval Air Station Lemoore. Therefore, **the Commission recommends that Naval Air Station Whidbey Island and the supporting Naval Hospital Oak Harbor remain open.**

3. 1993 BSEC and BRAC Findings

As stated earlier in this chapter, the 1993 BRAC recommended 130 bases be closed and 45 bases be realigned. The DoD had submitted to BRAC 165 bases for consideration for closure or realignment.

The Navy Department made significant advances toward ensuring their process was well documented throughout deliberations, and that recommendations were well founded and supportable. This, hopefully, would prevent the embarrassments experienced during the 1991 round of base closures.

NAS Whidbey Island was not recommended for closure by the Navy and DoD in 1993. However, NAS Barbers Point, Hawaii was recommended for closure with two of its P-3 squadrons to be transferred to NAS Whidbey. Whidbey also is to gain two additional P-3 squadrons from the east coast. This was the Navy, DoD and BRAC recommendation to President Clinton. It was also subsequently signed into law by the President as a result of BRAC-93.

The 1993 BSEC resulted in very different recommendations concerning the future of NAS Whidbey Island. Many feel that the changes made following BRAC 1991 gave a far more accurate assessment of the NAS Whidbey military value and the true costs of the relocation option to NAS Lemoore.

III. CASE STUDY

Naval Air Station Whidbey Island, Washington (Ault Field), is the case study of this research. Whidbey was chosen primarily due to differences in findings of the BRAC Commission and Navy BSEC during the 1991 round of base closures. It also presents a good case of the importance of correctly assessing the economic impact on the supporting community following closure.

A major factor in assessing NAS Whidbey in 1991 was the need to determine where the A-12 aircraft, the Navy replacement aircraft for the aging A-6E Intruder, would be stationed. Previous studies had been conducted to determine the feasibility of moving the Navy EA-6B squadrons to NAS Lemoore in California. The fact that these studies had taken place, regardless of the findings, would provide momentum for the efforts to close NAS Whidbey during the 1991 round of closures. Other significant factors were the inevitable retirement of the A-6E and various political forces involved

in efforts to close Whidbey or to move some of its commands to NAS Lemoore, California, which had excess capacity¹. NAS Lemoore is home to west coast A-7 and F/A-18 squadrons. With the transition of remaining A-7 squadrons to the F/A-18 and a reduction in the number of airwings, there would be an additional increase of capacity at NAS Lemoore.

In 1991 there was strong political support from California Representative Charles "Chip" Pashayan Jr., representative for the Lemoore district, for moving all or some Whidbey's squadrons to NAS Lemoore [Ref. 10]. There was, and still is, a small but very vocal group from the Whidbey Island community, Whidbey Islanders for a Sound Environment (WISE), campaigning for partial or total reduction of Naval Aviation in the Whidbey area. The following quote is extracted from a letter by Oak Harbor Mayor, Al Koetje, to Virginia Governor

¹The primary indicator used in the determination of an air station's "capacity" is the number of squadrons that can be hosted in terms of apron space, hangars and runways [Ref. 4].

Douglas L. Wilder¹. It is in response to a somewhat inflammatory letter from the WISE president to Virginia's Governor, accusing the Save NAS Whidbey Task Force of having as a prime objective, the transfer of NAS Oceana A-6E commands to Whidbey Island [Ref. 11].

...We have always been up front and above board in our efforts to retain NAS Whidbey. Obviously, this openness has been used against us by the WISE group. They are an opportunistic, self-serving group of about one hundred disgruntled citizens who reside near NAS Whidbey's outlying field south of Oak Harbor. Many of the WISE members have speculated by purchasing view property near the field hoping they can cause enough trouble to make the Navy leave. Most knew full well the property they purchased was impacted by noise . . .

It is this researcher's opinion, that the above quote relays an accurate and true view of the position of the City of Oak Harbor at present as well as the Save NAS Whidbey Task Force's intent and motivation.

The following sections of this chapter describe the primary cost and operational issues and follow with findings of the BSEC and BRAC Commission for 1991 and 1993. Chapter IV

¹Virginia is home to NAS Oceana, Virginia Beach, the location of all east coast A-6E Intruder commands.

provides projected costs of closure, both financial and operational, if Whidbey were to re-appear on the closure list in 1995.

A. NAS WHIDBEY ISLAND

Located about 80 miles north of Seattle, Washington, Whidbey Island Naval Air Station is on the northern part of the largest island in the continental United States. It is home to all U.S. carrier based EA-6B Prowlers and west coast A-6E Intruders. NAS Whidbey is located in Island County near the City of Oak Harbor, Washington. The Oak Harbor community, as a whole, is very supportive of the Navy and its mission, largely due to the enormous economic impact of the Navy payroll also the superb community relations that have been nurtured over the years.

This picturesque area is highly praised by military families stationed at Whidbey. Many Navy members attempt to remain at Whidbey as long as possible during their careers.

The following subsections of this chapter describe

significant areas for consideration given the possibility of a base closure or realignment.

1. Air Station Assets

NAS Whidbey Island and associated facilities encompass an area of 70,988 acres. Two 8000x200 foot runways are operated at NAS Whidbey with another runway available for carrier landing practice and emergencies at the outlying field, OLF Coupeville, just 10 miles south of NAS Whidbey Ault Field. The lack of parallel runways has been a key point in the argument for a move to Lemoore. In fact, simultaneous operations are frequently conducted on both runways, providing added versatility under changing wind conditions. OLF Coupeville provides near optimum conditions for FCLP's¹ due to the lack of lighting in adjacent areas at night, that creates a more realistic carrier environment.

¹FCLP's are field carrier landing practice, touch-and-go landings conducted both day and night in preparation for deployment aboard aircraft carriers. The FCLP's at OLF Coupeville are the focus of the WISE organization's efforts to reduce and/or eliminate air operations in the Whidbey area.

NAS Whidbey Island has 1,221 building structures that have a plant value of \$888 million when combined with land assets [Ref. 12]. Average age of facilities is 37 years; however, this number may be significantly less when one considers modernization that has been completed on many hangars and buildings. Care must be taken when comparing ages of facilities to ensure accurate analysis between one station and another. This will ensure refurbishment and modernization is properly accounted. NAS Whidbey consists of 4,362 acres at Ault Field, 2,793 acres at the Seaplane Base, and 664 acres at OLF Coupeville. There are 899 acres at Ault Field, 282 acres at the Seaplane Base, and 469 acres at Coupeville used in revenue generating programs such as agricultural outlease, forestry and shellfish programs.

As the 1991 round of base closures took place, NAS Whidbey was home to all carrier deployable Navy EA-6B squadrons except VAQ-136, which is permanently deployed to Carrier Air Wing Five in Japan. All east coast A-6E's are based at Whidbey, as well as reserve P-3 and EA-6B commands.

