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Assessment of Navy Personnel Geographic Stability or "Homesteading" in the 1980s

Thomas A. Blanco

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April 1991

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"Homesteading" in the 1980s**

Thomas A. Blanco

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<p>13. ABSTRACT (Maximum 200 words)</p> <p>This report contains a survey of past research and Navy initiatives in the area of personnel geographic stability or homesteading and documents lessons learned on why these initiatives have failed. The report also contains a quantitative assessment of informal homesteading through consecutive sea/shore rotational assignments and follow-on sea tours in the same geographical area.</p> <p>The report concludes that the regional sea/shore billet structures for sea-intensive ratings, such as boiler technicians and machinist's mates, do not support a formal homesteading guarantee program, but that the current Navy distribution and assignment system already provides considerable homesteading opportunity to career sailors home ported in five major fleet concentration areas: San Diego, Norfolk, Mayport, Seattle, and Charleston. As of September 1989, informal homesteading seemed to be working better than ever, and the negative aspects of a formal homesteading program would far outweigh any potential gains.</p>					
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FOREWORD

This effort was conducted within the engineering development Program Element 0604703N, Work Unit R1822-MH002 (Sea/Shore Rotation Management System), under the mission sponsorship of the Chief of Naval Operations (OP-01). The objective of this subproject is to develop and apply quantitative methods, including computed-based models, to improve enlisted sea/shore rotation management. Within the scope of this effort, the Head of Enlisted Plans and Community Management Branch (OP-132) tasked the Navy Personnel Research and Development Center to review alternative approaches for improving geographic stability for career sailors and assess the feasibility of implementing a formal "homesteading" sea/shore rotation program.

This report contains a detailed literature review of three personnel geographic stability or "homesteading" programs proposed during the 1980s and documents lessons learned on why they failed to be implemented. This report also documents for the first time a quantitative assessment of the extent of informal homesteading that currently occurs under normal distribution and assignment practices. The results and conclusions should be of interest to Navy managers and researchers interested in the subject and should serve as a reference document to future efforts.

MURRAY W. ROWE
Director, Manpower Systems Department



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SUMMARY

Problem

Over the last 10 years, the escalating costs of relocating from one geographic area has made geographic stability or "homesteading" an important concern for most Navy personnel, particularly homeowners and/or two-income families. Responding to this problem, Navy manpower planners have considered at least three geographic stability programs during the 1980s: Personnel Geographic Stability (PEGS), SEA HORSE, and TETHER. All of them have failed. Recently, the Navy renewed interest in this issue and tasked Navy Personnel Research and Development Center to examine alternative approaches to support increased geographic stability for career sailors.

Objective

The primary objective of this effort was to examine previous approaches at formal homesteading and document lessons learned. A secondary objective was to assess the extent of informal homesteading that already takes place within the current assignment system.

Approach

Previous formal homesteading proposals were examined through an extensive literature search of published reports and Navy correspondence. In addition, the Enlisted Master Record (EMR) was processed to quantify the amount of consecutive sea/shore rotational assignments or retours in the same geographical area that were occurring informally.

Results

Results of the literature review gave strong evidence against a formal homesteading program. All three proposed programs required major changes to the distribution system, and high percentages of shore billets outside of major fleet concentration areas (e.g., instructor billets in Great Lakes, Illinois) would have limited program participation. Any major billet restructuring, such as relocating major training facilities to major fleet concentration areas, was seen as too high a political and financial cost for the prospective gain in geographic stability. In the past, the fleet commanders also opposed a formal homesteading program because it would limit their flexibility to reassign assets within their span of control and therefore, degrade readiness.

Results of analysis of the EMR showed high percentages of informal homesteading in terms of retours and follow-on sea tours in five major home ports: San Diego, Norfolk, Mayport, Seattle, and Charleston. This was especially true for selected mission critical ratings (i.e., operations specialist, boiler technician, machinist's mate, gas turbine systems technician (electrical), gas turbine systems technician (mechanical), fire control technician (ballistic missile fire control), fire control technician (gun fire control), sonar technician (surface), sonar technician (submarine)).

Conclusions

A formal guarantee program like the ones proposed in the 1980s won't work for a number of reasons. It is unexecutable from a distribution standpoint and undesirable from the fleet commanders' perspective. Any major billet restructuring would be too expensive financially and infeasible politically.

The best way to achieve improved geographic stability is through informal means. The Navy already has a policy to optimize rotations within the constraints of other detailing parameters to achieve fleet readiness, individual desires, and permanent change of station cost considerations. The quantitative analyses in this study indicate that Navy detailers are doing a great job in providing homesteading opportunities through consecutive sea/shore rotational assignments as well as follow-on sea tours.

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INTRODUCTION

Problem

Over the last 10 years, the escalating costs of relocating from one geographic area has made geographic stability or "homesteading" an important concern for most Navy personnel, particularly homeowners and/or two-income families. Giuliano (1988), Jacobson (1983), and Jacobson and Thomason (1983) provide some quantitative evidence of the negative financial impact incurred by military families who move frequently. Responding to this problem, Navy manpower planners considered at least three geographic stability programs during the 1980s: Personnel Geographic Stability (PEGS), SEA HORSE, and TETHER. All of them failed. Recently, the Head of the Enlisted Plans and Community Management Branch (OP-132) asked Navy Personnel Research and Development Center (NPRDC) to revisit this issue by examining alternative approaches to support increased geographic stability for career sailors.

Objective

The objectives of this effort were to (1) examine previous approaches at formal homesteading and document lessons learned, and (2) look at how enlisted assignment decision makers or detailers are informally homesteading career enlisted personnel.

