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NAVY PERSONNEL RESEARCH AND DEVELOPMENT CENTER SAN D--ETC F/G 15/5
MANPOWER AVAILABILITY, NAVY ENLISTED PROJECTIONS -- FY 1979-198--ETC(U)
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LEVEL II

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NAVY PERSONNEL RESEARCH AND DEVELOPMENT CENTER SAN DIEGO CALIFORNIA 92162

✓ NPRDC SR 80-5

DECEMBER 1979

**MANPOWER AVAILABILITY
NAVY ENLISTED PROJECTIONS--FY79-85**

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December 1979

MANPOWER AVAILABILITY
NAVY ENLISTED PROJECTIONS—FY79-85

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FOREWORD

This effort has been conducted under subproject Z1170-PN.05, Reducing Manpower Costs Through Better System Design, and the sponsorship of the Deputy Chief of Naval Operations (OP-01). The objective of the subproject is to develop procedures to incorporate hardware/software/personnel tradeoffs and cost benefit alternatives in all stages of system design.

This effort was conducted to provide decision makers in manpower planning and in hardware development offices with information regarding current and projected availability of manpower for pay grades within selected Navy ratings through FY 1985. This information will assist these decision makers in estimating the demand for personnel of particular ratings and pay grades and in determining the probability of whether personnel with those qualifications will be available to meet the demands of new hardware acquisitions. If this information is available early in the design process, hardware developers will be able to focus on and compensate for specific manning problem areas through hardware design actions. This report, which is the second on manpower availability, supersedes the earlier issue, NPRDC Special Report 79-11 of January 1979.

Appreciation is expressed to personnel of the CNO Long-Range Manpower, Personnel and Training Planning Branch (OP-110), especially to CDR Lee S. Mairs, for assistance in acquiring the manpower forecast data.

DONALD F. PARKER
Commanding Officer

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SUMMARY

Problem

Personnel in their second enlistment, which comprise the bulk of the Navy's experienced personnel pool, are in seriously short supply for many ratings. As a result, many of the Navy's systems are being manned and maintained by personnel with skills and experience far below that required for optimum system performance.

Objective

The objective of this effort was to identify those Navy ratings and pay grades in seriously short supply. This knowledge will enable hardware developers to consider the impact of manpower limitations when evaluating various design options.

Approach

Manpower availability data were developed using manpower forecasting data developed and maintained by the Chief of Naval Operations (CNO) (OP-110) and requirements data based on CNO (OP-11) estimates.

Results and Conclusions

Projections through fiscal year 1985 indicate that manpower shortages, especially in pay grades E-5 and E-6 (Second and First Class Petty Officers), will continue to plague the Navy. The hardware development community can assist in reducing the impact of these shortages by actively seeking to develop systems that can be operated and maintained by fewer and less skilled military personnel.

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INTRODUCTION

Problem

Navy ships and systems are manned by a wide variety of enlisted personnel of different ratings (occupations) and rates (skill levels). Training individuals for these different positions requires substantial time, instructor personnel and facilities, and financial investment.

While the Navy has been reasonably successful in recruiting first-term enlistees, retaining these personnel beyond their initial enlistment has continued to be a problem. Second-term enlistees, which are the primary input into the Navy's experienced personnel pool, are in very short supply for many ratings, especially in pay grades E-5 and E-6 (Second and First Class Petty Officers). As a result, many Navy systems are being manned and maintained by personnel with skills and experience below that required for optimum system performance.

Purpose

The purpose of this report was to identify those Navy ratings and pay grades in severely short supply. This knowledge will enable hardware developers to consider the impact of manpower limitations during the concept formulation and subsequent stages of system development.

This report, which is the second on manpower availability, supersedes the earlier issue, NPRDC Special Report 79-11 of January 1979.¹

APPROACH

Data Sources

Projected enlisted manpower availability data through fiscal year 1985 were obtained from the Chief of Naval Operations (OP-110). These data were generated by the Force Structure Projection Computer Model (known as FAST), which was developed by the Navy Personnel Research and Development Center and implemented in the OP-01 organization. The FAST model simulates the flow of active duty enlisted personnel through the Navy force structure, using such historical data as number of enlistments, promotion flow, and attrition rates. The model also is used to project the implications of proposed changes in various manpower policy aspects such as pay, enlistment periods, training, and other benefits upon the future manpower pool. In this way, it is able to project the size and composition (rating and pay grade) of the enlisted force that will be available in future years.

Projected enlisted requirements data through fiscal year 1985 were obtained from the Chief of Naval Operations (OP-11) and are based on the Navy's total manning requirements. Requirements are projected using information contained in ship and shore manning

¹Koehler, E. A. Manpower Availability--Navy Enlisted Projections--FY78-FY84 (NPRDC SR 79-11). San Diego: Navy Personnel Research and Development Center, January 1979.

documents, planned ship and hardware system acquisitions and losses, and historical sources. Requirements data presented in this report were established by the Navy and reflect manning levels needed to fully meet the operational and support needs of the service. This differs from authorization, which is based upon a manpower ceiling imposed by Congress. Authorization reflects the constraints of budget limitations imposed on each service and other factors that may be imposed to limit the size and composition of the force.

Procedure

This report includes only those Navy ratings that are experiencing a shortfall of 20 percent or more within any pay grade from E-4 through E-7 for any year from FY79 through FY85. Within this constraint, requirements and available manning data are presented for the following 24 ratings:

1. AC--Air Controlman
2. AQ--Aviation Fire Control Technician
3. AW--Aviation Antisubmarine Warfare Operator
4. BT--Boiler Technician
5. DP--Data Processing Technician
6. DS--Data Systems Technician
7. EN--Engineman
8. ET--Electronics Technician
9. EW--Electronics Warfare Technician
10. FTB--Fire Control Technician (Ballistic Missile Fire Control)
11. FTG--Fire Control Technician (Gun Fire Control)
12. FTM--Fire Control Technician (Surface Missile Fire Control)
13. GMG--Gunner's Mate (Guns)
14. GMM--Gunner's Mate (Missiles)
15. GMT--Gunner's Mate (Technician)
16. GSE--Gas Turbine System Technician (Electrical)
17. GSM--Gas Turbine System Technician (Mechanical)
18. HT--Hull Maintenance Technician
19. MT--Missile Technician
20. OS--Operations Specialist
21. RM--Radioman
22. STG--Sonar Technician (Surface)
23. STS--Sonar Technician (Submarine)
24. TM--Torpedoman's Mate

RESULTS

Manpower availability data for the 24 selected ratings are tabled in the appendix. These tables present, for fiscal years 1979 through 1985, combined data for pay grades E-1 through E-3 (strickers); separate data for pay grades E-4 through E-9; combined data for pay grades E-4 through E-9; and, finally, combined data for pay grades E-1 through E-9. Data within the cells for each pay grade represent:

1. The number of personnel projected to be in that pay grade at the end of the fiscal year.

2. The average length of service (LOS) of those personnel.²

3. CNO estimates of the number of personnel required in that pay grade at the end of the fiscal year.

4. The difference between projected and required personnel, expressed as a percentage.

Each table is accompanied by a graph, which presents manpower availability data for personnel in the E-4, E-5, E-6, and E-7 pay grades. These four pay grades are comprised of personnel who are most likely to be involved in the actual operation and/or maintenance of shipboard systems. These graphs indicate, for each of these pay grades:

1. The number of personnel who will be available at the end of fiscal years 1979 through 1985.

2. The number of personnel needed to meet the CNO requirement estimates.

3. The difference (surplus or shortfall) between available and required personnel. These graphs have all been prepared to the same scale, except for the Hull Maintenance Technician (HT),³ to allow comparisons of surpluses or shortfalls of the different ratings. The vertical scale (number of personnel) has been cut at various points to permit a single page presentation for each rating. The ET rating is the one exception; its graph required two pages due to the size of the population it represents.

Table 1 is a summary of manpower availability data for the 24 selected ratings expressed as a percentage above or below requirements. These data indicate that, during the next 5 years, there will be substantial shortages of skilled personnel for particular ratings and pay grades. For example, during FY80, shortages are expected to occur in all ratings at the E-5 level except two (FTM and GSE). At the E-6 and E-7 levels, all reported ratings will experience shortages.

²In many ratings (i.e., DS, ET, EW, FTB, FTG, FTM, GSE, GSM, MT, STG, STS), the average LOS for personnel in pay grades E-1 through E-3 is greater than that for those in pay grade E-4. This is due to the more rapid promotion of persons who attend "A" school.

³The graph for the HT rating was slightly reduced to permit single page presentation.

Table 1
Manpower Availability Data Expressed as Percent
Above or Below Requirements

Pay Grade	AC	AQ	AW	BT	DP	DS	EN	ET	EW	FTB	FTG	FTM
FY79												
E-4	-31	-33	-15	-15	-26	+23	-33	+13	+18	+17	+21	+15
E-5	-38	-8	-15	-26	-22	-12	-13	-8	-4	-8	+2	+24
E-6	-19	-6	-6	-20	-6	-27	-6	-6	-28	-6	-21	-42
E-7	-4	-3	-5	-1	-6	-10	+8	-3	-3	-4	-2	-3
FY80												
E-4	-19	-38	-9	+8	-14	+21	-22	+7	+17	+33	+12	+12
E-5	-38	-7	-27	-21	-18	-15	-14	-7	-5	-7	-11	+21
E-6	-18	-7	-7	-20	-7	-32	-7	-7	-23	-9	-23	-38
E-7	-4	-4	-4	-4	-4	-4	-4	-4	-4	-3	-4	-6
FY81												
E-4	-20	-39	-3	+13	-26	+27	-23	+13	+33	+49	+32	+15
E-5	-26	-7	-22	-14	-9	-13	-10	-19	-18	-7	-28	+6
E-6	-20	-7	-7	-17	-7	-37	-7	-7	-16	-9	-32	-35
E-7	-4	-4	-4	-3	-4	-5	-5	-4	-4	-2	-3	-8
FY82												
E-4	-12	-22	+10	+13	-30	+21	-18	+16	+43	+64	+23	+15
E-5	-18	-3	-17	-12	-7	-5	-9	-22	-19	+0.4	-3	+3
E-6	-21	-6	-6	-14	-6	-44	-6	-6	-12	-20	-44	-41
E-7	-5	-5	-5	-4	-5	-5	-5	-5	-5	-2	-4	-8
FY83												
E-4	-10	-12	+13	+15	-29	+24	-20	+17	+43	+81	+23	+23
E-5	-11	-2	-7	-11	-8	+3	-4	-24	-17	+13	+4	+0.8
E-6	-23	-6	-6	-10	-6	-56	-6	-6	-9	-35	-50	-50
E-7	-5	-5	-5	-5	-5	-5	-5	-5	-5	-2	-3	-7
FY84												
E-4	-3	-8	-5	+15	-29	+32	-15	+18	+45	+87	+21	+21
E-5	-14	-2	-19	-15	-14	+14	-9	-12	-2	+7	+8	+19
E-6	-21	-9	-9	-17	-9	-52	-9	-9	-13	-30	-51	-49
E-7	-6	-6	-6	-6	-6	-7	-6	-6	-6	-7	-5	-7
FY85												
E-4	-4	+2	-7	+15	-29	+31	-16	+16	+47	+98	+25	+19
E-5	-8	-1	-9	-14	-13	+14	-4	-13	-2	-6	+4	+19
E-6	-19	-8	-8	-16	-11	-49	-8	-8	-9	-27	-52	-50
E-7	-6	-6	-6	-6	-6	-6	-6	-6	-6	-10	-6	-6

Table 1 (Continued)

Pay Grade	GMG	GMM	GMT	GSE	GSM	HT	MT	OS	RM	STG	STS	TM
FY79												
E-4	+13	+37	-38	+49	+12	-28	+24	-23	-5	+33	+53	-43
E-5	-8	-16	-23	-2	-54	-16	-8	-10	-8	-5	-7	-8
E-6	-9	-57	-23	-33	-6	-21	-6	-36	-6	-15	-12	-6
E-7	-5	-4	+1	-81	-82	-3	-3	-3	-4	-3	-7	-7
FY80												
E-4	+7	+40	-26	+67	+33	-24	+76	-32	-1	+18	+47	-36
E-5	-7	-12	-20	+45	-31	-23	-7	-11	-7	-16	-7	-8
E-6	-7	-54	-23	-68	-45	-20	-7	-32	-7	-19	-7	-7
E-7	-5	-4	-4	-67	-46	-4	-4	-4	-4	-4	-4	-4
FY81												
E-4	+13	+11	-20	+39	-7	-30	+143	-41	-6	+30	+41	-38
E-5	-7	-7	-15	+55	+6	-24	-7	-18	-7	-25	-7	-7
E-6	-7	-40	-21	-67	-66	-20	-7	-25	-7	-32	-7	-7
E-7	-5	-3	-4	-70	-48	-4	-4	-5	-4	-4	-4	-4
FY82												
E-4	+13	+1	-12	+24	-5	-30	+189	-40	+1	+30	+43	-31
E-5	-3	-15	-1	+98	+49	-26	-3	-24	-3	-15	-3	-3
E-6	-6	-37	-22	-65	-67	-19	-7	-15	-6	-42	-6	-6
E-7	-5	-3	-4	-70	-55	-5	-4	-5	-5	-5	-5	-5
FY83												
E-4	+2	-2	-2	+16	-12	-32	+230	-42	+4	+32	+44	-26
E-5	-2	-23	+0.2	+99	+39	-26	-2	-24	-2	-10	-2	-2
E-6	-6	-34	-18	-53	-54	-16	-6	-10	-6	-48	-6	-6
E-7	-5	-3	-4	-72	-60	-5	-4	-5	-5	-5	-5	-5
FY84												
E-4	-5	+5	+9	+26	+37	-31	+238	-36	+13	+28	+18	-26
E-5	-2	-21	-2	+72	+26	-31	-2	-26	-2	-5	-2	-2
E-6	-9	-22	-15	-43	-39	-11	-9	-9	-9	-51	-15	-9
E-7	-7	-5	-6	-66	-53	-6	-6	-6	-6	-6	-6	-6
FY85												
E-4	-10	+2	+15	+42	+39	-31	+273	-37	+15	+32	+19	-22
E-5	-2	-20	-2	+54	+14	-29	-1	-20	-1	-6	-2	-1
E-6	-8	-19	-10	-26	-20	-11	-9	-8	-8	-54	-11	-8
E-7	-7	-5	-6	-63	-49	-6	-6	-6	-6	-6	-6	-6

CONCLUSIONS AND RECOMMENDATIONS

The hardware development community can help to reduce the impact of the projected shortages of skilled personnel in the middle pay grades by developing hardware systems that can be operated and maintained by lesser skilled personnel in the lower pay grades. In doing this, the hardware designer should consider design options or procedures that would either simplify task performance or reduce the number of skilled personnel required.

NAVPERSRANDCEN has recently published an engineer's guide to assist in meeting this challenge.* A copy can be obtained by contacting Mr. Ernest Koehler, NAVPERSRANDCEN, Code 302, Telephone (714) 225-6617 or Autovon 933-6693.

*An Engineer's Guide to the Use of Human Resources in Electronic Systems Design (NPRDC TN 79-8). San Diego: Navy Personnel Research and Development Center, June 1979.

APPENDIX
MANPOWER AVAILABILITY BY RATING AND PAY GRADE

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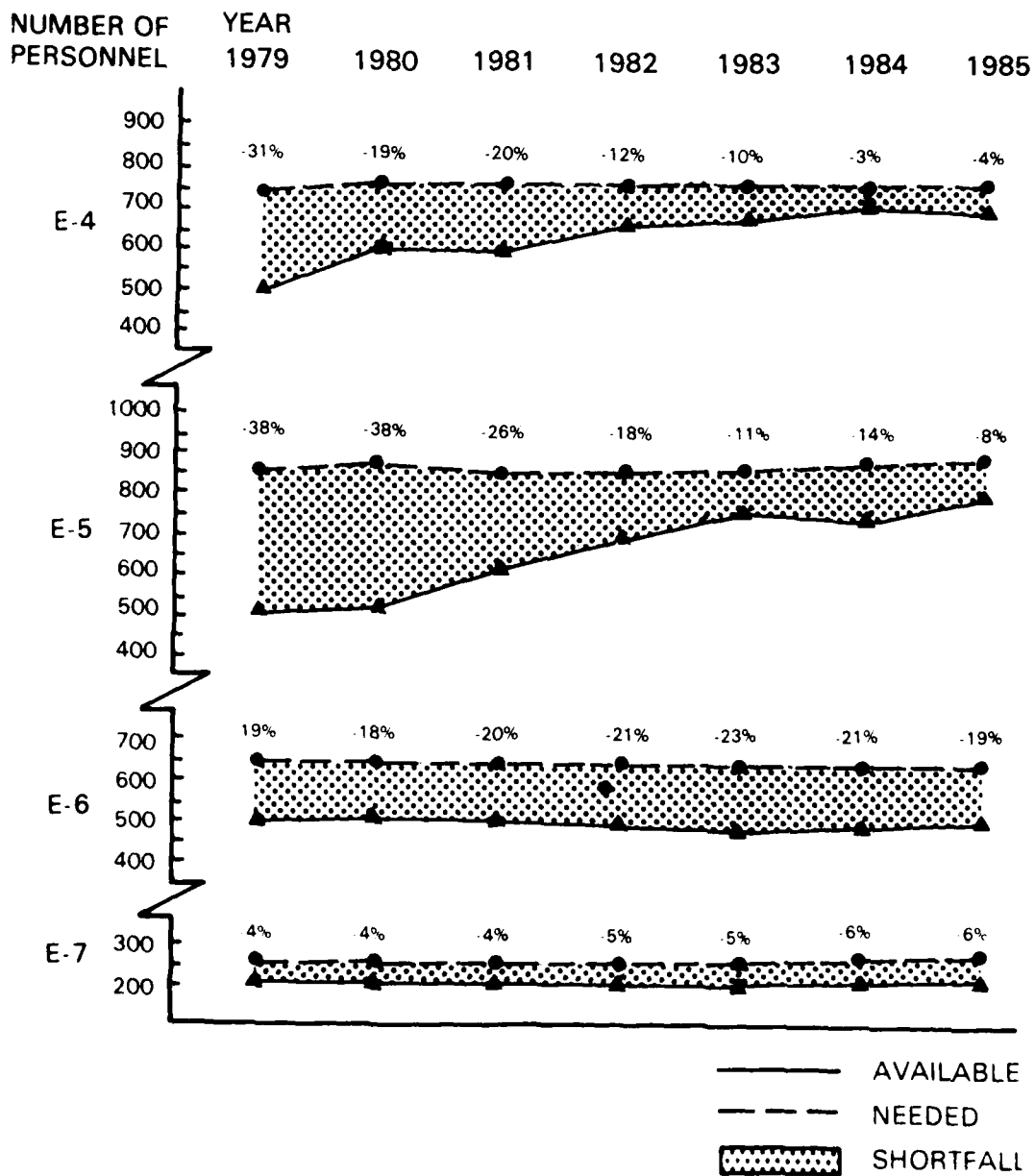
AIR CONTROLMAN (AC)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	1009 1.45 ----- -----	1139 1.35 ----- -----	1184 1.48 ----- -----	1256 1.46 ----- -----	1282 1.51 ----- -----	1257 1.50 ----- -----	1247 1.60 ----- -----
E-4	518 2.61 755 -31.39	620 2.65 770 -19.48	618 2.75 770 -19.74	685 2.71 775 -11.61	699 2.79 778 -10.15	741 2.78 762 -2.76	731 2.86 762 -4.07
E-5	535 5.23 863 -38.01	550 4.88 882 -37.64	644 4.52 865 -25.55	711 4.52 870 -18.28	774 4.50 868 -10.83	763 4.51 892 -14.46	825 4.50 892 -7.51
E-6	525 10.04 650 -19.23	530 9.76 650 -18.46	515 9.91 640 -19.53	505 10.02 643 -21.46	499 9.88 646 -22.76	520 9.73 659 -21.09	532 9.58 659 -19.27
E-7	256 17.74 266 -3.76	259 18.03 271 -4.43	249 18.05 260 -4.23	247 17.91 260 -5.00	248 17.10 261 -4.98	245 16.95 261 -6.13	245 16.37 261 -6.13
E-8	64 21.86 71 -9.86	61 22.61 71 -14.08	61 22.83 70 -12.86	63 22.75 70 -10.00	63 22.20 70 -10.00	66 22.14 74 -10.81	66 21.92 74 -10.81
E-9	18 22.94 20 -10.00	18 23.72 19 -5.26	18 24.50 19 -5.26	16 24.50 19 -15.79	17 23.79 20 -15.00	17 23.50 20 -15.00	17 22.91 20 -15.00
E-4/9	1916 8.23 2625 -27.01	2038 7.84 2663 -23.47	2105 7.62 2624 -19.78	2227 7.35 2637 -15.55	2300 7.13 2643 -12.98	2352 7.05 2668 -11.84	2416 6.93 2668 -9.45
Total	2925 5.89 2625 -----	3177 5.51 2663 -----	3289 5.41 2624 -----	3483 5.23 2637 -----	3582 5.12 2643 -----	3609 5.12 2668 -----	3663 5.12 2668 -----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the AC E-4 in FY80, the estimates are:

End Strength	620	(Projected number of men at end of FY)
Mean LOS	2.65	(Average Length of Service)
Manpower Requirements	770	(CNO estimates of number required)
End Strength Status	-19.48	(Percentage over or under requirements)

AIR CONTROLMAN (AC)



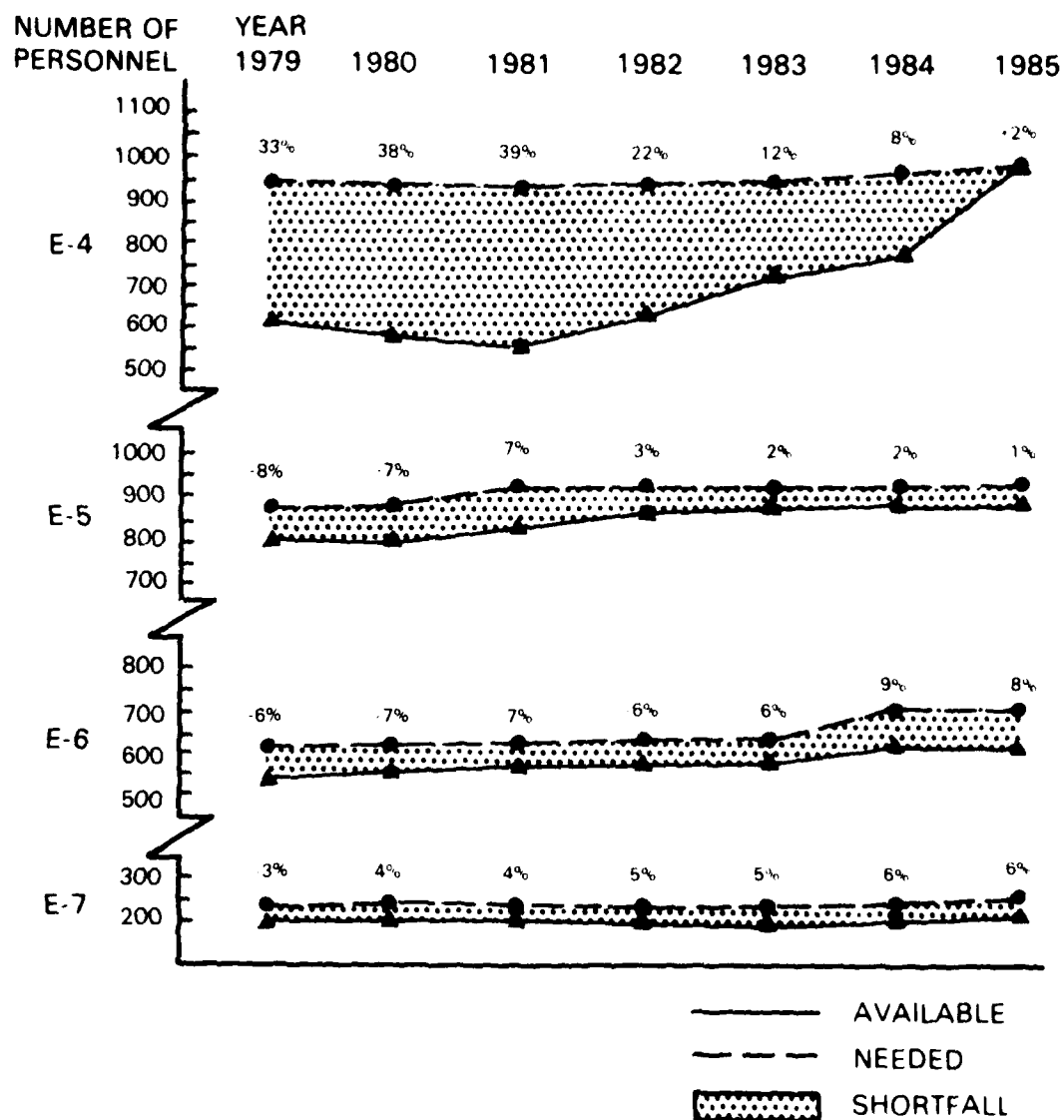
AVIATION FIRE CONTROL TECHNICIAN (AQ)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	613 1.49 ----- -----	834 1.33 ----- -----	920 1.51 ----- -----	939 1.45 ----- -----	1002 1.58 ----- -----	963 1.63 ----- -----	962 1.80 ----- -----
E-4	638 2.95 950 -32.84	591 2.36 952 -37.92	583 2.29 950 -38.63	743 2.30 956 -22.28	851 2.52 965 -11.81	906 2.50 980 -7.55	999 2.68 980 1.94
E-5	818 6.45 887 -7.78	834 6.13 895 -6.82	861 5.48 925 -6.92	899 5.14 928 -3.13	907 5.06 930 -2.47	921 4.77 943 -2.33	930 4.92 943 -1.38
E-6	569 10.79 606 -6.11	584 10.87 629 -7.15	594 10.93 637 -6.75	599 11.02 640 -6.41	599 11.18 640 -6.41	640 10.86 702 -8.83	643 10.90 702 -8.40
E-7	241 15.34 248 -2.82	246 15.46 257 -4.28	246 15.37 257 -4.28	247 15.13 260 -5.00	247 15.14 260 -5.00	256 15.16 272 -5.88	256 15.40 272 -5.88
E-8	114 19.41 125 -8.80	110 19.92 123 -10.57	113 19.57 125 -9.60	114 19.71 127 -10.24	111 19.61 123 -9.76	117 19.64 131 -10.69	118 19.86 131 -9.92
E-9	39 21.94 48 -18.75	38 22.63 46 -17.39	40 22.60 48 -16.67	41 23.01 49 -16.33	40 23.13 48 -16.67	45 23.46 53 -15.09	46 23.85 53 -13.21
E-4/9	2419 8.29 2864 -15.54	2403 8.20 2902 -17.20	2437 7.98 2942 -17.17	2643 7.51 2960 -10.71	2755 7.36 2966 -7.11	2885 7.22 3081 -6.36	2992 7.24 3081 -2.89
Total	3032 6.92 2864 -----	3237 6.43 2902 -----	3357 6.21 2942 -----	3582 5.93 2960 -----	3757 5.82 2966 -----	3848 5.83 3081 -----	3954 5.91 3081 -----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the AQ E-4 in FY80, the estimates are:

End Strength	591	(Projected number of men at end of FY)
Mean LOS	2.36	(Average Length of Service)
Manpower Requirements	952	(CNO estimates of number required)
End Strength Status	-37.92	(Percentage over or under requirements)

AVIATION FIRE CONTROL TECHNICIAN (AQ)



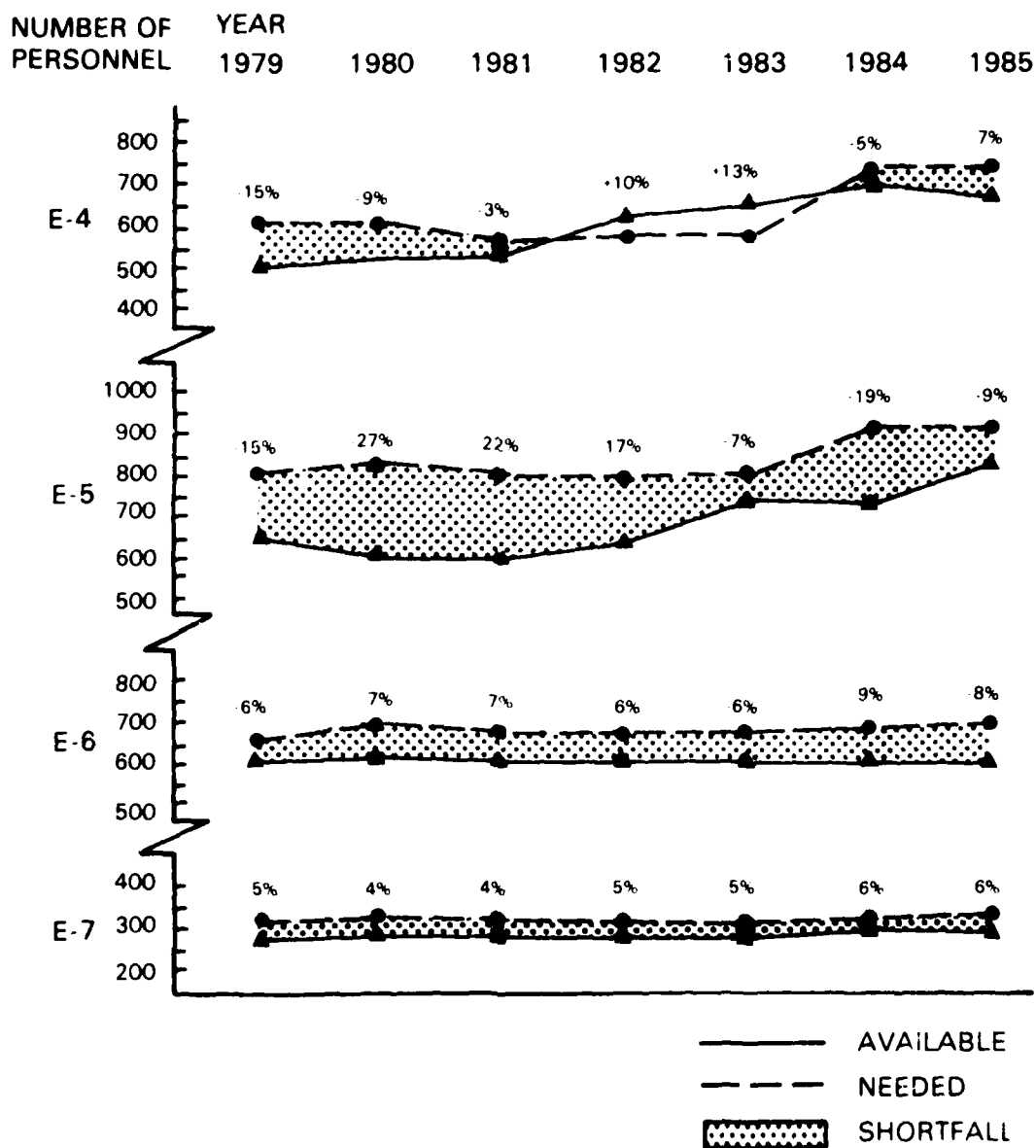
AVIATION ANTISUB. WARFARE OPERATOR (AW)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	999 1.54 ----- -----	1164 1.39 ----- -----	1222 1.51 ----- -----	1302 1.50 ----- -----	1329 1.58 ----- -----	1316 1.61 ----- -----	1295 1.76 ----- -----
E-4	514 2.84 604 -14.90	554 3.00 609 -9.03	567 3.01 584 -2.91	657 2.95 595 -19.52	679 3.07 677 -11.61	711 3.02 751 -5.33	698 3.06 751 -7.06
E-5	677 4.81 800 -15.37	693 4.73 830 -27.35	625 4.71 801 -21.97	668 4.65 803 -16.81	729 4.99 803 -6.72	736 4.61 909 -19.03	825 4.71 909 -9.24
E-6	621 10.83 682 -6.19	648 10.31 697 -7.03	640 10.29 687 -6.84	642 10.19 686 -6.41	644 10.09 688 -6.40	633 10.09 694 -8.79	636 10.28 694 -8.36
E-7	291 16.88 307 -5.21	301 16.83 315 -4.44	296 16.95 309 -4.21	295 16.19 310 -4.84	297 17.19 309 -4.53	304 16.61 324 -6.17	304 16.29 324 -6.17
E-8	31 20.41 81 1.0	71 20.73 79 -10.13	70 21.33 78 -10.16	74 21.33 81 -9.85	74 21.97 88 -13.84	89 21.31 100 -11.90	90 21.86 100 -10.00
E-9	22 23.18 28 -11.43	23 23.76 28 -17.86	23 24.07 28 -17.86	23 24.77 28 -17.86	24 25.75 28 -17.99	27 24.99 35 -12.00	27 23.95 25 -12.00
E-4/9	2206 8.49 2482 -11.12	2200 8.31 2559 14.00	2229 8.24 2487 -10.10	2338 7.96 2633 -15.79	2366 8.80 2670 -11.00	2495 7.90 2833 -19.99	2477 8.77 2803 -8.13
Total	5205 6.76 587 -----	5364 5.91 2558 -----	5443 5.95 2587 -----	5669 5.96 2593 -----	5727 6.27 2670 -----	5811 6.93 2663 -----	5810 5.76 2893 -----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the 3-4-5 in FY80, the estimates are:

End Strength	314	Projected number of men at end of FY
Mean LOS	3.40	Average length of service
Manpower Requirements	409	(314 x 3.40) = number required
End Strength Status	100%	Percentage over or under requirements

AVIATION ANTISUBMARINE WARFARE OPERATOR (AW)



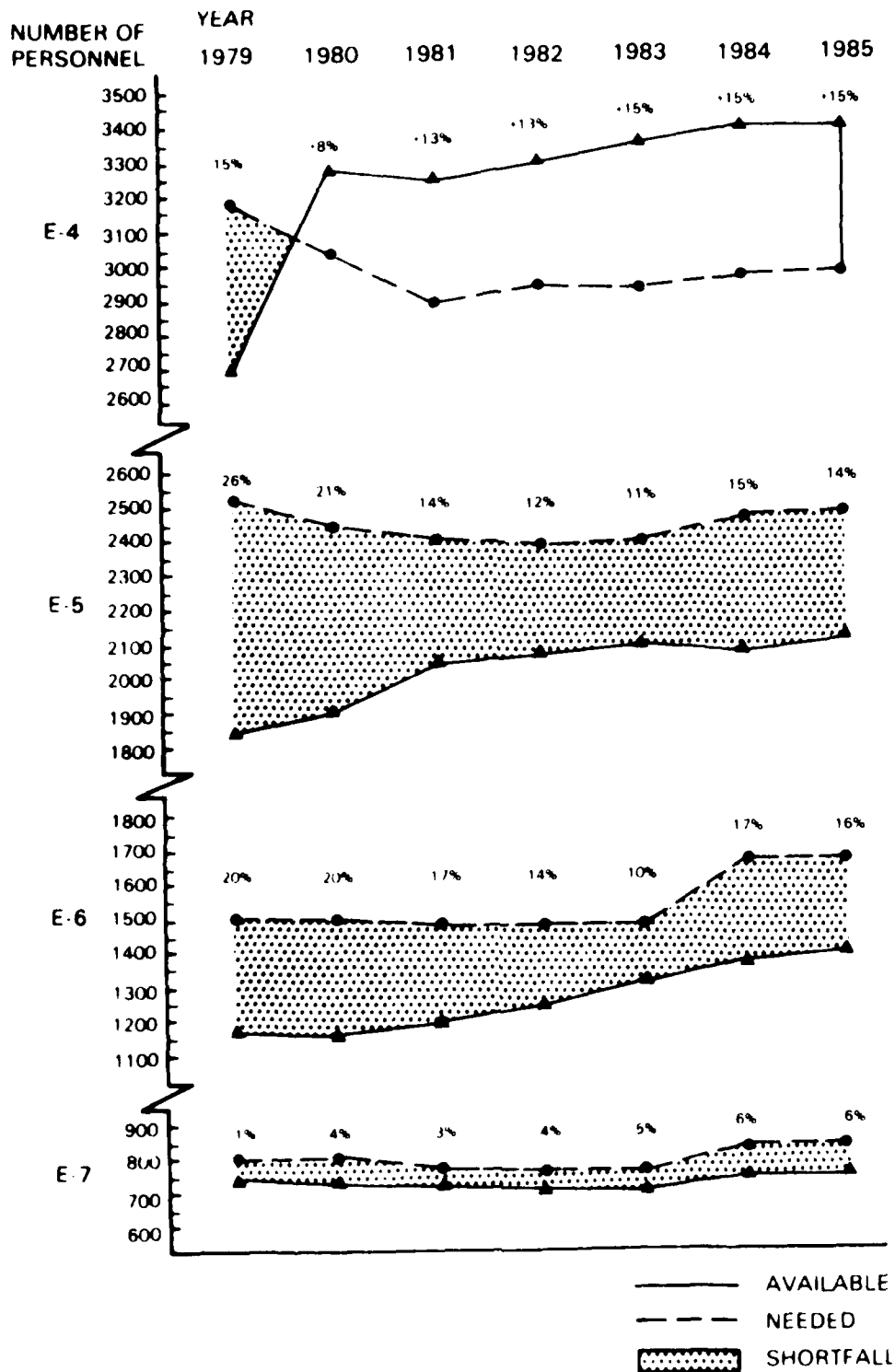
BOILER TECHNICIAN (BT)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	6534 1.83 ----	6778 1.62 ----	6904 1.74 ----	7447 1.69 ----	7591 1.80 ----	7496 1.79 ----	7412 1.88 ----
E-4	2723 2.54 3198 -14.85	3304 2.46 3050 8.33	3280 2.44 2900 13.10	3337 2.43 2954 12.97	3393 2.49 2951 11.98	3427 2.50 2980 15.00	3427 2.51 2980 15.00
E-5	1862 5.78 2525 -26.26	1933 5.58 2450 -21.10	2062 5.41 2400 -14.08	2099 5.41 2398 -12.47	2134 5.38 2400 -11.08	2108 5.33 2482 -15.07	2144 5.38 2482 -13.62
E-6	1195 10.89 1500 -20.33	1196 10.06 1500 -20.27	1229 9.45 1482 -17.07	1280 9.24 1491 -14.15	1347 9.23 1493 -9.78	1389 9.31 1673 -16.98	1413 9.54 1673 -15.54
E-7	789 16.35 800 -1.37	765 16.07 800 -4.37	752 15.66 779 -3.47	745 15.14 774 -3.75	728 14.80 764 -4.71	767 14.45 818 -6.23	768 14.27 818 -6.11
E-8	227 19.09 250 -9.20	240 19.13 240 0.0	250 18.97 243 2.88	255 18.94 250 2.00	262 18.87 250 3.80	241 19.05 271 -11.07	243 18.97 271 -10.33
E-9	141 21.59 190 -25.79	131 21.85 191 -31.41	125 22.22 200 -37.50	125 22.36 200 -37.50	129 22.71 200 -35.50	130 22.70 176 -26.14	126 22.58 176 -28.41
E-4/9	6937 7.35 8463 -18.03	7569 6.70 8231 -8.04	7698 6.50 8004 -3.82	7841 6.40 8067 -2.80	7993 6.38 8058 -0.81	8062 6.38 8400 -4.02	8121 6.41 8400 -3.32
Total	13471 4.67 8463 ----	14347 4.30 8231 ----	14602 4.25 8004 ----	15288 4.11 8067 ----	15584 4.15 8058 ----	15558 4.17 8400 ----	15433 4.26 8400 ----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the BT E-4 in FY80, the estimates are:

End Strength	3304	(Projected number of men at end of FY)
Mean LOS	2.46	(Average Length of Service)
Manpower Requirements	3050	(CNO estimates of number required)
End Strength Status	8.33	(Percentage over or under requirements)

BOILER TECHNICIAN (BT)