The DoD recommendation would have required the transfer of 11 EA-6B squadrons and six A-6E squadrons, including accompanying Fleet Replacement Squadrons (FRS). Table-1 delineates Navy requirements for A-6E and EA-6B squadrons based on the Facility Planning for Navy and Marine Shore Installations (NAVFAC P-80) publication. Hangar and ramp space available for aviation squadrons, along with runway availability and housing for personnel, all are important factors in the analysis of "capacity" of a base.

TABLE 1: SQUARE FOOT REQUIREMENTS

| Command | Hangar | Maint | Admin | Total |
|-------------|--------|--------|--------|--------|
| A-6E Fleet | 19,968 | 10,226 | 8,640 | 38,834 |
| A-6E FRS | 39,936 | 20,452 | 17,280 | 77,668 |
| EA-6B Fleet | 6,634 | 6,894 | 5,980 | 19,508 |
| EA-6B FRS | 32,652 | 20,452 | 17,280 | 70,384 |

The Navy recommendation, in the 1991 round of base closures, would have called for the decommissioning of Whidbey reserve squadrons by 1997. In total, the 1991 recommendation

of the Department of the Navy would have required the disestablishment or relocation of 50 Navy and Marine Corp tenant activities and the transfer of all aviation activities to other air stations [Ref. 13]. The 1991 DoD Base Closure and Realignment Report stated the following, concerning the maintenance backlog at NAS Whidbey: "Closure of NAS Whidbey Island would eliminate the requirement to maintain an operating base with a maintenance backlog of over \$7M" Again, care must be given not to take statements of costs and savings at face value. When compared to maintenance backlogs of other comparable west coast facilities, Whidbey is one of the lowest, if not the lowest, in dollar value of maintenance backlog requirements. NAS Lemoore, the proposed new location of Whidbey squadrons, had a backlog of more than four times that of NAS Whidbey at the time of the 1991 BRAC rounds.

2. City of Oak Harbor, Washington

The community of Oak Harbor, Washington is a military based community with minimal industry and a considerable secondary economic dependence on tourism. Relatively isolated

from the State of Washington mainland, the primary means of access are from Deception Pass Bridge on the north end of the island, two ferry terminals on the south and southwest ends and a small municipal airport, just south of Oak Harbor.

Demographics. In 1990 the population of Oak Harbor and the surrounding unincorporated area was 17,176 with Island County having a population of 60,195¹. According to the Island County Economic Development Council, 78.3 percent of the Greater Oak Harbor population is military related [Ref. 10]. This majority of the population includes military members, civilians employed by the military, and dependents of both.

Economic Impact. Military and civilian personnel working at Whidbey provided a total payroll of \$288 million in 1990. If Whidbey had been left on the closure list in 1991 it would have had a devastating economic impact on Oak Harbor and Island County. The loss of approximately 7,152 military, 831 civilian, and 389 contractor positions would have spurred an

¹According to the 1990 U.S. census.

estimated 3,349 indirect job losses¹. The total loss of 8,372 income generating positions equates to 55.7% loss of employment for Island County [Ref. 14].

The BSEC also recommended Naval Hospital Oak Harbor for closure in 1991. Many retirees depend on the hospital for primary medical care and prescription drug services. If the hospital were closed, in addition to the air station, it would result in a staggering 58.3% loss of Island County employment, and probably force relocation of many retired military [Ref. 14]. With statistics such as these, one can readily see why NAS Whidbey and the community of Island County require special consideration in terms of economic impact when examined in future rounds of closure considerations.

Island County has higher than the state and national average number of retirees as residents. Payments from military pensions, social security, public pensions and investment earnings of retirees accounted for 21 percent of

¹The military personnel totals are base on the 1989 base structure annex report minus the decommission totals from the 1991 DoD Base Closure Report.

the county's personal income in 1990. Closure of the base would have a substantial negative economic effect on retirees, as many might choose to move nearer to exchange, commissary and medical facilities [Ref. 15]. It should come as no surprise that with a population increase of over 35 percent from 1980 to 1990 and the associated income generated, primarily due to NAS Whidbey growth, the Northern Whidbey area has come to rely heavily on the base for economic support.

Private Sector Housing. With 94.8% of all NAS Whidbey personnel, employees and dependents living in the North Whidbey area, according to the 1990 State of the Station report, base closure would have a devastating effect on the civilian housing market [Ref. 16]. Seventy-two percent of all rental units in the North Whidbey area are occupied by military personnel and NAS employees. The rental market has continued to grow over the years to match the demand of an expanding air station. Forty-three percent of all single family homes within the city limits are owned by military members or civilian employees of the base. Harrington Realty

in Oak Harbor, following extensive market research, stated the following:

The Oak Harbor community has been encouraged by U.S. Navy leadership, since the late 1970's, to provide housing to accommodate continued projected growth at NAS Whidbey. The community has met the challenge: During the decade between 1980 - 1990 the city of Oak Harbor alone supplied 1,870 total living units . . . In addition the city has expanded infrastructure capability to an extraordinary degree. The Oak Harbor school system is considered one of the best overall systems in Washington State. Our Navy families are well housed in Oak Harbor, as evidenced by the current 6% multi-family vacancy rate, and enjoy a general quality in their family and community life that is unmatched by any Navy community anywhere.

As discussed further in subsequent sections, criterion six of the BSC decision process, deals with "The Economic Impact on Communities". The Navy estimated that only 11% of local off-base housing was occupied by people associated with the Navy in 1991. However, based on the economic and demographic analysis conducted other organizations, the BSC

estimate is low and the resulting grade of "yellow"¹ assigned to criteria six is neither accurate nor appropriate.

Whidbey General Hospital. The only private, non-profit hospital on Whidbey Island, Whidbey General, has been providing services to the military and civilian population since 1970. It is a 51 bed, general acute care facility. In 1990 the staff consisted of 40 physicians, including most specialties. Much long term debt was incurred for expansion, renovation and the increase of capabilities over the past two decades. If NAS Whidbey were closed, this long term obligation would result in an additional tax burden for the remaining population. An estimated 7% to 12% of services and hospital income are from military and retired military families. Closure would result in a total loss of 40 to 60 hospital jobs and a decrease in physician requirements of between a four and eight [Ref. 17].

¹Grades of green, yellow and red were applied to bases for P.L. 101-510 final criteria areas. Green was considered a favorable grade for retaining the base; red was unfavorable; and yellow was a moderate grade.

Local Churches. Community churches, like the housing market and businesses, have continued to grow and many have acquired long term debt as a result of adjusting for the continued growth of the air station. Most of the congregations rely on military families for financial support between 30% and 50% of their total incomes. Many churches that have expanded their facilities will not be able to meet these additional financial encumbrances and will likely be unable to continue to operate in the event of a closure [Ref. 14].