FORMAL HOMESTEADING PROPOSALS

Personnel Geographic Stability (PEGS) Program, 1981-82

In early 1981, the Chief of Naval Personnel (CNP) tasked NPRDC with analyzing the Navy's capacity to implement a formal homesteading program (CNP ltr of 23 Jan 81). The tasking assumed that the proposed program would:

1. Be limited to major fleet concentration areas.
2. Include all enlisted ratings and officer communities.
3. Be consistent with Navy manning policies.
4. Supplement, but not replace existing reenlistment incentives.

The tasking specifically required NPRDC to determine the extent to which homesteading could be "guaranteed", while making special provisions for "top performers" due to their higher probability of being assigned to priority shore billets outside of major fleet concentration areas.

The Navy selected the boiler technician (BT) rating for the homesteading feasibility study (Naval Military Personnel Command (NMPC) ltr 13 Mar 81)) for the following reasons:

1. BTs were a large population (over 10,000 members).
2. BTs were in a manpower shortage situation, especially in the E-5/E-6 paygrades.
3. BTs were mission critical (although the operations specialist (OS) rating was not chosen because it was too mission critical)).

4. Few BTs were in closed-loop detailing communities.

5. Many BTs were assigned ashore as recruiters and instructors outside of major fleet concentration areas.

NPRDC's plan of action and milestones for a homesteading feasibility study (NPRDC ltr of 24 Apr 81) identified a 3-phase, 18-month approach. Phase I consisted of defining alternative forms of homesteading, developing a quantitative approach to estimate bounds for program participation, and estimating the homesteading potential in the San Diego area. The plan included extending the analysis to other major fleet concentration areas (Phase II) and other ratings (Phase III).

NPRDC briefed NMPC-00 and NMPC-4 on the results of the BT feasibility assessment at the end of Phase II on 24 September 81. The program was named PEGS for Personnel Geographic Stability. The briefing made the following points. PEGS only included BTs in paygrades E-5 through E-9, with 5 to 20 years of service. PEGS intention was to benefit the individual by increasing family stability, and by increasing long-term net income by reducing costs associated with family moves. PEGS was to benefit the Navy by an expected increase in retention of homesteaded personnel (particularly top performers) and reduced costs associated with permanent change of station (PCS) moves. PEGS for BTs was assessed in six major fleet concentration areas: Charleston, Mayport, Newport, Norfolk, Pearl Harbor, and San Diego.

Most BT sea billets (82%) were in the PEGS regions listed above. However, 50 percent of the BT shore billets were in non-PEGs regions. The PEGS program accommodated this imbalance by insuring that people rotating from PEGS region sea billets filled a fair-share of non-PEGs region shore billets. Conversely, the program reserved PEGS region sea positions to accommodate the rotation of non-PEGs shore personnel back to sea. Ninety-five percent of the E-5 through E-9 BT shore billets were located in the United States, with the second largest geographical concentration in the Great Lakes area (Figure 1). A key PEGS strategy was to allow an individual to "buy" his way into the PEGS program by serving in a priority shore billet outside of a PEGS region (e.g., instructor duty in Great Lakes). This allowed top performers to meet the Navy's needs outside of PEGS regions and also participate in the program.

