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MANPOWER AVAILABILITY PROJECTIONS FOR SELECTED CONSTRAINED RATIOS--ETC(U)  
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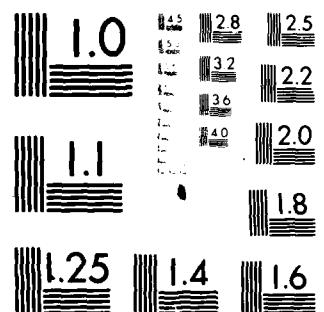
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March 1982

**MANPOWER AVAILABILITY PROJECTIONS FOR  
SELECTED CONSTRAINED FOR RATINGS--FY81-87**

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Reviewed by  
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Personnel in their second enlistment, who comprise the bulk of the Navy's experienced personnel pool, are in seriously short supply for many ratings. As a result, many Navy systems are being manned and maintained by personnel with skills and experience below that necessary for optimum performance.		
This report identifies selected Navy enlisted ratings having a 20 percent or greater shortfall for any year (1981-1987). Manpower availability data were developed using		

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manpower requirements forecasting and availability projections developed and maintained by the Chief of Naval Operations. The data base used is predicted on the growth to a 600-ship Navy by FY 1989.

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## **FOREWORD**

This effort has been conducted under project 63564N (surface ship continuing concept formulation), and the sponsorship of the Commander, Naval Sea Systems Command (SEA-313). The objective of the project is to identify future whole ship design alternatives that satisfy future mission requirements. The project is intended to provide guidance for research and development (R&D) priorities based on assessment of future whole ship impact of projected technology advances.

The objective of the effort presented herein is to provide decision makers in hardware development and manpower planning offices with information regarding current and projected availability of manpower for pay grades within selected Navy ratings through FY1987. This information is intended to 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 utilized early in the design process, hardware developers and the associated R&D community will be able to focus on and compensate for specific manning problem areas through research and hardware design actions. This report, which is the third on manpower availability, supersedes the previous issue, NPRDC Special Report 80-5 of December 1979.

Appreciation is expressed to personnel of the CNO Enlisted Programs Implementation Branch (OP-135), especially to LT Paul G. Johnson, for assistance in acquiring the manpower forecast data.

**JAMES F. KELLY, JR.**  
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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, the research and development (R&D) community, and manpower planners to focus on specific manning and skill level problem areas and to compensate for such deficiencies through design, research, and planning actions.

### Approach

Manpower availability data were developed using manpower requirements forecasting and availability projections developed and maintained by the Chief of Naval Operations (OP-11 and OP-13). The data base used is that predicated upon the growth to a 600-ship Navy by FY 1989.

### Results and Conclusions

Projections through fiscal year 1987 indicate that skill shortages, especially in pay grades E-5 and E-6 (second and first class petty officers), will continue to impact 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 effort 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 third on manpower availability, supersedes the previous issue, DPRDC Special Report 80-5 of December 1979.<sup>1</sup>

## APPROACH

### Data Sources

Projected enlisted manpower availability data through fiscal year 1987 were obtained from the Chief of Naval Operations (OP-135). 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 1987 were also obtained from the Chief of Naval Operations (OP-135) and are based on the Navy's total manning requirements. Requirements are projected using information contained in ship and shore manning documents, planned ship and hardware system acquisitions and losses, and

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<sup>1</sup>Koehler, E. A., & Miller, M. A. Manpower Availability--Navy Enlisted Projections--FY79-FY85 (DPRDC SR 80-5). San Diego: Navy Personnel Research and Development Center, December 1979.

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 selected technical 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 FY81 through FY87. Within this constraint, requirements and available manning data are presented for the following 32 ratings:

1. AC--Air Traffic Controller
2. AX--Aviation Antisubmarine Warfare Technician
3. ABE--Aviation Boatswain's Mate (Launching & Recovery Equipment)
4. AQ--Aviation Fire Control Technician
5. AME--Aviation Structural Mechanic (Safety Equipment)
6. BT--Boiler Technician
7. CTI--Cryptologic Technician (Interpretive Branch)
8. CTM--Cryptologic Technician (Maintenance Branch)
9. CTT--Cryptologic Technician (Technical Branch)
10. DS--Data Systems Technician
11. EM--Electrician's Mate
12. EW--Electronics Warfare Technician
13. FTG--Fire Control Technician (Gun Fire Control)
14. FTM--Fire Control Technician (Surface Missile Fire Control)
15. GSE--Gas Turbine System Technician (Electrical)
16. GSM--Gas Turbine System Technician (Mechanical)
17. GMG--Gunner's Mate (Guns)
18. GMM--Gunner's Mate (Missiles)
19. GMT--Gunner's Mate (Technician)
20. HT--Hull Maintenance Technician

21. IM--Instrumentman
22. IC--Interior Communications Electrician
23. IS--Intelligence Specialist
24. MR--Machinery Repairman
25. MM--Machinist's Mate
26. OT--Ocean Systems Technician
27. OS--Operations Specialist
28. OM--Opticalman
29. QM--Quartermaster
30. STG--Sonar Technician (Surface)
31. STS--Sonar Technician (Submarine)
32. TM--Torpedoman's Mate

## RESULTS

Manpower availability data for the 32 selected ratings are tabled in the appendix. These tables present, for fiscal years 1981 through 1987, combined data for pay grades E-1 through E-3 (strikers); 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.
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 1981 through 1987.
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 to allow comparisions 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. However, the HT, MM, and OS ratings are the exception; their graphs required two or three pages due to the size of the populations presented.