Save NAS Whidbey Task Force. When community leaders became aware of Navy and Department of Defense intention to place NAS Whidbey on the closure list in 1991, they quickly rallied their efforts to form the "Save NAS Whidbey Task Force". The task force was composed of community business and political leaders as well as prominent retired Navy officers. The extensive community support for NAS Whidbey was demonstrated by Task Force ability to gather over 12,000 signatures of support in only six days, to present to the BRAC

Commission. Task Force efforts were largely directed toward refuting the analysis of, and claims made by, the Navy BSEC and DoD in efforts to close NAS Whidbey.

In order for the Commission to remove one of the DoD recommended bases from the closure list, it was necessary that they determine, or be convinced, that there was substantial deviation from the Secretary's Force Structure Plan and the final criteria approved by Congress, in accordance with Public Law 101-510, the Defense Base Closure and Realignment Act of 1990 [Ref. 4].

In only a few weeks, the Task Force produced an extensive document in support of their community including an impressive, professionally produced public relations/information video. These efforts played a key role in the BRAC Commission removing NAS Whidbey from the closure list in 1991. Presentations before the Commission varied greatly in quality and professionalism. Reportedly, NAS Whidbey made one of the more professional presentations given throughout the BRAC hearings.

1993 BRAC Commissioner, Peter B. Bowman, when asked about the quality/reliability of data input to the COBRA¹ model by the services, replied: "...Military value became a sham . . . each of the services used COBRA to suit their needs" Mr. Bowman further stated: "...The selection process is not an exact science . . . Commission members tended to go with who (the defending community or service branch) the staff agreed with". Given the above statements, it is important to emphasize the need accuracy of data provided to the Commission by defending communities.

3. Air Operations and Training Environment

NAS Whidbey controls a richly diverse array of tactical training ranges and special use airspace. It has 17 operating areas, totaling almost 48,000 square miles; 13 low-level training routes, arguably among the best in the world

¹COBRA, or the Cost Of Base Realignment Actions model, was mandated by the DoD for use by the service departments to calculate one-time costs and savings associated with closure and realignment scenarios. It is intended to provide the analyst with an estimate of the Net Present Value of costs and savings over a twenty year period [Ref. 5].

for tactical training, totalling 5,060 miles. The operating areas consist of eight military operating areas (MOAs), five offshore warning areas, and three other restricted areas [Ref. 18].

Whidbey has the only 15E34 Electronic Combat Warfare Threat Generator, located on the Seaplane Base¹, that provides unequaled training for EA-6B crews. The Federal Aviation Administration (FAA) conducted an independent study on "Moving the Electronic Jammer Aircraft (EA-6B) to NAS Lemoore" in 1992. There were only seven cases of electro-magnetic interference from EA-6B aircraft in the Northwest in 1989 and 1990. Considering the fact that Sacramento, San Francisco, Los Angeles and Las Vegas are all within 250 miles of NAS Lemoore, the FAA has concluded that, "...there is much more potential for interference to National Airspace System radar and navigational facilities at Lemoore NAS than at Whidbey

¹The Navy Seaplane Base, is a support facility located several miles from the NAS near the city marina. It consists primarily of housing areas, the main Navy Exchange, Commissary, fire department and administrative support buildings.

Island NAS..." They concluded that operating EA-6B aircraft from NAS Lemoore would result in serious degradation of air safety and efficiency. The FAA further recommended, due to similarity of required training and the concern for civil aviation safety, that EF-111 Air Force jammer aircraft be located in the Northwest with the EA-6B aircraft for the joint use of NAS Whidbey unique facilities [Ref. 19].

Mining and radar bombing ranges are also controlled at the local level, providing excellent training facilities. A 1987 Navy airspace utilization and requirements study concluded [Ref. 20]:

Overall, the Pacific Northwest, as compared to other regions, appears to have the fewest problems with airspace utilization . . . At present, there are sufficient special use airspace, ranges and military training routes to meet current operational needs. Also, beyond current needs, there is room for expansion within existing capabilities.

Weather Conditions. To the uninitiated student of the base closure process, NAS Whidbey often has the erroneous reputation of an environment consisting of constant clouds and

drizzle associated with Seattle. In fact, Whidbey's climate provides superior training weather and is best described by the following statement from a 1984 NAS Whidbey Commanding Officer Congressional staff briefing:

An unexpected asset of our location, and an extremely important one, is the flying weather. Despite reports to the contrary, NAS Whidbey enjoys more VFR¹ weather (92%) than NAS Lemoore (84%) or NAS North Island (87.5%). During an average six month period, only 500 sorties are launched under less than VFR minimums.

The unique location of NAS Whidbey, between the Olympic and Cascade mountain ranges, provides an outstanding training climate. This is of significant military value and must be assessed accurately in comparison with alternative basing options.

4. Environmental Issues

Pollution Control. The Navy currently has a sanitary landfill at NAS Whidbey that is on the National Priorities

¹VFR refers to flying conditions under "Visual Flight Rules" which is flying in relatively clear conditions and is generally more favorable than inclement weather flying conditions.

List (NPL). If the base were closed, the site would require funds for cleanup prior to sale or use by the community.

The Seaplane Base sewage system is operated by the City of Oak Harbor through a joint-use agreement. The Ault Fields system has a history of violation of discharge permits but has a project programmed to realize compliance. A city-financed upgrade of the Seaplane Base system is underway [Ref. 18].

Sources of potential air pollution on NAS Whidbey include jet engine test cells, fire fighting school training fires, boilers and bulk fuel farm storage. No significant violations have been issued and all are permitted by current law.

Hazardous Materials. Ault Field and the Seaplane Base have been individually ranked on the National Priorities List as separate hazardous waste deposit sites. Areas that are currently undergoing study, other than the previously mentioned landfill, are PCB transformers, asbestos in buildings, and underground storage tanks [Ref. 15].

Noise Concerns. The following noise complaints were filed with NAS Whidbey and documented by the Community Planning Liaison Office:

| | YEAR | | | | |
|--------------------|--------------|--------------|--------------|-------------|--------------|
| | <u>1988</u> | <u>1989</u> | <u>1990</u> | <u>1991</u> | <u>1992</u> |
| Total Calls | 1,033 | 1,628 | 1,545 | 820 | 1,041 |

It should be noted that of the 820 calls that were made to complain in 1990, 345 of the calls were made by different households and a vocal 6 percent of those 345 households made 41 percent of the calls. In 1991, 421 households made calls, with 5 percent of the 421 making 36 percent of the calls. The 1993 numbers were tracking similarly to 1992 numbers as of mid September 1993. In the later months of 1992 and beginning of 1993, about 100 calls were made from neighboring Lopez Island alone. In contrast to the normal two or three complaints from Lopez each year, the

100 calls were due to engine tests having to be conducted outdoors for a few months.

According to Mr. Richard Melaas, Community Planning Liaison Officer of NAS Whidbey Island, the reduction in noise complaints is a result of more effective management of air operations and strict compliance with air routes to reduce the decibel level in high complaint areas [Ref. 21].