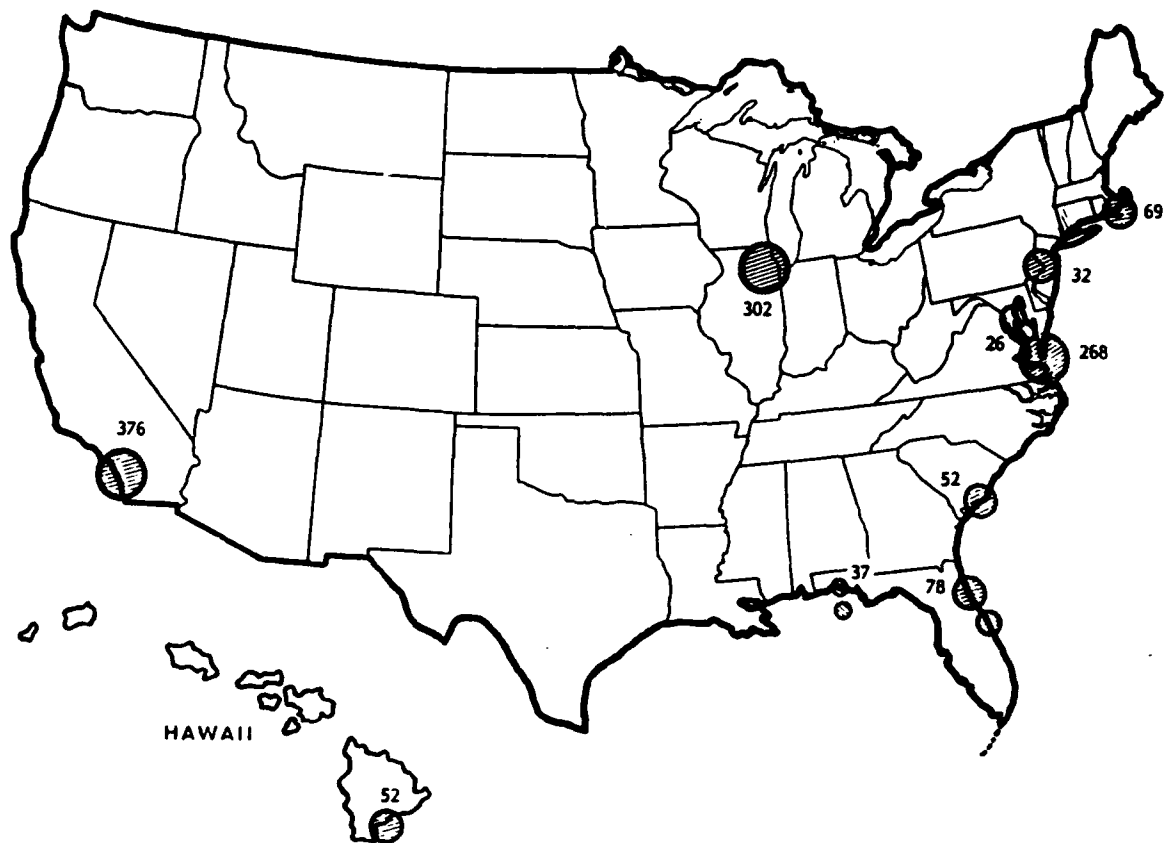


Figure 1. United States distribution of boiler technician shore billets (paygrades E-5 through E-9).

Blanco and Buletza (1982) documented the modeling framework and the results for BTs. Table 1 summarizes the model results in terms of projected steady-state levels and percentages of participation in the PEGS program by region and by duty type (sea, shore) for paygrades E-5 through E-9. For example, there would be 814 San Diego PEGS program participants. Of these, 670 would be in the San Diego area and 144 would be serving their first PEGS program assignment in a priority away shore billet. The baseline results indicated that 42 percent of the E-5 through E-9 BT community could be accommodated in the PEGS program while still maintaining an overall Navy-wide manning balance (i.e., a total of 2021 PEGS positions would be established within a Navy-wide manning plan of 4845 BT E-5 through E-9 personnel).

On 5 October 1981, the OP-01 PEGS Project Officer (Commander, Tom Eubanks, (OP-132)) gave a comprehensive briefing concerning the proposed BT pilot program to NMPC-4 Branch Heads. The briefing generated the following questions and concerns. The Head, Enlisted Assignment Division, expressed a number of implementation concerns (NMPC memo of 6 Oct 81) including:

1. Would there be a special PEGS program office or would it be another action for the detailers?

Table 1

PEGS Summary Results for BT Rating, Paygrades, E-5 through E-9

PEGS Home Port	Home Port Participants/ (% Participation)	Priority-away	Total
San Diego	671 (54%)	144	815
Norfolk	486 (48%)	127	613
Mayport	151 (45%)	42	193
Charleston	88 (27%)	45	133
Pearl Harbor	113 (44%)	34	147
Newport	108 (74%)	13	121
Total	1617 (49%)	405	2022 (42%)

Notes. 1. PEGS = Personnel Geographic Stability.

2. BT = boiler technician.

2. Would PEGS billets take priority on the Requisition over the needs of the Navy?

3. What is the current extent of geographic stability for BTs?

4. Won't additional constraint on the distribution system make the detailer's job of meeting the manning needs of the Navy more difficult?

5. What is the impact on other ratings of "fencing" general type (G) shore billets¹ for BTs?

The Head, Distribution Support Division, expressed some different but also important concerns (NMPC memo of 23 Oct 81). He stated that he believed that a *pilot* program was "absolutely essential", and that it should address:

1. Sensitivity of the program to fluctuations in personnel inventory, billets, and PCS funding.
2. ADP requirements for implementation.

On 5 November 1981, OP-01 approved the BT Pilot Program Implementation Plan and made the following decisions (CNO memo of 21 Nov 81):

1. Proceed with plan to implement BT pilot program in FY83.
2. Perform final reassessment of capability to implement by March 1982.
3. Man the homesteading program office with four billets by March 1982.

NPRDC briefed NMPC-4 on the final assessment of the Navy's capability to execute a BT pilot program on 4 March 1982 and discussion included OP-01's favorable position to implement. On 15 March 1982, plans for the BT pilot program made front page news in the *Navy Times*.

¹G billets are shore billets that can be generally filled by any enlisted occupation.

The publicity drew more documented concerns from NMPC-4 divisions (NMPC memo of 17 Mar 82). These concerns are summarized below:

1. BT rating doesn't adequately address distributable communities, women, and isolated duty issues.
2. Too much emphasis on CNO priority 2 manning ashore vice CNO priority 2 manning at sea or in isolated areas.
3. "25-year guarantee"² vice "preferred assignment" program.
4. Interface with distribution system functions.
5. Sensitivity to the dynamics of manpower requirements.
6. Cost-effectiveness: conduct a baseline comparative study with current geographic stability.

Two months after OP-01's approval of the BT Pilot Program Implementation Plan, OP-13 was already considering alternatives to a formal homesteading program (CNO memo of 11 May 82). OP-13 proposed to brief Admiral (ADM) Watkins, prospective CNO, on details of the PEGS program. ADM Watkins, then Commander in Chief, Pacific Fleet, strongly opposed formal homesteading on the grounds it would constrain the distribution process and limit the flexibility of the fleet commanders to reassign assets within their span of control. ADM Watkins viewed PEGS as having a negative effect on readiness.

The PEGS program formally ended in July 1982 with an (OP-13) memo for OP-01 (22 Jul 82) providing the following summary and assessment:

1. BT pilot program feasible, but too costly to extend to majority of enlisted force due to complexities of distributable communities.
2. Potential negative effect of current strategy upon E-5 and above unable to participate (only 42% could be included).