Table 1 is a summary of manpower availability data for the 32 selected ratings expressed as a percentage above or below requirements. These data indicate that, during the next 6 years, there will be substantial shortages of skilled personnel for particular ratings and pay grades. For example, during FY82, shortages are expected to occur in many ratings at the E-5 level. At the E-6 and E-7 levels, all reported ratings will experience shortages.

### 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 published an engineer's guide to assist in meeting this challenge.<sup>2</sup> Later in 1982, an updated and expanded design guide will be published. A copy of either guide can be obtained by contacting Mr. Ernest Koehler, NAVPERSRANDCEN, Code 17, telephone (714) 225-6617 or Autovon 933-6617.

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<sup>2</sup>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.

Table 1

Manpower Availability Data Expressed as Percent  
Above or Below Requirements

Pay Grade	AC	AX	ABE	AQ	AME	BT	CTI	CTM	CTT	DS	EM	EW
FY81												
E-4	-17	+2	+1	-7	+15	+8	-29	-25	-22	+8	+9	0
E-5	-17	-15	+7	-23	-15	-5	-19	-15	-28	+4	-2	+18
E-6	-24	-2	-33	-1	-2	-22	-24	-1	-13	-30	-22	-44
E-7	-6	-6	-19	-6	+17	-6	-6	-7	-7	-7	-6	-6
FY82												
E-4	-19	-2	+14	+3	+15	+15	+1	-14	-28	+15	+15	-2
E-5	-7	-12	-3	-14	-12	-5	-26	-12	-23	0	0	+18
E-6	-18	-2	-21	-9	-2	-17	-18	-2	-10	-24	-22	-43
E-7	-7	-8	-7	-8	-9	-8	-8	-8	-8	-7	-8	-8
FY83												
E-4	-2	-2	+15	+10	-7	+15	+17	-15	-5	+15	+15	+4
E-5	-10	-12	-12	-7	-12	-10	-16	-12	-24	-3	-3	+18
E-6	-11	-1	-1	-15	-1	-9	-13	-1	-15	-19	-18	-44
E-7	-9	-10	-8	-9	-11	-9	-9	-10	-9	-9	-9	-9
FY84												
E-4	+13	-1	+13	+13	-29	+13	+13	-4	+10	+25	+13	+9
E-5	-10	-10	-10	-7	-10	-10	-10	-10	-10	-10	-7	+22
E-6	-5	-5	-5	-14	-5	-5	-8	-5	-9	-9	-14	-46
E-7	-11	-11	-10	-10	-12	-10	-11	-11	-11	-11	-10	-10
FY85												
E-4	+12	-26	+12	+12	-49	+12	+12	-2	+12	+28	+12	+12
E-5	-6	-6	-6	-4	-19	-6	-7	-6	-6	-6	-6	+29
E-6	-4	-4	-4	-14	-4	-4	-4	-4	-4	-4	-11	-47
E-7	-11	-12	-10	-11	-12	-11	-12	-12	-11	-11	-15	-11
FY86												
E-4	+14	-23	+14	+14	-51	+14	+14	+11	+14	+50	+14	+14
E-5	-5	-5	-5	-2	-23	-5	-5	-5	-5	-5	-5	+25
E-6	-4	-4	-4	-15	-4	-4	-4	-4	-4	-4	-10	-42
E-7	-11	-11	-10	-11	-13	-11	-11	-10	-11	-11	-11	-11
FY87												
E-4	+14	-20	+14	+14	-51	+14	+14	+17	+14	+68	+14	+14
E-5	-2	-2	-2	+1	-25	-2	-2	-2	-2	-2	-2	+22
E-6	-5	-5	-5	-16	-5	-5	-5	-5	-5	-5	-8	-36
E-7	-9	-9	-7	-9	-12	-9	-10	-9	-9	-10	-9	-9

Table 1 (Continued)