Threatened or Endangered Species. Bald eagles are found on Whidbey Island along with occasional Aleutian Canada geese, Great Blue heron and the American Peregrine falcon. The eagle is listed as a threatened species in Washington State under the Endangered Species Act and is managed under the bald eagle management plan. However, no critical habitat has been designated on NAS Whidbey Island [Ref. 4].

B. BSEC AND BRAC DECISIONS

The Department of the Navy, and subsequently the DoD, recommended to the 1991 BRAC Commission that NAS Whidbey be closed and that the A-6E and EA-6B commands be moved to NAS Lemoore, California. This recommendation also called for

closure of the Naval Hospital Oak Harbor [Ref. 4]. This plan called for the disestablishment or relocation of 50 Navy and Marine Corp tenant activities that constitute the mission of the Air Station. The Naval Facility, as defined in chapter II, was to remain in operation. Reserve maritime patrol, and EA-6B squadrons would have been decommissioned.

The COBRA model estimated a one-time implementation cost of \$468.2 million with a break-even period of seven years and a return on investment period of nine years. Following full implementation, COBRA projected an annual savings of \$69.3 million. As of this writing, it appears that the budget for implementation of the 1993 BRAC decisions may be under-funded by as much as 75 percent [Ref. 22]. This budget reduction would appear to have a significant effect on decisions made in implementation of the 1993 BRAC decisions concerning NAS Whidbey, particularly with regard to relocation of assets from NAS Barbers Point and elsewhere.

NAS Whidbey was removed from consideration for the 1993 closure list by the BRAC Commission. The Commission

determined that costs of military construction for required facilities at Lemoore, costs of moving squadrons and families, and up-front closure costs had been under-estimated. They further determined that errors were made in assessing the operational value of maintaining the Northwest training and operating areas. Undoubtedly a significant variable, other than operational factors, was the degree of economic dependence on the part of Island County and Oak Harbor, on the continued existence of NAS Whidbey [Ref. 4]. The Commission implied that there were serious concerns about why NAS Whidbey was placed on the Navy and DoD lists for closure in 1991. BRAC Commissioner William L. Ball, former Secretary of the Navy, implied that he would be very surprised if Whidbey were on the Navy list in future rounds¹. There are few other examples of communities built around the growth of military installations that are as pronounced as that of Oak Harbor and NAS Whidbey in terms of economic dependence.

¹From C-SPAN televised hearings of the 1991 BRAC Commission.

Given the opinion of the BRAC Commissioners concerning Whidbey in 1991, it is of little surprise that it was not on the Navy list for closure or realignment in 1993. NAS Whidbey was affected by the 1993 rounds in that with NAS Barbers Point, Hawaii designated for closure, Whidbey is supposed to gain four of NAS Barbers' maritime patrol P-3 aircraft. The P-3 aircraft are scheduled to begin arriving at Whidbey after October of 1993 [Ref. 22]. As A-6E commands are disestablished, and with a cut-back of operational airwings, there should be adequate space for the additional squadrons, although hangar and facilities requirements are physically very different.

With the anticipated reduction of BRAC funding, there exists the significant problem if little or no funding for construction of larger hangars and the aircraft repair facilities necessary and unique to house the larger P-3 aircraft. As of mid September 1993, it appears Whidbey will still receive the four squadrons but that they must make do

with existing facilities, which are not designed for this type of aircraft.

C. SUMMARY

NAS Whidbey is an outstanding example of the response that can be elicited when a base and community are caught by surprise with the likelihood of closure or realignment. Fortunately for Oak Harbor, Island County and Navy aircrews in need of unreplaceable military training facilities, the community rallied behind the combined efforts of the Save NAS Whidbey Task Force, resulting in the BRAC Commission making a prudent decision that NAS Whidbey remain open.

The following chapter assesses, as accurately as possible with current information, the status of NAS Whidbey as the 1995 base closure rounds rapidly approach. Questions that remain unanswered include: (a) At what rate are Whidbey A6-E aircraft to be retired? (b) Will four P-3 commands, and their personnel and support/maintenance facilities and equipment be transferred, as planned, from NAS Barbers Point to NAS Whidbey?

Chapter IV will also provide an assessment of expected BRAC and DoD focus for 1995 and future rounds of closures as applied to all conus bases.

IV. ANALYSIS AND PROJECTIONS FOR 1995 ROUNDS

This chapter will first assess NAS Whidbey expected status concerning base closure and realignment potential in preparation for 1995 and future BRAC rounds. The most accurate, reasonable forecast will be made for 1995 given the information available as of this research. Next, the matrix analysis of various options concerning NAS Whidbey will be presented. The matrix will quantify the relationships of key factors in the closure and realignment equation. The final section of the chapter will address expected intentions and focus of the service branches and BRAC Commission for 1995 and possible out-year rounds of closures.

A. ANTICIPATED STATUS OF NAS WHIDBEY FOR 1995 ROUNDS

As described in previous chapters, NAS Whidbey and the citizens of Oak Harbor, were startled by the Navy placing the air station on the list for recommended closure in 1991. This

decision was not easily supportable by the Navy BSEC and Department of Defense. The BRAC Commissioners expressed concern as to how Whidbey was selected for closure in the first place and further, strongly recommended that it not be on future lists for recommended closure [Ref. 23]. The major issues influencing the commission were the need to retain the irreplaceable training facilities and special use airspace in the Pacific Northwest, and the devastating economic effect of a closure on the surrounding community of Oak Harbor [Ref. 4].

NAS Whidbey was not recommended for closure as a result of BRAC 1993; however, NAS Barbers Pt., Hawaii was, with four of its P-3 squadrons to be transferred to Whidbey. The initial plan was for two of the other NAS Barbers P-3 squadrons to be transferred to NAS Kaneohe Bay, Hawaii. As of 15 September 1993, it appears as if the Commander of Naval Forces Pacific Fleet has successfully championed a plan to transfer six squadrons, instead of the planned four, to NAS Whidbey. This would be a less costly action than that of dual siting the P-3 squadrons.

The original funds earmarked for the P-3 transfers will likely be reduced as a result of deeper DoD budget cuts, but probably not as much as was originally expected by AIRPAC [Ref. 24]. This reduction will likely require a compromise of the P-3 commands on hangars and facilities designed for the much smaller A-6E aircraft.

There will be military construction (MILCON) required for some modification of hangars, a building for the P-3 flight trainer and the Aircraft Intermediate Maintenance Department (AIMD) facilities. As of September 1993, it is unknown exactly how rapidly the A-6E Intruder community will draw-down toward an eventual retirement; however, there will be additional capacity made available at NAS Whidbey by this draw-down. With a gain of six P-3 commands to NAS Whidbey, the issue of excess capacity from retired A-6E squadrons should not be nearly as significant to closure analysts.