The emphasis in OP-01 shifted from one of "guaranteed homesteading" to maximum retours within the capabilities of the current distribution process. The CNO (ADM Watkins) reinforced this shift in emphasis in a memo to the Secretary of the Navy (CNO memo 17 Sep 82) making the following points:

1. San Diego and Norfolk retours increased and are close to maximum (from 33% in FY78 to 46% in FY81).
2. Ability to retour limited by sea/shore billet structure in each area, the fact that many training facilities which support sea-going ratings are not collocated with operational units, and by an overall shortage of experienced petty officers.

²Potential homesteading from the 5th year of service to the 30th year of service.

3. Efforts to further enhance retouring include placing new shore training facilities in areas of fleet concentration and possible civilization of shore duty billets in areas away from major fleet home ports.

4. Navy detailing parameters optimize fleet readiness, individual desires, and PCS cost considerations.

Finally, the CNO publicly stated his reasons for cancelling PEGS (*Navy Times*, 1 November 1982). These are summarized below:

1. PEGS would serve only a limited number of sailors.
2. Navy theoretically has a policy to "optimize retours."
3. Guaranteed reassignments are not possible due to worldwide requirements.

4. PEGS idea of having sailors accept assignments in less desirable locations to get the locations of their choice for several future assignments is a good way to fill necessary billets outside of fleet concentration areas.

Project SEA HORSE

PROJECT SEA HORSE originated in OP-01's Long-Range Planning Branch (then in OP-11). OP-11 briefed CNO on the concept on 7 Jan 82, about the time that PEGS was falling out of favor. SEA HORSE was much more ambitious than PEGS. It was a long-term plan for enlisted surface personnel with the objectives of increasing fleet readiness, decreasing training and maintenance requirements, reducing personnel turnover rates, and providing geographic stability. SEA HORSE was a long-term plan because it required a geographic realignment of enlisted and civilian billets to improve the sea/shore billet ratios in major fleet concentration areas and reduce the billets outside of these areas, such as Great Lakes.

SEA HORSE also proposed some radically different ideas about ship manning and crew stability. It called for assigning crews indefinitely and manning ships to 133 percent of the Ship's Manning Document. The new manning configuration would be as follows:

1. Four equal sections (any 3 equal 100 percent manning).
2. Two "ship's company" sections for local, short-duration operations (operate ship under normal circumstances).
3. One "standby" section ashore (working for local shore activities), except when needed on-board.
4. One "contract" section always ashore (on training/leave) and also available for work at local shore activities.

The standby crew would be recalled for extended operations and deployments, and every 18 months, each section would be assigned to the 6-month contract period (not eligible for recall).

Each individual would be assigned to two billets, one on-board ship and one at shore. At the 12-year point, the E-6 or E-7 would be given the option to transfer ashore permanently without sea pay to supervise ashore. Sea pay bonuses would be paid to those who stayed at sea. SEA HORSE recognized that shore supervisors would have a difficult task of managing a rotating pool of workers.

Finally, SEA HORSE proposed indefinite homesteading, extended overhauls in local shipyards, and the centralization of major training facilities at a large port on each coast.

The SEA HORSE project team claimed the following benefits:

1. Increased readiness due to all ships fully manned, ships ready to deploy, elimination of cross-decking, and long-term crew stability.
2. Reduced training and maintenance costs due to crew stability.
3. Reduced personnel turnover (crew stability) and reduced billets in the transient account.
4. Increased geographic stability, expanded spouse's employment opportunities, and reduced family separation.

At the end of FY83, OP-01 requested NPRDC's review of project SEA HORSE objectives, a subjective appraisal of the plan, and an estimate of costs and time to conduct a full feasibility assessment (CNO ltr 22 Sep 83). NPRDC formally responded to this request (NPRDC ltr of 8 Nov 83), using lessons learned from the PEGS program. NPRDC's work on the PEGS feasibility assessment took 18 months and \$450K. SEA HORSE was much more complex than PEGS. NPRDC estimated the feasibility assessment to take 2 to 3 years at \$400K a year. NPRDC also went on record to consider SEA HORSE a high risk endeavor for the following reasons:

1. Required militarization of civilian billets--recent trends were going in the opposite direction (i.e., the commercial activities program is aimed at contracting out shore establishment functions traditionally performed by Navy military and civilian personnel).
2. Relocation of major training facilities--political obstacles are obvious, and cost of dual location of many training facilities may be prohibitive.
3. Fleet readiness--may actually suffer due to reduced flexibility to move assets from one ship to another and one home port to another.
4. Shore Intermediate Maintenance Activity organization redesign--managing a rotating pool of workers may negatively affect productivity because of time required (sometimes 9 to 12 months) for on-the-job training.
5. Detailing process changes--radical impacts.
6. PCS funds--rotating crews from sea duty every 6 months would be very expensive, especially when the ships are deployed to the Indian Ocean or the Mediterranean.

About a year later, OP-13 formally recommended termination of further work on SEA HORSE (CNO memo of 12 Oct 84), stating that the limited Chief of Naval Operations Studies and Analysis Program (CSTAP) resources could be "better utilized on higher priority, more practical studies."

Project Tether

OP-13 established a PROJECT TETHER working group in March 1984 to set project definitions and goals. Concentrating on mission critical/sea intensive ratings in the mid-grades and length of service cells 5 through 15, TETHER's goal was to alleviate the chief threats to retention:

1. Arduous duty (shipboard burnout).
2. Family separation.
3. Geographic instability.

TETHER would homestead individuals that qualified in the above categories for 8 to 10 years in the same home port, rotating them 12-months sea and 6-months shore.