Pay Grade	FTG	FTM	GSE	GSM	GMG	GMM	GMT	HT	IM	IC	IS
FY81											
E-4	-1	-17	-17	-13	+3	-14	+14	-12	-20	-28	-11
E-5	+27	+23	+52	-28	-15	+6	+9	-6	-48	0	-11
E-6	-51	-47	-50	-58	-1	-67	-40	-34	-21	-29	-13
E-7	-5	-10	-6	-9	-7	-19	-6	-6	-6	-7	-6
FY82											
E-4	+4	-29	-17	+19	+1	-41	+13	-6	-23	-14	-32
E-5	+31	+18	+47	-37	-12	+2	+15	0	-34	0	-10
E-6	-53	-45	-63	-66	-3	-66	-36	-31	-22	-27	-11
E-7	-6	-11	-14	-16	-8	-8	-8	-8	-7	-8	-7
FY83											
E-4	+1	-33	-29	+22	-7	-43	+15	-20	-3	-10	-19
E-5	+35	-4	+24	-30	-12	-10	+8	+6	-25	-1	-14
E-6	-55	-49	-76	-70	-5	-64	-29	-29	-22	-24	-5
E-7	-11	-11	-21	-29	-10	-8	-9	-9	-10	-9	-9
FY84											
E-4	+4	-34	-26	+13	-29	-42	+13	-34	-1	-13	-9
E-5	+34	-12	+55	-5	-10	-15	-5	-1	-11	-5	-10
E-6	-56	-51	-79	-71	-5	-56	-16	-25	-18	-17	-5
E-7	-12	-10	-26	-34	-11	-10	-10	-10	-11	-10	-10
FY85											
E-4	+4	-34	-36	+3	-36	-39	+12	-37	-7	-16	-6
E-5	+39	-13	+60	-4	-9	-16	-6	-13	-6	-6	-6
E-6	-57	-54	-80	-73	-4	-55	-4	-21	-14	-10	-4
E-7	-13	-10	-30	-41	-12	-10	-12	-11	-11	-11	-11
FY86											
E-4	+5	-32	-44	-3	-35	-43	+14	-42	-8	-17	-2
E-5	+37	-7	+79	-2	-9	-19	-5	-17	-5	-5	-5
E-6	-54	-52	-75	-71	-4	-54	-4	-17	-10	-5	-4
E-7	-15	-9	-36	-44	-11	-10	-11	-11	-11	-11	-11
FY87											
E-4	+7	-32	-46	-2	-34	-41	+14	-41	-11	-14	-7
E-5	+37	0	+84	+1	-6	-20	-2	-22	-2	-2	-2
E-6	-49	-51	-70	-66	-5	-54	-5	-13	-6	-5	-5
E-7	-17	-6	-37	-44	-10	-8	-9	-9	-10	-9	-10

Table 1 (Continued)

Pay Grade	MR	MM	OT	OS	OM	QM	STG	STS	TM
FY81									
E-4	-19	-11	-16	-27	-55	-12	+15	+36	-21
E-5	-25	+7	-23	-25	-30	+4	+15	0	-15
E-6	-1	-32	-2	-45	-1	-47	-42	-23	-4
E-7	-7	-6	-7	-6	-5	-6	-7	-6	-6
FY82									
E-4	-1	-1	-17	-34	-49	-24	+2	+15	-16
E-5	-23	+10	-18	-24	-28	+7	+15	+1	-12
E-6	-2	-33	-2	-44	-2	-50	-41	-22	-2
E-7	-8	-8	-8	-8	-8	-8	-8	-8	-8
FY83									
E-4	-19	+9	-10	-19	-34	-36	-20	+15	-4
E-5	-14	+8	-15	-27	-36	+7	+8	+2	-12
E-6	-1	-31	-1	-45	-5	-52	-42	-23	-5
E-7	-10	-9	-9	-9	-10	-9	-9	-9	-9
FY84									
E-4	-30	+13	-11	-5	-45	-41	-24	+13	+10
E-5	-21	+4	-10	-13	-35	+5	-1	-9	-10
E-6	-5	-27	-5	-44	-7	-47	-38	-12	-5
E-7	-11	-10	-11	-10	-10	-10	-10	-10	-10
FY85									
E-4	-42	+12	-25	-16	-36	-42	-27	+12	+12
E-5	-24	+6	-9	-6	-34	0	-6	-6	-6
E-6	-4	-25	-4	-42	-12	-45	-39	-9	-4
E-7	-12	-11	-12	-11	-13	-11	-11	-11	-11
FY86									
E-4	-45	+14	-31	-30	-48	-44	-28	+14	+14
E-5	-20	+5	-6	-5	-26	-2	-6	-5	-5
E-6	-4	-22	-4	-40	-12	-45	-40	-5	-4
E-7	-11	-11	-11	-11	-10	-11	-11	-11	-11
FY87									
E-4	-45	+14	-27	-37	-48	-44	-29	+14	+14
E-5	-20	+5	-2	-10	-31	-2	-5	-2	-2
E-6	-5	-20	-5	-34	-10	-44	-39	-7	-5
E-7	-9	-9	-9	-9	-10	-9	-9	-9	-9