Excess capacity has been, and likely will continue to be, a major issue in the analysis of installations for potential closure. If all six P-3 squadrons are moved to Whidbey there

would be some initial difficulties in making space for the additional 48 aircraft (six squadrons with eight aircraft each) and accompanying personnel. This concern would be tempered somewhat by the planned standdown of one EA-6B and one A-6E squadron in fiscal year 1994. The addition of four, and possibly six, P-3 commands to NAS Whidbey will initially eliminate excess capacity at Whidbey, strengthening the case for the continued existence and future growth of the air station. As A-6E squadrons are retired through 1999 there will once again be growing concern for unused capacity but options such as moving Marine EA-6B's or Air Force EF-111's to NAS Whidbey should be considered in the future.

As noted in chapter III, the FAA recommended moving Air Force EF-111's to NAS Whidbey to provide economies of scale in the use of electronic warfare training facilities. In this researcher's opinion, this alternative merits further analysis from both the joint training opportunity perspective and the fact that gains could be made in air traffic safety by grouping electronic warfare operations in the environment that

NAS Whidbey provides. Another alternative being considered is the movement of Marine EA-6B commands to NAS Whidbey from their current station MCAS Cherry Point, North Carolina. This would provide efficiency of combined AIMD and logistics support while enhancing the training of both services. Both options will likely be considered as excess capacity is again made available during the drawdown of the A-6E community.

1. Air Station Assets

With the gain of between four and six P-3 squadrons and possibly an additional reserve A-6E command, there will be very little if any existing excess capacity until the A-6E retirement pace is quickened [Ref. 24]. The squadron compliment in 1995 will likely be five A-6E, eleven EA-6B, four to six P-3, one reserve EA-6B, one or two reserve A-6E, with three each C-12 and H-3 aircraft. Construction funds will be crucial for the additional P-3 squadrons and required support facilities. This will likely receive strong support in the fight for funding as it will be far less costly than

the formerly proposed dual siting of NAS Barber's Pt. P-3 aircraft.

Of concern is the effect of a reduction in air station ability to host training detachments of other commands and other branches of the service due to Whidbey operating at or near capacity until the A-6E drawdown is realized. This is a ramification of the effort to operate efficiently and use the full capacity of the air station. Further studies are warranted to analyze the full effects of the reduced ability to support training detachments. This "surge capability" should be factored into the equation when considering operational impact of realignment of installations.

2. City of Oak Harbor, Washington

Oak Harbor and Island County has demonstrated great support of the military over the years and has the existing facilities to more than handle the additional families gained with the transfer of six P-3 squadrons to Whidbey. Private sector housing is available for the new families. This should serve to strengthen the rental market and spur new housing

construction [Ref. 16]. The Oak Harbor school system has expanded in anticipation that NAS Whidbey would continue to operate and will no doubt continue to grow if needed, due to additional enrollment.

Whidbey General Hospital is a modern full service facility, as described in chapter III, which compliments the Navy Hospital on the Whidbey Island. The influx of personnel will prevent the closure of several churches in the community that committed funds for capitol investments prior to the discovery of the possible closure in 1991.

Overall, this will provide a needed economic boost to the Oak Harbor community as a whole. It is in fear of virtual collapse of their economy if the air station were closed. As a result of the closure and realignment process and their efforts to keep Whidbey open, Oak Harbor officials are actively seeking ways to bolster their economy that are not as totally reliant on the military.

3. Air Operations and Training Environment

As the P-3 commands arrive at NAS Whidbey and begin operations, there will be an initial increase of air traffic congestion and difficulties encountered between tactical jet and patrol aircraft inter-operability. These problems can be overcome by careful planning on the part of air operations staffs and thorough working with local FAA officials. This congestion problem will be far less than if EA-6B's were relocated to NAS Lemoore and will subside as the Intruder is retired.

P-3 aircraft almost always require different training ranges and airspace than A-6 and EA-6B aircraft. This will promote efficiency in use of the available Northwest operating areas and ensure the areas are used efficiently at near capacity. As a reminder, areas that are not maximized in usage tend to be ready targets for elimination or reduction.

4. Environmental Issues

Since the establishment of Ault Field on Whidbey Island in 1942, Naval Aviation operations have continuously generated a degree of hazardous wastes. As a result of the concern of NAS Whidbey and Navy leadership, and the EPA and local community concern for these matters, measures were taken to accurately assess correct existing environmental hazards.

In late 1985, the EPA proposed that Ault Field and the Seaplane Base be nominated to the EPA's National Priorities List (NPL). February of 1990, NAS Whidbey was listed as a Superfund Site on the NPL. September of that same year, the Navy, EPA and State of Washington Department of Ecology (Ecology) signed a Federal Facilities Agreement that required the Navy to conduct remedial investigations/feasibility studies (RI/FS) to determine the nature and extent of contamination and to evaluate measures required for necessary clean-up efforts [Ref. 25].

To facilitate an orderly study and efficient approach to clean-up, NAS Whidbey was divided into four operable units

(OU 1-4). The operable units are composed of twenty six areas currently under study by the Navy, EPA and Ecology (see figure 1). Refer to Appendix (B) for identification of the 26 evaluation areas of NAS Whidbey and the Seaplane Base.