The Head, Enlisted Assignment Division, expressed his concerns about TETHER from an execution standpoint (NMPC memo of 29 Mar 84) including:

1. Unexecutable from the distribution point of view.
2. For BT example, based on billet ratios, sea/shore rotation should be 6.9/2; maximum 5-year sea tour policy already impacts on readiness; reducing ratio to 2/1 would only further hurt readiness.
3. Too much personnel turbulence.
4. Problems in filling priority billets outside of fleet concentration areas.

The Assistant Commander for Distribution agreed with these concerns and recommended buying/reprogramming billets ashore to improve rotation in sea intensive ratings rather than changing the current distribution system (NMPC memo of 6 Apr 84).

The Chairman of the TETHER Working Group recognized some of these issues and problems in a series of memos during May/June 1984 (CNO memos of 14 and 22 May/22 Jun 84). Since TETHER required an additional 1,652 shore billets in the TETHER home ports to provide a 2:1 sea/shore rotation, this was a major area of concern. OP-132 investigated the following alternative solutions:

1. Program additional authorizations in home port areas.
2. Redistribute G, L, and K billets attributed to the TETHER ratings at other locations to the TETHER home ports.
3. Investigate economic elasticities to determine limits for which pay and bonuses will maintain inventories in target skills with an insufficient shore billet base.

Even if the Navy resolved the problems with the billet structure, OP-132 recognized that another problem involved regulating rotation of personnel within sea and shore in home ports compatible with ship operating cycles. This was also a concern of NMPC-4, who went on record against what constituted a requirement for two-step detailing.

Another problem, one which eventually cancelled the PEGS program, concerned the numbers of E-5's and E-6's in selected ratings not able to participate in TETHER. The Navy wanted to avoid separate career paths for TETHER/non-TETHER personnel. The retention impact of non-TETHER personnel was also a concern.

Despite the above obstacles, OP-13 recommended replacing PROJECT SEA HORSE with PROJECT TETHER in the FY85 CSTAP funding plan (CNO memo of 31 Oct 84). Due to limited resources, there was no CSTAP funding available for TETHER in FY85. The Center for Naval Analyses (CNA) supported TETHER at a low level of effort under the umbrella of other MPT studies. OP-13 tasked CNA to assess the level of geographic stability being achieved by the TETHER ratings under the existing billet structure and distribution practices. OP-13 wanted to know if the costs of large changes to the billet structure and distribution system were worth the gain if geographic stability was already acceptably high in some locations (Stout, 1985).

Using data from the Enlisted Master Record (EMR) from June 1979 to September 1984, Questor, Lurie, and Garvey (1985) calculated estimated lengths of stay for five sea-intensive combat system/propulsion ratings in eight geographic areas. Table 2 presents their results.

Table 2
Estimated Average Length of Stay (months)

Location	Rating					Avg
	BT	FT	GS	OS	ST	
Charleston	46.7	48.5	38.6	50.8	39.2	45.4
Hawaii	40.7	39.1	31.6	45.5	43.4	42.2
Long Beach	40.9	40.6	30.7	39.2	38.2	38.9
Mayport	39.4	41.7	37.6	40.7	34.8	39.2
Norfolk	46.7	41.9	52.8	45.1	43.1	45.2
Newport	33.9	41.7	35.6	35.9	30.9	34.6
San Diego	53.5	51.3	52.8	46.0	42.4	48.8
San Francisco	41.0	38.7	26.2	37.8	38.3	39.3

- Notes.** 1. BT = boiler technician.
 2. FT = fire control technician.
 3. GS = gas turbine systems technician.
 4. OS = operations specialist
 5. ST = sonar technician
 6. Avg = average

San Diego was the only location with an average length of stay of over 4 years for all five ratings. Another interesting statistic in the CNA report is the proportion of individuals who stayed for relatively long periods of time (4 to 8 years). San Diego was the only location that had a significant amount of informal homesteading after 8 years (18.5% of the BT, FT, and OS ratings).

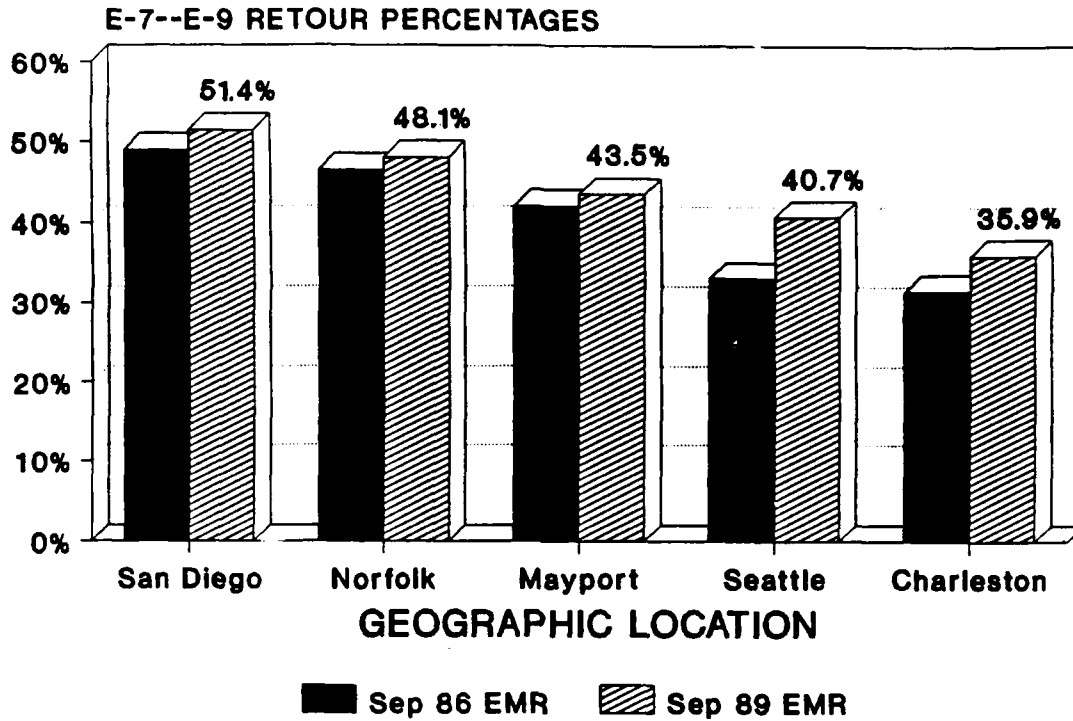
PROJECT TETHER died sometime in FY85 due to lack of CSTAP funding and the inability to conclusively answer the question, "Is the cost of the structural changes worth the gain in geographic stability?"