**APPENDIX**  
**MANPOWER AVAILABILITY BY RATING AND PAY GRADE**

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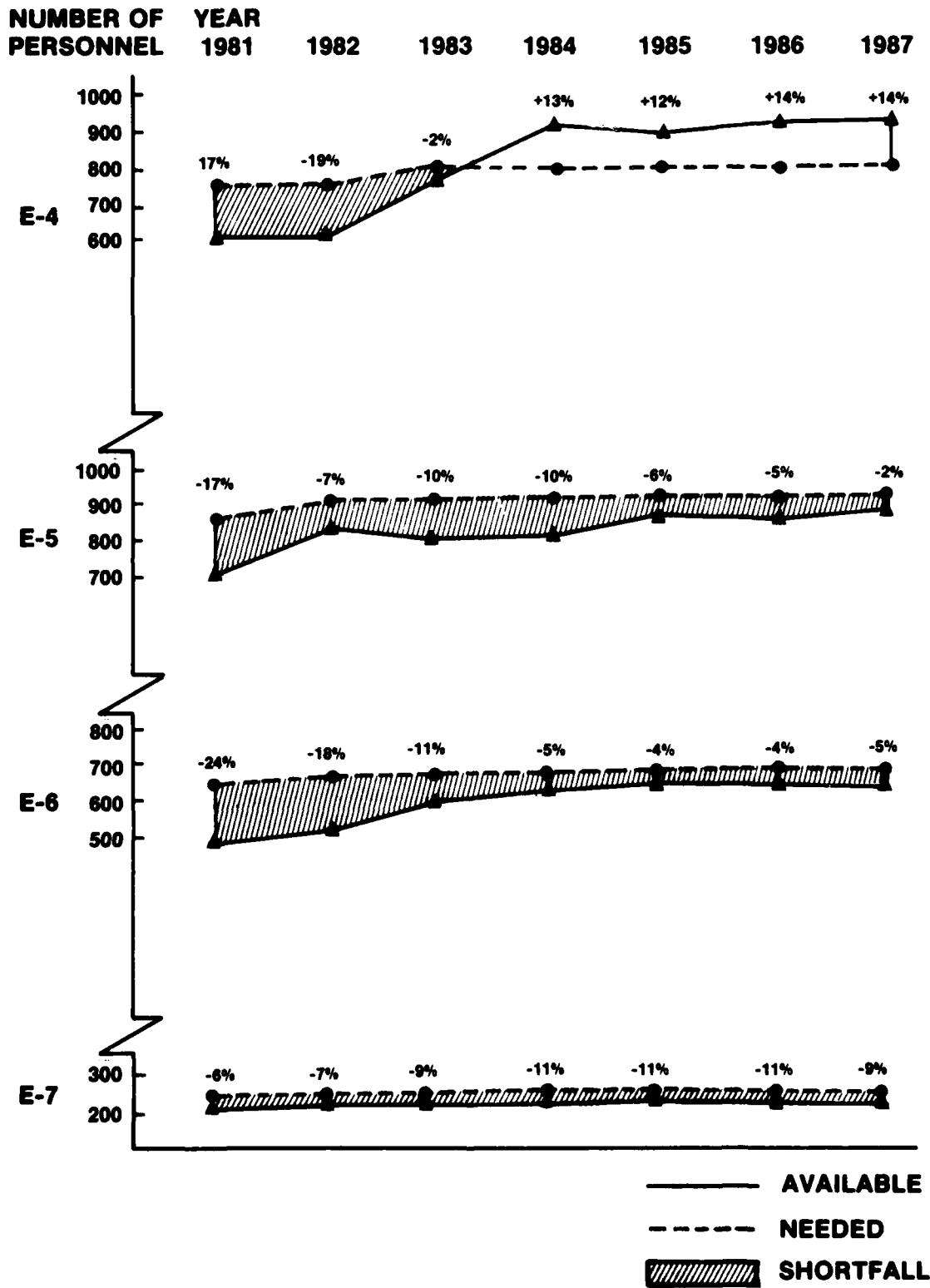
AIR TRAFFIC CONTROLLER (AC)

Rate	FY81	FY82	FY83	FY84	FY85	FY86	FY87
E-1/3	849 1.21 ---	972 1.16 ---	1058 1.12 ---	1206 1.36 ---	1439 1.57 ---	1694 1.88 ---	1719 2.33 ---
E-4	631 2.64 763 -17.30	622 2.55 766 -18.80	783 2.57 800 -2.12	902 2.72 800 12.75	897 2.96 800 12.12	910 3.20 800 13.75	914 3.50 800 14.25
E-5	723 4.97 870 -16.90	853 4.65 915 -6.78	836 4.84 925 -9.62	833 5.11 925 -9.95	872 5.40 926 -5.83	879 5.82 926 -5.08	903 6.30 926 -2.48
E-6	515 10.37 680 -24.26	567 10.41 690 -17.83	622 10.50 695 -10.50	661 11.03 695 -4.89	671 11.60 700 -4.14	669 12.15 700 -4.43	665 12.70 700 -5.00
E-7	239 17.55 255 -6.27	236 17.35 255 -7.45	236 17.11 260 -9.23	234 17.34 262 -10.69	236 17.49 265 -10.94	236 17.25 265 -10.94	240 17.20 265 -9.43
E-8	53 23.22 62 -14.52	54 23.56 64 -15.63	56 23.63 65 -13.85	57 24.24 67 -14.93	57 23.64 67 -14.93	58 23.05 67 -13.43	59 23.26 67 -11.94
E-9	20 25.70 25 -20.00	21 25.64 25 -16.00	21 25.79 25 -16.00	23 25.50 26 -11.54	24 25.54 27 -11.11	24 24.58 27 -11.11	24 24.83 27 -11.11
E-4/9	2181 7.58 2655 -17.85	2353 7.38 2715 -13.33	2554 7.24 2770 -7.80	2710 7.39 2775 -2.34	2757 7.71 2785 -1.01	2776 7.98 2785 .32	2805 8.35 2785 .72
Total	3030 5.80 2965 ---	3325 5.56 3065 ---	3612 5.45 3125 ---	3916 5.53 3140 ---	4196 5.60 3155 ---	4470 5.67 3155 ---	4524 6.06 3155 ---

Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 723	(Projected No. of men at end of FY)
Means LOS 4.97	(Average Length of Service)
Manpower Requirements 870	(CNO estimates of number required)
End Strength Status -16.90	(Percentage over or under requirements)

# AIR TRAFFIC CONTROLLER (AC)



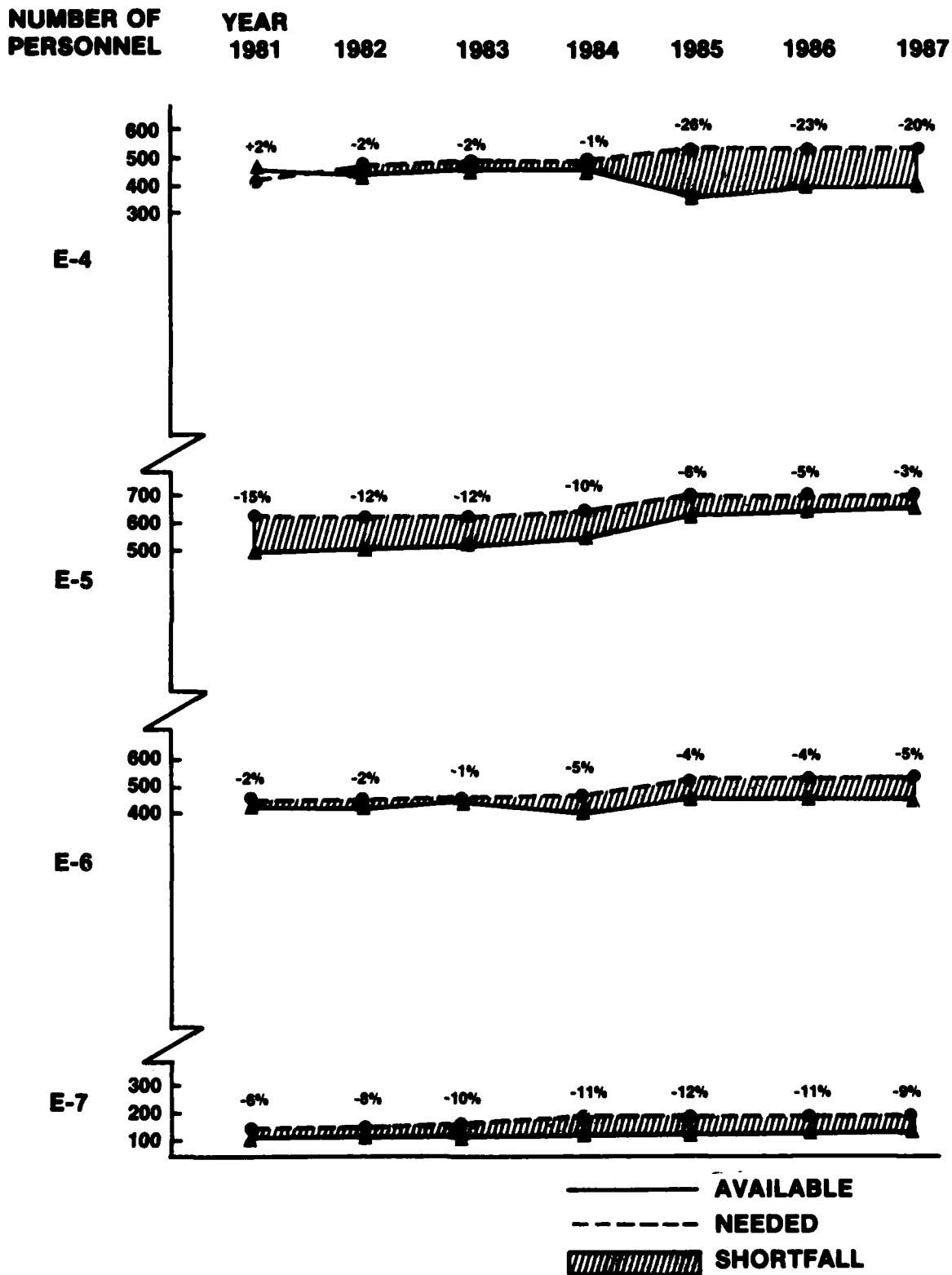
AVIATION ANTISUBMARINE WARFARE TECHNICIAN (AX)

