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AN ANALYSIS OF THE EFFECT
OF BUDGET REDUCTIONS ON MILITARY
FORCE STRUCTURE REALIGNMENT

by

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The thesis compares MILCON cost figures for the various P-3 realignment options that are being or have been considered, then draws conclusions on the effect of MILCON deferrals on this realignment. The enclosed data indicates that the NAS Whidbey Island single-site plan will save over $100 million in up-front MILCON cost as compared to dual-site plans that include MCAS Kaneohe Bay as a P-3 receiver site. Also, the effect of BRAC-related MILCON deferrals will be to significantly increase OMN and MPN account costs over the FYDP by forcing the delay of base closures.

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As the result of the deliberations of the 1993 Base Realignment and Closure (BRAC) Commission, the Department of Defense will close or realign over 100 military installations, at a cost of over $5.5 billion. This study provides an analysis of the effect of budget reductions on military force structure realignment. The realignment of P-3 squadrons that results from the closure of NAS Barbers Point is used as a case analysis to gain insight into the effect of BRAC related Military Construction (MILCON) reductions on the P-3 force structure decisions.

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I. INTRODUCTION

A. BACKGROUND

The United States is currently experiencing federal budget deficits of unprecedented peacetime magnitude. This fact, combined with the breakup of the former Soviet Union, has brought about an era of decreasing defense budgets. The Soviet threat that had previously defined the military force structure and justified its spending level has all but vanished. The increased pressure to cut the budget deficit and the inherent political difficulty in reducing mandatory entitlements have made the Department of Defense a prime target for trimming. For these reasons, U.S. defense spending (as a percentage of gross domestic product) in 1993 dipped to its lowest level since the post World War II drawdown [Ref. 1].

As the U.S. military downsizes, tremendous savings can be realized through the closure and realignment of military facilities in both the United States and abroad. This so called "peace dividend" may indeed help to reduce the federal budget deficit. The removal of excess capacity in Defense Department base structure can no doubt yield substantial savings, but whether expected funding levels will support the restructuring is yet to be determined. Making decisions

regarding reduction in military facilities has been difficult in the past due to the parochial interests of members of Congress. Legislators were so effective at keeping the installations in their districts from closing that from 1977[1] until the first Commission on Base Realignment and Closure in 1988, not a single major facility was closed [Ref. 2].

Realizing that conventional legislative procedures were ineffective for the base closure process, Navy Department officials have taken great care to establish policies and procedures that make the base closure screening and selection process both efficient and effective [Ref. 3]. The Department of Defense established the Commission on Base Realignment and Closure (BRAC) in May, 1988, and gave the Commission its official power later that year when it passed Public Law 100-526. This Defense Authorization Amendments and Base Closure and Realignment Act requires the President and Congress to accept all or none of the Commission's realignment and closure recommendations. The Commission consists of eight Presidentially appointed members whose charter was extended in 1990 to include 1991,1993, and 1995 closure rounds.

Since its formation in 1988, the BRAC Commission has been asked to make the difficult decisions on the closure and realignment of military facilities. In determining which bases

[1] Congress passed legislation in 1977 that gave the Armed Services Committees the power to review all military base closure decisions, effectively giving Congress power to make all base closure decisions.

should be closed or realigned, a number of factors are used to present an accurate overall picture. The primary issue is present and projected future operational requirements for the installation, including excess capacity needs. The next factor is the issue of estimated impact on local communities. If a community is largely dependent on the base for employment and tax support and has few other sources of income, it may be devastated by a closure decision. The final major consideration is initial closure costs and the amount of time projected to pay back the initial costs given the annual savings. This evaluation of the estimated cost savings of each proposed closure is a vital part of the process, since the overall objective of base closure and realignment is to eliminate excess capacity and avoid future costs.

To evaluate the potential costs and savings of the base closure alternatives under consideration, the BRAC Commission has developed a cost estimating model that attempts to capture all essential costs and savings associated with each alternative. This model, the Cost of Base Realignment Actions (COBRA) model, was developed by the U.S. Air Force Cost Center in conjunction with the Logistics Management Institute. The model uses data that is available to the military department staffs without extensive field studies. This data is then used to compare the relative cost differences among the various

base-closure alternatives. Correct quantitative input of dollar values is essential if this is to be an accurate analysis and useful decision tool.

B. OBJECTIVE

The core of this thesis is a case study on military facility realignment and the associated costs. The thesis focuses on the realignment plan for NAS Whidbey Island, Washington and other facilities affected by the realignment. Aspects considered will include the cost of implementing the realignment plan, anticipated funding levels, and the expected impact of any funding shortfall.

NAS Whidbey Island is one of three master jet bases on the west coast and is home to 11 EA-6B squadrons, 5 A-6 squadrons, and a reserve P-3 squadron. The BRAC Commission determined in both 1991 and 1993 that NAS Whidbey Island will remain open. With the A-6 fleet slated for retirement by 1998, NAS Whidbey will have a gradually increasing excess capacity over the next four years. This excess capacity will be filled with a yet-to-be-determined number of P-3 squadrons relocated from NAS Barbers Point, Hawaii (selected for closure by BRAC 93) and NAS Moffett Field (selected for closure by Brac 91). It is unclear if the funding level from Congress and the Defense Department will match all of the realignment costs. Hangar space and intermediate maintenance facility

requirements, as well as the cost associated with additional military personnel in the area are examples of variables that will determine if this realignment plan is funded adequately.

Also unclear is how this realignment plan will affect future BRAC options regarding NAS Whidbey Island. Possible options include the consolidation of U.S. based USAF and/or USMC Electronic Countermeasures aircraft with the Navy EA-6B fleet at NAS Whidbey Island. The USAF EF-111's are currently based at Mountain Home AFB, ID, while USMC EA-6B's are based at MCAS Cherry Point, NC.

The unique electronic warfare training facilities and abundance of special use airspace at NAS Whidbey Island make it an ideal site for consolidation of EW assets. The Federal Aviation Administration, out of concern for civil aviation safety, recommended in 1991 that the EF-111 fleet at Mountain Home AFB be relocated to NAS Whidbey Island [Ref. 4]. Movement of USMC aircraft from MCAS Cherry Point to NAS Whidbey Island would provide efficiency of combined logistics and maintenance support while enhancing the training of both services.

C. RESEARCH QUESTIONS

Primary Research Question:

- Are the facilities involved in the relocation of P-3 squadrons from NAS Barbers Point likely to be provided adequate funding to implement the plan, and if not,how will the shortfall effect plan implementation?

Subsidiary Research Questions:

- Is the current data call procedure for BRAC reducing the efficiency and effectiveness of realignment and closure by forcing the submission of budgetarily unexecutable cost data?
- What impact will budgeting for realignment have on future realignment options at NAS Whidbey Island and other Naval and Marine Corps air stations?

D. SCOPE

This thesis provides an analysis of the key factors involved in the realignment of Naval Air Stations, focusing on NAS Whidbey Island. The factors analyzed are the cost of relocation to the facilities involved and the level of funding provided by the Defense Department and Congress.

Information is assimilated to improve cost and budgetary analysis in the closure and realignment process in the future.

E. METHODOLOGY

1. This thesis identifies the various cost categories related to the realignment plan. This is accomplished through telephone and personal interviews and literature searches, and from 6 years of personal experience at NAS Whidbey Island.

2. It determines the specific periods of focus where costs will be incurred and identifies the specific cost variables to be measured

3. It identifies the cost data sources through interviews and literature searches.

4. It determines anticipated funding levels to the

facilities involved in the relocation. This is accomplished through telephone and personal interviews at command levels.

F. ORGANIZATION OF THE STUDY

This thesis is divided into five chapters, beginning with this introduction. Chapter II presents a brief history of the facilities involved in this realignment plan and an overview of the base closure and realignment process. It also describes the factors considered when closing a military facility and preparing it for disposal, as well as a background of decisions that have been made relating to NAS Whidbey Island and NAS Barbers Point.

Chapter III provides identification of the many operational and cost variables that are crucial to determinating closure and realignment criteria. This includes the methodology for deriving costs and funding levels. Chapter IV gives the results of BRAC 93 for the facilities involved and presents an overview of the various P-3 realignment options that have been considered. It also presents the cost figures from each for comparison.

Chapter V assesses the impact of the current funding level, summarizes the findings, and discusses the value of the study to future closure and realignment decision-makers.

II. BASE CLOSURE HISTORY

A. INTRODUCTION

This chapter reviews the history of the overall base closure process and the specific BRAC findings involving the air stations related to this P-3 realignment. It is divided into eight sections, including this introduction. Section B gives a brief history of the events that led to the creation of the BRAC Commission in 1988. Section C gives an overview of the BRAC selection process and criteria and describes the make-up of the Commission. Section D describes the Department of Navy selection process and the makeup and mission of the Navy's Base Structure Evaluation Committee (BSEC). Section E summarizes the role of the General Accounting Office in the closure and realignment process. Section F presents an overview of the aircraft types involved in the various P-3 realignment options being considered. Sections G and H give an overview of the 1991 BRAC findings for the air stations involved and presents a brief history of each.

B. BACKGROUND

It became apparent to Defense Department officials in the 1960's that many bases had considerable excess capacity. This inefficiency prompted the closure of many facilities by the authority of the Defense Department [Ref. 5]. The end

of the Vietnam conflict in the early 1970's further enhanced the need for closure of unnecessary military facilities. These closures were executed with minimal Congressional consultation and the subsequent political backlash was far greater than Congress thought possible. The closure process all but stopped when Congress in 1977 enacted section 2687 of title 10, which required congressional notification and lengthy environmental studies on all closure candidates.

As the military force structure was reduced following the end of the "Cold War," the excess capacity issue continued to surface as the force structure declined and the base structure became bloated. Readiness was threatened as the services struggled to pay the operating costs of unneeded bases. The demand for a continued base closure process resulted in the passage of Public Law 100-526 in October 1988, which created the Commission on Base Realignment and Closure (BRAC). The law charged the Commission with recommending installations for closure or realignment based on an independent study of the base structure. Concerns over political bias within the Commission prompted the passage of Public Law 101-510, the Defense Base Closure and Realignment Act of 1990. This new statute calls for public hearings to be conducted for all closure candidates with records of the proceedings to be open to full review by the public. The law also requires the General Accounting Office (GAO) to conduct a thorough analysis

of the BRAC Commission's selection process. The Commission was directed to meet to determine base closure and realignment candidates in 1991, 1993, and 1995.

C. BASE REALIGNMENT AND CLOSURE COMMISSION

Congress created the 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. 6]. The new closure candidate selection process was designed to be less susceptible to political parochialism than previous selection processes. An audit of the closure and realignment selection process by GAO was established to ensure that an appropriate "paper trail" of justifications was maintained.

Public Law 101-510 calls for the President to appoint eight members to the BRAC commission, six of whom are based on congressional recommendations. All appointees are subject to Senate confirmation. The Commission Chair is to serve through the 1995 round with all others serving only for the remainder of that Congressional session.

The BRAC final selection criteria delineated in Public Law 101-510 are as follows [Ref. 7]:

- The current and future mission requirements and the impact in operational readiness of the Defense Department's total force.
- The availability and condition of land, facilities, and

associated airspace at both the existing and potential receiving locations.