INFORMAL HOMESTEADING

Since previous homesteading programs concentrated on E-5 personnel and above, OP-132 asked NPRDC to reassess the limitations discussed above to see if they applied to a more senior subset of personnel, enlisted supervisors (E-7 through E-9). Although the regional billet structure was more favorable for supervisors than journeymen (E-7 through E-9), there were still high percentages (40%-60%) of shore billets outside of the five major CONUS fleet concentration areas in mission-critical, sea-intensive ratings like BT, machinist's mate (MM), gas turbine systems technician (electrical), and gas turbine systems technician (mechanical), with the largest concentration in Great Lakes, Illinois. This fact provided more convincing evidence against a formal guarantee program. We also decided to determine the current extent of informal homesteading defined as consecutive assignments in the same geographic area, and from the analysis, gain some insight about potential for improvement. We tracked the two most common informal homesteading practices: consecutive sea/shore rotational assignments and consecutive follow-on sea tours. In both cases, we found informal homesteading to be working better than ever in the five major CONUS home ports: San Diego, Norfolk, Mayport, Seattle, and Charleston.

Sea/Shore Retours

For each geographic area, we analyzed the current extent of E-7 through E-9 retours: consecutive sea-to-shore (or shore-to-sea) rotational assignments in the same geographic area. The percentages represented by the bar graphs in Figure 2 represent the proportion of people on the EMR that change from a past activity at sea to a current activity ashore, or from shore to sea, and don't leave the area. Those people that changed activities but did not rotate from sea or from shore duty were excluded from the calculations if they stayed in the area. We used two snapshots of the EMR, September 1986 and September 1989, to obtain our results. For example, on the September 1989 EMR, 3,417 E-7s through E-9s in the Navy who were located in San Diego in an operational job at sea or shore in their past activity changed from sea-to-shore or from shore-to-sea to their current activity. Of these, 7,755 (51.4%) were retoured in San Diego. As Figure 2 shows, over the last 3 years, retouring has improved in all five locations, with the biggest gains in Seattle and Charleston.



Based on Past Activity/Current Activity

Figure 2. Total retours (E-5 through E-9) all Navy.

We also analyzed the data separately for six mission critical rating families. On the average, their retour percentages were higher than the all Navy averages. We also found a relationship between high retour percentages, favorable sea/shore billet ratios, and individual location preferences. This was especially true for the OS rating in San Diego and Norfolk and the FT rating family in Seattle and Charleston. Figure 3 displays retour percentages from the September 1989 EMR for selected surface mission critical ratings in San Diego and Norfolk, while Figure 4 displays similar data for selected submarine mission critical ratings in Seattle and Charleston.

Rating	San Diego	Norfolk
All Navy	51%	48%
Boiler Technician	54% (N = 38)	55% (N = 56)
Machinist's Mate	58% (N = 112)	42% (N = 90)
Operations Specialist	66% (N = 82)	69% (N = 99)

Base on Past Activity/Current Activity Sep 89 Enlisted Master Record

Figure 3. Total retours (E-7 through E-9) surface mission critical ratings.

Rating	Seattle	Charleston
All Navy	41%	36%
Fire Control Technician		
Fire Control Technician (Ballistic Missile Fire Control)		
Fire Control Technician (Gun Fire Control)	56% (N = 28)	52% (N = 25)
Machinist's Mate	40% (N = 34)	43% (N = 56)
Base on Past Activity/Current Activity Sep 89 Enlisted Master Record		
Figure 4. Total retours (E-7 through E-9) submarine mission critical ratings.		