<u>Rate</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>
<b>E-1/3</b>	369 1.41 ---	356 1.44 ---	385 1.58 ---	406 1.74 ---	418 1.98 ---	430 2.28 ---	398 2.95 ---
<b>E-4</b>	476 2.99 468 1.71	462 2.62 471 -1.91	476 2.60 485 -1.86	490 2.59 496 -1.21	392 2.43 528 -25.76	406 2.38 528 -23.11	424 2.26 528 -19.70
<b>E-5</b>	533 5.21 625 -14.72	556 5.13 632 -12.03	559 5.23 635 -11.97	581 5.45 645 -9.92	655 5.09 695 -5.76	659 5.17 695 -5.18	678 5.28 695 -2.45
<b>E-6</b>	443 10.45 450 -1.56	445 10.38 455 -2.20	460 10.58 463 -.65	447 11.01 470 -4.89	488 10.78 510 -4.31	488 11.03 510 -4.31	485 11.27 510 -4.90
<b>E-7</b>	178 16.32 190 -6.32	180 16.14 195 -7.69	181 16.04 200 -9.50	183 16.31 205 -10.73	184 16.49 208 -11.54	186 16.16 208 -10.58	189 16.16 208 -9.13
<b>E-8</b>	57 19.59 67 -14.93	57 19.61 67 -14.93	57 19.59 67 -14.93	59 20.03 69 -14.49	59 20.67 69 -14.49	59 20.28 69 -14.49	60 20.05 69 -13.04
<b>E-9</b>	20 23.30 25 -20.00	21 23.79 25 -16.00	21 24.17 25 -16.00	22 24.77 25 -12.00	23 24.54 26 -11.54	23 23.98 26 -11.54	23 24.54 26 -11.54
<b>E-4/9</b>	1707 7.80 1825 -6.47	1721 7.67 1845 -6.72	1754 7.73 1875 -6.45	1782 7.89 1910 -6.70	1801 7.98 2036 -11.54	1821 7.97 2036 -10.56	1859 7.98 2036 -8.69
<b>Total</b>	2076 6.67 2055 ---	2077 6.60 2075 ---	2139 6.62 2108 ---	2188 6.75 2155 ---	2219 6.85 2286 ---	2251 6.88 2286 ---	2257 7.09 2286 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 533	(Projected No. of men at end of FY)
Means LOS 5.21	(Average Length of Service)
Manpower Requirements 625	(CNO estimates of number required)
End Strength Status -14.72	(Percentage over or under requirements)

# AVIATION ANTISUBMARINE WARFARE TECHNICIAN (AX)



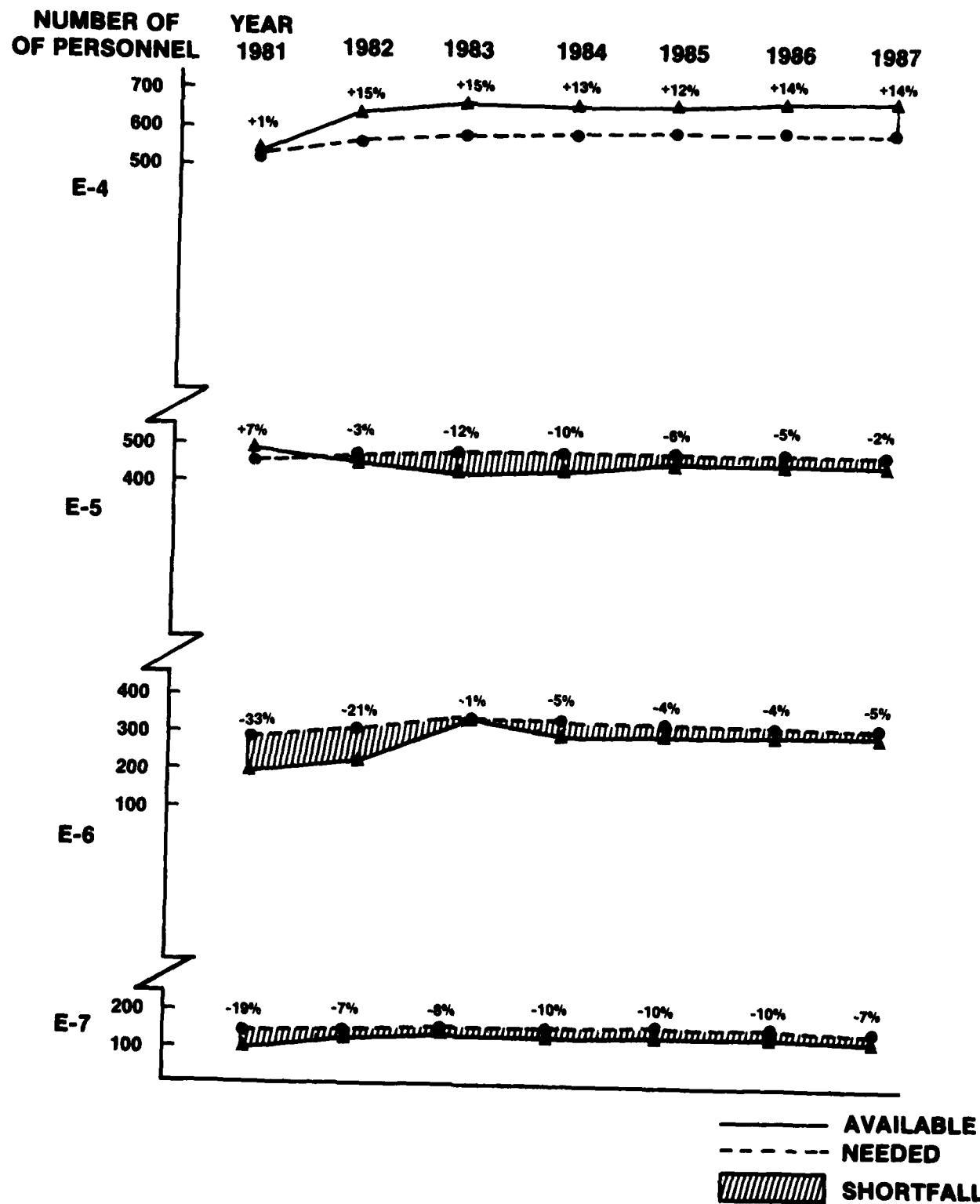
AVIATION BOATSWAIN'S MATE (LAUNCHING & RECOVERY EQUIPMENT)  
(ABE)