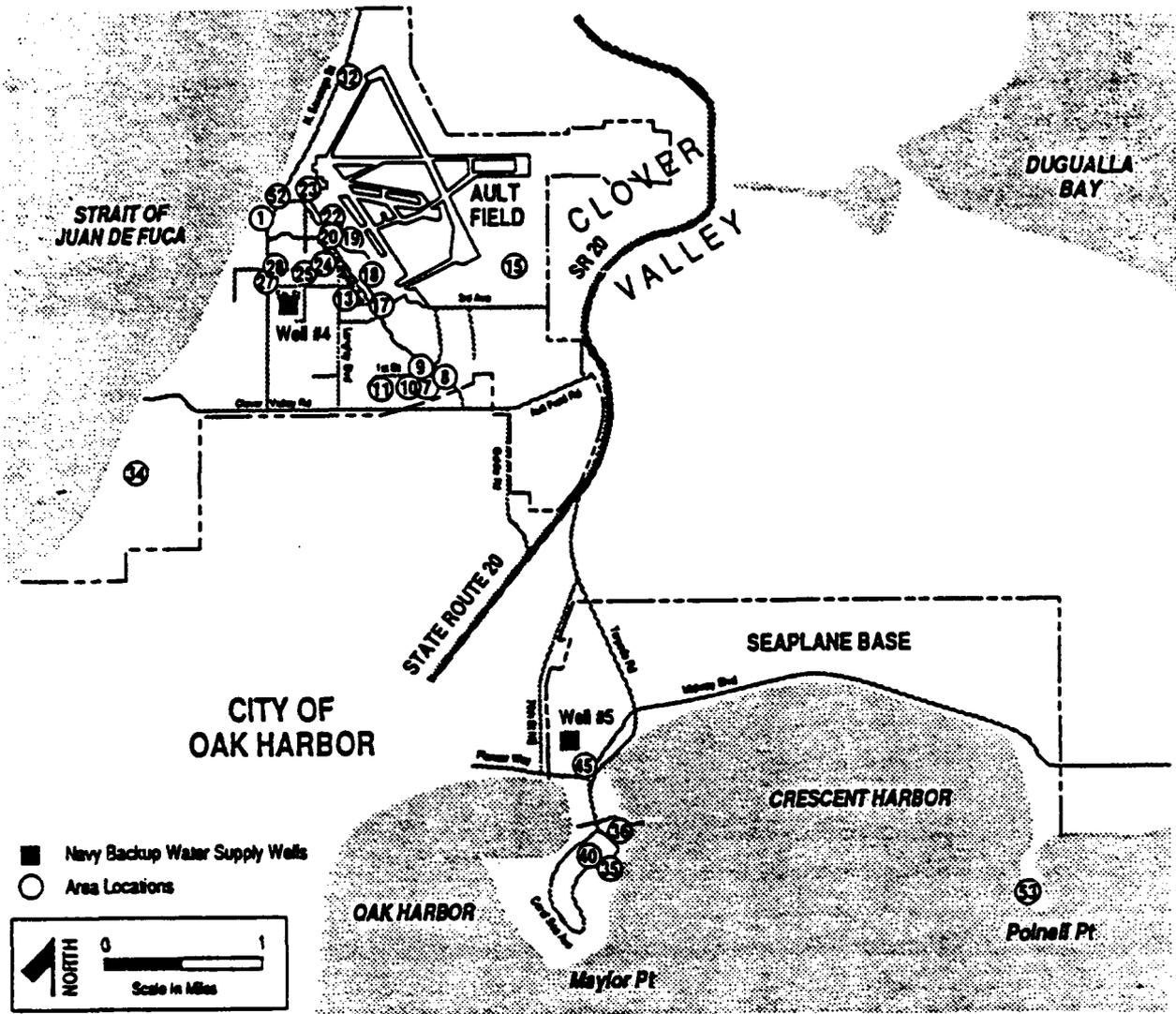


Figure 1

The RI/FS were conducted of the four OU at NAS Whidbey. The evaluations and ultimate recommendations for various alternative plans of action were based primarily on nine evaluation criteria of the EPA (see Appendix C).

Decisions were made based not only on the EPA criteria but on Washington State Department of Ecology input and also concerns of the local community which was solicited by the Navy¹. As a result of this comprehensive and carefully controlled process, an efficient and effective plan for correcting many years of contamination by hazardous activities is in effect and will be carried out by the Navy and local community depending on availability of funding [Ref 25].

B. MATRIX ANALYSIS OF OPTIONS FOR NAS WHIDBEY

The matrix depicted in Table-2 is intended to allow comparison of likely options for NAS Whidbey Island in 1995 and any subsequent rounds of closures and realignments. The

¹Citizens were officially encouraged to submit written comments on proposed action items and also were encouraged to comment in person during public meetings.

factors have been weighted based on relative priority and significance to the decision to close, retain or realign. The quantified values are subjective but based on research in this case and on the findings of others involved with the closure and realignment process in general and especially with NAS Whidbey Island.

The options of moving Marine EA-6B's from MCAS Cherry Point and U.S. Air Force EF-111's to NAS Whidbey have not been extensively researched in the past but may warrant in-depth study in future rounds of realignment and closure.

The matrix option which presents the highest total value is the most favorable alternative. Again, the matrix should be used for general relationships only, due to the lack of research in the areas concerning Marine EA-6B and Air Force EF-111 options. These two options are good future thesis subjects.

Options considered in the analysis have been depicted in the top row of the matrix. They are as follows: 1. Retain NAS Whidbey with the addition of P-3 squadrons; 2. Close NAS

Whidbey and move aviation commands to NAS Lemoore; 3. Move Marine EA-6B aircraft to NAS Whidbey; 4. Move Air Force EF-111 aircraft to NAS Whidbey. Factors considered in the analysis have been depicted in the first column and are based primarily on BRAC and BSC criteria (Appendix A). Operational factors have been given substantial priority as in BSEC and BRAC evaluation criteria. Economic effect on the gaining and losing communities has been given substantial priority in this matrix analysis, as well as the political impact of the various options.

Values for multiples (-0.5 to 0.8) were assigned to provide relative weighting for the various categories based on information gained throughout the course of this research. Negative values have been assigned to indicate a detrimental or non-desired effect on the community in question or in the case of "transfer/closure costs", a higher cost to the DoD. Values between zero and 10 were assigned to each factor category and subsequently multiplied by the multiple to provide value of each option sub-category.

| | | | | | |
|--|------------------------------|------------------|----------------------|----------------------|----------------------|
| EFFECT ON LOSING COMMUNITY | -0.8/-0.5¹ | N/A | 5x(0.8)=(4.0) | 3x(0.5)=(1.5) | 3x(0.5)=(1.5) |
| EFFECT ON GAINING COMMUNITY | 0.8 | 3x0.8=2.4 | 2x0.8=1.6 | 3x0.8=2.4 | 3x0.8=2.4 |
| POLITICAL SUPPORT | 0.6 | 5x0.6=3.0 | 2x0.6=1.2 | 1x0.6=0.6 | 1x0.6=0.6 |
| TOTALS | N/A | 14.8 | 0.2 | 5.9 | 7.3 |

As in the case of multiples, the sub-category values were assigned based on the assessment of this researcher. After developing values for each option sub-category, the columns

¹A more negative multiple of -0.8 is used when the economic impact on the community will result in greater than 30 percent increase in unemployment.

were totalled providing a relative indicator of preferred options. Although subjective in nature, the matrix provides a tool of analysis in considering the various options concerning NAS Whidbey Island, Washington.

In summary, the optimum decision based on the matrix would be to retain NAS Whidbey, with the addition of the P-3 patrol squadrons as an operational air station. The option of relocating the Air Force EF-111 commands to NAS Whidbey, as Navy A-6E squadrons are disestablished, received a relatively high score primarily due to operational economies of scale that may be gained in training and support facilities. As noted however, further, in-depth study must be conducted to strengthen credibility for this argument.

C. POLITICAL ENVIRONMENT

President Clinton's first budget has drawn substantial criticism from Congress and the public due to increases in taxes and what many feel is too little reduction of expenses in the short term. As per Public Law 101-510, BRAC hearings will be conducted in 1995. This was intended to be the final

round of hearings but due to the "success" of the Commission, some expect a continuance of the Commission and its hearings following the 1995 round. In fact, 1995 is now expected to yield a major set of Navy and other military base closures relative to what was originally planned [Ref. 26].

Former New Jersey Representative Jim Courter has been highly praised for his performance as BRAC Chairman in 1991 and 1993. Many believe he will be asked to chair the 1995 round as well. Since the Navy had such a large share of the closures in 1993, it is believed that the Army will likely be closely scrutinized in 1995 [Ref. 27]. However, current Navy planning intends to offer up a large number of facilities for closure in 1995, more than required by DoD or Congress.