Follow-on Sea Tours

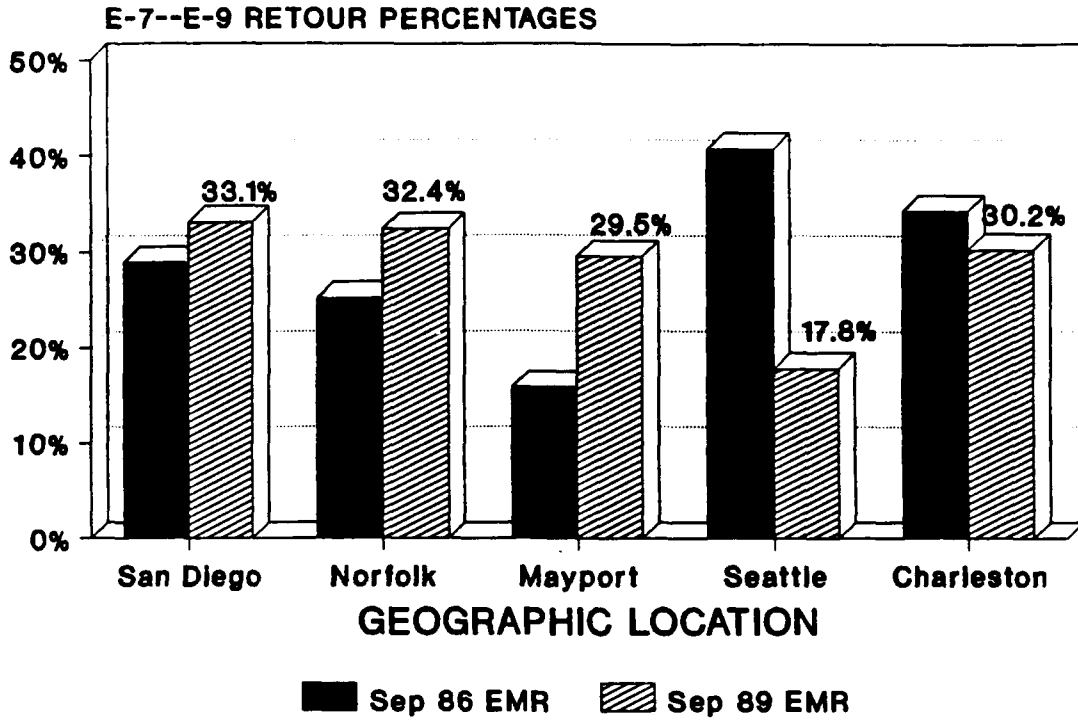
We also found a high percentage of follow-on sea tours for E-7 through E-9 personnel in these mission critical ratings. For example, on the September 1989 EMR, over a third of those that were on sea duty in San Diego in their past activity received a follow-on sea duty tour in San Diego for their current activity. As Figure 5 shows, the follow-on sea tour percentages are also high in the other locations. Figure 6 shows the follow-on sea tour percentages in San Diego and Norfolk for E-7 through E-9 for each of three mission critical and sea-intensive ratings, BT, MM, and OS. Follow-on sea tours were not counted in the original retour statistics, but they do make a positive contribution to personnel geographic stability.

CONCLUSIONS AND RECOMMENDATIONS

There is convincing evidence in this paper against a formal geographic stability program. First, all three programs (PEGS, SEA HORSE, and TETHER) required major changes to the distribution system. NMPC-4 criticized these programs as unexecutable from a distribution standpoint. NMPC-4 did not want an additional constraint on the distribution system that would make the detailer's job harder to meet the manning needs of the Navy. The fleet commanders also opposed a formal homesteading program because it would limit their flexibility to reassign assets within their span of control and therefore, degrade readiness.

The proposed formal programs also failed because they could only serve a limited number of sailors. Guaranteed reassignments in the same geographic area were not possible because of the billet structure (sea/shore ratios and geographic locations). For example, analysis during the PEGS program showed that over 50 percent of the BT shore billets were located outside major fleet concentration areas. Retention of non-homesteaded personnel was a major concern.

In addition, SEA HORSE and TETHER proposed major changes to the billet structure, including relocating major training facilities, militarizing civilian billets, and buying additional shore billets. The Navy estimated the financial and political costs to accomplish the above changes



Based on Past Activity/Current Activity

Figure 5. Follow-on sea tours (E-7 through E-9) six mission critical ratings.

Rating	San Diego	Norfolk
Boiler Technician	35% (N = 30)	30% (N = 36)
Machinist's Mate	35% (N = 65)	37% (N = 100)
Operations Specialist	29% (N = 26)	33% (N = 46)

Based on Past Activity/Current Activity Sep 89 Enlisted Master Record

Figure 6. Follow-on sea tours (E-7 through E-9) mission critical ratings.

to be too high for the prospective gain in geographic stability. These changes also went against the trend towards Strategic Dispersal.

This paper concludes that the best way to achieve improved geographic stability is through informal means. At the end of FY82, the CNO went on record to state that the Navy already had a policy to optimize retours within the constraints of other detailing parameters to achieve fleet readiness, individual desires, and PCS cost considerations. He stated that San Diego and Norfolk retours increased from 33 percent in FY78 to 46 percent in FY81, and were close to maximum.

This paper further demonstrated that informal homesteading is working better than ever in five major CONUS home ports: San Diego, Norfolk, Mayport, Seattle, and Charleston, in terms of both consecutive sea/shore rotational assignments and follow-on sea tours. In each of the five locations above, at least a third of all sea/shore rotational assignments were retours in both the September 1986 and September 1989 EMR snapshots. San Diego had the highest retour percentage with 51.4 percent on the September 1989 EMR, and Seattle and Charleston experienced the largest improvements between the two snapshots. The mission critical ratings we looked at tended to be even more geographically stable than the All-Navy average. For example, on the September 1989 EMR, the OS rating had a 66 percent and 69 percent retour percentage in San Diego and Norfolk, respectively, while the FT rating family (fire control technician (ballistic missile), fire control technician (gun)) had a 56 percent and 52 percent retour percentage in Seattle and Charleston, respectively.

These selected mission critical ratings also displayed high percentages of follow-on sea tours in the same geographical area, further contributing to improved personnel geographic stability. Follow-on sea tours can also be beneficial to the Navy in reducing regional sea/shore billet problems and maintaining sufficient experience levels and readiness on ships and squadrons.