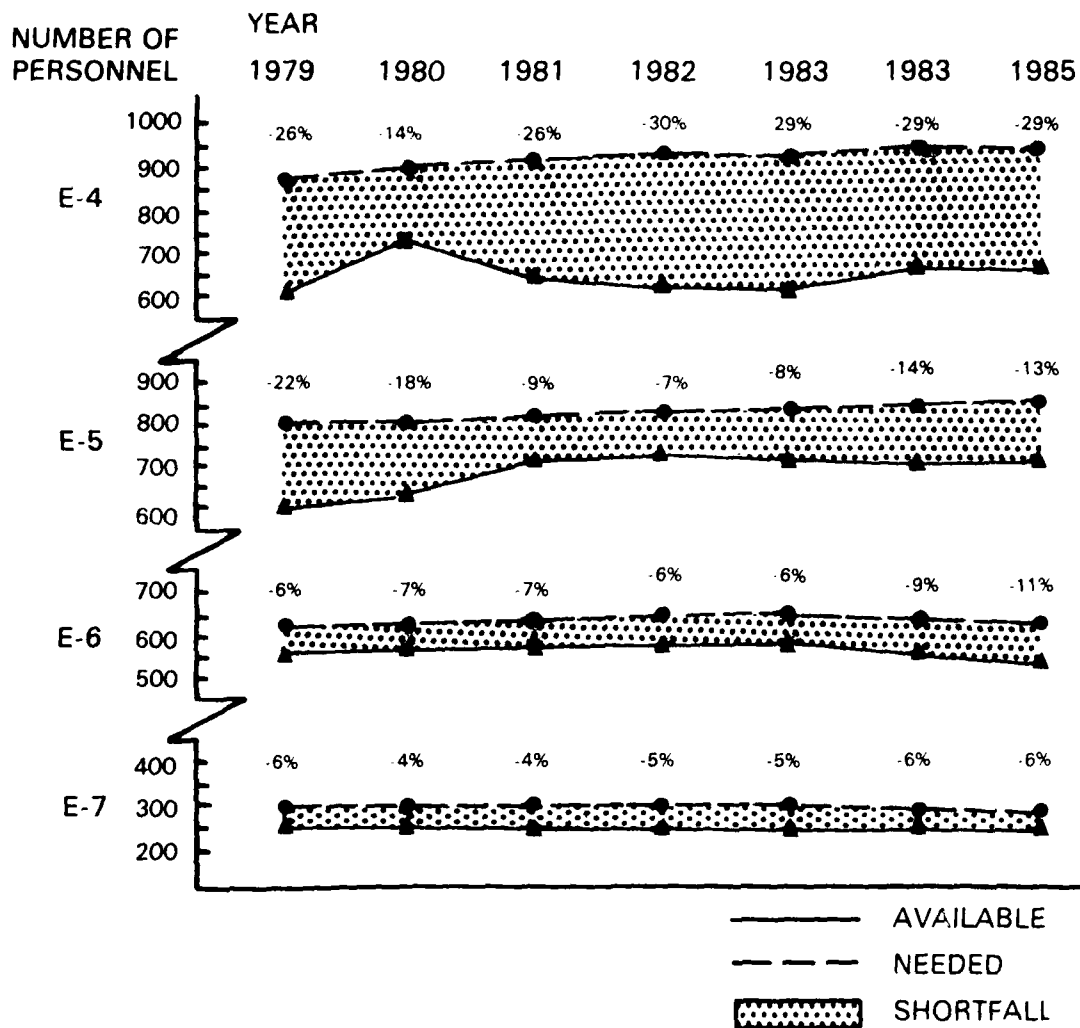
DATA PROCESSING TECHNICIAN (DP)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	1577	1486	1441	1473	1491	1462	1421
	1.62	1.58	1.64	1.56	1.64	1.65	1.71
	----	----	----	----	----	----	----
	----	----	----	----	----	----	----
E-4	649	770	675	646	658	675	674
	2.89	2.82	3.05	2.89	3.01	3.05	3.03
	880	900	915	929	927	946	946
	-26.25	-14.44	-26.23	-30.46	-29.02	-28.65	-28.75
E-5	628	663	743	767	763	727	732
	5.52	4.79	4.15	4.08	4.06	3.97	4.02
	800	809	815	826	831	843	843
	-21.50	-18.05	-8.83	-7.14	-8.18	-13.76	-13.17
E-6	589	592	597	609	610	576	560
	13.06	12.77	12.16	11.50	10.97	10.78	10.17
	628	637	641	651	651	632	632
	-6.21	-7.06	-6.86	-6.45	-6.30	-8.86	-11.39
E-7	281	288	289	289	289	280	280
	16.68	16.74	16.92	17.02	17.21	17.35	17.12
	300	301	302	304	303	298	298
	-6.33	-4.32	-4.30	-4.93	-4.62	-6.04	-6.04
E-8	55	49	49	50	49	51	53
	19.45	20.38	20.81	21.00	20.95	20.93	21.01
	53	54	54	55	54	58	58
	3.77	-9.26	-9.26	-9.09	-9.26	-12.07	-8.62
E-9	24	23	22	23	23	23	23
	21.71	22.54	23.36	23.46	23.63	22.93	22.80
	27	26	27	28	28	27	27
	-11.11	-11.54	-18.52	-17.86	-17.86	-14.81	-14.81
E-4/9	2226	2385	2375	2384	2392	2332	2322
	8.67	8.07	7.92	7.76	7.66	7.55	7.37
	2688	2727	2754	2793	2794	2804	2804
	-17.19	-12.54	-13.76	-14.64	-14.39	-16.83	-17.19
Total	3803	3871	3816	3857	3883	3794	3743
	5.75	5.58	5.55	5.40	5.35	5.28	5.22
	2688	2727	2754	2793	2794	2804	2804
	----	----	----	----	----	----	----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the DP E-4 in FY80, the estimates are:

End Strength	770	(Projected number of men at end of FY)
Mean LOS	2.82	(Average Length of Service)
Manpower Requirements	900	(CNO estimates of number required)
End Strength Status	-14.44	(Percentage over or under requirements)

DATA PROCESSING TECHNICIAN (DP)



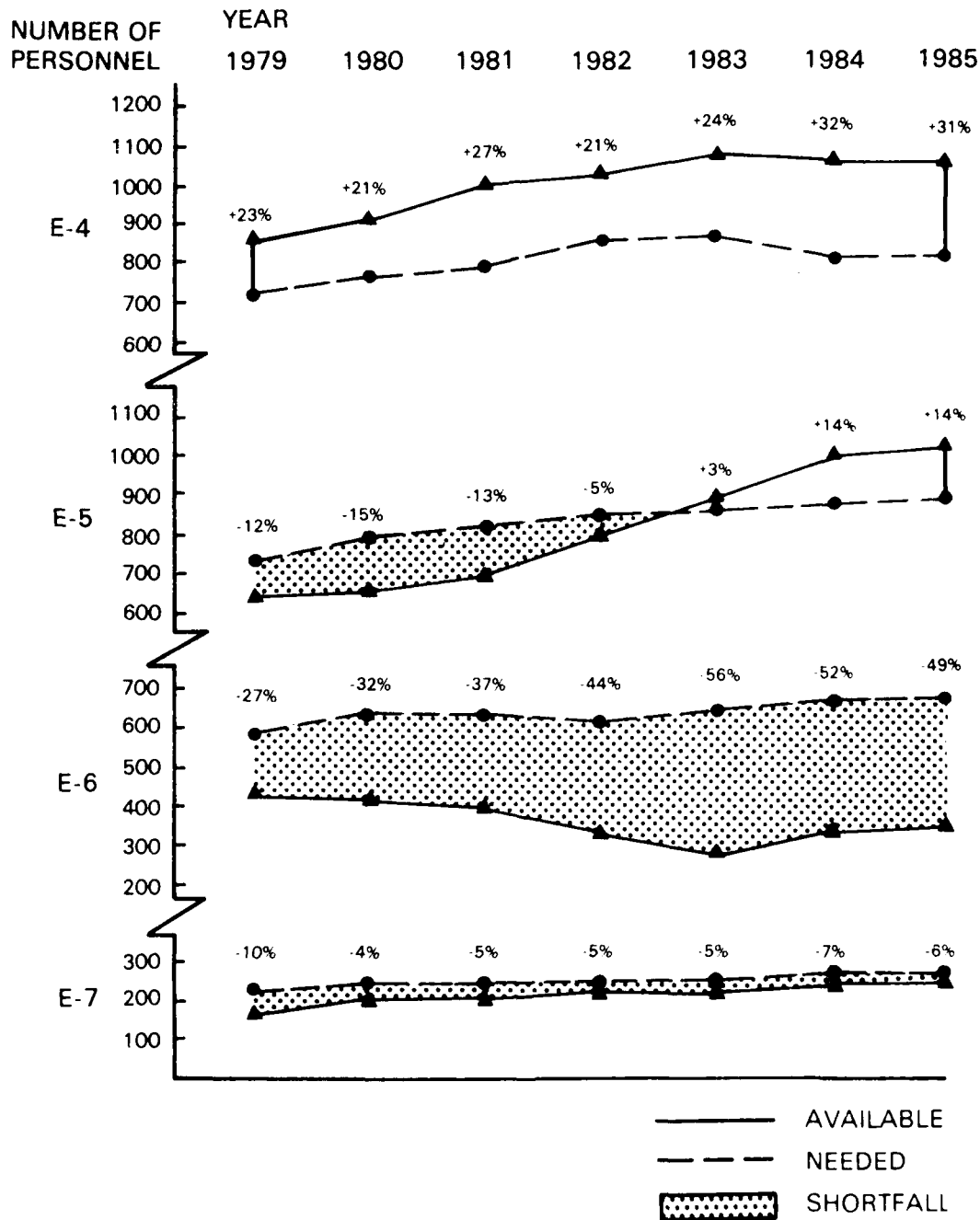
DATA SYSTEMS TECHNICIAN (DS)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	530 1.84 ----	678 2.01 ----	710 2.45 ----	785 2.47 ----	750 2.74 ----	763 2.90 ----	762 3.13 ----
E-4	881 1.50 719 22.53	932 1.36 773 20.57	1009 1.39 797 26.60	1048 1.47 869 20.60	1093 1.55 880 24.20	1067 1.52 807 32.22	1061 1.52 807 31.47
E-5	655 4.47 743 -11.84	681 3.84 800 -14.87	703 3.52 812 -13.42	809 3.32 855 -5.38	907 3.38 879 3.19	1019 3.59 890 14.49	1019 3.62 890 14.49
E-6	435 8.08 592 -26.52	434 7.65 642 -32.40	409 7.67 645 -36.59	346 7.30 618 -44.01	291 7.11 660 -55.91	330 6.44 683 -51.68	346 6.20 683 -49.34
E-7	189 14.52 211 -10.43	222 14.88 232 -4.31	223 15.53 234 -4.70	228 15.89 239 -4.60	229 16.03 240 -4.58	239 15.49 257 -7.00	241 15.01 257 -6.23
E-8	42 16.60 30 40.00	38 16.89 30 26.67	38 17.58 29 31.03	39 18.37 32 21.88	37 18.99 32 15.63	32 19.31 33 -3.03	30 18.97 33 -9.09
E-9	14 21.57 17 -17.65	15 22.10 18 -16.67	15 21.90 18 -16.67	15 21.97 18 -16.67	15 22.90 18 -16.67	16 23.38 19 -15.79	16 24.00 19 -15.79
E-4/9	2216 5.19 2312 -4.15	2322 4.94 2495 -6.93	2397 4.79 2535 -5.44	2485 4.60 2631 -5.55	2572 4.49 2709 -5.06	2703 4.47 2689 0.52	2713 4.43 2689 0.89
Total	2746 4.54 2312 ----	3000 4.28 2495 ----	3107 4.25 2535 ----	3270 4.09 2631 ----	3322 4.10 2709 ----	3466 4.13 2689 ----	3475 4.15 2689 ----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the DS E-4 in FY80, the estimates are:

End Strength	932	(Projected number of men at end of FY)
Mean LOS	1.36	(Average Length of Service)
Manpower Requirements	773	(CNO estimates of number required)
End Strength Status	20.57	(Percentage over or under requirements)

DATA SYSTEMS TECHNICIAN (DS)



ENGINEMAN (EN)

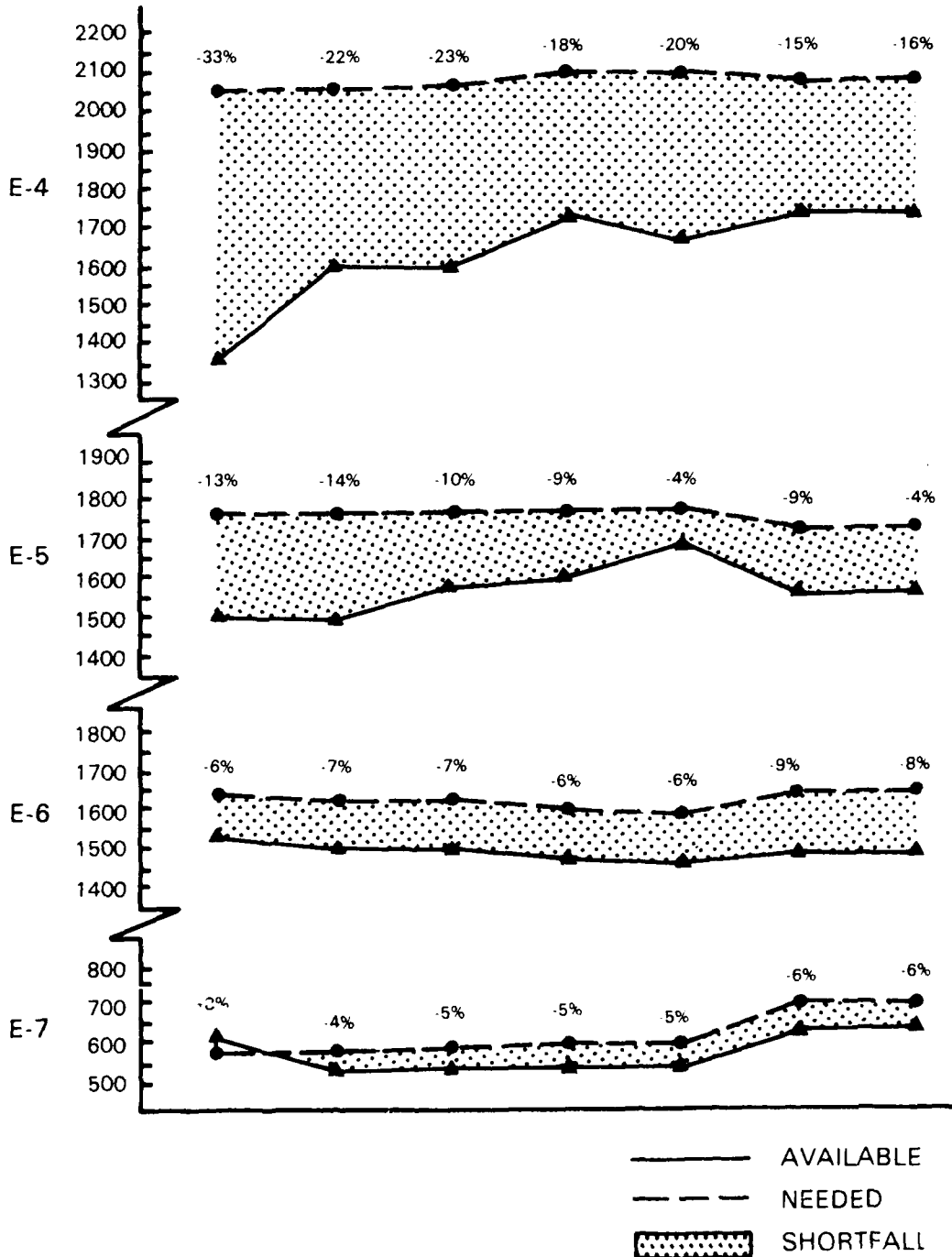
Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	5628 1.57 ----- ----	6061 1.49 ----- ----	6079 1.58 ----- ----	6252 1.50 ----- ----	6361 1.63 ----- ----	6238 1.61 ----- ----	6095 1.69 ----- ----
E-4	1378 3.47 2060 -33.11	1625 3.32 2081 -21.91	1615 3.48 2085 -22.54	1720 3.45 2100 -18.10	1680 3.51 2100 -20.00	1769 3.50 2085 -15.16	1757 3.55 2085 -15.73
E-5	1538 5.54 1770 -13.11	1518 5.82 1774 -14.43	1595 5.78 1779 -10.34	1618 5.83 1776 -8.90	1704 5.77 1780 -4.27	1576 5.78 1731 -8.95	1670 5.73 1731 -3.52
E-6	1550 12.29 1653 -6.23	1523 12.23 1639 -7.08	1524 11.84 1634 -6.73	1498 11.51 1600 -6.37	1487 11.20 1588 -6.36	1511 10.35 1657 -8.81	1517 10.32 1657 -8.45
E-7	630 17.21 585 7.69	564 17.25 589 -4.24	571 17.03 598 -4.52	575 16.77 603 -4.64	572 16.60 600 -4.67	659 16.21 702 -6.13	659 16.17 702 -6.13
E-8	141 19.58 156 -9.62	130 19.69 145 -10.34	125 19.44 140 -10.71	125 19.64 140 -10.71	125 19.36 140 -10.71	135 19.31 151 -10.60	136 19.10 151 -9.93
E-9	73 22.01 87 -16.09	71 22.04 87 -18.39	70 22.43 84 -16.67	71 22.22 84 -15.48	71 22.18 84 -15.48	74 22.36 88 -15.91	76 22.38 88 -13.64
E-4/9	5310 8.96 6311 -15.86	5431 8.60 6315 -14.00	5500 8.47 6320 -12.97	5607 8.26 6303 -11.04	5639 8.14 6292 -10.38	5724 8.01 6414 -10.76	5815 7.98 6414 -9.34
Total	10938 4.15 6311 -----	11492 4.85 6315 -----	11579 4.87 6320 -----	11859 4.69 6303 -----	12000 4.69 6292 -----	11962 4.68 6414 -----	11910 4.76 6414 -----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-1/3 in FY80, the estimates are:

End Strength	1625	(Projected number of men at end of FY)
Mean LOS	3.32	(Average Length of Service)
Manpower Requirements	2081	(CNO estimates of number required)
End Strength Status	-21.91	(Percentage over or under requirements)

ENGINEMAN (EN)

NUMBER OF PERSONNEL	YEAR	1979	1980	1981	1982	1983	1984	1985
---------------------	------	------	------	------	------	------	------	------



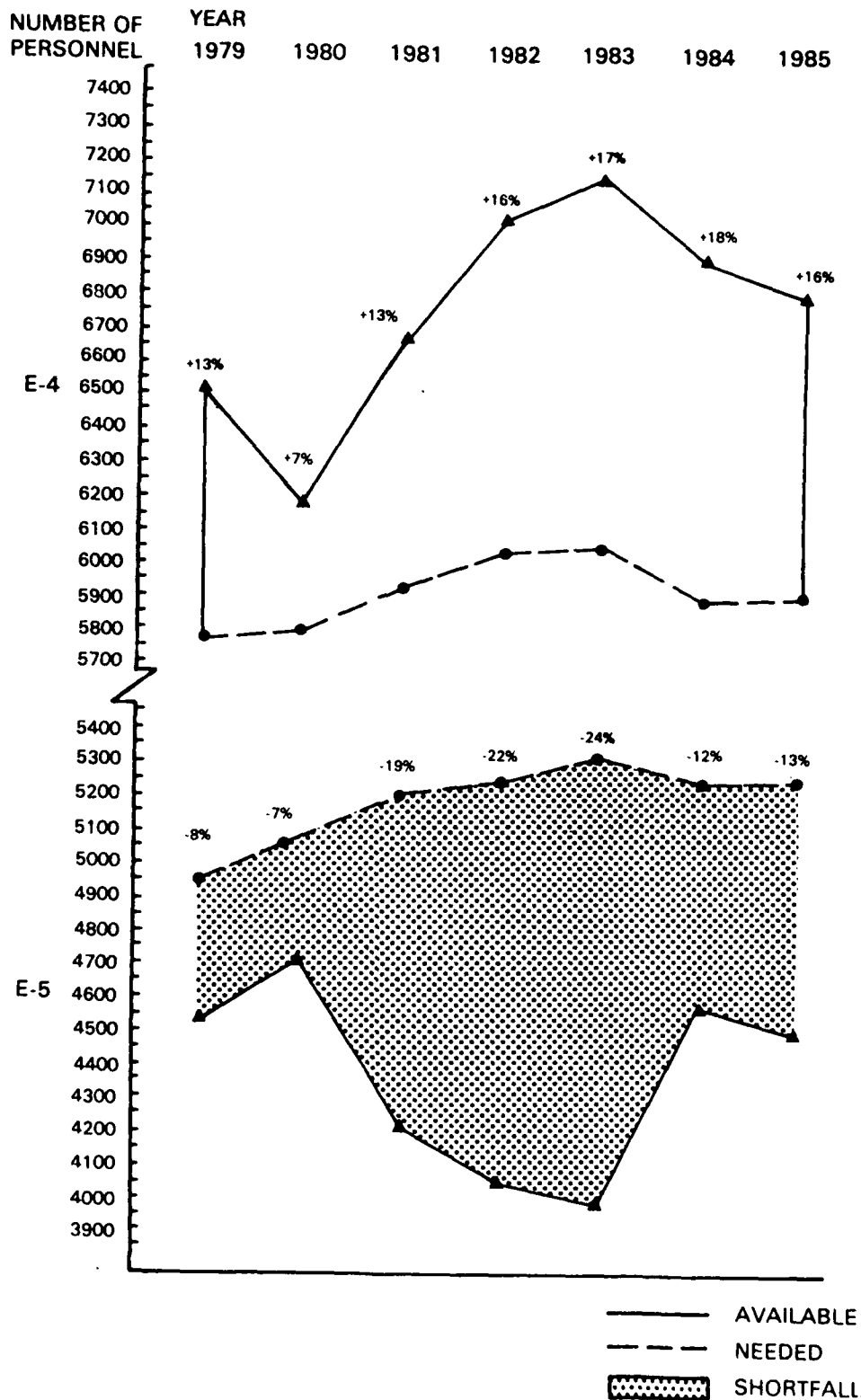
ELECTRONICS TECHNICIAN (ET)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	2716 1.89 ----- -----	3652 2.03 ----- -----	3585 2.24 ----- -----	3677 2.13 ----- -----	3371 2.29 ----- -----	3477 2.39 ----- -----	3390 2.58 ----- -----
E-4	6515 2.11 5756 13.20	6172 1.78 5788 6.64	6663 1.77 5914 12.66	7017 1.86 6038 16.14	7152 1.91 6089 17.33	6908 1.89 5870 17.63	6797 1.89 5870 15.77
E-5	4532 4.44 4948 -8.26	4713 4.43 5060 -6.79	4211 4.38 5203 -18.59	4042 4.05 5244 -21.90	3989 3.77 5320 -23.74	4574 3.96 5247 -11.85	4490 3.97 5247 -13.29
E-6	3265 10.26 3481 -6.21	3237 10.12 3485 -7.12	3244 9.85 3479 -6.75	3296 9.48 3522 -6.42	3288 9.31 3512 -6.38	3240 9.05 3555 -8.86	3254 8.70 3555 -8.47
E-7	1409 15.53 1455 -3.16	1392 15.50 1456 -4.40	1415 15.49 1481 -4.46	1434 15.41 1505 -4.72	1435 15.52 1505 -4.65	1401 15.61 1493 -6.16	1402 15.71 1493 -6.10
E-8	381 18.44 420 -9.29	377 18.48 420 -10.24	382 18.45 425 -10.12	389 18.35 434 -10.37	390 18.43 434 -10.14	390 18.43 438 -10.96	394 18.45 438 -10.05
E-9	143 21.23 176 -18.75	144 21.47 177 -18.64	148 21.70 178 -16.85	155 21.78 184 -15.76	158 22.08 186 -15.05	164 22.34 194 -15.46	167 22.30 194 -13.92
E-4/9	16245 6.11 16236 .06	16035 9.92 16386 -2.14	16063 5.87 16680 -3.7	16333 5.71 16927 -3.51	16412 5.62 17046 -3.72	16677 5.59 16797 -.71	16504 5.57 16797 -1.74
Total	18961 5.51 16236 -----	19687 8.45 16386 -----	19648 5.21 16680 -----	20010 5.05 16927 -----	19783 5.05 17046 -----	20154 5.04 16797 -----	19894 5.06 16797 -----