- The ability to accommodate contingency, mobilization, and future total force requirements at both the existing and potential receiving locations.
- The cost of manpower implications.
- The extent and timing of potential costs and savings, including the number of years for the savings to exceed the costs.
- The economic impact on communities.
- The ability of both the existing and potential receiving communities' infrastructure to support forces, missions, and personnel.
- The environmental impact.

The above criteria were also adhered to by the Department of Defense and the Navy Department in the selection of closure candidates.

The statute requires the Secretary of Defense to base all recommendations on a force structure plan submitted to Congress with the Department's budget recommendation and on selection criteria developed by the Secretary of Defense and approved by Congress. The FY 94 plan, submitted to the Commission on March 12, 1993, incorporated an assessment of the probable threats to national security during the FY 94 to 99 period, and took into account the anticipated funding levels for the period. The plan was classified secret and included sections on threat assessment, the need for overseas basing, and the force structure implementation plan.

Upon the Commission's receipt of the Defense Secretary's recommendations, PL 101-510 requires the Commission to hold public hearings to discuss the recommendations before it makes any findings. Before the Commission can change any of the secretary's recommendations, by law it must find substantial deviation from the Defense Secretary's force structure plan and from the final criteria approved by Congress.

D. THE NAVY PROCESS

The Department of Navy candidate selection process for the 1991 closure round brought significant criticism from the BRAC Commission and GAO. The BRAC Commission and GAO agreed that there had been inadequate documentation of the Navy's decision making process and deliberation results. 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.

The Department of the Navy issued SECNAVNOTE 11000 on April 22, 1992 as a response to these criticisms. This Navy Department 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 for the Department of Defense and the BRAC Commission for 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 also established the Base Structure Analysis Team (BSAT) and charged it with providing support to the BSEC [Ref. 8].

The BSEC was responsible for the following actions:

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 the evaluation of the return on investment, economic, community infrastructure, and environmental impacts resulting from proposed alternatives for closure or realignment;

5. Based on the above analytical methodology, the development of a list of Navy Department installations recommended for closure or realignment.

The BSEC process consisted of two phases. Phase one involved development and validation of the Navy Base Structure Data Base (BSDB). This data base contained information relevant to closure on all Navy bases and was to be "the sole and authoritative Navy Department data base for making closure

and realignment recommendations." 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 and determination of closure and realignment candidates.

Due to the criticisms of the Navy process in 1991[2], the BSEC took significant measures to ensure an adequate "paper 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. Many involved in the process believe the above measures led to a more efficient Navy base closure process in 1993.

The Navy submitted 28 major closure or realignment recommendations in 1993. This was the largest number among the services and defense agencies. The overriding goal of the Navy process was the elimination of as much excess base capacity as possible. Implicit in this goal was the assumption that the results would represent savings to the Navy while retaining the base structure necessary to meet force structure needs. The approach was to review similar types of bases by category and minimize the excess capacity in that category.

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[2]The BRAC Commission and GAO agreed there had been inadequate documentation of the Navy's 1991 decision-making process and deliberation results.

The Navy first determined whether excess capacity existed in each base category, then compared existing capacity in each category to the anticipated requirement based on the 1993 force structure plan. Capacity was determined on a category-by-category basis but was generally an estimate based on current facilities and equipment. For example, Naval Station requirements were determined using the number of ships projected to be in the force in the final year of the force structure plan. Major support requirements such as shipyards and naval aviation depots were more difficult to determine and were based on anticipated work load.

Military value assessments were also made on a category-by-category basis and were evaluated along with capacity considerations in developing recommendations. When a category of bases was determined to have excess capacity, all bases in that category were evaluated against four military value criteria. The military value score for each base in a category was generally derived from answers to as many as 151 questions. The questions were assigned point values and an average military value was then computed for each category. The four military value criteria were: readiness, facilities, mobilization, and cost/manpower.

Critical to the Navy's process was a configuration analysis designed to eliminate as much excess capacity as possible in each category while retaining or improving the

overall military value average. It is important to note, however, that in the Navy's configuration analysis the average military value for a category of bases was more important than individual military value scores for the bases in that category. This was due to the scope of the analysis, which was category-wide rather than on a base-versus-base level.

The Navy conducted deliberations on configurations using 1999 force structure requirements and applying analysis in a manner designed to minimize excess capacity by category. The solutions, however, were not based solely on quantitative analysis, because assumptions based on military judgements were an important part of the process and its results. For example, the naval station analysis assumed that the split between ships located on the East and West coasts would remain consistent with current practice.

When the Navy believed it had reached the best solution in terms of capacity reduction and military value average in a category, a calculation of return-on-investment was run to confirm that the results of the analysis would indeed produce savings. In only a few cases was the return-on-investment analysis run on more than one scenario. This was done to test the feasibility of an alternative, not to determine which of the alternatives produced the greatest savings.

Once a closure scenario for a category was identified, evaluations were done based on the three remaining criteria:

economic, environmental, and community impact on the closure area. These assessments were generally done only for the final recommendations.

The goal of excess capacity reduction for the operational air station category involved capacity measurements of apron and hangar space for various types of aircraft based on established standards. The military values were determined from the responses to 95 questions generated by the Navy in consultation with technical experts.

E. THE ROLE OF THE GENERAL ACCOUNTING OFFICE

Under PL 101-150, GAO evaluates the Department of Defense's selection process, provides the Commission and Congress their detailed analysis of the process, and assists the Commission in its review and analysis of the Defense Secretary's recommendations. Nine professional staff members are detailed by the GAO to serve full-time on the Commission's review and analysis teams. The detailees participate fully in each phase of the review and analysis effort. They verify data, visit candidate bases, participate in local hearings, and testify before the Commission at its public hearings. Additionally, GAO field personnel visit bases to gather information first-hand and to verify data solicited by the Commission.

The GAO review of the Navy process and its implementation centered on several categories of bases. The GAO analysis

found that the Navy process did eliminate excess capacity and would produce savings. However, the Navy did not routinely seek alternative closure scenarios in order to assess relative cost savings, since excess capacity reduction was the objective.

GAO reviewed the configuration analysis and traced decisions regarding the rules for air stations to minutes of Navy deliberations. One of these rules, for example, was that a 67 percent active and 100 percent reserve aircraft basing requirement was to be preserved. Subject to military judgement, these rules guided the configuration analysis. The GAO review of the configuration analysis showed the importance the Navy placed on excess capacity reduction. It also illustrates that some bases recommended for closure had a higher individual military value score than air stations that were retained[3].

F. AIRCRAFT TYPES

1. P-3 *Orion*

The Lockheed P-3 *Orion* is the Navy's standard shore-based anti-submarine patrol aircraft. P-3 aircraft squadrons are currently based at two East coast locations and at NAS Barbers Point, Hawaii. The realignment plan for the P-3's at

[3]The Navy operates a variety of activities and functions, such as Naval Stations, aviation depots, training centers, etc. The Navy's approach of reviewing bases by category means that a Naval Station chosen to stay open could have a lower military value score than an Aviation Depot selected for closure.

NAS Barbers Point (selected for closure by BRAC 93) is the subject of this thesis.

First deliveries of production P-3 aircraft began in 1962 in response to a Navy request for maritime patrol aircraft design proposals in 1957. The *Orion* is a conversion of the *Electra* civil airliner and has ample room for Anti-Submarine Warfare (ASW) equipment and operators. The total crew is normally 10 to 12, five of whom are tactical specialists working in a compartment within the main cabin which contains the detection equipment. The latest model of the *Orion* , the P-3C, is powered by four 4,910 shp Allison T-56 turboprops, which give a top speed of 473 mph and an endurance of over 17 hours. Because of the long endurance, a large crew rest area with galley is provided in the main cabin. Maximum takeoff weight is 135,000 lbs and dimensions include a span of 99 ft 8 in and an overall length of 116 ft 10 in. ASW sensors include radar, ESM (Electronic Surveillance Measures), MAD (Magnetic Anomaly Detection), active and passive sonobuoys and the associated acoustic processing equipment, low-light TV and FLIR (Forward Looking Infrared Radar). Offensive armament includes up to 15,000 lbs of depth charges, homing torpedoes, or mines in an internal bay and on 10 external hardpoints. Unguided rockets or AGM-84 Harpoon anti-ship missiles can be carried under the wings, with a maximum weapons load of 20,000 lbs.

2. A-6 *Intruder*

The Grumman A-6 *Intruder* is the Navy's carrier-based medium attack aircraft. Lessons learned from the Korean War convinced Navy officials of the need for a long-range, low-level, tactical strike aircraft capable of operating in poor weather. Designs were solicited in 1957 with first delivery of production aircraft in 1963. Many modifications to the original platform have been made over the years, including the addition of a Norden multi-mode attack/navigation radar integrated with FLIR and laser detection equipment. The aircraft has a maximum ordnance load of more than 17,000 lbs, which represents about 30 percent of its take-off weight. The *Intruder* can carry a greater variety of weapons, nuclear or conventional, than any previous naval aircraft.

The *Intruder* is powered by two J-52 turbojets and has a maximum speed of 685 mph at sea level. The aircraft has a wingspan of 53 ft and a length of 54 ft 9 in. The ordnance is carried on one underfuselage and four underwing attachments and can consist of conventional, incendiary, or laser-guided bombs, rocket pods, nuclear weapons, or auxiliary fuel tanks. All U.S.-based Pacific fleet A-6 squadrons, when not deployed, are based at NAS Whidbey Island . The A-6 squadrons based at NAS Whidbey Island and on the East coast are being gradually retired and will be fully decommissioned by 1998.

3. EA-6B *Prowler*

The Grumman EA-6B *Prowler* is the Navy's carrier-based electronic countermeasures (ECM) aircraft. The mission of the *Prowler* is to mislead or suppress enemy radars while acting as escort for carrier-based strike aircraft. Externally the *Prowler* looks similar to the A-6 except the nose section has been extended by 4 ft 6 in and a fin pod housing containing surveillance receivers has been mounted on the tail of the aircraft. The major changes are internal and include accommodation for two additional crew members, reinforced wings and landing gear to match the higher gross weight, increased fuel capacity, and more powerful engines. The *Prowler* is powered by two Pratt & Whitney J52 turbojets and has a maximum speed at sea level of 651 mph. The aircraft has a maximum take-off weight of 61,500 lbs and a wing span of 53 ft. Offensive armament is limited to the AGM-88 HARM (High Speed Anti-Radiation Missile) missile.

The *Prowler*'s advanced ECM is based upon the ALQ-99 tactical jamming system, and up to ten jamming transmitters can be carried. The jammers are packaged in up to five external pods, each with electrical power provided by a turbogenerator on the nose. A central computer processes sensor and receiver information, enabling detection, identification, and jamming to be initiated automatically, or with manual assistance from the back-seat crew. All U.S.-based

EA-6B squadrons are based at NAS Whidbey Island when not deployed. The *Prowler* will be an important part of Navy carrier airwing capability for some time as no replacement aircraft platform has been selected.