REFERENCES

- Blanco, T.A., & Buletza, P.G. (1982). *Assessing the Personnel Geographic Stability Program for Boiler Technicians* (NPRDC-TR-82-40). San Diego: Navy Personnel Research and Development Center.
- CNO Still a Strong Backer of Homesteading. (1 November 1982). *Navy Times*.
- Chief of Naval Personnel. (1981). Letter for Commanding Officer, Navy Personnel Research and Development Center, OP-136C2 Ser 537- 80 of 23 Jan 81, Subj: Analysis of Navy's Capability to Implement a Formal "Homesteading" Program, by Vice Admiral Landow W. Zech, Jr. Washington, DC.
- Giuliano, S.A. (1988). *The impact of permanent change of station moves on air force enlisted family income for avionics and nonavionics personnel*. Department of the Air Force Air University, Air Force Institute of Technology, Wright-Patterson AFB, OH. (AD-A201 157)
- Jacobson, L. (1983, January). *Research to quantify the effect of permanent change of station moves on wives' wages and labor supply* (Professional Paper 373). Alexandria: Center for Naval Analyses.
- Jacobson, L.S., & Thomason, J.E. (1983). *The effect of PCS moves on military wives' earnings and husband's retention* (CNA CRC 508). Alexandria: Center for Naval Analyses.
- Naval Military Personnel Command. (1981). Letter for Commanding Officer, Navy Personnel Research and Development Center, NMPC- 461:PJR:jw Ser 265 of 13 Mar 81, Subj: Geographic Stabilization Feasibility Study, by D.B. Robinson. Washington, DC.
- Naval Military Personnel Command. (1981). Memorandum for Naval Military Personnel Command (4), NMPC-40:JSY:rwr of 6 Oct 81, Subj: PEGS, by CAPT. J. S. Yow. Washington, DC.
- Naval Military Personnel Command. (1981). Memorandum for Naval Military Personnel Command (4), NMPC-47-CEW:dj of 23 Oct 81, Subj: PEGS, by CAPT C.E. Ward. Washington, DC
- Naval Military Personnel Command. (1982). Memorandum for Procedural Control/Fiscal Management Division (NMPC-46), NMPC- 493G:GRH:lj of 17 Mar 82, Subj: PEGS Program, by LT G. R. Habel. Washington, DC.
- Naval Military Personnel Command. (1984). Memorandum for Naval Military Personnel Command (4), NMPC-40B:DMC of 29 Mar 84, Subj: Project Tether, by CAPT R. G. Castle. Washington, DC.
- Naval Military Personnel Command. (1984). Memorandum for Chief of Naval Operations (OP-13) of 6 Apr 84, Subj: Project Tether, by COMO Richard C. Ustick. Washington, DC.
- Navy Personnel Research and Development Center. (1981). Letter to Chief of Naval Personnel, 303:TB:pli Z1186-PN.08 of 24 Apr 81, Subj: Geographic Stabilization Feasibility Study; POA&M for, by Thomas A. Blanco. San Diego, CA.

- Navy Personnel Research and Development Center. (1983). Letter for Chief of Naval Operations, 61:TB:pli/3903, Ser 953 of 8 Nov 83, Subj: Project SEA HORSE, by CAPT J. W. Renard. San Diego, CA.
- Office of the Chief of Naval Operations. (1981). Memorandum for the Record, OP-132E4:TIE:sas Ser 1652-81 of 21 Nov 81, Subj: Homesteading, by RADM J. R. Hogg. Washington, DC.
- Office of the Chief of Naval Operations. (1982). Memorandum for Chief of Naval Operations (OP-132), OP-132E4:TIE:tl Ser 0676-82 of 11 May 82, Subj: Formal Homesteading, by CDR T. I. Eubanks. Washington, DC.
- Office of the Chief of Naval Operations. (1982). Memorandum for the Secretary of the Navy, Ser 00/300357 of 17 Sep 82, Subj: Personnel Rotational Policy, by ADM J. D. Watkins. Washington, DC.
- Office of the Chief of Naval Operations ltr of 22 Sep 83.
- Office of the Chief of Naval Operations. (1984). Memorandum for Chief of Naval Operations (OP-13), OP-132C11:JTK:bb Ser 371-84 of 14 May 84, Subj: Project Tether Update, by CDR J. T. Kelly. Washington, DC.
- Office of the Chief of Naval Operations. (1984). Memorandum for Distribution, 5000 Ser OP-132C11/363047 of 22 May 84, Subj: Tether Update, by CDR J. T. Kelly. Washington, DC.
- Office of the Chief of Naval Operations. (1984). Memorandum for the Director, Military Personnel and Policy Division (OP-13), 7400 Ser OP-132H1/465-84 of 22 Jun 84, Subj: Project Tether Update, by R. C. Taylor. Washington, DC.
- Office of the Chief of Naval Operations. (1984). Memorandum for the Assistant Deputy Chief of Naval Operations (MPT), 5223 Ser OP-135C4/0527 of 12 Oct 84, Subj: CNO Studies and Analysis Program (CSTAP) 85, by RADM A. J. Herberger. Washington, DC.
- Office of the Chief of Naval Operations. (1984). Memorandum for the Assistant Deputy Chief of Naval Operations (MPT), 5000 Ser OP-132H1/802-84 of 31 Oct 84, Subj: CNO Studies and Analysis Program (CSTAP) 85, by RADM A. J. Herberger. Washington, DC.
- Stout, C. L. (1985, February). *Tether* (Issue Paper). Office of the Chief of Naval Operations, Washington, DC.
- Questor, A., Lurie, P., & Garvey, K. (1985). *Current geographic stability in the Navy* (CNA CRM 85-88). Alexandria: Center for Naval Analyses.

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