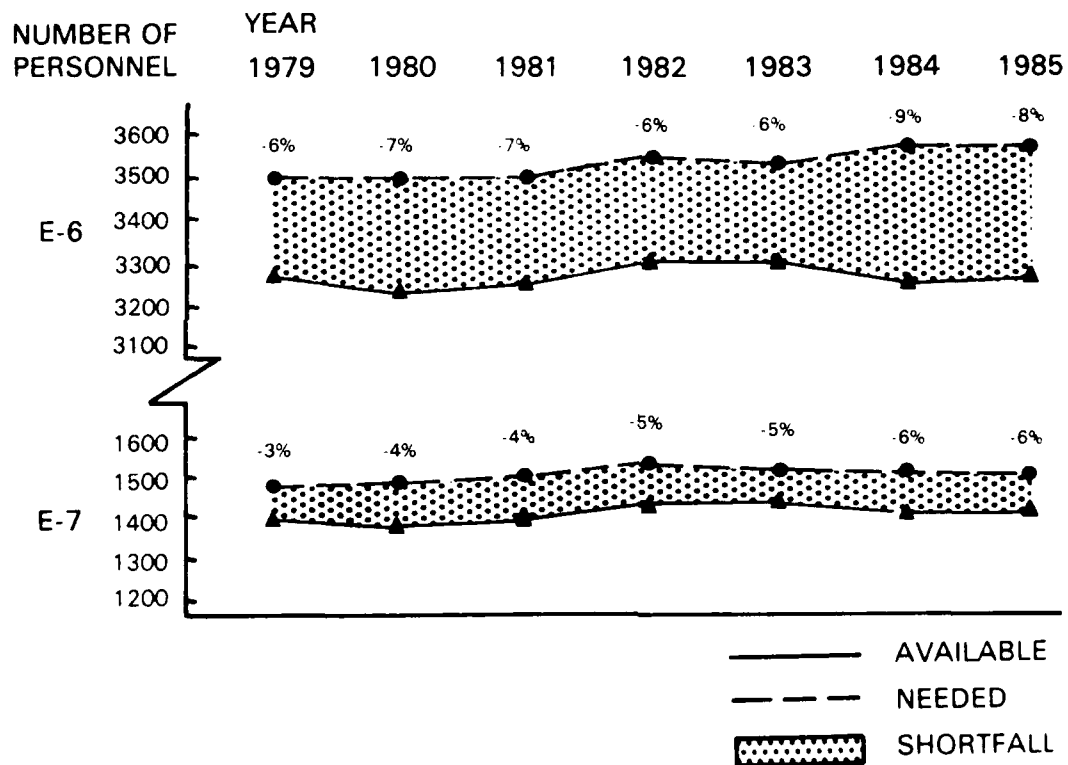
Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the ET E-6 in FY80, the estimates are:

End Strength	6172	(Projected number of men at end of FY)
Mean LOS	1.78	(Average Length of Service)
Manpower Requirements	5788	(CNO estimates of number required)
End Strength Status	6.64	(Percentage over or under requirements)

ELECTRONICS TECHNICIAN (ET)



ELECTRONICS TECHNICIAN (ET)



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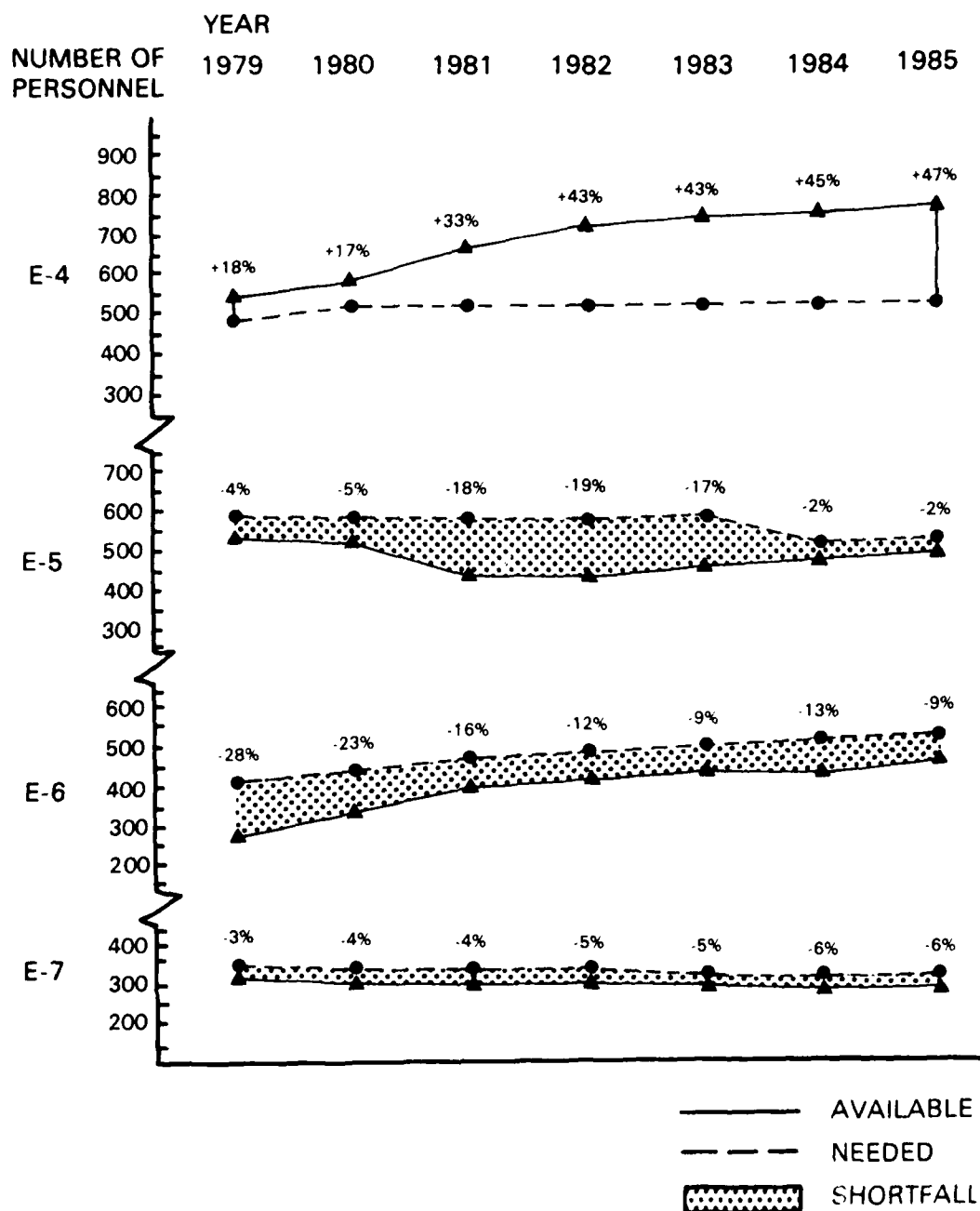
ELECTRONICS WARFARE TECHNICIAN (EW)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	540	655	683	730	769	791	824
	2.26	2.53	2.95	3.03	3.31	3.59	3.93
	----	----	----	----	----	----	----
	----	----	----	----	----	----	----
E-4	577	600	683	737	747	764	775
	1.99	1.71	1.76	1.88	1.90	1.91	1.96
	489	512	514	517	524	527	527
	18.00	17.19	32.88	42.55	42.56	44.97	47.06
E-5	550	545	466	459	475	496	500
	4.80	5.00	5.14	4.95	4.78	4.89	4.90
	572	574	567	570	570	508	508
	-3.85	-5.05	-17.81	-19.47	-16.67	-2.36	-1.57
E-6	293	351	403	432	454	459	478
	9.02	8.92	8.96	9.14	9.40	9.63	9.89
	408	455	477	493	500	527	527
	-28.19	-22.86	-15.51	-12.37	-9.20	-12.90	-9.30
E-7	333	328	316	314	303	298	298
	15.40	16.06	16.59	17.03	17.60	17.93	18.11
	345	343	330	330	318	317	317
	-3.48	-4.37	-4.24	-4.85	-4.72	-5.99	-5.99
E-8	55	55	53	53	53	51	51
	17.85	18.59	18.93	19.20	19.52	20.17	20.50
	61	59	59	59	59	59	59
	-9.84	-6.78	-10.17	-10.17	-10.17	-13.56	-13.56
E-9	13	12	13	12	13	13	13
	20.27	21.33	21.96	21.50	22.19	23.12	24.04
	16	15	16	15	15	13	13
	-18.75	-20.00	-18.75	-20.00	-13.33	0.0	0.0
E-4/9	1821	1891	1934	2007	2045	2081	2115
	7.03	7.10	7.10	7.09	7.14	7.20	7.30
	1891	1958	1963	1984	1986	1951	1951
	-3.70	-3.42	-1.48	1.16	2.97	6.66	8.41
Total	2361	2546	2617	2737	2814	2872	2939
	5.94	5.93	6.02	6.01	6.10	6.21	6.36
	1891	1958	1963	1984	1986	1951	1951
	----	----	----	----	----	----	----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the EW E-4 in FY80, the estimates are:

End Strength	600	(Projected number of men at end of FY)
Mean LOS	1.71	(Average Length of Service)
Manpower Requirements	512	(CNO estimates of number required)
End Strength Status	17.19	(Percentage over or under requirements)

ELECTRONICS WARFARE TECHNICIAN (EW)



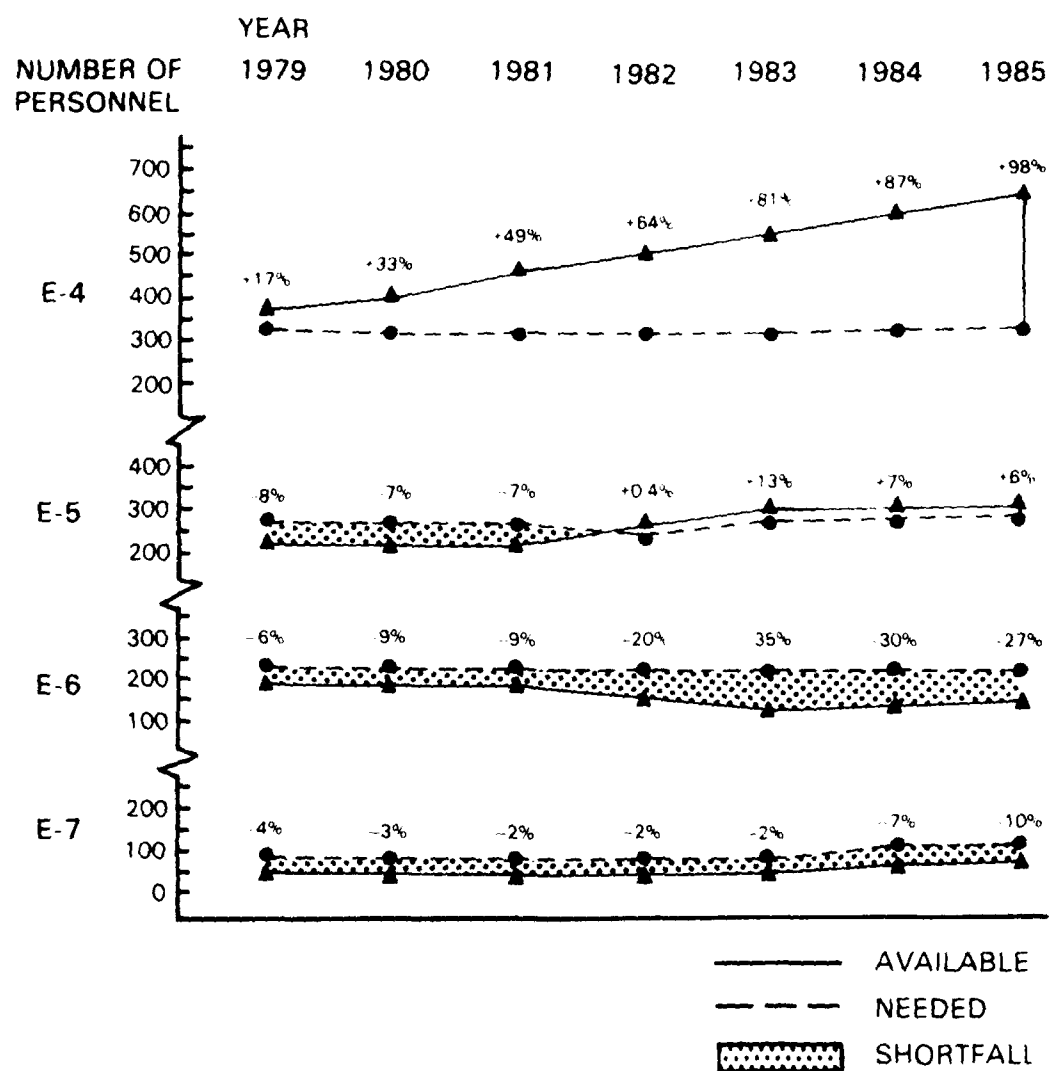
FIRE CONTROL TECHNICIAN (Ballistic Missile Fire Control) (FTB)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	161 1.86 ----- -----	213 2.36 ----- -----	281 2.54 ----- -----	309 2.93 ----- -----	357 3.16 ----- -----	391 3.43 ----- -----	430 3.79 ----- -----
E-4	391 1.75 335 16.72	426 1.49 320 33.12	476 1.50 320 48.75	525 1.62 320 64.06	579 1.80 320 80.94	628 2.03 336 86.90	666 2.26 336 98.21
E-5	254 4.40 275 -7.64	261 4.06 280 -6.79	258 3.87 277 -6.86	278 3.78 277 0.36	306 3.99 270 13.33	317 4.17 295 7.46	312 4.13 295 5.76
E-6	226 8.31 240 -5.83	213 8.12 233 -8.58	212 7.82 234 -9.40	188 7.90 236 -20.34	151 7.59 232 -34.91	166 6.85 238 -30.25	174 6.66 238 -26.89
E-7	91 15.09 95 -4.21	92 15.13 95 -3.16	93 15.01 95 -2.11	93 15.16 95 -2.11	93 15.09 95 -2.11	100 14.57 108 -7.41	97 14.19 108 -10.19
E-8							
E-9							
E-4/9	962 5.25 945 1.80	992 4.85 928 6.90	1039 4.59 926 12.20	1084 4.42 928 16.81	1129 4.26 917 23.12	1211 4.29 977 23.95	1249 4.27 977 27.84
Total	1123 4.77 945 -----	1205 4.41 928 -----	1320 4.15 926 -----	1393 4.09 928 -----	1486 4.00 917 -----	1602 4.08 977 -----	1679 4.14 977 -----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the FTB E-4 in FY80, the estimates are:

End Strength	426	(Projected number of men at end of FY)
Mean LOS	1.49	(Average Length of Service)
Manpower Requirements	320	(CNO estimates of number required)
End Strength Status	33.12	(Percentage over or under requirements)

FIRE CONTROL TECHNICIAN (BALLISTIC MISSILE) (FTB)



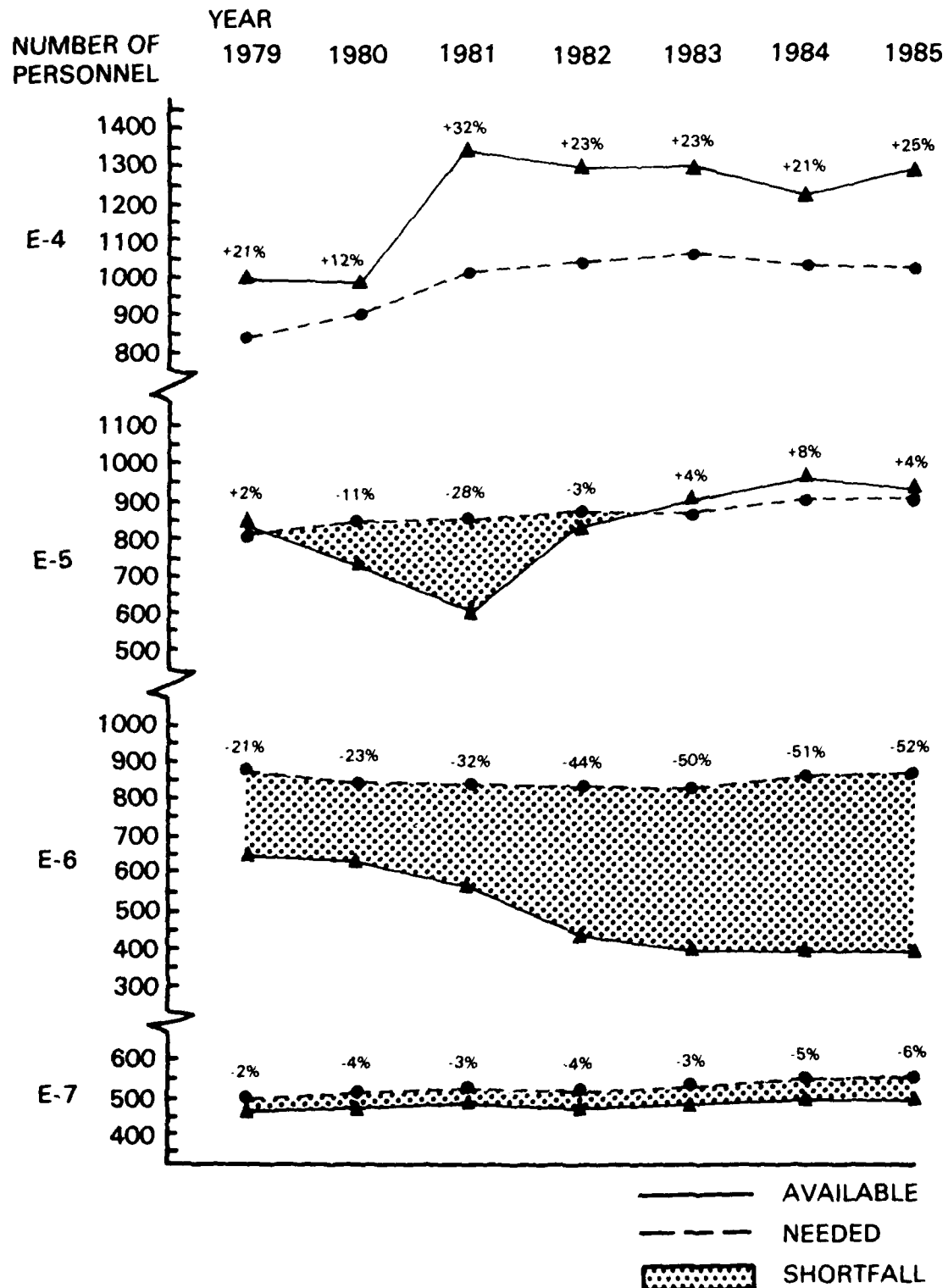
FIRE CONTROL TECHNICIAN (Gun Fire Control) (FTG)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	1012 2.40 ----- -----	1277 2.28 ----- -----	1113 2.28 ----- -----	1294 2.16 ----- -----	1337 2.31 ----- -----	1414 2.46 ----- -----	1372 2.70 ----- -----
E-4	1022 2.12 843 21.23	1005 1.54 901 11.54	1350 1.89 1019 32.48	1311 1.83 1067 22.87	1322 1.85 1074 23.09	1259 1.72 1042 20.83	1305 1.80 1042 25.24
E-5	867 4.71 846 2.48	768 4.81 866 -11.32	626 4.41 866 -27.71	850 4.07 878 -3.19	923 4.10 888 3.94	976 4.16 907 7.61	945 4.17 907 4.19
E-6	688 8.40 874 -21.28	656 7.54 850 -22.82	581 7.37 850 -31.65	467 7.59 836 -44.14	416 7.48 837 -50.30	425 6.91 871 -51.21	418 6.50 871 -52.01
E-7	474 15.08 486 -2.47	494 14.84 512 -3.52	500 14.45 515 -2.91	498 13.96 517 -3.68	504 13.31 521 -3.26	516 13.17 546 -5.49	515 12.93 546 -5.68
E-8							
E-9							
E-4/9	3051 6.28 3049 0.07	2923 6.00 3129 -6.58	3057 5.50 3250 -5.94	3126 5.23 3298 -5.22	3165 5.07 3320 -4.67	3176 5.03 3366 -5.64	3183 4.92 3366 -5.44
Total	4063 5.32 3049 -----	4200 4.87 3129 -----	4170 4.64 3250 -----	4420 4.33 3298 -----	4502 4.25 3320 -----	4590 4.24 3366 -----	4555 4.25 3366 -----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the FTG E-4 in FY80, the estimates are:

End Strength	1005	(Projected number of men at end of FY)
Mean LOS	1.54	(Average Length of Service)
Manpower Requirements	901	(CNO estimates of number required)
End Strength Status	11.54	(Percentage over or under requirements)

FIRE CONTROL TECHNICIAN (GUNS) (FTG)



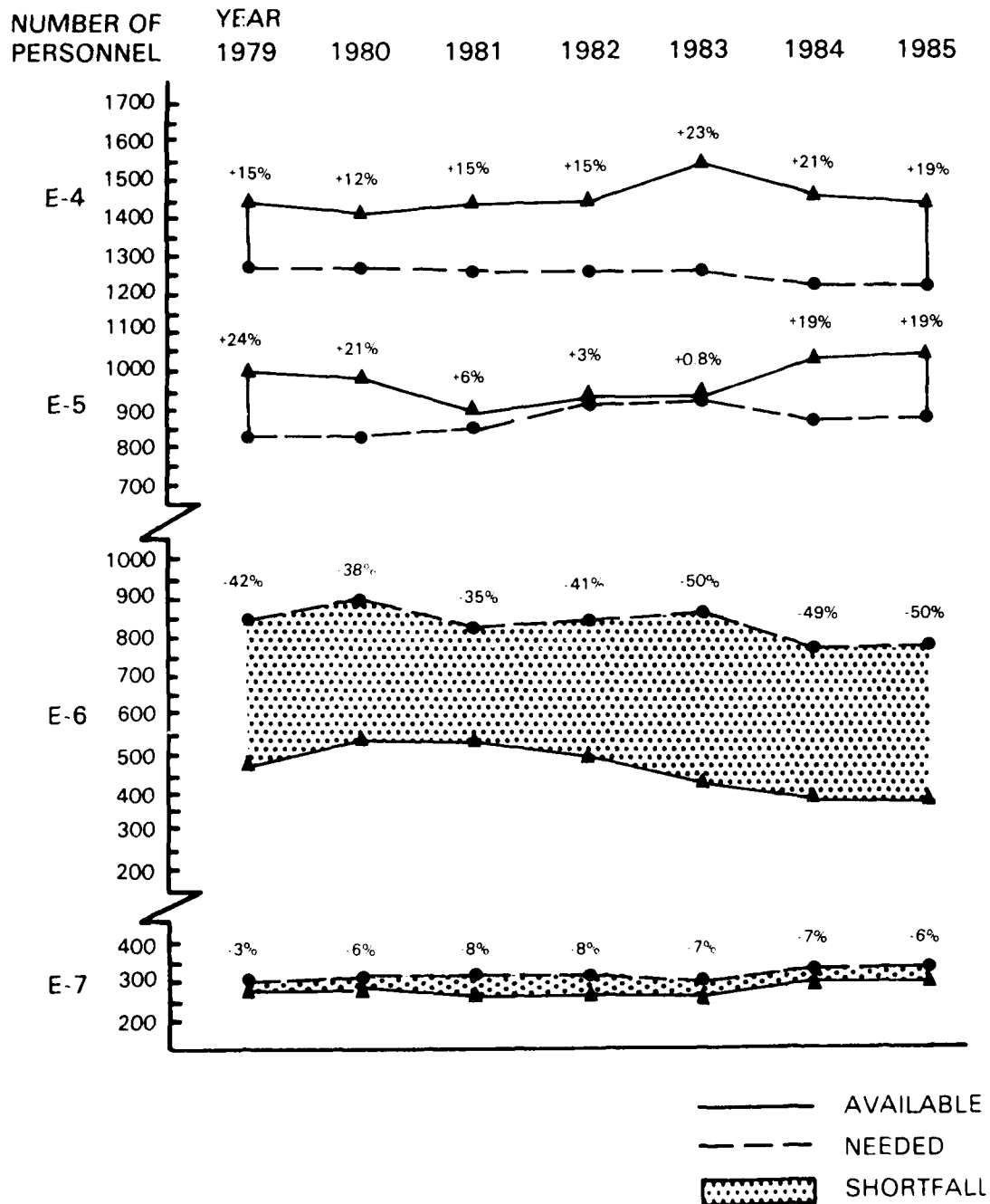
FIRE CONTROL TECHNICIAN (Surface Missile Fire Control) (FTM)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	1113 2.30 ----- -----	1132 2.87 ----- -----	1196 3.17 ----- -----	1135 3.45 ----- -----	1065 3.59 ----- -----	1101 3.72 ----- -----	1143 3.80 ----- -----
E-4	1462 2.08 1272 14.94	1435 1.84 1276 12.46	1457 1.78 1263 15.36	1460 1.80 1271 14.87	1560 1.91 1268 23.03	1471 1.82 1220 20.57	1447 1.79 1220 18.61
E-5	1005 4.60 809 24.23	999 4.89 829 20.51	906 4.86 856 5.84	943 4.62 916 2.95	964 4.54 956 0.84	1050 4.51 879 19.45	1047 4.56 879 19.11
E-6	497 9.47 852 -41.67	554 8.87 900 -38.44	544 8.59 834 -34.77	504 8.03 855 -41.05	435 7.64 878 -50.46	395 7.22 775 -49.03	391 7.01 775 -49.55
E-7	290 15.26 300 -3.33	292 15.37 310 -5.81	286 15.49 310 -7.74	287 15.80 312 -8.01	287 14.71 310 -7.42	304 13.44 326 -6.75	307 12.88 326 -5.83
E-8							
E-9							
E-4/9	3254 5.16 3233 0.65	3280 5.16 3315 -1.06	3193 5.04 3263 -2.15	3194 4.87 3354 -4.77	3246 4.59 3412 -4.87	3220 4.46 3200 0.62	3192 4.41 3200 -0.25
Total	4367 4.44 3233 -----	4412 4.57 3315 -----	4389 4.53 3263 -----	4329 4.50 3354 -----	4311 4.34 3412 -----	4321 4.27 3200 -----	4335 4.25 3200 -----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the FTM E-4 in FY80, the estimates are:

End Strength	1435	(Projected number of men at end of FY)
Mean LOS	1.84	(Average Length of Service)
Manpower Requirements	1276	(CNO estimates of number required)
End Strength Status	12.46	(Percentage over or under requirements)

FIRE CONTROL TECHNICIAN (SURFACE MISSILE) (FTM)



GUNNER'S MATE (Guns) (GMC)

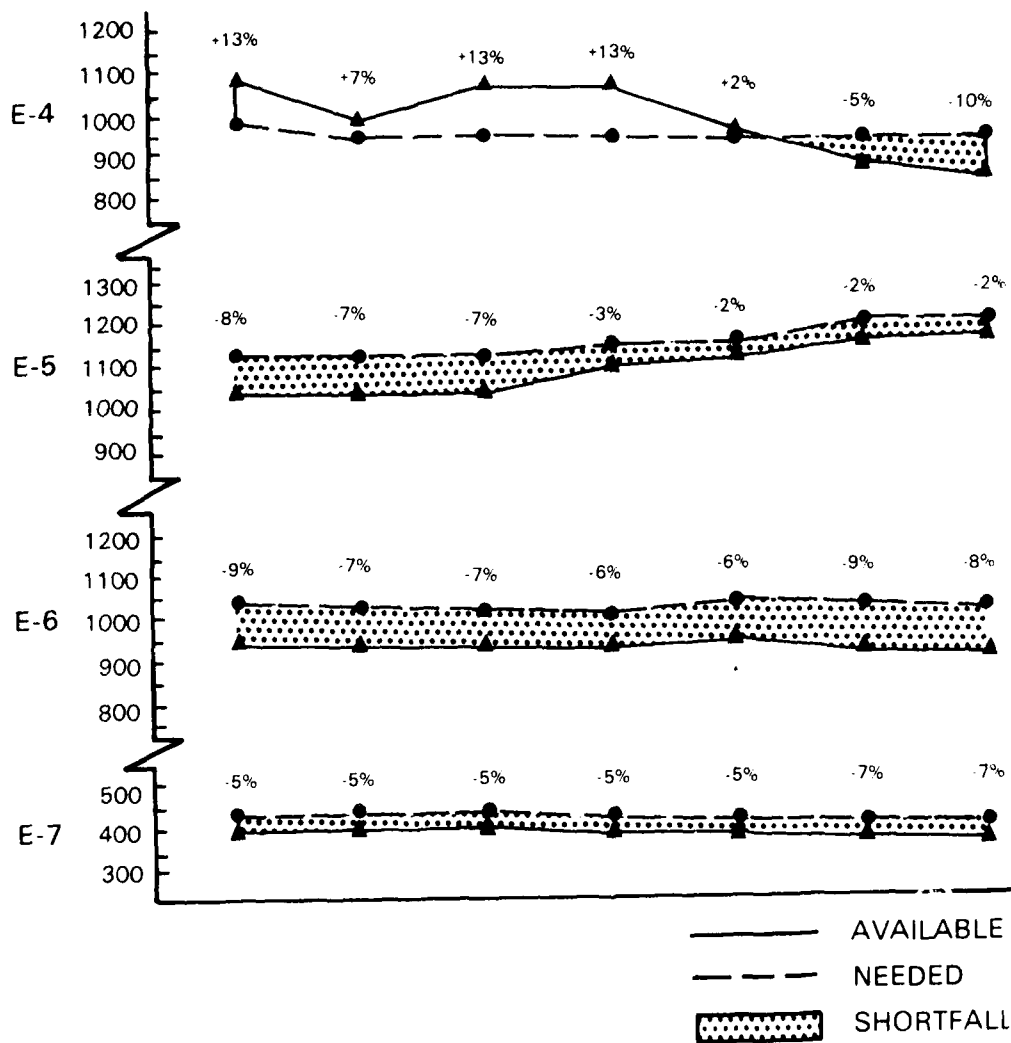
Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	3865 1.91 ----- -----	3385 2.17 ----- -----	2725 2.20 ----- -----	2322 1.89 ----- -----	2262 1.89 ----- -----	2186 1.84 ----- -----	2106 1.88 ----- -----
E-4	1099 3.26 972 13.07	1016 3.27 953 6.61	1078 3.54 953 13.12	1073 3.75 950 12.95	972 3.98 950 2.32	901 3.98 953 -5.46	861 3.95 953 -9.65
E-5	1043 6.01 1131 -7.78	1066 6.08 1144 -6.82	1059 6.14 1139 -7.02	1111 6.25 1148 -3.22	1124 6.40 1152 -2.43	1173 6.75 1202 -2.41	1184 7.07 1202 -1.50
E-6	957 11.95 1047 -8.60	957 11.54 1030 -7.09	954 11.21 1023 -6.74	953 11.04 1018 -6.39	978 10.96 1045 -6.41	943 11.15 1035 -8.89	948 11.40 1035 -8.41
E-7	409 17.13 429 -4.66	414 17.06 434 -4.61	412 16.93 433 -4.85	403 16.57 425 -5.18	405 16.37 428 -5.37	396 16.29 424 -6.60	396 16.13 424 -6.60
E-8							
E-9							
E-4/9	3508 8.07 3579 -1.98	3453 8.08 3561 -3.03	3503 7.99 3548 -1.27	3540 7.96 3541 -0.03	3479 8.17 3575 -2.69	3413 8.34 3614 -5.56	3389 8.55 3614 -6.23
Total	7373 4.84 3579 -----	6838 5.16 3561 -----	6228 5.46 3548 -----	5862 5.55 3541 -----	5741 5.69 3575 -----	5599 5.80 3614 -----	5495 5.99 3614 -----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the GMC E-4 in FY80, the estimates are:

End Strength	1016	(Projected number of men at end of FY)
Mean LOS	3.27	(Average Length of Service)
Manpower Requirements	953	(CNO estimates of number required)
End Strength Status	6.61	(Percentage over or under requirements)

GUNNER'S MATE (GUNS) (GMG)

NUMBER OF PERSONNEL	YEAR						
	1979	1980	1981	1982	1983	1984	1985



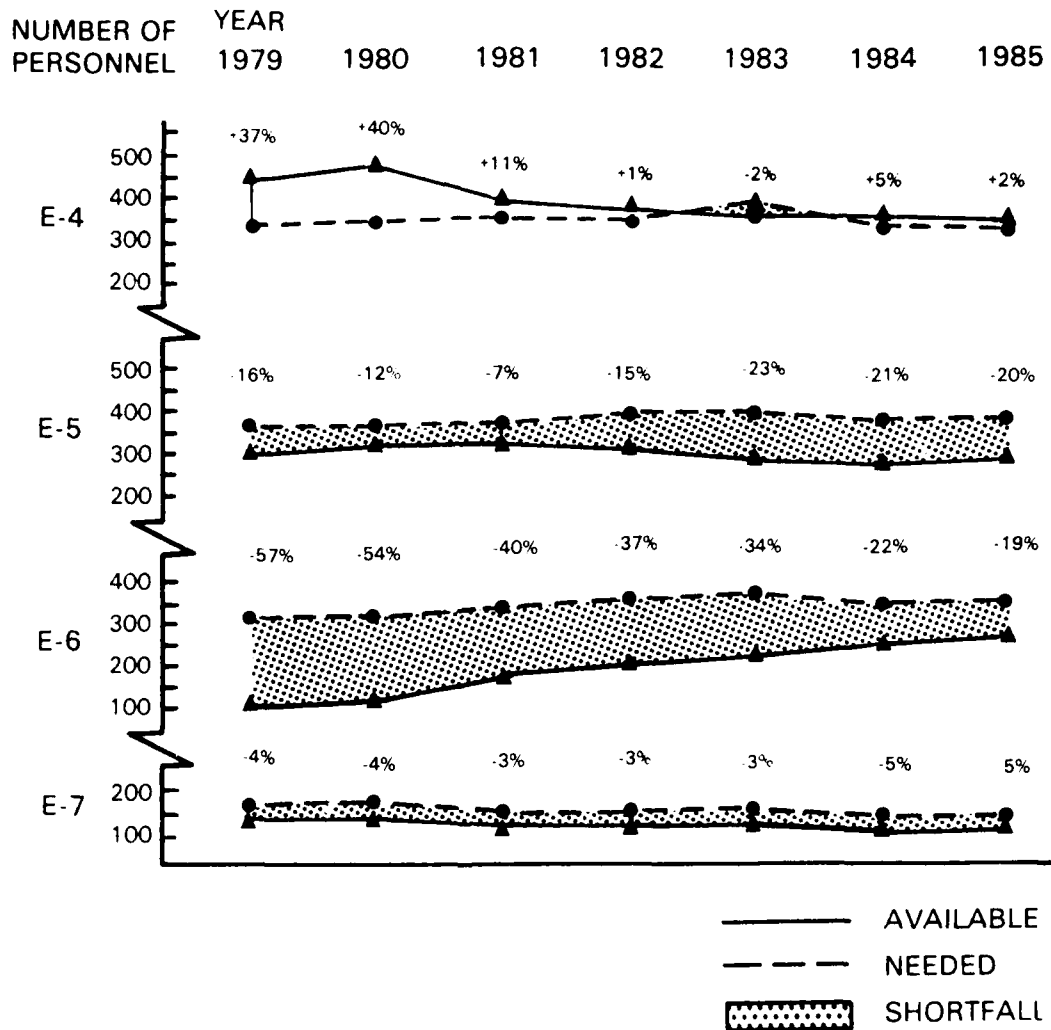
GUNNER'S MATE (Missiles) (GMM)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	765 2.06 --- ---	646 1.92 --- ---	609 1.84 --- ---	625 1.82 --- ---	620 1.85 --- ---	610 1.86 --- ---	599 1.94 --- ---
E-4	477 3.28 347 37.46	497 3.54 355 40.00	409 3.75 370 10.54	381 3.76 377 1.06	372 3.85 379 -1.85	375 3.83 357 5.04	364 3.82 357 1.96
E-5	315 4.78 374 -15.78	331 5.04 374 -11.50	358 5.26 386 -7.25	342 5.54 400 -14.50	309 5.59 400 -22.75	298 5.69 377 -20.95	301 5.67 377 -20.16
E-6	140 9.04 324 -56.79	155 7.76 339 -54.28	206 7.86 346 -40.46	236 7.93 373 -36.73	255 8.09 388 -34.28	282 8.55 362 -22.10	292 9.08 362 -19.34
E-7	173 14.34 180 -3.89	173 14.83 180 -3.89	150 15.26 155 -3.23	150 15.35 155 -3.23	151 15.18 155 -2.58	138 15.51 145 -4.83	138 15.50 145 -4.83
E-8							
E-9							
E-4/9	1105 6.17 1225 -9.80	1156 6.22 1248 -7.37	1123 6.52 1257 -10.66	1109 6.76 1305 -15.02	1087 6.91 1322 -17.78	1093 7.03 1241 -11.93	1095 7.21 1241 -11.76
Total	1870 4.49 1225 ---	1802 4.68 1248 ---	1732 4.87 1257 ---	1734 4.98 1305 ---	1707 5.07 1322 ---	1703 5.18 1241 ---	1694 5.34 1241 ---

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the GMM E-4 in FY80, the estimates are:

End Strength	497	(Projected number of men at end of FY)
Mean LOS	3.54	(Average Length of Service)
Manpower Requirements	355	(CNO estimates of number required)
End Strength Status	40.00	(Percentage over or under requirements)

GUNNER'S MATE (MISSILES) (GMM)



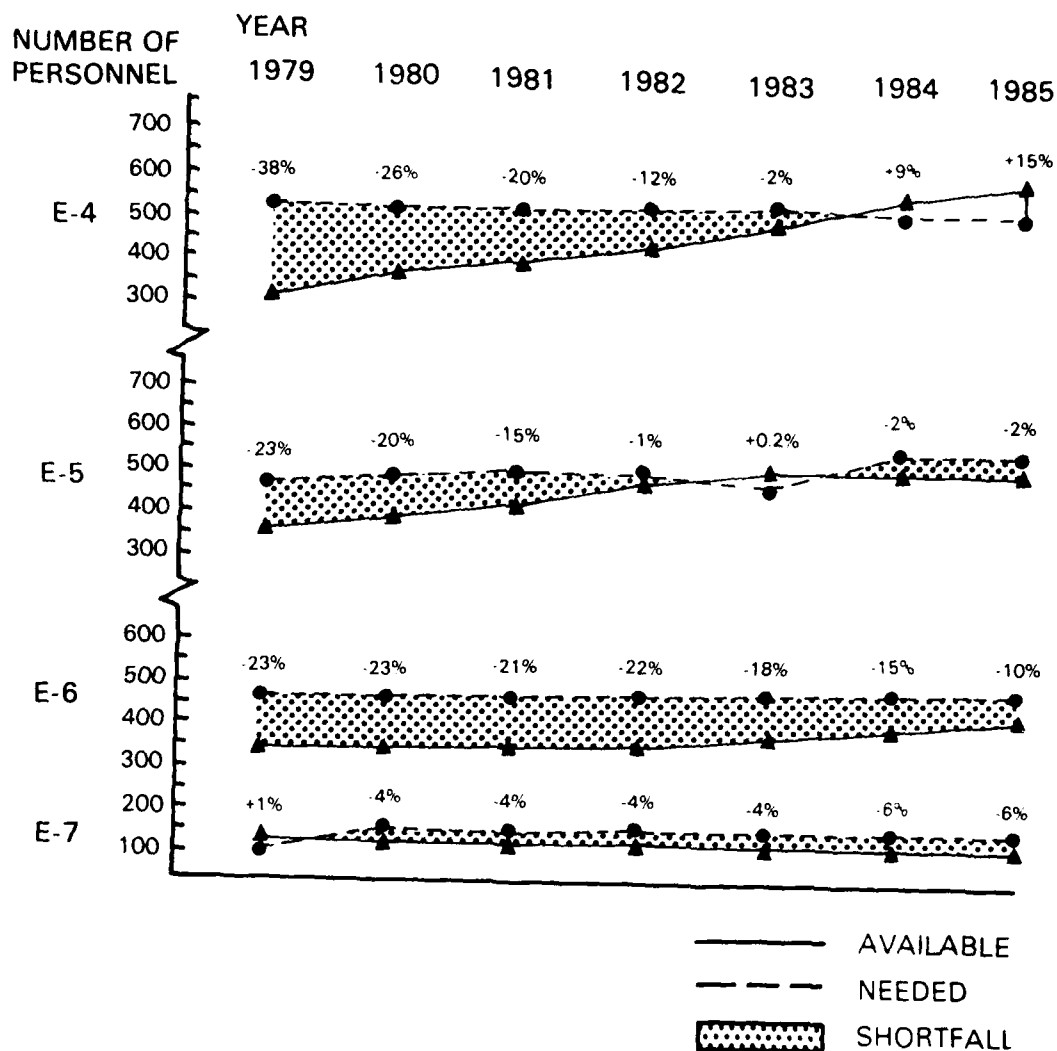
GUNNER'S MATE (Technician) (GMT)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	784	940	1010	1102	1173	1189	1232
	1.89	1.81	1.94	1.98	2.16	2.30	2.50
	---	---	---	---	---	---	---
E-4	336	390	420	466	519	574	604
	2.85	2.89	3.03	3.04	3.10	3.12	3.32
	538	524	527	532	529	526	526
	-37.55	-25.57	-20.30	-12.41	-1.89	9.13	14.83
E-5	373	401	435	495	505	523	527
	5.34	5.62	5.74	5.85	6.17	6.40	6.60
	482	499	509	499	504	535	535
	-22.61	-19.64	-14.54	-0.80	0.20	-2.24	-1.50
E-6	374	367	376	380	400	418	444
	12.29	11.90	11.26	10.66	10.48	10.60	10.77
	487	475	473	485	490	491	491
	-23.20	-22.74	-20.51	-21.65	-18.37	-14.87	-9.57
E-7	162	153	149	152	156	145	145
	17.65	17.89	17.78	17.60	17.68	17.80	17.73
	160	160	156	159	163	154	154
	1.25	-4.37	-4.49	-4.40	-4.29	-5.84	-5.84
E-8	35	36	39	41	41	40	42
	20.96	20.31	19.91	19.77	20.23	20.25	20.05
	43	43	45	46	46	46	46
	-18.60	-16.28	-13.33	-10.87	-10.87	-13.04	-8.70
E-9	17	16	15	15	16	15	14
	21.91	22.50	23.43	23.50	24.00	24.37	24.14
	14	14	16	18	18	16	16
	21.43	14.29	-6.25	-16.67	-11.11	-6.25	-12.50
E-4/9	1297	1363	1434	1517	1637	1715	1776
	8.88	8.49	8.21	7.88	7.87	7.77	7.89
	1724	1715	1726	1739	1750	1768	1768
	-24.77	-20.52	-16.92	-10.93	-6.46	-3.00	0.45
Total	2081	2303	2444	2651	2810	2904	3008
	6.25	5.77	5.62	5.43	5.49	5.53	5.69
	1724	1715	1726	1739	1750	1768	1768
	---	---	---	---	---	---	---