4. F/A-18 *Hornet*

The McDonnell Douglas F/A-18 *Hornet* is the Navy's successor to the F-4 phantom and A-7 Corsair. It is a single seater and is powered by two GE F404 turbofans. Maximum speed at sea level is 1300 mph and combat radius in the fighter role is 425 nautical miles, increasing to 580 nm for the attack mission. The *Hornet* Wingspan is 37 ft 6 in, length 56 ft, and maximum take-off weight is 45,000 lbs. Built-in armament is an M-61 Vulcan cannon and up to 19,000 lbs of external ordnance can be lifted. For air-to-air combat, two Sparrows are carried under the fuselage, with two Sidewinders on the wingtips and four wing hardpoints also available for Air-to-Air Missiles (AAMs).

The *Hornet*'s principle sensor is the APG-65 radar, a multi-mode air-to-air and air-to-ground system. The pilot can operate it simply by using controls mounted on the throttle and control column, with the data displayed on a HUD (heads-up display). Navigation, weapons control, and sensor operation are all highly computerized to ease the pilot's workload and to compensate for the lack of a second crewmember. Twenty-

four USMC F/A-18 *Hornets* are currently stationed at MCAS Kaneohe Bay as part of the Marine Air Ground Task Force (MAGTF) located there.

G. NAS WHIDBEY ISLAND

1. Description of Mission

NAS Whidbey Island is on Whidbey Island, Washington, located 45 miles north of Seattle. The local community is the city of Oak Harbor, Washington. NAS Whidbey Island 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 Island 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. In 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. Reserve EA-6B, P-3, and C-9 squadrons are also based at NAS Whidbey Island.

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, COMMATVAQWINGPAC'[4], consisting of two fleet replacement squadrons and 18 fleet squadrons, four reserve squadrons, a Naval Hospital, Naval Facility[5], for a total of 24 tenant commands and visiting units. In total, over 24,500 people including civilian employees and dependents were employed at NAS Whidbey Island [Ref. 9]. As of 1991, the air station 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 aboard aircraft carriers. NAS Whidbey Island also maintains two target complexes for training of A-6E aircrews in weapons delivery. These complexes are located at Boardman, Oregon and Spokane, Washington.

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

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

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 would 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 Evaluation Committee for the following reasons:

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

Following Department of Defense selection criteria, the Base Structure Evaluation Committee determined that the closure of NAS 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 Defense Department, with a projected subsequent annual savings of $76 million [Ref. 10].

The BRAC determined that the Navy recommendation for closing NAS Whidbey would have a more pronounced affect on a local community than would any of its other proposed closings. The Commission further determined that the Defense Department underestimated the costs of moving the aviation squadrons to Lemoore. There also was the problem of NAS Whidbey's runways lacking the versatility required for future growth due to a supposed single-runway configuration[6]. In fact, Whidbey consists of a dual-runway configuration providing versatility with changing wind conditions.

The Commission determined that existing noise and encroachment problems[7] supporting the Navy decision were not

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[6]The lack of parallel runways at NAS Whidbey was a key point in the argument to move the Whidbey squadrons to NAS Lemoore, which has parallel runways.

[7]There is a small but vocal group of citizens that resides near the Navy's outlying field in Coupeville. This field is located 10 miles south of NAS Whidbey and is used for FCLP's (Field Carrier Landing Practice). The group, Whidbey Islanders for a Sound Environment (WISE), is campaigning for partial or total reduction of tactical aviation in the Whidbey area.

as severe as at 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 hurt safety and efficiency [Ref. 9].

In order to change any of the Defense Department recommendations, the BRAC Commission is required by Public Law 101-510 to find substantial deviation from the Secretary's force structure plan and the final criteria approved by Congress [Ref. 5]. 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.**

H. HAWAII AIR STATIONS

1. NAS Barbers Point Mission Description

Naval Air Station Barbers Point is located on the southwestern plain of Ewa on the island of Oahu in the state

of Hawaii. It is the largest Naval Air Station in the Pacific and consists of more than 3,700 acres. It provides employment and/or services for 12,000 military members, their family members, and civilian employees. NAS Barbers Point is home port for several maritime surveillance and antisubmarine warfare aircraft squadrons as well as the U. S. Coast Guard and the U. S. Army.

In late 1939 the Navy acquired more than 3,500 acres from the estate of James Campbell. On these acres was built the Ewa Marine Corps Air Station, which is now NAS Barbers Point. The Ewa air strip was completed in early 1941, and naval facilities construction was well under way by late that year when the Japanese attack on U. S. Forces there caused the United States' entrance into World War II. The station was commissioned NAS Barbers Point on April 15, 1942, with a complement of 14 officers and 242 enlisted men.

The start of the Korean conflict in 1950 saw the NAS Barbers Point logistic and support role become paramount for forward deploying squadrons in the Pacific. The late 60's and early 70's saw Barbers Point providing increasing support to U. S. military commitments in southeast Asia. In June, 1973, with the reorganization of naval units in the Pacific, NAS Barbers Point became an operational shore command under the control of Commander, Naval Air Forces Pacific (CNAP) located in San Diego, CA. Also during this time, Commander, Patrol

Wing Two (COMPATWINGTWO) acquired direct operational control of five maritime patrol(VP) squadrons, Patron Special Projects Unit Two (VPU-2), and VQ-3.

Commander, Patrol Wing U. S. Pacific Fleet (COMPATWINGSPAC) moved from NAS Moffett Field, CA, to NAS Barbers Point in July, 1993, replacing COMPATWINGTWO. The recent addition of VP-9 and VP-47 from NAS Moffett Field results in the following major aviation units currently assigned as tenant activities of the station: COMPATWINGSPAC; VP-1, VP-4, VP-9, VP-17, VP-22, and VP-47; VPU-2; HSL-37; the Coast Guard air station and the Army's 214th Aviation Regiment.

Personnel at the U. S. Coast Guard Air Station (CGAS) fly the C-130 *Hercules* aircraft and HH-65 *Dolphin* helicopters in performance of Search And Rescue (SAR) missions within the Central Pacific maritime region. Its aircraft also conduct water pollution patrols throughout the Hawaiian Islands chain.

The U. S. Army's B Company 214th Aviation Regiment relocated to Barbers Point in 1974 from Wheeler AFB due to overcrowding. The large C-147C Chinooks support the Army's 25th Infantry Division at Schofield Barracks, located 30 nm to the North.

The Patrol squadrons at NAS Barbers Point fly the P-3C update *II.5* and *III* versions of the *Orion* Aircraft, a military version of the Lockheed *Electra*. The range of the P-3

and its ability to fly slowly make the aircraft ideal for maritime surveillance and ASW missions. The VP squadrons are also called upon to fly SAR operations and medical evacuations (MEDEVAC).

2. MCAS Kaneohe Bay Mission Description

Marine Corps Air Station Kaneohe Bay is the home of the First Marine Expeditionary Brigade (MEB) and First Radio Battalion. The mission of the first MEB is to provide combat-ready air-ground forces capable of executing amphibious assault and maritime pre-positioning force operations as directed by national authorities. The MEB combines an Aviation Combat Element (ACE), a Ground Combat Element (GCE), a Communications Service Support Element (CSSE), and a Command Element (CE) into one cohesive force.

The station is located on 2,951 acres of the Mokapu Peninsula on the Northeast coast of the island of Oahu and is home to approximately 15,000 marines, sailors, and their families. The air station is separated from the downtown Honolulu/Pearl Harbor area by the Koolau mountain range, which runs approximately 22 miles along the length of the East side of Oahu from North to South.

Although the station has been a Marine Corps facility only since the early 1950's, the Mokapu peninsula has a rich military and Hawaiian history dating back to the ancient Hawaiians. The U.S. Military began to use the peninsula in

1918 when the Kuwaaohe Military Reservation was commissioned on its Eastern shore. In 1939, the Navy began construction of a small seaplane base, and the area was commissioned a Naval Air Station in July, 1941. On December 7, 1941, NAS Kaneohe Bay and its long-range reconnaissance aircraft were targeted during the Japanese surprise attack. During the attack on Kaneohe, the Japanese Navy suffered its first aircraft loss, and a Kaneohe Bay sailor became one of the first World War II recipients of the Congressional Medal of Honor.

Following the war the Navy decommissioned the base. It was recommissioned a Marine Corps Air Station on January 15, 1952. Its position in the North Central Pacific makes it an ideal location for strategic deployment to the Far East.

3. 1991 BSEC and BRAC Findings

The 1991 BRAC Commission selected NAS Barbers Point as a receiver site for an unspecified number of P-3 squadrons from NAS Moffett Field, California, which was selected for closure. The specific recommendation of the Commission was as follows:

> Naval Air Station Moffett Field is recommended for closure. Three active maritime patrol squadrons will be decommissioned and the remaining active duty maritime patrol squadrons will be relocated to NAS Barbers Point, HI, NAS Brunswick, ME, and NAS Jacksonville, FL. A single P-3 Fleet Replacement Squadron(FRS) will be sited at Jacksonville.

The decommissioning of three squadrons refers to the Pacific fleet portion of a "rightsizing" of the P-3 community

from 24 to 18 squadrons. The Commission cited reductions in Maritime Patrol Aircraft (MPA) as justification for reducing the MPA support shore infrastructure by one air station. The BSEC considered for closure, on an equal basis, all four MPA installations along with all other air stations. NAS Moffett Field was graded low in military value for the following reasons:

- Air operations at NAS Moffett Field are severely encroached by air traffic at San Francisco International and San Jose and Palo Alto Municipal Airports, and air accident potential zones are particularly severe to the south with multi-family residential development.
- NAS Moffett Field operations cannot be expanded due to adjacent development. Planned multi-story construction will further encroach on operations.
- NAS Moffett Field is located in a high-cost region.

Supporting documents from the BRAC deliberations indicated a Commission desire for each of the remaining P-3 bases (NAS Jacksonville, Florida, NAS Brunswick, Maine, and NAS Barbers Point, Hawaii) to maintain 6 P-3 squadrons each. Subsequent to the signing into law of the 1991 closure list, COMPATWINGSPAC was rumored to have gained the support of CNAP on a proposal to split the 18 remaining squadrons evenly between East and West coasts, putting 9 at Barbers Point and leaving 9 to split between NAS Jacksonville and NAS Brunswick. The proposal subsequently did not receive approval at the CNO

level, leaving the previous 6-squadron-per-station plan still in effect [Ref. 11].

III. BASE CLOSURE COSTS AND SAVINGS

A. INTRODUCTION

This chapter provides a framework for identifying all of the costs and savings associated with base closures. It categorizes the costs and savings to the Defense Department and the federal government using the Congressional Budget Office guidelines for analysis of base closure costs in Department of Defense Reports [Ref. 12].

The chapter is divided into ten sections, including this Introduction. Section B provides an overview of the magnitude of the costs and savings due to closing bases. It introduces the concepts of one-time and recurring costs/savings. Sections C through J provide descriptions of the specific categories of costs and savings using the CBO guidelines mentioned above. The final section (K) summarizes the chapter.

B. OVERVIEW

"It takes money to make money," and "there is no such thing as a free lunch," are frequently quoted business adages. Although they perhaps oversimplify, these phrases capture succinctly the fundamental concept of closing military bases. A relatively large one-time investment is required to close a base before future savings can be achieved. The BRAC Commission estimated the total one-time implementation costs

for the 1988 round of base closures at $3.1 billion [Ref. 13].