1. NAS Whidbey

The "Save NAS Whidbey Task Force" has remained vigilant in their efforts to update NAS Whidbey status and in keeping the Commission and associated political leaders well informed. Conversations with many Whidbey civic leaders and others interested in the continued economic development of

Whidbey Island have expressed concerns about the almost total reliance on the military for the economic well-being of the community. Much ground has been gained in convincing the community of the need for investment in business other than tourism and the military. Until sufficient incentives are in place, the community will likely remain very dependent on the Navy for its economic welfare.

The WISE organization continues to lobby for the reduction or elimination of air operations but WISE will have less firm ground to stand on as A6-E's are retired and the far less noisy P-3 aircraft are transferred to Whidbey. The Commission and political leaders have been made aware of the hidden agendas that remain in efforts to fight for closure of the air station.

The final chapter of this thesis will provide conclusions resulting from this research, recommendations for NAS Whidbey, and potential improvement in the BSEC and BRAC processes. Finally, it will provide areas for further study and questions that remain unanswered relating to this research.

V. CONCLUSIONS AND RECOMMENDATIONS

The end of the "cold war" and the fall of the Soviet Union have provided an immeasurable benefit to society in the form of greatly reduced risk of nuclear war. It has also generated a new term, "peace dividend", which may not necessarily be seen as positive to all stakeholders. One of the most substantial means for achieving cost savings associated with the "peace dividend" is base closures. The large savings to be realized by the Department of Defense, and ultimately, U.S. taxpayers is generally considered positive by defense critics and analysts as well as the general public. However, the economic fallout for many communities after their facilities have been designated for closure is often perceived as devastating, and in some cases it is a serious economic shock.

Taking the decision process out of the hands of Congress with the establishment of an impartial commission appears to have provided an effective means of making prudent decisions as to which installations should remain open and which should

be closed. However, there are areas of the process that may be improved, and specific factors involved in the analysis of closure candidates appear to require more weighting and focus.

This final chapter presents conclusions and recommendations based on this thesis research. Recommendations made for improvement of processes, or criticisms of actions taken by individuals or organizations are solely the opinion of this researcher and are intended to be constructive in nature. Following the conclusions and recommendations section are topics for further study and potential future thesis subject area suggestions.

A. CONCLUSIONS AND RECOMMENDATIONS

1. Conclusion:

The base closure and realignment process has become much more effective as a result of the establishment of the BRAC Commission. Many "pork" considerations have been squelched in the decision making process due to removal of direct involvement of political leaders. The importance of

keeping base closure decisions at the analysis level out of the hands of politicians cannot be overemphasized. The BRAC Commissioners and their staff are, by design, non-partisan and are not as easily pressured by constituents concerned with proposed base closures.

Recommendation:

Understandably, there has been growing concern voiced by communities designated for closure that emphasis be placed on the impact on the community when deciding which base should be closed and which should remain open. Given these concerns, consideration must be given to increasing the significance, or weighting, of community economic reliance on the military installation and subsequent economic impact if the installation is closed. Specifically, there must be consideration given to both impact on the perspective losing and gaining communities, but especially the losing community. The importance of giving the "impact on the community" significant consideration is demonstrated by the case study of NAS Whidbey Island (see chapters III and IV). This is

particularly crucial when a losing community is almost totally dependent on the military for their economic survival.

2. Conclusion:

As the 1995 round of base closures approaches, there may be an even greater number of closures than in previous rounds [Ref. 27]. Congress is also considering an amendment to Public Law 101-510 to allow the closure and realignment process to continue past 1995. It may be speculated that there are two likely alternatives concerning NAS Whidbey. The first is that it would continue to function as a major naval air station with various realignment actions transpiring. The second alternative is that it would be closed, with associated aviation commands moved to an existing facility with excess capacity, e.g., probably NAS Lemoore, California.

Recommendation:

The recommendation based on this research is that NAS Whidbey should remain in operation with the realignment of additional P-3 aircraft from NAS Barbers Point. The four and possibly six additional squadrons of aircraft and associated

personnel will virtually eliminate NAS Whidbey excess capacity in the next few years. However, as A-6E commands are retired/deactivated the issue of excess capacity will again come into question by the Navy BSEC and the BRAC Commission.

It is recommended that studies be conducted to determine the feasibility of realigning Air Force EF-111 commands or Marine EA-6B commands to NAS Whidbey Island. As stated earlier, this would provide assurance of continued retainment of the irreplaceable training/operating environment and facilities provided by NAS Whidbey. Economies of scale would also be realized by combining electronic warfare training and operating facilities.

3. Conclusion:

Communities that have relied significantly on military installations for their economic survival must take aggressive measures to diversify their efforts to achieve economic development to areas other than Department of Defense facilities.

Recommendation:

Communities threatened by potential closings, i.e., any communities near a military facility of any kind, must first identify potential closure as a key strategic issue that must be dealt with as a top priority. Public and private economic development groups or commissions should be provided adequate resources to pursue alternatives to dependence on the "military payroll". Without well-organized efforts to pursue economic alternatives, and without strong support from community leaders, the likelihood of successful transition from dependence on the military is dim.

B. AREAS FOR FURTHER STUDY

Areas of further study to build on the material and analysis provided in this thesis are provided for potential researchers involved in the base closure and realignment process, and specifically, the realignment of NAS Whidbey Island, Washington:

1. Given the emphasis on elimination of excess capacity of existing military facilities, is adequate consideration being given to the opportunity cost of a "surge capability"¹ of training/operating facilities?

2. Analysis of the costs and benefits of moving the Air Force EF-111 commands to NAS Whidbey as, or after, the A-6E commands are disestablished should be attempted to examine the benefits that may be gained in joint electronic warfare training and operations. Also, any economies of scale that may be realized, should be researched.

3. As in item two above, there is a need to examine the operational and financial benefits of moving all or a portion of existing Marine EA-6B aircraft from MCAS Cherry Point, North Carolina to NAS Whidbey. Joint operations and the

¹The ability for a facility to absorb the operations of units other than those assigned to the base on a permanent basis, usually involving a training detachment of several aircraft and associated maintenance and support personnel. These are particularly important for facilities such as NAS Whidbey due to the rich training environment it provides.

shared training and maintenance facilities would provide many advantages but, this move requires in-depth study before conclusions or recommendations may be made.

APPENDIX A

FINAL SELECTION CRITERIA

Military Value (given priority consideration)

1. The current and future mission requirements and the impact on operational readiness of the Department of Defense's total force.
2. The availability and condition of land, and associated airspace at both the existing and potential receiving locations.
3. The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations.
4. The cost and manpower implications.

Return on Investment

5. The extent and timing of potential costs and savings, including the number of years, beginning with the date of completion of the closure or realignment, for the savings to exceed the costs.