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the GMT E-4 in FY80, the estimates are:

End Strength	390	(Projected number of men at end of FY)
Mean LOS	2.89	(Average Length of Service)
Manpower Requirements	524	(CNO estimates of number required)
End Strength Status	-25.57	(Percentage over or under requirements)

GUNNER'S MATE (TECHNICIAN) (GMT)



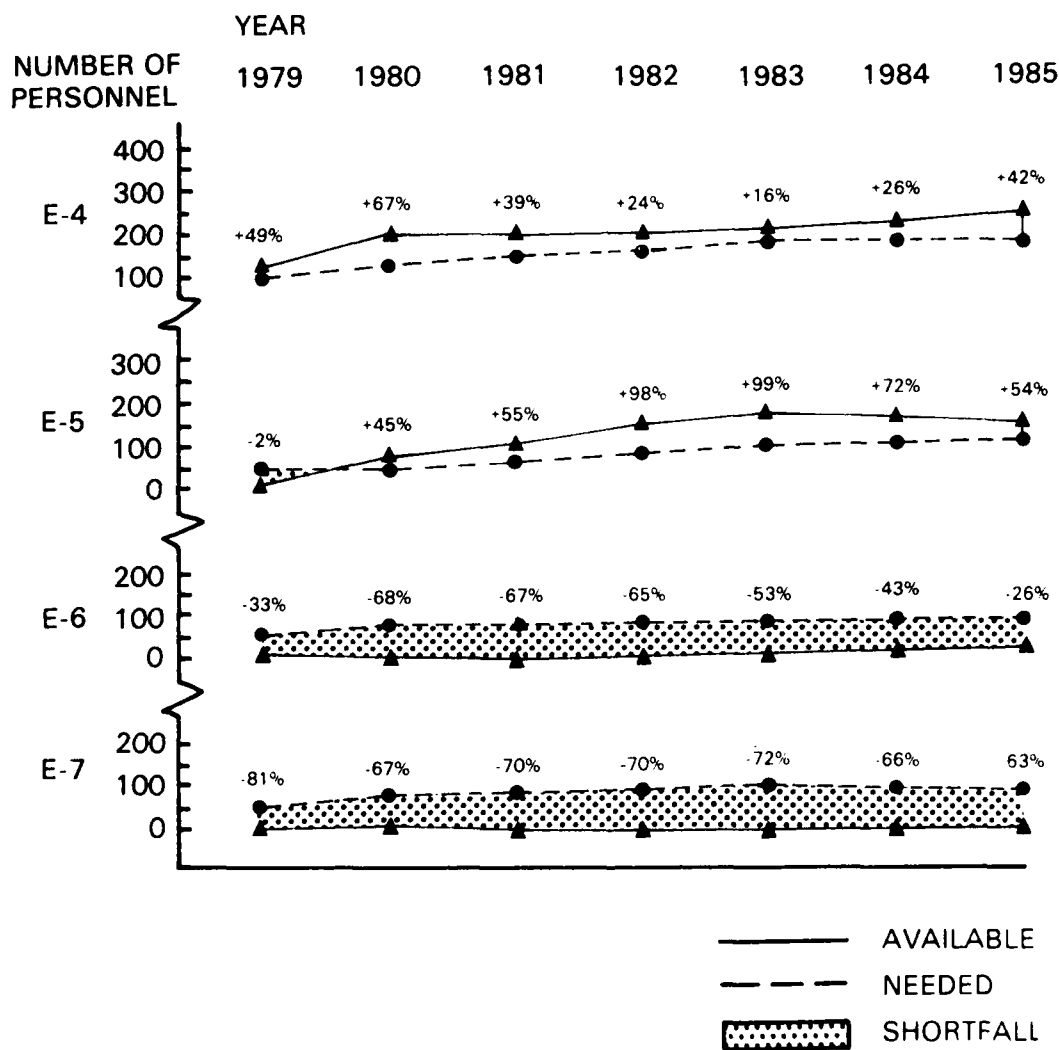
GAS TURBINE SYSTEM TECHNICIAN (ELEC) (GSE)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	179 2.03 ----- -----	193 1.65 ----- -----	209 1.92 ----- -----	268 1.94 ----- -----	292 2.17 ----- -----	302 2.20 ----- -----	302 2.39 ----- -----
E-4	148 2.24 99 49.49	219 1.69 131 67.18	224 1.58 161 39.13	219 1.50 177 23.73	227 1.48 196 15.82	250 1.54 198 26.26	281 1.62 198 41.92
E-5	40 9.17 41 -2.44	81 5.75 56 44.64	135 4.07 87 55.17	180 3.79 91 97.80	199 3.85 100 99.00	193 4.13 112 72.32	173 4.48 112 54.46
E-6	42 13.57 63 -33.33	26 12.92 82 -68.29	28 11.61 86 -67.44	30 9.20 86 -65.12	40 7.60 86 -53.49	55 7.01 97 -43.30	72 6.60 97 -25.77
E-7	12 14.50 63 -80.95	28 14.79 84 -66.67	28 14.75 92 -69.57	29 14.81 97 -70.10	28 14.00 101 -72.28	33 13.83 97 -65.98	36 13.17 97 -62.89
E-8							
E-9							
E-4/9	242 5.96 266 -9.02	354 4.48 353 0.28	415 3.95 426 -2.58	458 3.75 451 1.55	494 3.64 483 2.28	531 3.81 504 5.36	562 3.88 504 11.51
Total	421 4.29 266 -----	547 3.48 353 -----	624 3.27 426 -----	726 3.08 451 -----	786 3.09 483 -----	833 3.23 504 -----	864 3.36 504 -----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the GSE E-4 in FY80, the estimates are:

End Strength	219	(Projected number of men at end of FY)
Mean LOS	1.69	(Average Length of Service)
Manpower Requirements	131	(CNO estimates of number required)
End Strength Status	67.18	(Percentage over or under requirements)

GAS TURBINE SYSTEM TECHNICIAN (ELECTRICAL) (GSE)



GAS TURBINE SYSTEM TECHNICIAN (MECH) (GSM)

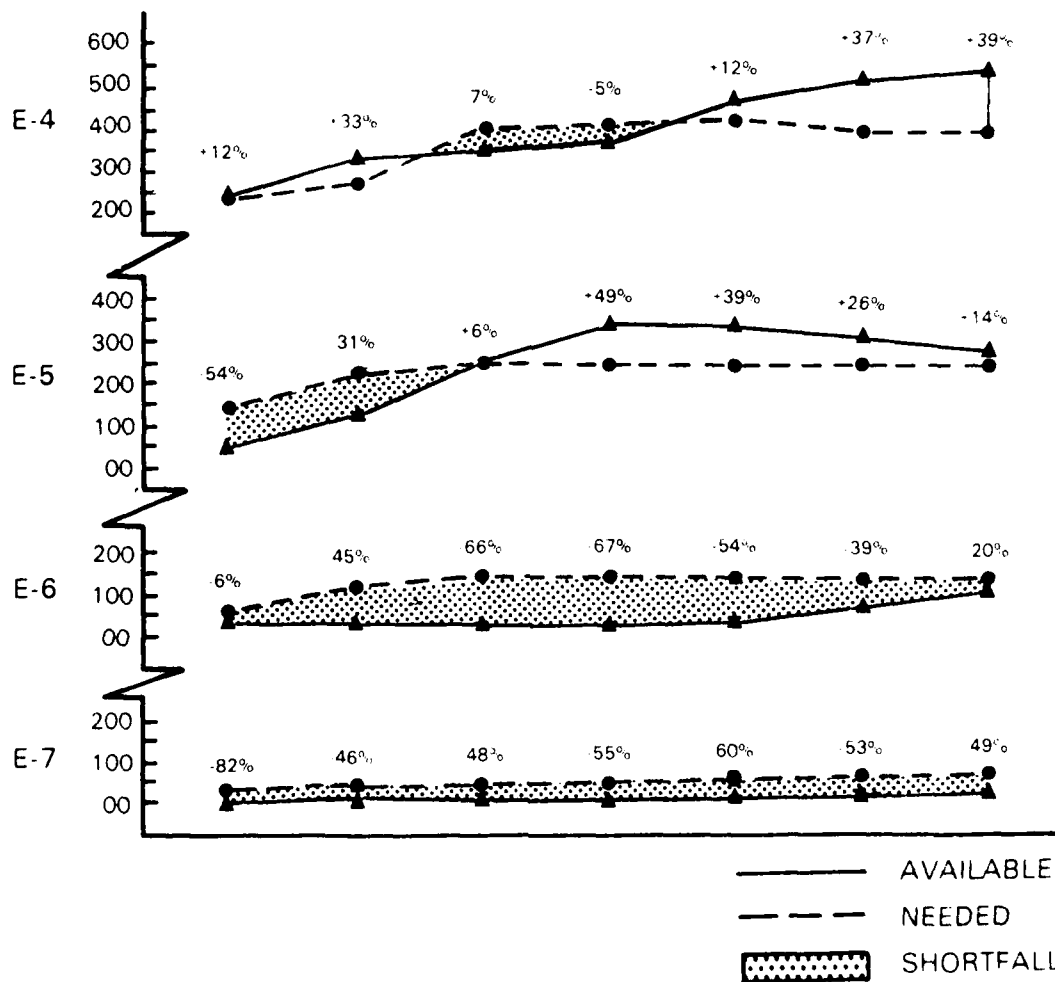
Rate	FY79	FY80	FY81	FY82	FY83	FY84	FY85
E-1/3	271	257	232	259	274	339	354
	1.91	1.57	1.70	1.48	1.73	2.05	2.39
	----	----	----	----	----	----	----
	----	----	----	----	----	----	----
E-4	273	360	376	397	491	535	545
	1.91	1.83	1.92	1.94	2.07	2.23	2.38
	243	270	403	417	437	391	391
	12.35	33.33	-6.70	-4.80	12.36	36.83	39.39
E-5	78	151	261	366	359	319	289
	8.73	4.88	3.83	3.87	4.47	5.16	5.48
	168	220	246	246	258	253	253
	-53.57	-31.36	6.10	48.78	39.15	26.09	14.23
E-6	81	64	51	52	74	93	122
	14.45	13.31	11.97	10.00	8.31	7.65	7.63
	86	117	150	156	162	152	152
	-5.81	-45.30	-66.00	-66.67	-54.32	-38.82	-19.74
E-7	11	44	48	41	37	45	49
	14.95	15.57	15.69	15.45	15.09	14.83	13.83
	60	82	92	92	92	96	96
	-81.67	-46.34	-47.83	-55.43	-59.78	-53.13	-48.96
E-8							
E-9							
E-4/9	443	619	736	856	961	992	1005
	5.73	4.74	4.19	3.90	3.95	4.25	4.47
	557	689	891	911	949	892	892
	-20.47	-10.16	-17.40	-6.04	1.26	11.21	12.67
Total	714	876	968	1115	1235	1331	1359
	4.28	3.81	3.60	3.34	3.46	3.69	3.92
	557	689	891	911	949	892	892
	----	----	----	----	----	----	----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the CSM E-4 in FY80, the estimates are:

End Strength	360	(Projected number of men at end of FY)
Mean LOS	1.83	(Average Length of Service)
Manpower Requirements	270	(CNO estimates of number required)
End Strength Status	33.33	(Percentage over or under requirements)

GAS TURBINE SYSTEM TECHNICIAN (MECHANICAL) (GSM)

NUMBER OF PERSONNEL	YEAR	1979	1980	1981	1982	1983	1984	1985
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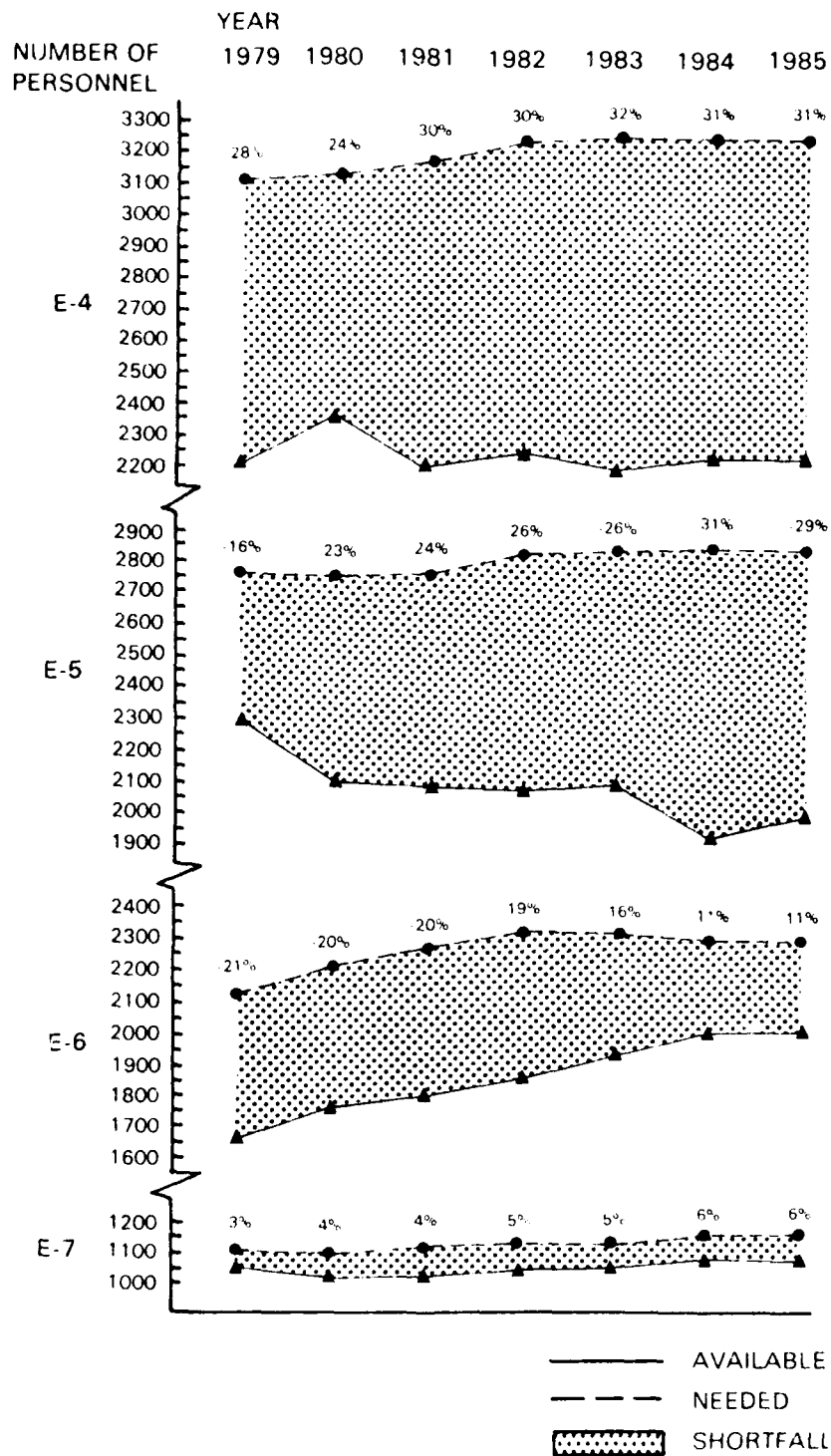
HULL MAINTENANCE TECHNICIAN (HT)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	6497 1.72 ----	6466 1.60 ----	6277 1.63 ----	6428 1.52 ----	6466 1.61 ----	6348 1.62 ----	6145 1.64 ----
E-4	2230 3.08 3110 -28.30	2390 3.06 3131 -23.67	2232 3.21 3171 -29.61	2271 3.17 3232 -29.73	2200 3.19 3250 -32.31	2242 3.18 3256 -31.14	2234 3.24 3256 -31.39
E-5	2314 5.39 2770 -16.46	2128 5.60 2765 -23.04	2104 5.57 2782 -24.37	2084 5.63 2822 -26.15	2110 5.67 2841 -25.73	1965 5.71 2851 -31.08	2029 5.73 2851 -28.83
E-6	1689 10.35 2130 -20.70	1784 9.92 2219 -19.60	1824 9.63 2281 -20.04	1885 9.62 2327 -18.99	1961 9.70 2332 -15.91	2041 9.83 2303 -11.38	2049 10.06 2303 -11.03
E-7	1075 15.63 1110 -3.15	1052 15.48 1100 -4.36	1069 15.32 1119 -4.47	1076 15.22 1130 -4.78	1077 15.20 1130 -4.69	1101 15.16 1173 -6.14	1102 15.12 1173 -6.05
E-8	198 19.88 218 -9.17	206 19.73 230 -10.43	212 19.50 236 -10.17	211 19.51 235 -10.21	219 19.39 244 -10.25	220 19.39 247 -10.93	222 19.02 247 -10.12
E-9	79 23.07 98 -19.39	82 23.18 101 -18.81	88 23.01 105 -16.19	88 23.10 105 -16.19	87 23.03 103 -15.53	85 23.03 101 -15.84	87 23.14 101 -13.86
E-4/9	7585 7.83 9436 -19.62	7642 7.74 9546 -19.95	7529 7.83 9694 -22.33	7615 7.83 9851 -22.70	7654 7.92 9900 -22.69	7654 8.01 9931 -22.93	7723 8.08 9931 -22.23
Total	14082 5.01 9436 ----	14108 4.93 9546 ----	13806 5.01 9694 ----	14043 4.94 9851 ----	14120 5.03 9900 ----	14002 5.11 9931 ----	13868 5.22 9931 ----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the HT E-4 in FY80, the estimates are:

End Strength	2390	(Projected number of men at end of FY)
Mean LOS	3.06	(Average Length of Service)
Manpower Requirements	3131	(CNO estimates of number required)
End Strength Status	-23.67	(Percentage over or under requirements)

HULL MAINTENANCE TECHNICIAN (HT)



MISSILE TECHNICIAN (MT)