Lest these huge one-time costs deter the Department of Defense from closing bases, Congress established the Base Closure Account to provide the initial investment. The Base Closure Account provides funds for military construction, relocation expenses, environmental cleanup costs, and other one-time costs that are incurred as a result of base closure. The decision to appropriate funds specifically for base closures appears prudent, since the military departments were reluctant to use funds from already lean Operations and Maintenance and Military Construction Appropriations to pay the costs of closing bases. Providing separate funds earmarked for base closure forced financial decisions and sped up the process so that savings could be achieved sooner.

Although the Defense Department incurs many different types of costs when it closes bases, a small number of these types account for the vast majority of the total dollar amount. Military construction and environmental cleanup costs are the two largest one-time base closure costs, accounting for over two-thirds of the total. The Operations category includes several types of costs: severance pay and early retirement pays for civilian employees, relocation costs, etc.

The sizable future savings that can be achieved by closing bases justifies these substantial one time costs: The GAO conservatively estimates that the 1988 base closures will save

the Defense Department $453 million annually [Ref. 14]. These recurring savings occur because the number of civilian and military positions (and thus payroll costs)

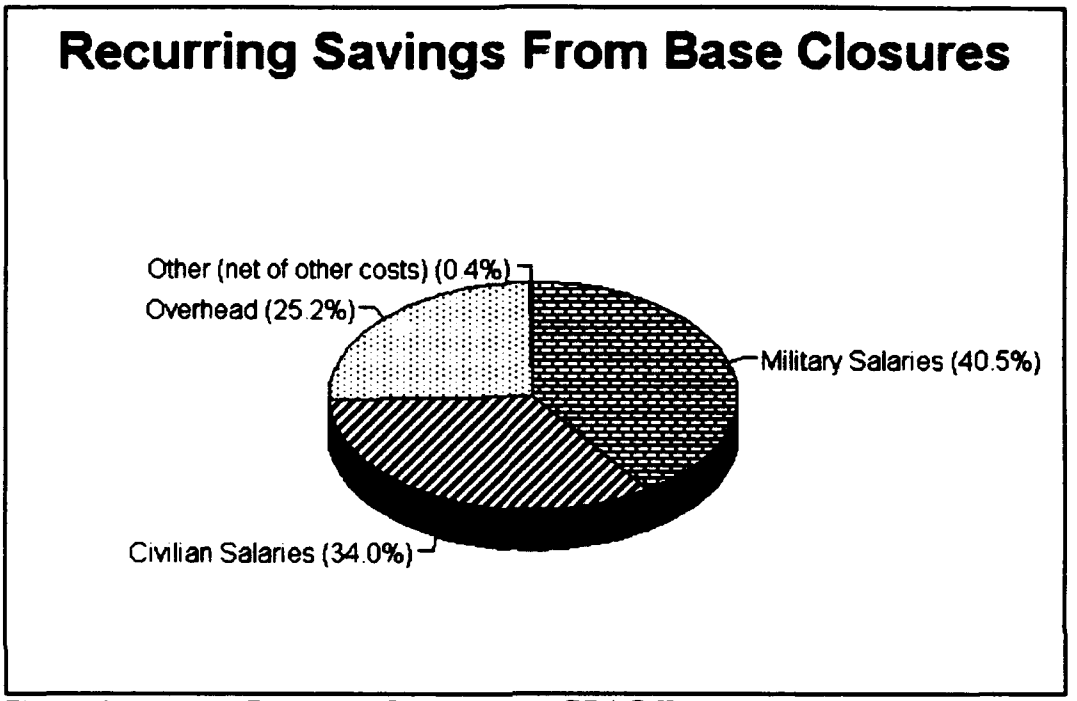

Figure 1 Recurring Savings from BRAC-II.

and non-payroll overhead costs (such as utilities and maintenance) are reduced.

As is the case with one-time costs, a few categories account for the vast majority of the total dollar amount of the recurring savings. Figure 1 illustrates the relative magnitudes of the recurring savings from BRAC-II (the 1991 round of closures). Military and civilian payroll savings and

overhead savings account for over 99 percent of the recurring savings.[8]

Not all of the savings from base closures recur annually; some are "one-time" savings. "One-time" savings occur whenever one-time costs that would occur if a base remained open are avoided; for example, cancelling a programmed military construction project at a closing base saves MILCON funds. Throughout this chapter, savings are considered true savings if they represent dollars eliminated from the Defense Department Future Years Defense Program (FYDP), rather than simply a shifting of expenses to another fiscal year or to another facility.

C. MILITARY CONSTRUCTION COSTS AND SAVINGS

Military construction costs comprise a large share of the one-time costs associated with base closures, accounting for over $1.5 billion for the 1988 round of base closures. Military construction may be required when closing a base because before a base can be closed, its personnel, equipment, and other mission essentials must be transferred to a receiving base where the mission will be continued. If the receiving base does not have excess building capacity in suitable condition to support the personnel and equipment, then a military construction project is funded. If excess

[8] The source of the data for Figure 2 was the 1993 Defense Department Budget justification for BRAC 91.

capacity exists, but in unsuitable condition, then military construction funds are used to rehabilitate the facility. The funds spent for new construction or rehabilitation are considered a cost of base closure because they would not be spent if the base were not closed.

Alternatively, closing a base may result in saving military construction funds. When a base is chosen for closure, the military construction projects programmed for the base may no longer be needed and thus may be cancelled. The funds that are not spent, net of any excess cost to terminate contracts, represent savings to the Department of Defense. These savings are attributed to the base closure action because the funds would be spent if the base remained operational.

D. REAL ESTATE COSTS AND REVENUES

Once a military base is closed and the land has been restored to proper environmental standards, the real property may be sold or leased to generate revenue. This revenue (net of the costs to promote the sale) is applied to the Base Closure Account and thus represents a one-time savings to the Department of Defense. Early estimates of the land sales proceeds for the twelve largest of the bases chosen for closure in 1988 ranged from $1.0 to $1.35 billion.

Unfortunately, the large number of regulations governing disposal of federal property and the continued slow pace of

environmental cleanup have made the proceeds from land sales very uncertain. The Navy has yet to realize any land sales revenue from base closures, and estimates for the total Defense Department proceeds from land sales from 1988 base closures have been revised downward from $2.3 to $1.1 billion [Ref. 15].

The Department of Defense has had to purchase land to support some base closures. In these cases the receiving bases did not have adequate land to support the personnel, equipment and mission transferred from the closing base. These purchases are a cost attributed to the base closure process because they would not occur if the base were not closed. These costs can be defined with much greater certainty than the savings from land sales.

E. PERSONNEL COSTS AND SAVINGS

The lion's share of the recurring savings from base closures comes from the elimination of military and civilian positions. This is to be expected, because civilian labor costs account for approximately 60 percent of the total cost of operating a military base. In fact, for the 1988 round of closures, personnel reductions account for 84 percent of the $381 million in recurring savings to the Air Force [Ref. 16]. Accurate prediction of the savings due to personnel reductions is essential when estimating the total savings a base closure will achieve.

When the Defense Department closes or realigns military bases, it eliminates some or all of the civilian and military positions at the affected bases. The disposition of the affected employees determines the amount of personnel costs and savings due to the closure action. The Defense Department may transfer civilians and military members to a receiving base where the number of positions is increased. In this case no savings are achieved because the number of employees and therefore payroll costs have not decreased.

Alternatively, the Defense Department may choose not to transfer civilian employees to new or previously existing positions, removing them from the federal payroll using a Reduction in Force (RIF). It may place the affected civilian employees in another federal job as part of the Priority Placement System. Some of the affected civilian employees may choose early retirement or resign from their positions. In these cases, savings can be achieved if no new employees are hired to take their places, in other words, if the positions are eliminated. The savings are attributed to the base closure only if the positions are eliminated directly by the closure action and not by some other mandated reduction in the civilian work force.

In a like manner, the Defense Department may produce recurring savings by reducing the number of military positions when it closes or realigns bases. Again, the savings are attributed to base closure only if the military positions are

eliminated by the base closure action. Savings that accrue when military positions are eliminated to meet goals for planned military force reductions, even if concurrent with base closings, do not count as base closure savings.

Closing bases involves personnel-related costs as well as savings. The Department of Defense does not enjoy a "free lunch" when it eliminates civilian or military positions. If the civilian employees or military members affected by base closing choose early retirement, then the Defense Department must consider the marginal cost of providing early retirement benefits as a base closure cost. If the Defense Department uses a Reduction in Force to eliminate civilian positions, then the severance pay it gives to fired employees is a base closure cost. DOD may also be required to reimburse state governments for the cost of unemployment compensation paid to workers who lose their jobs when a base closes.

F. BASE OPERATIONS AND SUPPORT COSTS AND SAVINGS

The base closure process generates other substantial recurring savings by reducing the total overhead costs to operate the military base structure. Military base operations are supported by two separate funds, one for the maintenance costs of real property and the other for non-payroll costs of base operating support. When the Defense Department closes a base, it sheds the costs to maintain the buildings and grounds and to provide services to base personnel and tenant commands.

Alternatively, the bases that receive the mission and personnel from the closing base will see their overhead costs rise. Net savings will occur if the base support funds saved at the closing base are greater than the increase in costs at the receiving bases. This is usually the case when the receiving base has excess capacity and economies of scale can be achieved.

The Department of Defense incurs other costs if the base is deactivated[9] (instead of closed) or if the closing process is protracted. In either of these cases, Defense Department pays caretakers to provide minimal maintenance for the grounds and buildings until the properties are sold or reactivated.

G. RELOCATION COSTS

Although relocation costs are a relatively smaller portion of the one-time costs of closing a base, they are not insignificant. Before a base can be closed, the equipment (aircraft, vehicles, and tools) and personnel must be transferred to receiving bases where the activities will be continued. The Defense Department pays for the packing, unpacking, freight, and setup of transferred equipment. It incurs additional costs when transferring specialized equipment; for example, sophisticated laboratory equipment may

[9] When a base is deactivated, the activities are transferred to other bases and a caretaker force is left in place to provide minimal maintenance and security. The lands are not disposed of and the base can be reactivated if needed.

require special handling and require expensive recalibration after transfer.

Relocating civilian and military personnel involves different types of costs. The Defense Department pays the total permanent change of station (PCS) costs for all civilian and military personnel transferred during the closing process. However, since military members receive PCS orders at regular intervals regardless of base closings, the cost of the PCS moves that would have normally occurred during the closure period should be excluded from base closure costs.

The Defense Department may be responsible for other costs of transferring civilian employees. The Housing Assistance Program provides payments to transferring federal employees who stand to lose significant sums upon sale of their homes because of depressed housing prices[10]. These payments are a cost of base closure because they would not be made if the affected military base remained operational.

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[10]Section 1013 of Public Law 89-754 authorizes the Defense Secretary to provide financial help to eligible homeowners serving at installations that are ordered closed or realigned. The law permits benefits if property decreases in value as a result of a closure announcement and cannot be sold on "reasonable terms." The program allows recoupment of up to 95 percent of the pre-closure fair market value of the property.