<u>Rate</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>
<b>E-1/3</b>	1352 1.58 ---	1363 1.75 ---	1389 2.08 ---	1419 2.37 ---	1444 2.56 ---	1418 2.85 ---	1464 2.99 ---
<b>E-4</b>	528 3.27 525 .57	656 3.41 571 14.89	670 3.76 583 14.92	660 4.24 585 12.82	661 4.59 589 12.22	670 4.90 589 13.75	673 5.25 589 14.26
<b>E-5</b>	490 5.52 460 6.52	452 5.88 464 -2.59	426 6.18 485 -12.16	437 6.93 485 -9.90	456 7.46 485 -5.98	460 8.10 485 -5.15	474 8.75 485 -2.27
<b>E-6</b>	192 9.99 285 -32.63	238 9.51 300 -20.67	302 9.72 305 -.98	292 10.52 307 -4.89	295 11.11 308 -4.22	295 11.83 308 -4.22	293 12.25 308 -4.87
<b>E-7</b>	134 14.63 165 -18.79	153 14.65 165 -7.27	153 14.85 167 -8.38	151 14.67 168 -10.12	151 15.13 168 -10.12	151 15.31 168 -10.12	156 15.63 168 -7.14
<b>E-8</b>	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
<b>E-9</b>	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
<b>E-4/9</b>	1344 6.18 1435 -6.34	1499 6.27 1500 -.07	1551 6.68 1540 .71	1540 7.22 1545 -.32	1563 7.68 1550 .84	1576 8.13 1550 1.68	1596 8.59 1550 2.97
<b>Total</b>	2696 3.88 1843 ---	2862 4.12 1935 ---	2940 4.50 1978 ---	2959 4.89 1990 ---	3007 5.22 2000 ---	2994 5.63 2000 ---	3060 5.91 2000 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 490	(Projected No. of men at end of FY)
Means LOS 5.52	(Average Length of Service)
Manpower Requirements 460	(CNO estimates of number required)
End Strength Status 6.52	(Percentage over or under requirements)