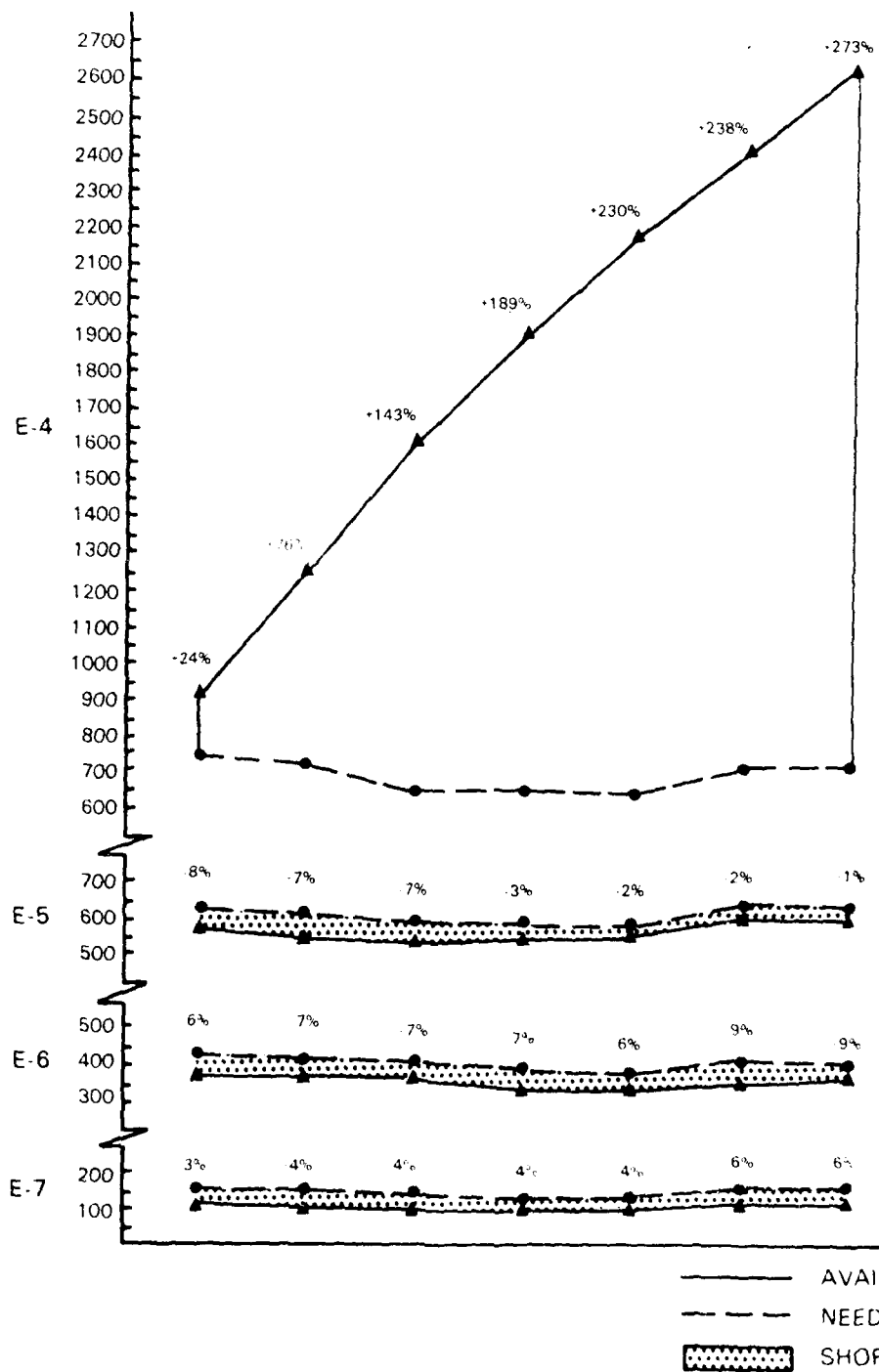
Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	296 1.70 ----- -----	359 2.27 ----- -----	448 2.48 ----- -----	512 2.81 ----- -----	597 2.98 ----- -----	643 3.34 ----- -----	715 3.62 ----- -----
E-4	939 1.59 756 24.21	1265 1.59 718 76.18	1621 1.91 668 142.66	1928 2.23 666 189.49	2190 2.58 664 229.82	2415 2.96 715 237.76	2664 3.31 715 272.59
E-5	591 5.02 640 -7.66	569 5.28 611 -6.87	551 5.52 593 -7.08	578 5.54 597 -3.18	581 5.43 595 -2.35	618 4.85 633 -2.37	624 5.12 633 -1.42
E-6	389 9.88 415 -6.27	381 10.11 410 -7.07	378 10.14 405 -6.67	359 10.43 384 -6.51	353 10.43 376 -6.12	382 10.42 418 -8.61	382 10.79 418 -8.61
E-7	154 15.21 159 -3.14	153 15.56 160 -4.37	152 15.46 159 -4.40	150 15.48 157 -4.46	150 15.41 157 -4.46	170 15.06 181 -6.08	170 15.59 181 -6.08
E-8	45 18.26 50 -10.00	44 18.91 49 -10.20	45 19.14 50 -10.00	46 19.37 51 -9.80	47 19.01 52 -9.62	49 18.64 55 -10.91	50 18.68 55 -9.09
E-9	21 21.12 25 -16.00	20 21.60 25 -20.00	21 22.21 26 -19.23	21 22.69 25 -16.00	21 23.31 25 -16.00	24 23.42 28 -14.29	24 24.17 28 -14.29
E-4/9	2139 5.56 2045 4.60	2432 5.15 1973 23.26	2768 4.93 1901 45.61	3082 4.85 1880 63.94	3342 4.84 1869 78.81	3658 4.97 2030 80.20	3914 5.19 2030 92.81
Total	1335 5.09 2045 -----	2791 4.78 1973 -----	3216 4.59 1901 -----	3594 4.56 1880 -----	3939 4.56 1869 -----	4301 4.72 2030 -----	4629 4.95 2030 -----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the MT E-4 in FY80, the estimates are:

End Strength	1265	(Projected number of men at end of FY)
Mean LOS	1.59	(Average Length of Service)
Manpower Requirements	718	(CNO estimates of number required)
End Strength Status	76.18	(Percentage over or under requirements)

MISSILE TECHNICIAN (MT)

NUMBER OF PERSONNEL	YEAR	1979	1980	1981	1982	1983	1984	1985
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OPERATIONS SPECIALIST (OS)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	3048 1.75 ----- -----	3101 1.52 ----- -----	3137 1.55 ----- -----	3275 1.52 ----- -----	3356 1.63 ----- -----	3267 1.63 ----- -----	3194 1.71 ----- -----
E-4	1715 3.17 2216 -22.61	1526 3.15 2257 -32.39	1351 3.17 2285 -40.88	1443 3.04 2389 -39.60	1421 3.07 2437 -41.69	1506 3.11 2366 -36.35	1487 3.15 2366 -37.15
E-5	1738 5.22 1937 -10.27	1736 5.41 1952 -11.07	1624 5.50 1984 -18.15	1520 5.51 1995 -23.81	1505 5.48 1985 -24.18	1464 5.52 1981 -26.10	1584 5.50 1981 -20.04
E-6	1015 10.33 1598 -36.48	1129 9.54 1651 -31.66	1273 9.05 1686 -24.50	1424 8.95 1680 -15.24	1514 9.09 1680 -9.88	1528 9.52 1677 -8.88	1535 9.90 1677 -8.47
E-7	596 16.52 616 -3.25	592 16.53 619 -4.36	594 16.27 622 -4.50	591 16.20 620 -4.68	591 15.73 620 -4.68	580 15.63 617 -6.00	580 15.37 617 -6.00
E-8	173 19.70 190 -8.95	170 20.11 190 -10.53	171 20.35 190 -10.00	170 20.68 190 -10.53	171 20.43 190 -10.00	163 20.76 183 -10.93	165 20.56 183 -9.84
E-9	54 23.69 67 -19.40	54 24.39 66 -18.18	55 25.10 66 -16.67	56 25.50 66 -15.15	58 25.43 68 -14.71	59 25.30 70 -15.71	61 24.02 70 -12.86
E-4/9	5291 7.47 6624 -20.12	5207 7.58 6736 -22.70	5068 7.75 6833 -25.83	5204 7.69 6940 -25.01	5260 7.73 6980 -24.64	5300 7.78 6894 -23.12	5412 7.83 6895 -21.50
Total	8339 5.38 6624 -----	8308 5.32 6736 -----	8205 5.38 6833 -----	8479 5.31 6940 -----	8616 5.35 6980 -----	8567 5.44 6894 -----	8606 5.46 6894 -----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the OS E-4 in FY80, the estimates are:

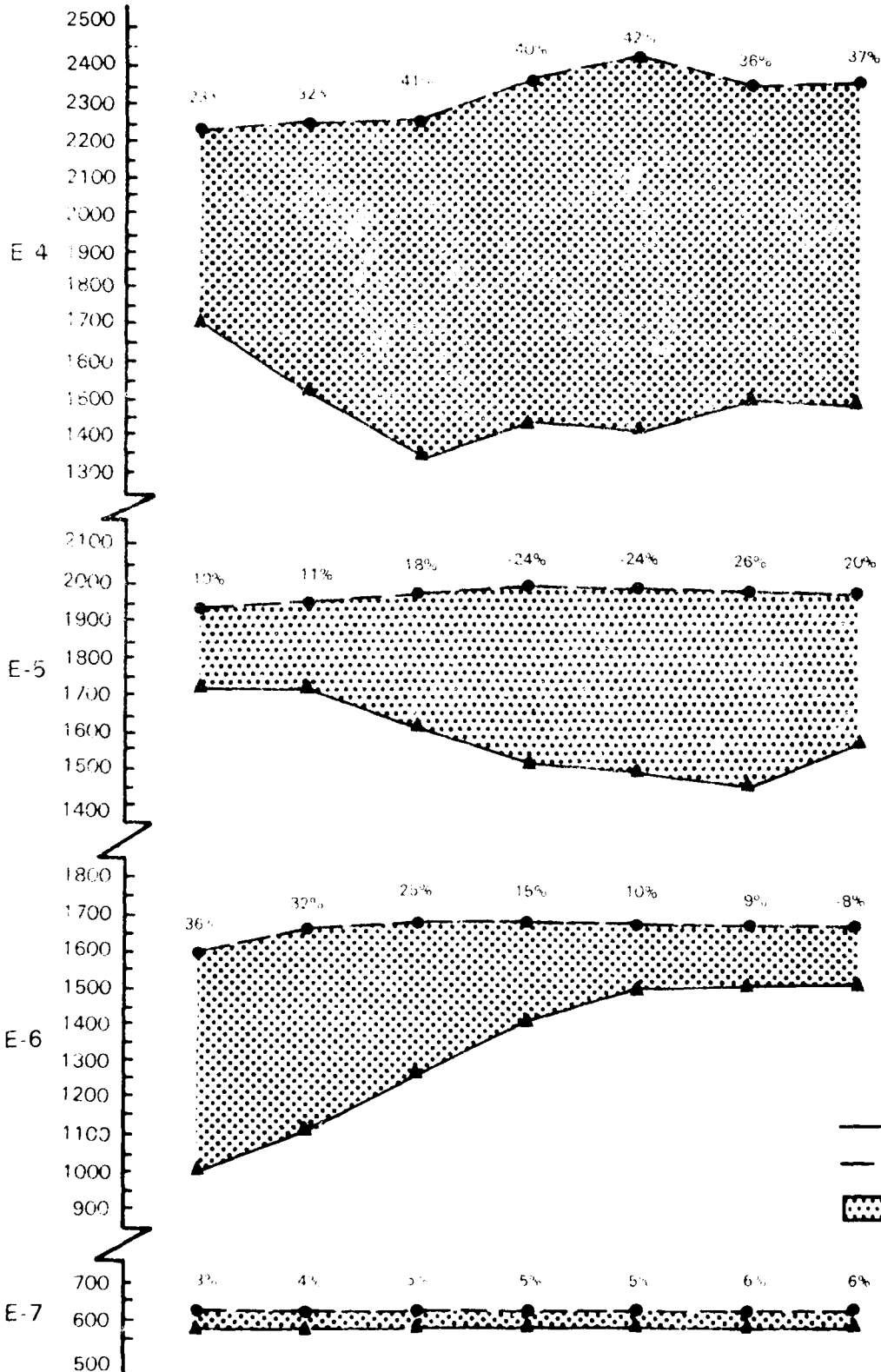
End Strength	1526	(Projected number of men at end of FY)
Mean LOS	3.15	(Average Length of Service)
Manpower Requirements	2257	(CNO estimates of number required)
End Strength Status	-32.39	(Percentage over or under requirements)

OPERATIONS SPECIALIST (OS)

NUMBER OF
PERSONNEL

YEAR

1979 1980 1981 1982 1983 1984 1985



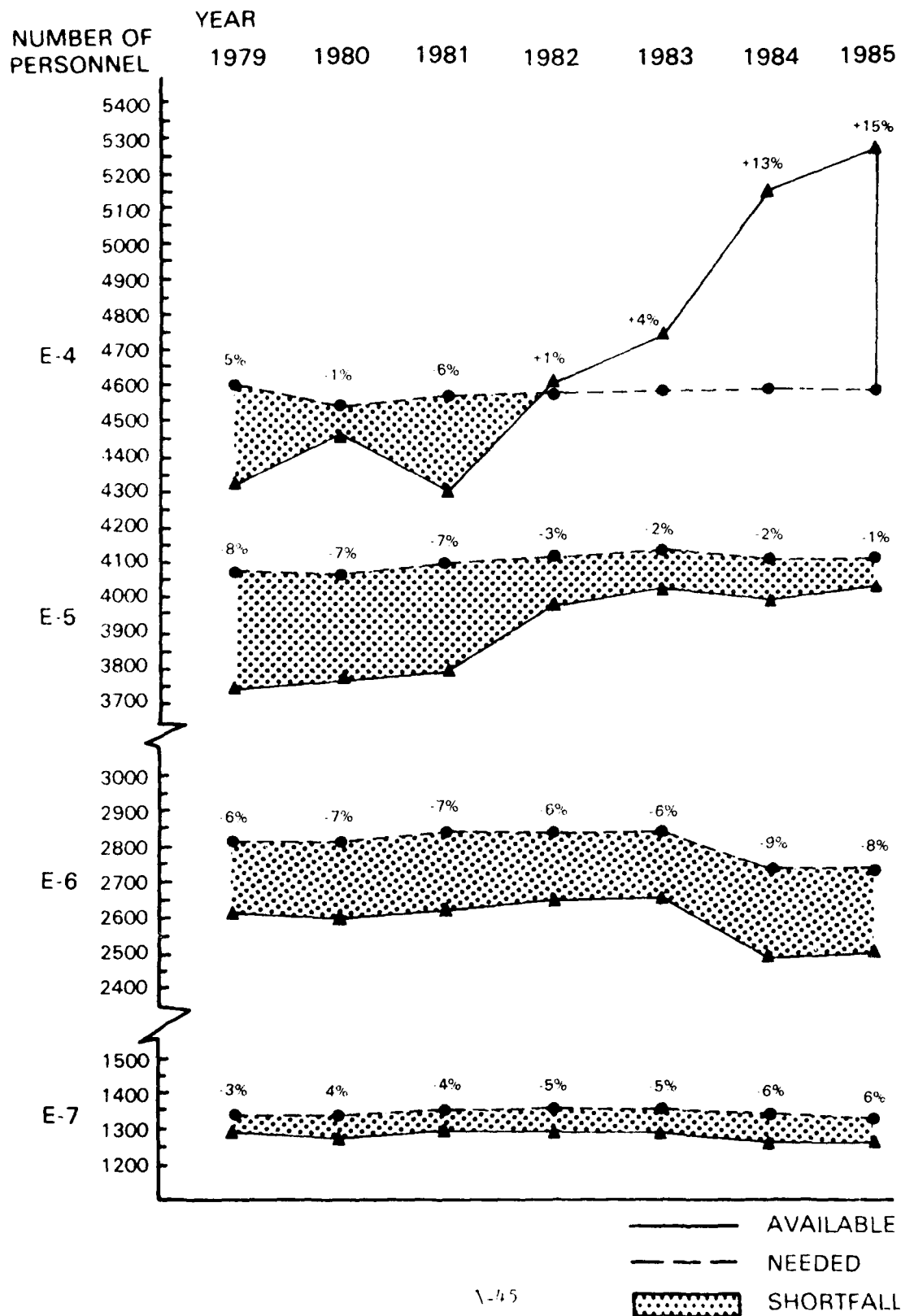
RADIOMAN (RM)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	5797 1.73 ----- -----	6351 1.51 ----- -----	6599 1.61 ----- -----	6964 1.59 ----- -----	7132 1.69 ----- -----	6953 1.68 ----- -----	6925 1.75 ----- -----
E-4	4365 3.06 4600 -5.11	4488 3.01 4551 -1.38	4329 3.04 4584 -5.56	4617 2.98 4592 0.54	4763 3.06 4597 3.61	5183 3.16 4598 12.72	5287 3.33 4598 13.98
E-5	3778 6.41 4094 -7.72	3801 6.26 4081 -6.86	3814 6.01 4100 -6.98	3996 5.88 4129 -3.22	4044 5.81 4144 -2.41	4017 6.07 4114 -2.36	4053 6.15 4114 -1.48
E-6	2641 13.68 2815 -6.18	2618 13.17 2818 -7.10	2657 12.44 2850 -6.77	2675 12.06 2859 -6.44	2687 11.80 2869 -6.34	2509 12.06 2753 -8.86	2520 12.11 2753 -8.46
E-7	1308 17.92 1350 -3.11	1298 17.75 1357 -4.35	1310 17.69 1370 -4.38	1305 17.68 1370 -4.74	1309 17.58 1373 -4.66	1271 17.41 1354 -6.13	1272 17.15 1354 -6.06
E-8	359 20.37 395 -9.11	355 20.41 396 -10.35	364 20.41 405 -10.12	364 20.54 405 -10.12	363 20.61 403 -9.93	364 20.64 409 -11.00	367 20.69 409 -10.27
E-9	116 22.78 144 -19.44	119 22.73 146 -18.49	122 22.51 146 -16.44	122 22.51 146 -16.44	123 22.76 146 -15.75	125 22.78 147 -14.97	126 22.90 147 -14.29
E-4/9	12567 8.52 13398 -6.20	12679 8.26 13349 -5.02	12596 8.14 13455 -6.38	13079 7.86 13501 -3.13	13289 7.76 13532 -1.80	13469 7.68 13375 0.70	13625 7.73 13375 1.87
Total	18364 6.38 13398 -----	19030 6.01 13349 -----	19195 5.89 13455 -----	20043 5.68 13501 -----	20421 5.64 13532 -----	20422 5.64 13375 -----	20550 5.72 13375 -----

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the RM E-4 in FY80, the estimates are:

End Strength	4488	(Projected number of men at end of FY)
Mean LOS	3.01	(Average Length of Service)
Manpower Requirements	4551	(CNO estimates of number required)
End Strength Status	-1.38	(Percentage over or under requirements)

RADIOMAN (RM)



SONAR TECHNICIAN (Surface) (STG)