H. ENVIRONMENTAL CLEANUP COSTS

The cost of environmental cleanup at closing bases continues to skyrocket. The military department estimates of the cleanup costs for the bases chosen in 1988 have climbed from $510 to $859 million [Ref. 17]. Experience with the 1988 closures shows that cost estimates increase significantly (sometimes by a factor of ten) after the detailed studies and ground tests are complete. Pease Air Force Base is representative of this trend:

> ... the preliminary environmental cleanup estimate was $11 million. In fiscal year 1992, the Air Force increased the estimated cleanup to over $63 million and to over $102 million in fiscal year 1993 when it had the benefit of studies and tests that were not previously available. By December 1992, the estimate had increased to over $114 million.

If the trend continues, the cleanup costs for the 1991 and 1993 rounds, currently estimated at $2.7 billion, will become monumental [Ref. 18].

Since 1991 the Base Closure Account has provided the funds for environmental restoration of closing bases; however, the Defense Department and reviewing agencies have not considered these restoration costs as "base closure costs" per se. The current policy of the Defense Department is that environmental cleanup costs should not be a factor in the base closure decision process; it excludes these costs from its net present value analyses. The Defense Department believes environmental restoration costs are sunk costs since public law requires

Defense Department to clean up the bases whether or not they are closed[11].

Although the Defense Department is required to clean up bases regardless of closure decisions, the enormous costs of cleanup may in the short term "squeeze out" defense spending in other areas. GAO predicts that environmental cleanup costs will have "significant budgetary impact since pressure for rapid conversion and reutilization of closed bases will not allow these costs to be spread over many years" [Ref. 19]. The opportunities that the Defense Department forgoes to redirect its funds to accelerate environmental cleanup have some value or cost that should be recognized as part of base closure decision.

I. HEALTH COSTS

When the Defense Department closes medical facilities at a base, the retirees and dependents who previously used these facilities and remain in the area must use civilian health care facilities. This increases the costs to the Civilian Health and Medical Plan of the Uniformed Services (CHAMPUS) and to Medicare. However, if medical facilities are expanded at a receiving base during the closure process, more retirees and dependents in that locale may be able to receive care at

[11]The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Public Law 96-510) and Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499) require the Defense Department to restore contaminated sites.

Defense Department facilities. This reduces CHAMPUS and Medicare costs to the federal government, and reduces the net increase in health care costs due to base closings.

J. ECONOMIC GRANTS

The federal government has provided substantial financial assistance to the communities affected by base closures [Ref. 20]. From 1966 through 1987, federal agencies provided $963 million (in 1988 dollars) in assistance to communities affected by base closure or realignment; however, it is hard to estimate the amount of economic aid that will be available in the future. When asked how much funding they could provide to communities affected by the base closures in 1988, agency heads stated that "substantially smaller amounts" of funds were available [Ref. 21]. Although it may be difficult to estimate the amounts of these grants, they are still a cost of base closure.

K. SUMMARY

In summary, closing military bases requires a relatively large one-time investment in order to achieve future savings. Two categories of costs, military construction and environmental cleanup costs, account for the majority of this large initial investment; however, large potential recurring savings may justify the initial costs. As was the case with the initial or one-time costs, a few categories account for

nearly all of the recurring savings. Military and civilian salary savings and non-payroll overhead savings make up over 99 percent of the recurring savings. Thus the accurate estimation of these few categories of costs and savings is crucial if the Defense Department is to make sound financial decisions as it closes bases.

IV. REALIGNMENT SCENARIO COMPARISON

A. INTRODUCTION

This chapter presents Military Construction (MILCON) cost data for the various P-3 realignment plans that are being or have been considered. As stated in the last chapter, Environmental clean-up and MILCON costs are the two largest one-time closure costs, accounting for over two-thirds of the total. The Defense Department considers environmental restoration costs as sunk, however, since public law requires the eventual clean-up of all facilities regardless of closure status. For this reason MILCON costs are generally considered the best yardstick of initial closure cost for each realignment alternative, and are presented in this chapter in table format for each P-3 realignment option. Appendix A presents a brief description and justification for each MILCON project requirement specified in the enclosed tables.

This chapter consists of eight sections, beginning with this introduction. Section B gives an overview of the 1993 BRAC decisions regarding the involved facilities. Sections C and D give the MCAS Kaneohe Bay and NAS Whidbey Island justifications for receiver site selection. Sections E through H present the MILCON cost Data for the Realignment scenario options. Section J summarizes the data.

B. 1993 BRAC FINDINGS

The Navy Department made significant advances toward ensuring their process was well documented throughout the 1993 deliberations, and that recommendations were well founded and supportable. This was intended to prevent the kind of embarrassments experienced during the 1991 round of base closures.

By early 1993, new cuts in Defense funding prompted a decrease in the P-3 force structure from 18 to 16 squadrons. This fact, combined with an assumed future decrease in USMC end strength to 159,000, led to P-3 relocation scenarios that involved MCAS Kaneohe Bay, Hawaii, as a receiver site. One of many scenario data calls executed by the BSEC requested cost figures for movement of P-3 squadrons from NAS Barbers Point and NAS Moffett Field to MCAS Kaneohe Bay and NAS Whidbey Island. Eight West coast P-3 squadrons would be split between the two sites.

NAS Barbers Point was indeed selected for closure by the 1993 BRAC commission, with West coast receiver sites identified as MCAS Kaneohe Bay and NAS Whidbey Island. NAS Whidbey Island would receive two P-3 squadrons from NAS Barbers Point and two additional squadrons from NAS Moffett field, which was slated for closure by BRAC 91. The remaining four P-3 squadrons at Barbers Point would relocate to Kaneohe Bay. The official closure of Barbers Point would be complete

by the end of FY 96, contingent upon completion of appropriate MILCON at receiver sites. The Coast Guard facility at Barbers Point was also set to relocate to Kaneohe Bay in FY 96', however, efforts to keep the Coast Guard at Barbers Point are being explored pending airfield-community-reuse-planning decisions. All Barbers Point Family housing units will remain for multi-service use under the control of COMNAVBASE Pearl Harbor. Appropriate Quality-of-life facilities such as Commissary, Exchange, and Medical Clinic will also be retained to support the remaining 10,000 military residents in the Barbers Point area.

C. MCAS KANEOHE BAY JUSTIFICATION

Table I PACFLT AIR STATION CONFIGURATION ANALYSIS

AIR STATION	MV-MV Avg	Apron Cap.	Hangar Cap.
NAS Whidbey Island	18.06	459	683
MCAS Kaneohe Bay	10.15	164	177
NAS Miramar	6.26	591	859
NAS Lemoore	4.70	435	645
NAS North Island	2.69	552	626
NAS Barbers Point	1.33	533	533
MCAS CP Pendleton	-1.13	251	216
MCAS El Toro	-7.88	579	378
NAS Alameda	-15.27	535	1430

NAS Barbers Point was recommended for closure by the BRAC Commission because its capacity was judged to be excess to that required to support the reduced force levels contained in the Defense Department force structure plan. The analysis of required capacity supported only one Naval Air Station in Hawaii. NAS Barbers Point had lower military value (Table I)[12] and a greater ground encroachment problem than MCAS Kaneohe Bay, and its assets could also be readily redistributed to other existing Naval Air Stations [Ref. 22].

By maintaining operations at MCAS Kaneohe Bay, the Defense Department retained the additional capacity that the station provides in supporting ground forces. Given the uncertainties of future overseas basing, the Commission felt that MCAS Kaneohe Bay would provide a flexibility to support future Navy and Marine Corps operations. The BRAC Commission recommended the relocation of F-18 and helicopter squadrons from MCAS Kaneohe Bay to other West coast facilities in order to "create" the required capacity at Kaneohe Bay. The BRAC Commission recommendation was signed into law by the President in September of 1993.

[12](MV-MV AVG) refers to the difference of the station Military Value score and the overall average Military Value for all operational air stations.

D. NAS WHIDBEY ISLAND JUSTIFICATION

NAS Whidbey Island was judged to be an ideal receiver site for the patrol squadrons due to facilities and hangar space capacity and training area availability. Geographically, NAS Whidbey Island is located in close proximity to several key ASW facilities in the Puget Sound area, all of which would mutually benefit from the presence of operational patrol squadrons. P-3 aircraft based at Whidbey would be able to operate and train with the Trident class submarines based 40 miles away at Banghor submarine base. They would also interact and train with the Naval Undersea Warfare Center Division (NUWCD) at Keyport, WA. Currently, Whidbey based SH-3 SAR helicopters drop various undersea mines and torpedoes for NUWCD at the Nanoose mining range in British Columbia, Canada. The Nanoose range is one of the finest acoustically scored ranges in the world. Nanoose, in conjunction with the Admiralty bay mining range ten miles south of NAS Whidbey provides an outstanding complex of scored weapons ranges at which P-3 aircrew can train to their missions.

Also of great importance to the ASW capability of P-3's at Whidbey Island is the strategic location of the Naval Facility (NAVFAC) located on the air station. VP mission debrief facilities already exist on station, and the addition of a mobile ASWOC unit would complement the capabilities offered by the NAVFAC.

In this scenario there is an excess of hangar and ramp space at Whidbey Island due to the retirement of A-6 squadrons. Additional building space would not be required for the P-3 simulators as there would be room in existing A-6 simulator facilities. AIMD support would require minimal modification to handle the P-3 update III equipment, with no additional MILCON required.

E. SCENARIO "A"

Initial planning for BRAC 93 called for the transfer of all Marine Corps aviation assets of the Marine Air Ground Task Force (MAGTF) from MCAS Kaneohe Bay to other bases, while the ground forces would remain [Ref. 23]. Under this initial scenario the eight West coast squadrons would have been split evenly between NAS Whidbey Island and MCAS Kaneohe Bay giving an estimated BRAC supported facilities cost of **$92 million**. The relocation of the 36 helicopters and 24 F/A-18 aircraft from Kaneohe Bay assumed by the BRAC would create sufficient capacity to keep MILCON costs relatively low for this option. The low MILCON requirements also supported the preliminary Barbers Point closure date of September 30, 1996.

F. SCENARIO "B"

The initial scenario presented above was short-lived, however, due to its failure to recognize the synergistic relationship of the air assets and the ground combat forces of

the MAGTF. The MAGTF trains and operates the helicopter and ground combat elements as one unit and must co-locate these forces. Since the ground combat element was never slated to move, the Marine Corps decided to retain a "tailored" MAGTF force structure at MCAS Kaneohe Bay. The Marine Corps would be able to reduce the required MAGTF force structure by reducing the Air Combat Element (ACE) requirement to the helicopter assets already on station. The two medium and one heavy lift helicopter squadrons of MAG-24 would remain while the F/A-18 squadrons (along with any associated support) would be relocated elsewhere [Ref. 24].

This issue is directly related to the MAGTF concept and is not a function of the Marine Corps end strength control at the time of budget submission of 159,000. The Marine Corps view of its capability requirements is based on CINC mission requirements in three theaters. That mission is to furnish PACCOM, CENTCOM, and KOREA a reservoir of capability-based forces from which to provide a wide range of expert low to mid intensity contingency capabilities as well as large, task-organized forces of combined arms for theater level high intensity warfare. One of the keys to accomplishing this mission is preserving a MAGTF in the mid-Pacific [Ref. 25].