Impacts

6. The economic impact on communities.

7. The ability of both the existing and potential receiving communities' infrastructure to support forces, missions and personnel.

8. The environmental impact.

APPENDIX B

NAS WHIDBEY HAZARDOUS WASTE EVALUATION AREAS

| | |
|---------|---|
| Area 1 | Beach Landfill |
| Area 7 | Old Waste Storage Tank Spills |
| Area 8 | Sewage Sludge Disposal Area |
| Area 9 | Asphalt Plant Disposal Area |
| Area 10 | Building 2536, Phencyclidine (PCP) Dip Tank |
| Area 11 | Fuel Farm 4 |
| Area 13 | Fuel Farm 3 |
| Area 15 | PD-680 Spill Area |
| Area 17 | Old Ault Field Coal Pile |
| Area 18 | Ault Field Nose Hangar |
| Area 19 | Fuel Truck Depot |
| Area 20 | Ault Field Sewage Clarifier |
| Area 22 | Hangar 5 |
| Area 23 | Northwest Apron Area |
| Area 24 | Building 283, PCP Dip Tank |
| Area 25 | Building 120, Transformer Service Area |
| Area 27 | 1966 Fire School |
| Area 28 | Chapel Fire School |
| Area 32 | Building 889, Transformer Service Area |
| Area 34 | Machine Gun Range Berms |
| Area 35 | Fuel Farm 2 |
| Area 36 | Fuel Farm 1 |
| Area 40 | Seaplane Base Coal Pile |
| Area 45 | Trichloroethane (TCE) Tank |
| Area 52 | Jet Test Cell |
| Area 53 | Polnell Point Ordnance Burn Area |

APPENDIX C

EPA'S NINE EVALUATION CRITERIA

1. **Overall Protection of Human Health and the Environment** - Does the alternative achieve adequate overall elimination, reduction, or control of risks to human health or the environment posed by each pathway? This is a summary check that takes into account the other criteria and includes an evaluation of short-term and cross-media impacts.
2. **Compliance with Federal and State Regulations** - Does the alternative meet all of the applicable or relevant and appropriate requirements (ARARs) that have been identified? These are typically established environmental standards, but other, non-environmental standards may also be ARARs for a particular alternative.
3. **Long-Term Effectiveness and Permanence** - Does the alternative leave a risk after the conclusion of remedial activities?
4. **Reduction of Toxicity, Mobility, or Volume Through Treatment** - Does the alternative permanently and significantly reduce the hazard posed by the site by destroying contaminants, reducing the quantity of contaminants, or irreversibly reducing the mobility of the contaminants?
5. **Short-Term Effectiveness** - Does the alternative provide adequate protection to human health and the environment during the remedial action, and how long does it take for the action to achieve the established objectives?
6. **Implementability** - Is the alternative technically and administratively feasible?
7. **Cost** - What are the overall capital cost and operations and maintenance costs associated with the alternative?

8. State Acceptance - Does the alternative address the technical and administrative concerns of the state?

9. Community Acceptance - Does the alternative adequately address the concerns of the local community?

LIST OF REFERENCES

1. Figgie, Harry E. Jr., "Bankruptcy 1995", 1992.
2. Jones, L.R., Bixler G.C., "Mission Financing to Realign National Defense", 1992.
3. Gordon, Edward F., "Base Realignment and Closure Study", National Defense University, 1992.
4. Defense Base Closure and Realignment Commission, "1991 Report to the President", 1 July 1991.
5. Defense Base Closure and Realignment Commission, "1993 Report to the President", 1 July 1993.
6. Defense Base Closure and Realignment Commission, "DON Analysis and Recommendations (Volume 4)", March 1993.
7. Waggoner, Dave, Captain, USN, "NAS Whidbey Island State of the Station", 1991.
8. Department of Defense, "Base Closure and Realignment Report", April 1991.
9. Federal Aviation Administration, "Moving Electronic Jammer Aircraft to Lemoore NAS", July 1992.
10. Naval Aviation Basing Studies, 27 April 1988.
11. Conversation with Mayor A. Koetje, Oak Harbor, Washington, 7 September 1993.
12. Conversation with Commander Brashore, CNAP Shore Plans and Programming OP-53, 7 September 1993.

13. Department of the Navy, "Base Closure and Realignment Recommendations - Detailed Analysis", April 1991.
14. Island County Economic Development Council, 15 April 1992.
15. Labor Market and Economic Analysis Employment Security Department (LMEA), "The Economic Impact of the Proposed Closure of the Whidbey Naval Air Station", May 1991.
16. Harrington Realty, Oak Harbor, Wa., "Report on the Effect of Closure - NAS Whidbey on Private Sector Housing", 1991.
17. Zylstra, R.L., Administrator, Whidbey General Hospital, Letter to BRAC Chairman, 29 April 1991.
18. NAS Whidbey Task Force, "1993 Update for the Defense Base Closure and Realignment Commission", 15 October 1992.
19. Federal Aviation Administration, "Moving Electronic Warfare Aircraft to Lemoore NAS", 1991.
20. Booz, Allen and Hamilton Inc., "An Analysis of Naval Airspace Utilization and Requirements", 2 November 1987.
21. Conversation with Richard L. Melaas, NAS Whidbey Community Planning Liaison Officer, 10 September 1993.
22. Conversation with Captain Berkebile, USN, CNAP Comptroller - code (019), 10 September 1993.
23. C-SPAN Programming, BRAC Commission Hearings, 1991.
24. Conversation with AIRPAC Comptroller staff member, 21 September 1993.

25. Engineering Field Activity, Northwest, "Final Hazardous Waste Evaluation Study", 21 June 1993.
26. Navy Times, "Will Base Closure Rules Change for '95?", 11 October 1993.
27. NEWSWEEK, "More Closures in 95", 12 July 1993.

INITIAL DISTRIBUTION LIST

| | No. Copies |
|---|------------|
| 1. Defense Technical Information Center Cameron Station Alexandria VA 22304-6145 | 2 |
| 2. Library, Code 052 Naval Postgraduate School Monterey CA 93943-5002 | 2 |
| 3. Commanding Officer Naval Air Station, Whidbey Island Oak Harbor, WA 98278-5000 | 2 |
| 4. Representative Barry Sehlin P.O. Box 40620 Olympia WA 98504 | 1 |
| 5. Stan Stanley, CDR, USN (RET) 11468 115th Street NW. Oak Harbor WA 98277-2120 | 2 |
| 6. Mayor Al Koetje 3075 300 Avenue W. Oak Harbor WA 98277 | 2 |
| 7. Professor L.R. Jones Naval Postgraduate School Code AS/JN Monterey CA 93943 | 1 |

8. Professor Jerry McCaffrey 1
Naval Postgraduate School
Code AS/MM
Monterey Ca 93943
9. Richard L. Dawe, LCDR, USN 2
1481 Dartmouth Drive
St. Charles MO 63303