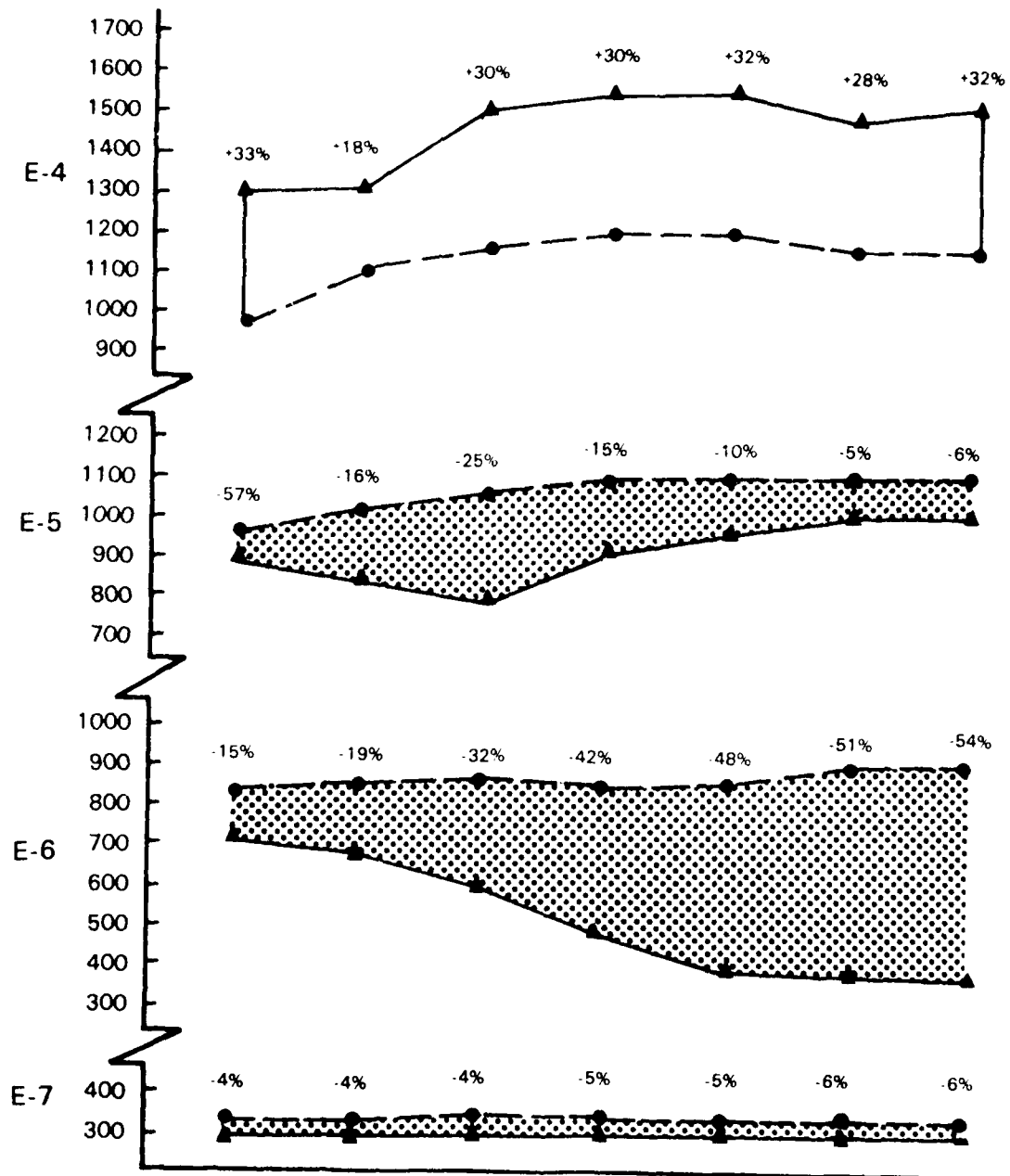
Rate	FY79	FY80	FY81	FY82	FY83	FY84	FY85
E-1/3	1381 2.37 ---	1509 2.54 ---	1283 2.76 ---	1351 2.68 ---	1298 2.88 ---	1331 2.98 ---	1263 3.32 ---
E-4	1334 1.63 1000 33.40	1346 1.44 1141 17.97	1544 1.59 1190 29.75	1570 1.65 1213 29.43	1594 1.70 1212 31.52	1525 1.61 1189 28.26	1570 1.71 1189 32.04
E-5	934 4.14 986 -5.27	871 3.99 1043 -16.49	813 3.70 1091 -25.48	945 3.62 1107 -14.63	1001 3.61 1117 -10.38	1056 3.74 1114 -5.21	1051 3.72 1114 -5.66
E-6	733 9.70 858 -14.57	706 9.10 876 -19.41	612 8.70 894 -31.54	505 8.49 875 -42.29	456 7.62 877 -48.00	445 6.84 903 -50.72	416 6.41 903 -53.93
E-7	330 15.17 342 -3.51	325 15.12 340 -4.41	335 15.09 350 -4.29	334 15.22 350 -4.57	334 15.20 350 -4.57	327 14.30 348 -6.03	327 12.93 348 -6.03
E-8	110 19.03 128 -14.06	116 18.82 130 -10.77	117 18.74 130 -10.00	116 18.21 129 -10.08	116 18.16 128 -9.38	122 18.29 137 -10.95	123 18.24 137 -10.22
E-9	28 23.46 26 7.69	22 23.27 26 -15.38	21 22.31 26 -19.23	21 22.40 25 -16.00	21 22.02 25 -16.00	21 22.36 25 -16.00	22 22.59 25 -12.00
E-4/9	3469 6.03 3340 3.86	3386 5.74 3556 -4.78	3442 5.38 3681 -6.49	3491 5.15 3699 -5.62	3522 4.95 3709 -5.04	3496 4.81 3716 -5.92	3509 4.63 3716 -5.57
Total	4850 4.99 3340 ---	4895 4.76 3556 ---	4725 4.67 3681 ---	4842 4.46 3699 ---	4820 4.39 3709 ---	4827 4.31 3716 ---	4772 4.28 3716 ---

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the STG E-4 in FY80, the estimates are:

End Strength	1346	(Projected number of men at end of FY)
Mean LOS	1.44	(Average Length of Service)
Manpower Requirements	1141	(CNO estimates of number required)
End Strength Status	17.97	(Percentage over or under requirements)

SONAR TECHNICIAN (SURFACE) (STG)

NUMBER OF PERSONNEL	YEAR	1979	1980	1981	1982	1983	1984	1985
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— AVAILABLE
 - - - NEEDED
 [Pattern] SHORTFALL

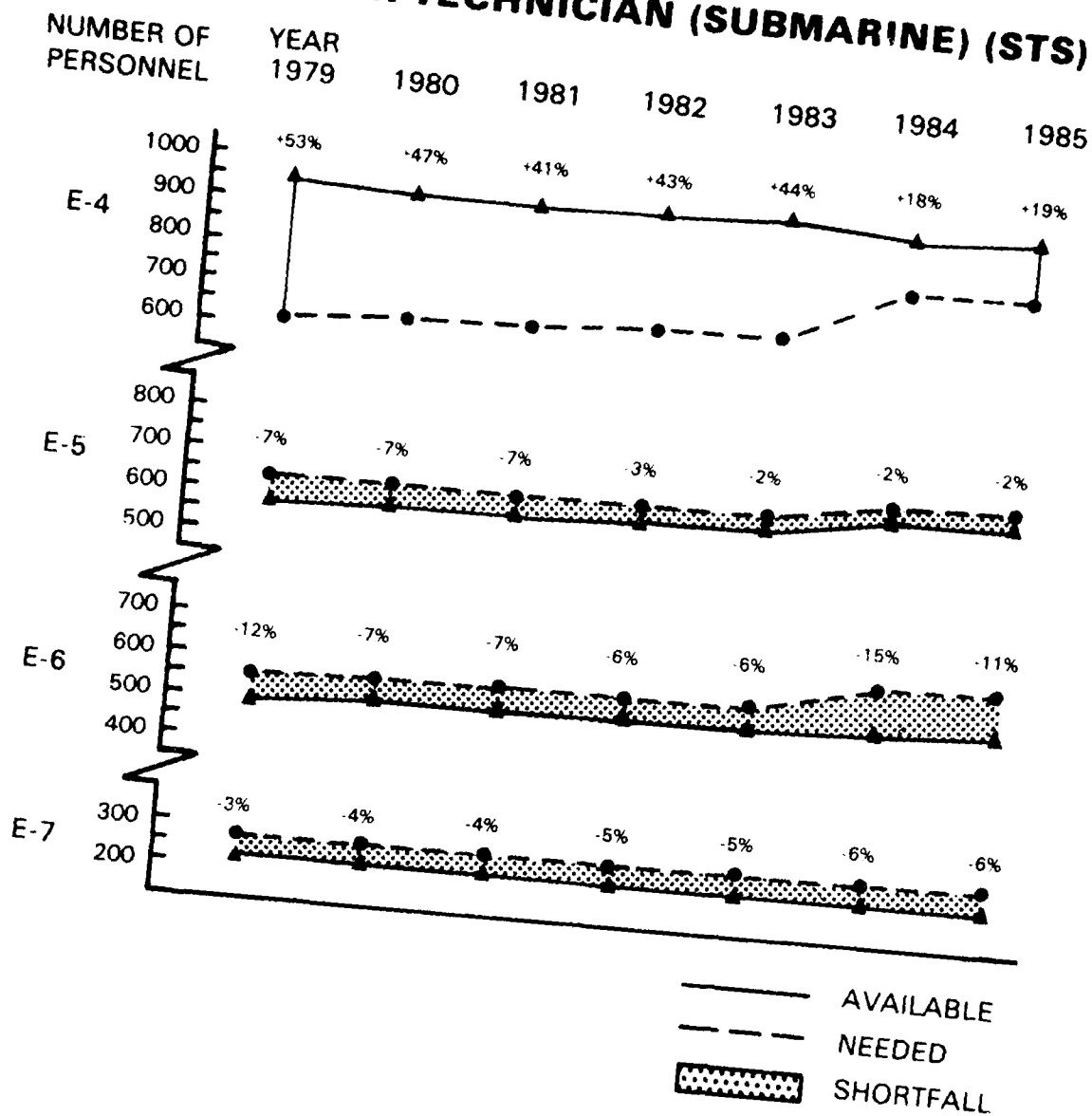
SONAR TECHNICIAN (Submarine) (STS)

Rate	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
E-1/3	960 1.78 ---	1389 1.78 ---	1566 2.05 ---	1804 2.12 ---	1876 2.29 ---	1923 2.42 ---	1899 2.61 ---
E-4	978 2.12 639 53.05	958 2.20 651 47.16	943 2.13 667 41.38	968 2.17 675 43.41	972 2.18 674 44.21	943 2.17 800 17.87	952 2.23 800 19.00
E-5	599 4.55 646 -7.28	602 4.43 646 -6.81	604 4.39 650 -7.08	631 4.37 652 -3.22	638 4.30 653 -2.30	680 4.23 697 -2.44	686 4.30 697 -1.58
E-6	516 7.90 587 -12.10	547 7.85 589 -7.13	553 7.82 594 -6.90	554 7.87 592 -6.42	553 7.88 591 -6.43	560 7.86 655 -14.50	585 7.80 655 -10.69
E-7	266 13.77 274 -2.92	261 13.94 273 -4.40	263 14.09 275 -4.36	262 14.05 275 -4.73	262 14.07 275 -4.73	260 13.65 277 -6.14	260 13.68 277 -6.14
E-8	127 17.91 140 -9.29	129 18.22 144 -10.42	131 18.41 146 -10.27	134 18.58 150 -10.67	134 18.40 151 -11.26	153 18.19 172 -11.05	154 18.29 172 -10.47
E-9	22 21.36 28 -21.43	23 22.37 28 -17.86	24 22.79 28 -14.39	25 23.66 29 -13.79	26 24.54 29 -10.34	27 25.35 31 -12.90	29 25.95 31 -6.45
E-4/9	2508 6.09 2314 8.38	2520 6.18 2331 8.11	2518 6.22 2360 8.69	2574 6.21 2373 8.47	2585 6.19 2373 8.93	2623 6.23 2632 -0.35	2666 6.29 2632 1.29
Total	3468 4.99 2314 ---	3909 4.62 2632 ---	3984 4.61 2632 ---	4378 4.72 2632 ---	4461 4.55 2632 ---	4546 4.62 2632 ---	4565 4.76 2632 ---

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-4/9 in FY80, the estimates are:

Ind Strength	968	(Projected number shown at end of FY)
Mean LOS	2.20	(Average length of service)
Manpower Requirements	601	(0% estimate of number required)
Ind Strength Status	47.16	(Percentage over or under requirements)

SONAR TECHNICIAN (SUBMARINE) (STS)



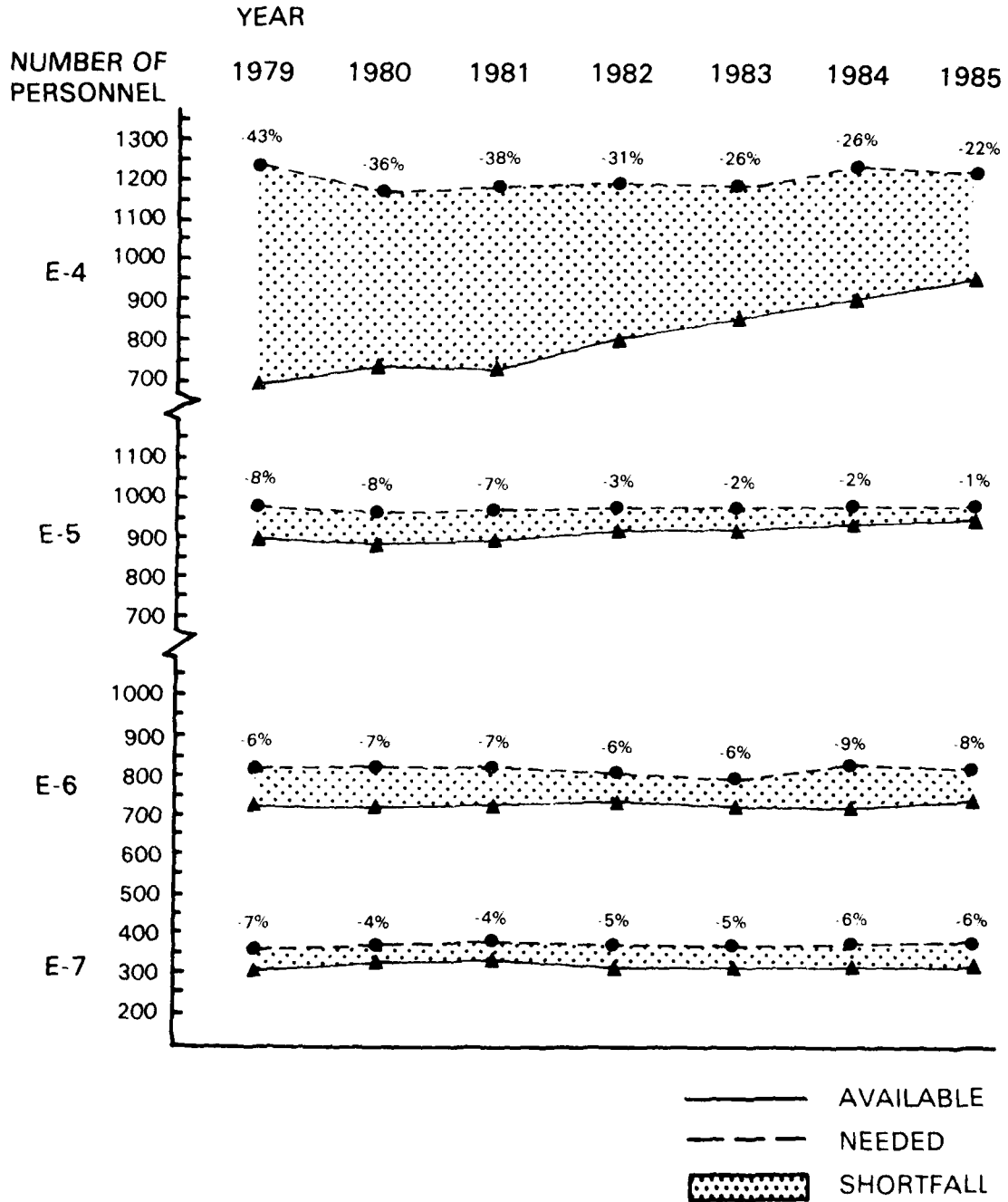
TORPEDOMAN'S MATE (TM)

Rate	FY79	FY80	FY81	FY82	FY83	FY84	FY85
E-1/3	1581 1.64 ---	1746 1.51 ---	1790 1.60 ---	1875 1.53 ---	1915 1.63 ---	1890 1.67 ---	1853 1.75 ---
E-4	711 2.98 1248 -43.03	758 3.03 1189 -36.25	738 3.13 1199 -38.45	832 3.07 1200 -30.67	876 3.16 1191 -26.45	913 3.16 1239 -26.31	965 3.37 1239 -22.11
E-5	909 5.72 985 -7.72	898 5.43 974 -7.80	906 5.19 974 -6.98	943 5.24 974 -3.18	948 5.36 972 -2.47	959 5.41 982 -2.34	968 5.47 982 -1.43
E-6	758 12.91 808 -6.19	757 12.43 815 -7.12	765 11.70 820 -6.71	753 11.26 804 -6.34	745 10.95 795 -6.29	752 10.80 825 -8.87	756 10.86 825 -8.36
E-7	341 17.83 365 -6.58	355 17.86 371 -4.31	368 17.69 385 -4.42	356 17.60 373 -4.56	356 17.70 373 -4.56	351 17.68 374 -6.15	351 17.28 374 -6.15
E-8	85 20.69 80 6.25	72 21.43 80 -10.00	71 21.37 80 -11.25	71 21.44 80 -11.25	71 21.19 80 -11.25	74 21.22 83 -10.84	74 20.47 83 -10.84
E-9	68 22.90 82 -17.07	72 23.51 88 -18.18	75 24.30 90 -16.67	76 24.83 90 -15.56	76 24.74 90 -15.56	72 24.76 85 -15.29	74 24.42 85 -12.94
E-4/9	2872 9.22 3568 -19.51	2912 8.98 3517 -17.20	2923 8.83 3548 -17.62	3031 8.46 3521 -13.92	3072 8.36 3501 -12.25	3121 8.25 3588 -13.02	3188 8.20 3588 -11.15
Total	4453 6.53 3568 ---	4658 6.18 3517 ---	4713 6.08 3548 ---	4906 5.81 3521 ---	4987 5.78 3501 ---	5011 5.77 3588 ---	5041 5.83 3588 ---

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the TM E-4 in FY80, the estimates are:

End Strength	758	(Projected number of men at end of FY)
Mean LOS	3.03	(Average Length of Service)
Manpower Requirements	1189	(CNO estimates of number required)
End Strength Status	-36.25	(Percentage over or under requirements)

TORPEDOMAN'S MATE (TM)



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Commander, David W. Taylor Naval Ship Research and Development Center

Commander, Naval Ocean Systems Center

Commander, Naval Ocean Systems Center (Code 161), (Code 162), (Code 811), (Code 814), (Code 8143), (Code 821), (Code 823), (Code 8231), (Code 824), (Code 825), (Code 8254), (Code 8302), (Code 834), (Code 8341), (Code 912), (Code 921), (Code 9242), (Code 9311), (Code 9321), (Code 9333)

Commander, Naval Weapons Center, China Lake

Commander, Naval Weapons Center, China Lake (Code 3664), (Code 081)

Commander, Naval Surface Weapons Center, Dahlgren (Code G 31) (5)

Commander, Naval Sea Systems Command (NSEA-03C), (NSEA-0312), (NSEA-0327), (NSEA-3134) (10), (NSEA-04L2), (NSEA-05L), (NSEA-05L1C), (NSEA-06H3-13), (NSEA-61R2) (3), (NSEA-62R) (3), (NSEA-63R) (3), (PMS-300), (PMS-300C4), (PMS-30612), (PMS-377213), (PMS-404-30), (PMS-404-35)

Commander, Naval Air Systems Command (PMA-231), (NAIR-531)

Commander, Naval Electronic Systems Command (NELEX-01), (NELEX-330), (NELEX-350), (NELEX-04C), (NELEX-4701), (NELEX-501), (NELEX-504B), (NELEX-550), (PME-107-5), (PME-108-1)

Commander, Naval Facilities Engineering Command (031A)

Commander, Naval Military Personnel Command (NMPC-5) (5)

Commanding Officer, Naval Air Engineering Center (Code 92A44)

Commanding Officer, Naval Training Equipment Center (Code N82), (Code 712)

Commanding Officer, Naval Underwater Systems Center

Commanding Officer, Naval Underwater Systems Center (Code 22), (Code 301)

Commanding Officer, Fleet Combat Training Center, Pacific (Code 00E)

Commanding Officer, Naval Education and Training Program Development Center (2)

Commanding Officer, Naval Development and Training Center (Code 0120)

Commanding Officer, Naval Aerospace Medical Institute (Library Code 12) (2)

Commanding Officer, Naval Coastal Systems Center

Commanding Officer, Naval Sea Support Center, Pacific (Code 40)

Commanding Officer, Naval Electronic Systems Security Engineering Center (Security Station)

Commanding Officer, Naval Electronic Systems Security Engineering Center (Security Station) (Code 240)

Commanding Officer, Naval Ship Weapon Systems Engineering Station (Code 5499)
Officer in Charge, Central Test Site, Personnel and Training Evaluation Program, Naval
Guided Missile School Dam Neck
Officer in Charge, White Oak Laboratory, Naval Surface Weapons Center
Officer in Charge, New London Laboratory, Naval Underwater Systems Center
Officer in Charge, Annapolis Laboratory, David W. Taylor Naval Ship Research and
Development Center
Officer in Charge, Annapolis Laboratory, David W. Taylor Naval Ship Research and
Development Center (Code 273), (Code 2735) (2)
Officer in Charge, Civil Engineering Laboratory
Officer in Charge, Civil Engineering Laboratory (Code L53), (Code L5D3)
Director, Naval Weapons Engineering Support Activity (Code ESA 8313), (Code ESA 84)
Director, Training Analysis and Evaluation Group (TALG)
President, Naval War College
Master Chief Petty Officer of the Force, U.S. Atlantic Fleet
Master Chief Petty Officer of the Force, U.S. Pacific Fleet
Master Chief Petty Officer of the Force, Naval Material Command (NMAT-50C)
Master Chief Petty Officer of the Force, Naval Education and Training Command (Code
003)
Personnel Research Division, Air Force Human Resources Laboratory (AFSC), Brooks Air
Force Base
Occupational and Manpower Research Division, Air Force Human Resources Laboratory
(AFSC), Brooks Air Force Base
Technical Library, Air Force Human Resources Laboratory (AFSC), Brooks Air Force Base
Advanced Systems Division, Air Force Human Resources Laboratory, Wright-Patterson
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(AFSC)
Army Research Institute for the Behavioral and Social Sciences
Military Assistant for Training and Personnel Technology, Office of the Under Secretary
of Defense for Research and Engineering
Office of the Deputy Under Secretary of Defense for Research and Engineering (Research
and Advanced Technology)
Office of the Deputy Assistant Secretary of the Navy (Manpower) (5)
Director for Acquisition Planning, OASD (MRA&L)
Science and Technology Division, Library of Congress
Coast Guard Headquarters (G-P-1/62)