As a result of the P-3 force structure decisions and the Marine Corps decision to retain helicopter units of the MAGTF at Kaneohe Bay, additional MILCON requirements were identified

Table II SCENARIO B MILCON PROJECTS

Project	BASE	FY 95	FY 96	FY 97	TOTAL
P-287T Helo Pad	KB	610			
P-539T Util Recon	KB	2300			
P-538T PWC Shop	KB	6700			
P-507T Ord Facil	KB	5600			
P-284T USCG Facil	KB	25000			
P-506T TELCOMM	KB	2400			
P-276T P-3 OFT	KB	4200			
P-269T Wash Rack	KB	1200			
P-268T A/C Apron	KB	29300			
P-270T A/C HGR	KB	24500			
P-272T AIMD Facil	KB	9400			
P-273T Ord Facil	KB	4700			
P-280T POL Move	KB	1000			
P-285T Rehab Admin	KB	2100			
P-261T CONSOL Fac	KB	6500			
P-271T Rehab CPWP	KB	2050			
P-274T Av Supply	KB	15800			

to generate the capacity at Kaneohe Bay for the P-3 units from NAS Barbers Point. The MILCON requirements for this option are detailed in Tables II and III for NAS Whidbey Island and MCAS Kaneohe Bay. Total MILCON cost for this option is estimated at over **$254 million** [Ref. 26].

Table III SCENARIO B MILCON PROJECTS (continued)

Project	Base	FY 95	FY96	FY97	TOTAL
P-277T Alter APTU	KB	680			
P-286T BQ Facil	KB	21400			
P-288T AMM Sites	KB	2900			
P-289T Applied Ins	KB	2200			
P-291T EDF Renov	KB	880			
P-500T Clubs Add	KB	6400			
P-501T Exchange	KB	4700			
P-502T Med/Dent	KB	2700			
P-503T Recr Fac	KB	32500			
P-504T Util Upgr	KB	9100			
P-505T A/C OPS Fac	KB	5900			
MCAS K-Bay Total		**232720**			**232720**
P-603T Apron Rehab	WI	4500			
P-604T TSC	WI	8300			
P-605T FLT SIM	WI	2700			
P-608T HGR Rehab	WI	3150			
P-612T Eng Shop	WI	3320			
NAS Whidbey Total		**21970**			**21970**

G. SCENARIO "C"

Late Summer of 1993 brought further cuts in Defense funding and a reduction in P-3 force structure from 16 to 13 squadrons. Seven squadrons would be split between NAS Brunswick and NAS Jacksonville on the East coast, while six

squadrons would be stationed on the West coast. Continued concerns over funding levels led to P-3 realignment scenarios that proposed single-siting all six west coast squadrons at NAS Whidbey Island. This option would save extensive construction costs (Table IV)[13].

Under this current plan, the two squadrons that have already relocated to NAS Whidbey Island from Moffett Field will be joined by four squadrons from NAS Barbers Point along with COMPATWINGSPAC. The two remaining squadrons at NAS Barbers Point will be disestablished as part of the downsizing. The Executive Transport Department (ETD), HSL-37, and the Coast Guard Air Station will move from Barbers Point to Kaneohe Bay and will require MILCON for Hangar alterations, a helicopter pad, and ordnance and supply facilities. These requirements were reduced in September, 1993, due to a further reduction in MAGTF ACE requirements from one heavy and two medium lift helicopter squadrons to two tailored heavy lift squadrons. The two tailored squadrons would contain 8 CH-53D aircraft each. This proposal would reduce the USMC air asset loading at Kaneohe Bay from 36 to 16 helicopters. The ACE requirement was subsequently upgraded by the Marine Corps to 10 CH-53D's per squadron [Ref. 27].

[13]Several projects originally part of the scenario C project list did not survive the Navcompt review process. These now unfunded projects are P-601T, P-606T, P-607T, P-613T, P-617T, and P-620T.

Prior to the acceptance of the single site plan there were significant MILCON-funding reductions. The NAVCOMPT marked BRAC construction budget of $32.11 million for Kaneohe Bay was the catalyst for the acceptance of the scenario C plan. Additionally, the deferral of the P-3 Tactical Support Center (TSC) project funding to FY 95 and other receiver site MILCON to FY 96/97 will significantly impact the speed of implementation of the single site plan. The NAVCOMPT marks will cause the closure of the station to slide to late FY 98 and have essentially frozen the Whidbey single siting effort following the arrival of the two Moffett squadrons. Without the TSC the squadrons will be operating like remotely deployed units and will be limited with regard to real world tactical and training support.

The slide in the Barbers Point closure date seems inevitable regardless of efforts to accommodate the move. Assuming that initial funds won't be available until December of 1995 and using the two-year construction rule of thumb, few of the facilities at Whidbey Island or Kaneohe Bay will be usable until January of 1998. Allowing several months to move forces and assets results in the late FY 98 Barbers Point closure date. The total MILCON cost for this option is estimated at **$74 million**.

Table IV SCENARIO C MILCON PROJECTS

Project	Base	FY 95	FY96	FY97	TOTAL
P-269 Wash Rack	KB	1300			
P-539T Util Recon	KB	2800			
P-538T PWC Shop	KB	6100			
P-270T HGR Mod	KB	13100			
P-294T Coast Guard	KB	11900			
P-273T Ord Fac	KB	4700			
P-274T Av Supply	KB	300			
P-287T Helo Pad	KB	1250			
P-508T Ord Facil	KB	2800			
MCAS K-Bay Total		**39550**			**39550**
P-603T Apron Rehab	WI	4500			
P-604T TSC	WI	7000			
P-605T FLT SIM	WI	4920			
P-608T HGR Rehab	WI	3150			
P-612T Eng Shop	WI	5850			
P-616T CPWP HQ	WI	1600			
P-600T GSE Shop	WI		5600		
P-615T Sono Stor	WI		1860		
NAS Whidbey Total		**25020**	**7460**		**34480**

H. SCENARIO "D"

Scenario D is a fallback plan to the single site effort that calls for locating 3 P-3 squadrons each at NAS Whidbey and MCAS Kaneohe Bay. It should be noted here that the new Navy aircraft loading for Scenario D has been increased from

8 to 9 P-3's per squadron. The ETD and HSL squadron would also move to Kaneohe Bay under this plan. This option originated from CINCPACFLT tasking to the Commander, Pacific Division, Naval Facilities Engineering Command (PACNAVFACENGCOM) in December, 1993. The tasking directed PACNAVFACENGCOM to conduct a study of scenario C and D MILCON requirements. The study was initiated by CINCPACFLT due to the NAVCOMPT marked BRAC construction budget and the reduction in MAGTF ACE requirements at Kaneohe Bay.

From the preliminary estimates contained in Table V and VI, it is clear that this option will result in a large increase in initial cost over scenario C. The projects are basically the same as scenario B, with revisions to reflect the new Navy and Marine Corps loadings and Commanding Officer recommendations. Supporting MWR facility requirements which qualified for BRAC funding were screened by the facility CO's during the final joint brief in February, 1994. It was agreed at that time to delete certain MWR projects that were not required and/or not defendable. These deleted requirements resulted in a savings of $29.8 million[14].

What is not now clear is what compromises and adjustments will come out of the political maneuvering that will surely take place over this issue between now and BRAC 95. Future budget reductions, updated force structure requirements, and

[14]Deleted projects include P-289T, P-291T, P-500T, P-501T, and part of P-503T.

BRAC construction budget and the reduction in MAGTF ACE requirements at Kaneohe Bay.

From the preliminary estimates contained in Table V and VI, it is clear that this option will result in a large increase in initial cost over scenario C. The projects are basically the same as scenario B, with revisions to reflect

Table VI SCENARIO D MILCON PROJECTS (continued)

Project	Base	FY 95	FY 96	FY 97	TOTAL
P-603T Apron Rehab	WI		4500		
P-604T TSC	WI		8300		
P-605T FLT SIM	WI		2700		
P-608T HGR Rehab	WI		3150		
P-612T Eng Shop	WI		3320		
NAS Whidbey Total			**21970**		**21970**

the new Navy and Marine Corps loadings and Commanding Officer recommendations. Supporting MWR facility requirements which qualified for BRAC funding were screened by the facility CO's during the final joint brief in February, 1994. It was agreed at that time to delete certain MWR projects that were not required and/or not defendable. These deleted requirements resulted in a savings of $29.8 million[14].

[14]Deleted projects include P-289T, P-291T, P-500T, P-501T, and part of P-503T.

What is not now clear is what compromises and adjustments will come out of the political maneuvering that will surely take place over this issue between now and BRAC 95. Future budget reductions, updated force structure requirements, and political compromises will all play into the final decision. The total cost for this option is estimated at **$198 million**.

I. SUMMARY

In summary, the initial scenario delineated in the BRAC closure report called for the relocation of West Coast P-3 squadrons to MCAS Kaneohe Bay and NAS Whidbey Island. Capacity would be created at Kaneohe Bay by moving all Marine Corps aviation assets of the MAGTF ACE to other West Coast air stations. The ACE relocation and the decommissioning of A-6 squadrons at NAS Whidbey Island would give sufficient excess capacity at both locations and avoid excessive MILCON cost ($92 million total). The USMC decision to retain a partial ACE at Kaneohe Bay led to a significant increase in MILCON requirements ($254 million total). This increase in cost and the subsequent decrease in P-3 force structure prompted the current NAS Whidbey Island single site plan. This plan calls for NAS Whidbey to be home to all 6 West coast P-3 squadrons and would result in substantial savings. While this is the lowest cost option put forth to date ($74 million total), other options are being investigated. The most likely

compromise to be considered would be a 3/3 squadron split between MCAS Kaneohe Bay and NAS Whidbey Island that has a projected MILCON cost of $198 million. The final decision will likely not be made until after the 1995 BRAC deliberations have concluded. The conclusions that flow from these cost figure findings and the possible areas for further research are included in the next chapter.

V. SUMMARY AND CONCLUSIONS

A. INTRODUCTION

This chapter summarizes the findings of the thesis and draws conclusions on the effect of budget reductions on military force structure realignment. The chapter is divided into four sections, including this introduction. Section B summarizes the study, reviewing the major points of the previous chapters. Section C presents conclusions based on the findings of the study. Section D provides suggestions for further research regarding the base closure and realignment process.

B. SUMMARY

Chapter I reviewed the changes in the political and fiscal environments that led to formation of the Base Realignment and Closure Commission. It introduced the P-3 realignment scenario that would be analyzed in order to form conclusions on the effect of budget reductions on force structure realignment.

Chapter II presented a history of the base closure process and the BRAC findings involving the air stations related to this realignment. It reviewed the history of events that led to the creation of the BRAC Commission in 1988, then provided an overview of the BRAC selection process and criteria, and described the make up of the Commission. The Navy's closure

candidate selection process and the role of GAO were then summarized, followed by a review of the aircraft types affected by this realignment. Finally, the 1991 BRAC findings for NAS Whidbey Island and MCAS Kaneohe Bay were summarized.

Chapter III described the costs and savings associated with the closure and realignment of military facilities. It was shown that closing bases requires a large one-time investment, but that the sizable future savings justify this initial investment. Military construction (MILCON) and environmental cleanup are by far the largest up-front costs of closure. The environmental cleanup costs, however, are not considered true closure costs given that all facilities must be cleaned up eventually, regardless of closure status. Military construction costs then make up the lion's share of incremental-one-time costs of base closure. The savings are primarily from the elimination of military and civilian positions, and the reduction of overhead expenses, which are predicted to account for 75 and 24 percent of future savings, respectively. It also discussed the large overestimation of revenue from property disposal which is due primarily to skyrocketing environmental clean-up costs.

Chapter IV presented MILCON cost data for the various P-3 realignment options. MILCON data was used due to it being the largest up-front-marginal cost incurred when closing or realigning bases. The chapter first presented an overview of the 1993 BRAC decisions regarding Whidbey Island and Kaneohe

Bay, then it reviewed the justifications for their selection as receiver sites. The initial scenario delineated in the 1993 BRAC report called for splitting eight West coast P-3 squadrons between Whidbey Island and Kaneohe Bay. The capacity was to be created at Kaneohe by relocating all air assets of the MAGTF from Kaneohe to other locations. The USMC decision to retain a partial ACE complement of helicopters at Kaneohe Bay resulted in a sharp increase in MILCON cost. This increase in cost and subsequent decrease in P-3 force structure were the catalysts for the acceptance of the Whidbey Island single-site option (scenario C). There is also a plan being studied (scenario D) that would split the six West coast squadrons between Kaneohe and Whidbey, but with a significant increase in MILCON cost.

C. CONCLUSIONS

1. Least Cost Scenario

The cuts in BRAC related MILCON funding and the decrease in P-3 force structure requirements led to the acceptance of the NAS Whidbey Island single site plan. This plan uses the excess capa created at Whidbey by the decommissioning of A-6 squadrons to phase in all six West coast squadrons. This plan saves over $120 million when compared to the scenario D plan that is also being studied. This single site plan is the most efficient use of operational NAS capacity and appears to result in no strategic sacrifices

when compared to the scenario D plan. While much more expensive initially, the D option would, however, leave more air station excess capacity available for detachment capability and future military ramp-ups.

2. Longer Closure Process

The BRAC 93 closure plan contains several complex, time-sensitive, daisy chain closures and realignments. The MILCON funding reductions jeopardize the accomplishment of critical closures/realignments within the six-year time period required by law. The Secretary of Defense and Department of the Navy support the concept of rapid, efficient closures so as to minimize the impact on local communities and to realize savings as soon as possible.

With the deferral of MILCON funding supporting the Barbers Point closure until FY 96/97, the closure of the station will likely slide well into FY 98. Assuming that the initial funds won't be available until December 1995 and using the two-year construction rule of thumb, few of the facilities at Kaneohe or Whidbey will be usable until December of 1997. At a minimum, movement of the Executive Transport Department (ETD), HSL-37, and the Coast Guard from Barbers Point cannot begin until the hangar alterations, Helo pad, ordnance and supply facilities, and AIMD alterations are completed at Kaneohe Bay. Allowing several months to move these forces and assets will mean shutting down Barbers sometime in late FY 98.

a. Higher OMN Costs

The resulting effect of the MILCON reductions is to delay operational closures and to increase costs to maintain the facilities for an additional 1-2 years. Costs to the O&M and personnel accounts to keep facilities open longer than the current BRAC 93 plan envisioned could exceed $1 billion. Additional costs can also be expected from the inflationary impact to construction projects and potential duplication of operation costs to simultaneously maintain two or more bases and pay salaries as transition/realignments are drawn out. It is unclear at this time whether the MILCON savings will outweigh the increase in OMN costs due to the resulting delays in the closure process.

b. Reduced Mission Effectiveness

With the two Moffett squadrons in place at NAS Whidbey Island, the MILCON deferral has frozen the single siting effort. The deferral of the TSC funding has created a situation where the Whidbey squadrons are operating like remotely deployed units, with limited real-world tactical and training support. Until the TSC is brought on line, the Navy is forced to maintain two VP sites which require duplicate support and could adversely impact the readiness of the Whidbey based P-3 squadrons. The longer the squadrons operate in this manner, the more likely that the tactical proficiency of the aircrew will decrease.

3. Adverse Community Impact

Until the Barbers Point closure date issue, along with the single site final determination is resolved, many incorrect and false expectations are being generated within the local communities. The consequences of not finalizing these issues and keeping the interest groups uninformed could lead to detrimental working relationships as local community plans become inexecutable. An extended closure combined with the cleanup process may agitate the local population given the Defense Secretary's commitment to minimizing impact on communities.

D. AREAS FOR FURTHER RESEARCH

Analysis of the effect of budget reductions on force structure realignment suggests that the following issues and research tasks are worthy of further attention.

- Determine if there is sufficient excess capacity at NAS Whidbey Island for 3 P-3 squadrons and the EF-111 fleet from Mountain Home AFB. If so, assess the efficiency of implementing scenario D in conjunction with the EF-111 relocation. Significant benefits could be gained from the joint electronic training and operations of USAF EF-111's and USN EA-6B's

- Analyze the impact of the BRAC MILCON deferrals on the tactical proficiency of the two P-3 squadrons that have already relocated to NAS Whidbey Island. Funding for the TSC and other training and support functions has been deferred 1-2 years and the impact of this delay on readiness needs to be assessed.

- Assess the impact of the elimination of excess capacity in the Navy's base structure. Will the loss of excess capacity eliminate the "surge" capability that may be needed in the future.

- Conduct a cost benefit analysis on the BRAC MILCON funding deferral for the P-3 relocation. The funding cuts result in an increase in OMN costs to support the bases whose closure date has been delayed.

APPENDIX

A. MCAS KANEOHE BAY CONSTRUCTION PROJECTS

1. P-261T Consolidated Training Facility

This project calls for the construction of a two story metal or concrete masonry building with reinforced concrete floor slab and built up roofing. This training facility will provide on station, academic classroom and laboratory type technical training for the Naval Maintenance Training Group Detachment (NAMTRAGRUDET), and Fleet Aviation Maintenance Program (FRAMP). NAMTRAGRUDET and FRAMP provide formal aviation maintenance training to pilots, aircrew, and maintenance personnel to maintain and operate the P-3 aircraft.

2. P-268T Aircraft Parking Apron

The existing MCAS Kaneohe Bay aircraft apron pavement is presently designed for Kaneohe's primary aircraft, the F/A-18 *Hornet*. The apron does not meet design strength requirements for the P-3 aircraft and must be strengthened to accommodate the P-3 wheel loads. The pavement has been in service for some time and repair requirements are backlogged due to the lack of O&M funds. The accomplishment of the

repairs, however, will not allow operation of the heavier P-3 loads as it would only include work needed to meet the current F/A-18 mission requirements. This project specifically involves the strengthening of the pavement required to accommodate the P-3 mission. This will avoid rapid pavement failure and consequent damage to aircraft.

3. P-269T Modify Aircraft Wash & Rinse

The existing MCAS Kaneohe Bay rinse facility is designed for F/A-18 Hornets and is essentially comprised of a concrete slab, floor mounted spray nozzles with a pump and drainage system. The P-3 is a much larger and taller aircraft than the F/A-18 and cannot be serviced by the existing rinse facility without major modifications. This project will provide a spray-up rinserack for the P-3s by installing spray racks and additional pavement, modifying water pumps, holding tanks, and the oil-water separator, and increasing the rinse facility taxiway radii. Similarly, the project will modify the wash facility by strengthening/enlarging the pavement and modifying drainage to accommodate P-3s.

4. P-270T Alter Aircraft Hangars

The existing hangars at MCAS Kaneohe Bay reserved for the Navy P-3 aircraft are substandard in that they lack fire protection systems and adequate lighting in the hanga. bays

and shop/administrative spaces. The Marines presently risk using these facilities that do not conform to fire codes and marginally utilize them for aviation supply storage and hangar space. Fire safety codes require the provision of minimum fire protection systems whenever a building is modified or renovated. The hangars will also require modification of entrances to allow the larger P-3 aircraft to be fully housed. The tail height of the P-3 is over 34 feet while the hangar door is only 28 feet tall. Other hangar module spaces will be renovated to meet crew and equipment and administrative space requirements that do not exist. This project proposes to renovate 168,000 SF (the Navy hangar requirement) in order to provide safe and adequate facilities for Navy use. The balance of the spaces will remain substandard to conform with BRAC guidance.

5. P-271T Rehab COMPATWINGPAC

This project calls for the renovation of former research, laboratory, and storage buildings at Kaneohe Bay to accommodate COMPATWINGSPAC administration. Existing buildings will be renovated to provide administrative, conference, vault, and associated administrative spaces. MCAS Kaneohe Bay currently does not currently have sufficient administrative office space to accommodate CPWP headquarters. The buildings

proposed for renovation were formerly occupied by Naval Oceanographic Research personnel.

6. P-272T Alter AIMD Facilities

This renovation work is compelled by the expansion of the existing Ground Support Equipment (GSE) holding shed to meet requirements. The GSE holding shed expansion in the joint shop/shed compound will displace existing shop space which is the station motor pool area. The motor pool will be relocated to a former flight simulator facility. The 3600 SF facility requires renovation in order to convert it to administrative support space.

7. P-273T Ordnance Facilities

This project calls for the construction of ordnance facilities to accommodate the P-3 squadrons at Kaneohe Bay. Project work includes construction of an air/underwater weapons (AUW) shop and storage facility, an above-ground box ready magazine, and an earth-covered missile magazine. The project also includes the relocation of a simulated carrier deck displaced by the construction. There are currently no suitable existing assets available at Kaneohe Bay to satisfy these requirements.

8. P-274T Aviation Supply

This projects calls for the construction of aviation supply facilities at Kaneohe Bay to accommodate the P-3 squadrons from Barbers Point. The project calls for the construction of a Navy supply facility and a Marine Corps storage facility which will be displaced from hangars 102 and 103. Kaneohe Bay does not currently have adequate supply facilities to support the P-3 squadrons.

9. P-276T Operational Trainer Facility

The NAVFAC P-80 Basic Facility Requirement (BFR) criteria for operational training facility requires 37,000 SF (square feet) for four VP squadrons and one HSL squadron. Although this project provides for only half of the requirement, the NAS Barbers Point Operational Training is performed in the existing 15,983 SF permanent facility. The project was to be developed in this way so as to be in accordance with BRAC guidance which states that project scope will be the lesser of BFR and existing assets at the closing site(s). This guidance specifically prohibits execution of construction projects to "get well". Therefore the project scope replaces only existing assets of 15,983 SF. In addition, there are no existing facilities at MCAS Kaneohe Bay that can readily accommodate the special construction needs (high ceilings, raised flooring, etc) required to support the flight

simulator and trainer units. Construction of facilities equal to existing assets will allow training to continue at existing levels.

10. P-277T Alter APTU

This project calls for the renovation of former research facilities at Kaneohe Bay to accommodate the Navy Aviation Physiology Training Unit. The project will renovate an existing building to provide administrative and classroom spaces, and modify an existing research tank for water survival training. The APTU provides physiological and water survival training to the local aviation community.

11. P-280T Relocate POL

This project calls for the modification of the existing aircraft refueling station at Kaneohe Bay to accommodate the P-3 aircraft from Barbers Point. Kaneohe Bay does not have adequate direct refueling facilities to accommodate the P-3 squadrons. Existing facilities are designed for the smaller Marine jet aircraft and are unsuitable for the P-3 aircraft. Adequate direct fueling capability for 2 P-3 aircraft is required.

12. P-284T Coast Guard Facilities

The Coast Guard has provided considerable study information that concludes that the most economic alternative is to move their operation to MCAS Kaneohe Bay. They considered the $2 million to $3 million cost of operating the runway at Barbers Point and alternative sites such as Hickam AFB. The cost of operations,additional construction, and limitations on mission for the other sites prompted inclusion of this project. The Coast Guard could remain as a tenant at NAS Barbers Point if plans are carried out to convert it to a civilian airfield. The state of Hawaii, however, has given no guarantees that Barbers Point will remain as an airfield and has discussed alternative uses such as housing, a college campus, and industrial parks. This project includes an aircraft hangar, supporting shops, administrative space, aircraft apron and taxiway, enlisted bachelor quarters, and replacement of a displaced helicopter rinse facility.

13. P-285T Rehab Administrative Spaces

This project calls for the renovation of 38000 square feet of administrative office space and an 1100 square foot data processing center. This space is needed to accommodate the incoming P-3 support staff at Kaneohe Bay due to the current lack of adequate administrative office space at the MCAS.

14. P-286T Alter BQ

This project calls for the renovation of an existing open bay barrack space to accommodate 377 enlisted personnel and construction of a six story facility to accommodate 100 officers. The project also calls for the renovation of an open bay barrack space for a discipline barracks. This project is required due to a current lack of adequate billeting facilities at Kaneohe Bay.

15. P-287T Helicopter Landing Pad

This plan calls for the construction of a landing pad for the helicopter anti-submarine squadron (HSL-37) relocating to Kaneohe Bay. The pad will include lighting and appurtenances for night and training landings. Kaneohe Bay does not currently have sufficient helicopter landing pads to accommodate the Navy helicopters.

16. P-288T HM/HZ Ammcum Sites

This project calls for the construction of a hazardous and flammable materials storehouse and an operational storage facility on sites which are currently vacant and compatible with the long range land use plan. There are currently no suitable existing facilities available for this use.

17. P-289T Applied Instruction Building

This project proposes the construction of a one-story concrete masonry applied instruction building. The facility is required in order to adequately train and support the operation of the P-3 units from Barbers Point. The project includes air-conditioning, fire-protection, and utility connections. There are no suitable existing assets at MCAS Kaneohe Bay.

18. P-291T Renovate EDF

This project calls for the renovation of an existing facility to support the dining requirements of the Naval aviation units relocating from Barbers Point. Kaneohe Bay does not currently have adequate dining facilities to accommodate the additional Navy personnel. Without this facility the air station will not be able to provide adequate dining facilities to its personnel, and quality of life will be degraded.

19. P-294T Coast Guard

This project calls for the alteration of existing aircraft facilities to accommodate the Coast Guard unit relocating from Barbers Point. Hangar 104 can be modified to satisfy the Coast Guard maintenance hangar and support requirement. The hangar currently lacks necessary foam and wet pipe fire protection systems, and requires a pavement upgrade

to accommodate the heavier Coast Guard C-130 aircraft. The Coast Guard functions are required to be centralized due to unique operational and maintenance requirements in support of a 24 hour immediate standby status for search and rescue operations.

20. P-500T Clubs Addition

This project calls for the construction of additions to the enlisted, officer, and CPO clubs in order to accommodate the Navy personnel relocating to the air station. The project proposes an 11620 sq ft enlisted club addition, an 8170 sq ft CPO club addition, and a 3352 sq ft officer club addition. Kaneohe Bay does not currently have sufficient club facilities to accommodate the relocating units.

21. P-501T Exchange

This project calls for the construction of a one-story exchange retail building to support the relocating units from Barbers Point. The exchange outlets will include cafeteria, service outlet, snack stand, and auto parts facilities. Exchange support areas will include administrative and maintenance shop spaces. The existing assets at Kaneohe Bay are unsuitable to satisfy the requirement.

22. P-502T Med/Dent Facility

This project calls for the construction of medical and dental clinic additions, and an emergency vehicle shelter to accommodate the relocating units from Barbers Point. The proposed medical and dental additions are 3950 and 2067 sq ft, respectively, while the vehicle shelter is 1800 sq ft. The air station does not currently have medical/dental facilities to support the relocating units.

23. P-503T Addition to Recreation Facility

This project calls for the construction of various support and recreational facilities to support the personnel relocating from Barbers Point. The project includes construction of a gymnasium, theater, library, auto hobby shop, pool, and bowling alley.

24. P-504T Utilities Upgrade

This project calls for the upgrade of the water, electrical, and wastewater distribution systems in order to accommodate the Navy operations at MCAS Kaneohe Bay. The existing utility systems do not have adequate capacity to support the relocating P-3 unit personnel.

25. P-505T Aircraft Operations Facility

This project calls for constructing an aircraft operations building, an aircraft line operations facility, a refueling vehicle shop addition, and a controlled humidity space. It also calls for expanding the control tower facility and the fueling laboratory and support space. These facilities are required to accommodate P-3 aircraft operations at Kaneohe Bay.

26. P-506T Telecommunications Center

The ASCOMM telecommunications facility is a vital element essential for support of the relocating VP squadrons. The facilities provide the necessary integrated communications to COMPATWINGSPAC as well as the home-based VP squadrons and transient Patrol Aircraft squadrons (allied and reserve). This is done via point-to-point, air-to-ground, voice, computer, and data circuits. There are no other counter-parts that exist that can perform ASCOMM responsibilities. The relocation with the P-3 squadrons is a necessary part of maintaining their mission capability.

27. P-507T Ordnance Facility

This project calls for the construction of magazines for the stowage of war reserve material and other ordnance presently stored at Barbers Point. The material includes such

as torpedoes and missiles that can not be physically accommodated by the existing Kaneohe Bay facilities. The project is sited at Naval Magazine West Loch since the blast separation distances for the magazines could not be satisfied at Kaneohe Bay. There is no suitable existing magazine space available at West Loch.

28. P-508T Ordnance Facility

This project calls for the construction of ordnance facilities to accommodate the P-3 squadrons at Kaneohe Bay. Project work includes construction of an air/underwater weapons (AUW) shop, an above-ground ready magazine, and a ready service locker. The project displaces an existing amphibious assault LHA simulator deck. Relocation of the deck is included in project P-287T.

29. P-538T Public Works Shop

This project calls for the construction of a new public works facility to maintain essential facilities support and transportation services to Navy and tenant activities in the West Oahu area. The Barbers Point public works facility currently services the entire West Oahu area and is forced to relocate by the closure. The project will include construction of warehouse, storage, maintenance and shop space, and fueling station areas.

30. P-539T Utility System Mod

This project calls for the modification of the Barbers Point utility systems that will allow disposal of excess property by discontinuing PWC utility services and obtaining services from private sources. Separation of utilities is required for the housing areas that are to be retained and the areas of the base that will be disposed of. This modification requires water and electrical line realignments, pump station and substation relocations, and other modifications. Deletion of this project would prevent disposal of the property.

B. NAS WHIDBEY ISLAND CONSTRUCTION PROJECTS

1. P-600T GSE Shop

This project calls for the construction of a new one-story Ground Support Equipment (GSE) shop and the renovation of an existing GSE shop. There is insufficient space in existing GSE facilities to adequately support A-6 and EA-6B squadrons currently assigned. Assignment of P-3 squadrons will further aggravate the deficiency. Additionally, GSE required for P-3 squadrons is too heavy for the paved areas in the equipment compound. The size and weight increase of P-3 GSE would require a new facility even with the removal of A-6 tasking.

2. P-601T Galley Upgrade

Project scope unavailable.

3. P-603T Aircraft Parking Apron Modification

The existing aircraft parking apron is configured for A-6 aircraft which requires 1760 SY (square yards) per aircraft. The parking area requirement for P-3 aircraft is 3560 SY per aircraft. The larger area necessitates relocation of tiedowns, compressed air outlets, and electrical power islands. Current locations of power islands create safety hazards for P-3 aircraft while taxiing in or out of the apron. High risk of hitting power stations with aircraft propellers exist with present power island locations.

4. P-604T ASWOC/Tactical Support Center

This project calls for the construction of a consolidated Tactical Support Center (TSC) to support the P-3 units from Barbers Point. The project proposes a two story building with air conditioning, raised flooring, uninteruptable power system, and site improvements. There is no building available at Whidbey Island that is capable of housing a tactical support center.

5. P-605T Flight Simulator

This project calls for construction of a facility to accommodate two P-3 cockpit training devices, one radar/ESM operator trainer, and one acoustics trainer to support the P-3 mission. The trainers are needed to provide a realistic cockpit environment and visual display for flight crew and refresher training in operating P-3 equipment. The proposed building would be a two-story reinforced concrete and masonry facility with computer flooring, air-conditioning, landscaping, and parking. There is no existing facility at Kaneohe Bay that could be modified to house these trainers.

6. P-606T Hospital Addition

Project scope unavailable.

7. P-607T BEQ

Project scope unavailable.

8. P-608T Hangar 6 Rehab

Hangar 6 is a modular type II hangar built in World War II for medium bombers. The building is presently configured for A-6 aircraft and will require renovation in order to accommodate P-3 aircraft. The P-3 aircraft requires numerous and diverse systems to accomplish its mission. These systems include five different communication systems, two

inertial navigation systems, two underwater acoustic tracking systems, two radar systems, magnetic anomaly detection, sonobuoy tracking, and electronic surveillance systems. These systems require squadron maintenance and storage space that are much higher than A-6 squadron requirements. The combined higher maintenance and administrative space requirements make it necessary to reconfigure space presently used for other purposes. The physical size differences of the P-3 and the A-6 also drive other modification requirements such as increasing crane capacities for lifting much heavier P-3 engines.

9. P-612T Engine Maintenance Shop

Although the A-6 is being phased out, A-6 and EA-6B engines are essentially the same. The EA-6B will remain on station, therefore the maintenance will still be required. The A-6 phase out will reduce the demand for Ready For Issue (RFI) engines but will not reduce the maintenance and storage space required to work and test EA-6B engines. The P-3 engine assembly requires different maintenance shops due to its larger size and weight, and associated propellers, gearbox, etc. The four engines per P-3 vice two per A-6 increases storage and maintenance requirements.

10. P-613T High Power Turn

Project scope unavailable.

11. P-615T Sonobuoy Storage

This project calls for the construction of a one-story pre-engineered building with loading ramp and platform, propane hot water system, security system, and parking area. This sonobuoy storage facility is required because existing storage space is fully utilized by the reserve P-3 squadron already assigned to Whidbey Island.

12. P-616T CPWP HQ

This project calls for the construction of a two-story reinforced concrete and masonry building to be used as COMPATWINGSPAC staff administrative space. There is currently insufficient space in existing facilities to accommodate the additional administrative requirement.

13. P-617T Supply Addition

Project scope unavailable.

14. P-620T CDC

Project scope unavailable.

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