# AVIATION BOATSWAIN'S MATE (LAUNCHING & RECOVERY EQUIPMENT) (ABE)



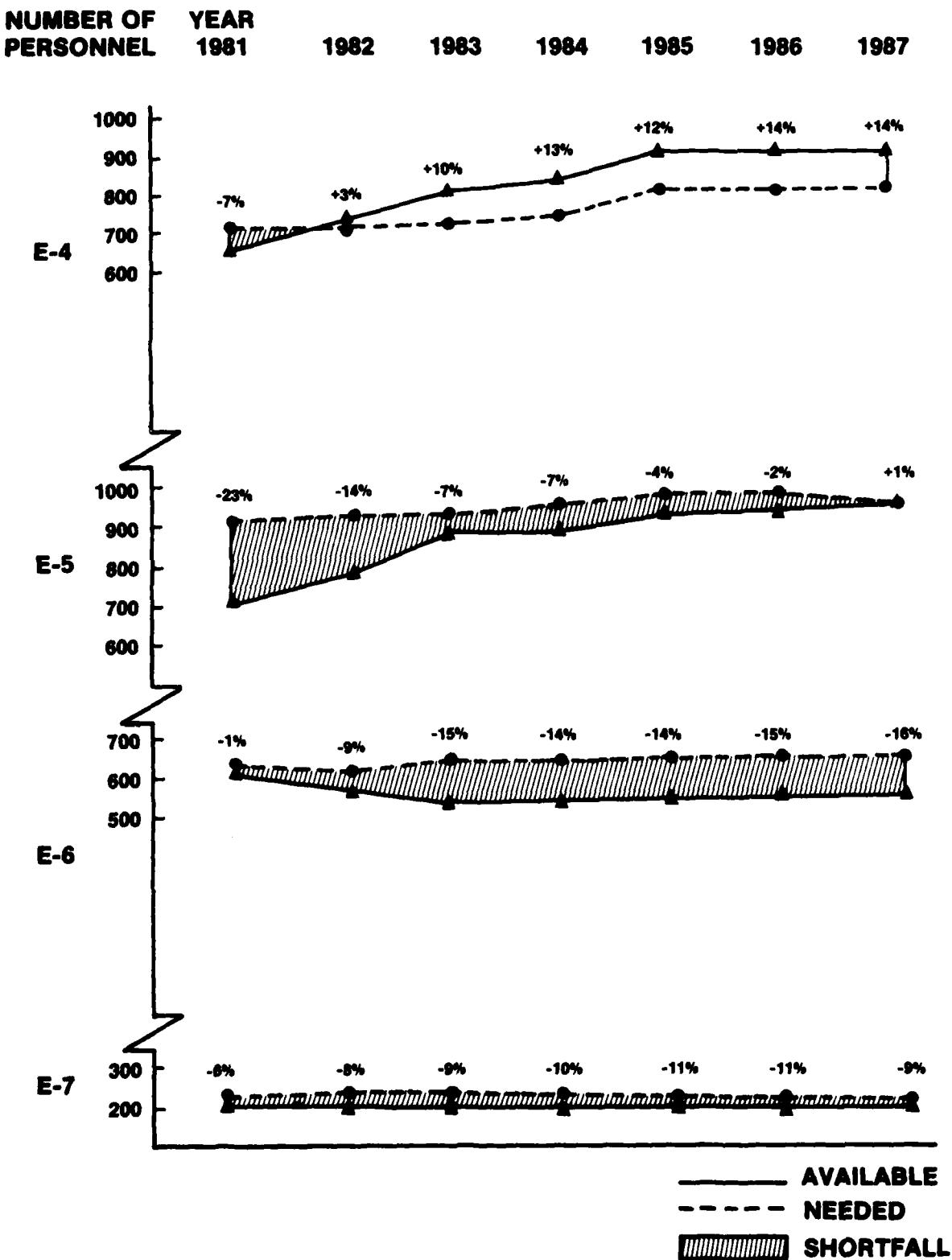
AVIATION FIRE CONTROL TECHNICIAN (AQ)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	803 1.41 ---	943 1.32 ---	1073 1.43 ---	1235 1.67 ---	1331 1.87 ---	1395 2.06 ---	1251 2.46 ---
<b>E-4</b>	655 2.16 705 -7.09	731 2.17 710 2.96	810 2.16 739 9.61	850 2.16 754 12.73	904 2.22 806 12.16	917 2.25 806 13.77	921 2.30 806 14.27
<b>E-5</b>	689 4.59 900 -23.44	789 4.21 920 -14.24	873 4.21 935 -6.63	878 4.34 945 -7.09	931 4.38 970 -4.02	949 4.47 970 -2.16	976 4.44 970 .62
<b>E-6</b>	606 10.69 615 -1.46	576 10.77 630 -8.57	555 10.67 650 -14.62	567 10.53 660 -14.09	575 10.28 665 -13.53	565 9.85 665 -15.04	559 9.20 665 -15.94
<b>E-7</b>	220 14.90 235 -6.38	222 14.69 240 -7.50	222 14.53 245 -9.39	224 14.63 250 -10.40	225 14.96 253 -11.07	226 15.15 253 -10.67	230 15.39 253 -9.09
<b>E-8</b>	111 19.29 130 -14.62	110 19.45 130 -15.38	112 19.39 131 -14.50	112 19.78 131 -14.50	112 20.19 131 -14.50	113 19.38 131 -13.74	114 19.48 131 -12.98
<b>E-9</b>	39 21.99 49 -20.41	40 22.15 49 -18.37	42 22.26 49 -14.29	42 23.00 48 -12.50	43 23.27 49 -12.24	42 22.95 48 -12.50	43 22.94 48 -10.42
<b>E-4/9</b>	2320 7.47 2634 -11.92	2468 7.05 2679 -7.88	2614 6.76 2749 -4.91	2673 6.76 2788 -4.12	2790 6.67 2874 -2.92	2812 6.56 2873 -2.12	2843 6.45 2873 -1.04
<b>Total</b>	3123 5.91 3074 ---	3411 5.47 3119 ---	3687 5.21 3199 ---	3908 5.15 3253 ---	4121 5.12 3344 ---	4207 5.07 3343 ---	4094 5.23 3343 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 689	(Projected No. of men at end of FY)
Means LOS 4.59	(Average Length of Service)
Manpower Requirements 900	(CNO estimates of number required)
End Strength Status -23.44	(Percentage over or under requirements)

# AVIATION FIRE CONTROL TECHNICIAN (AQ)



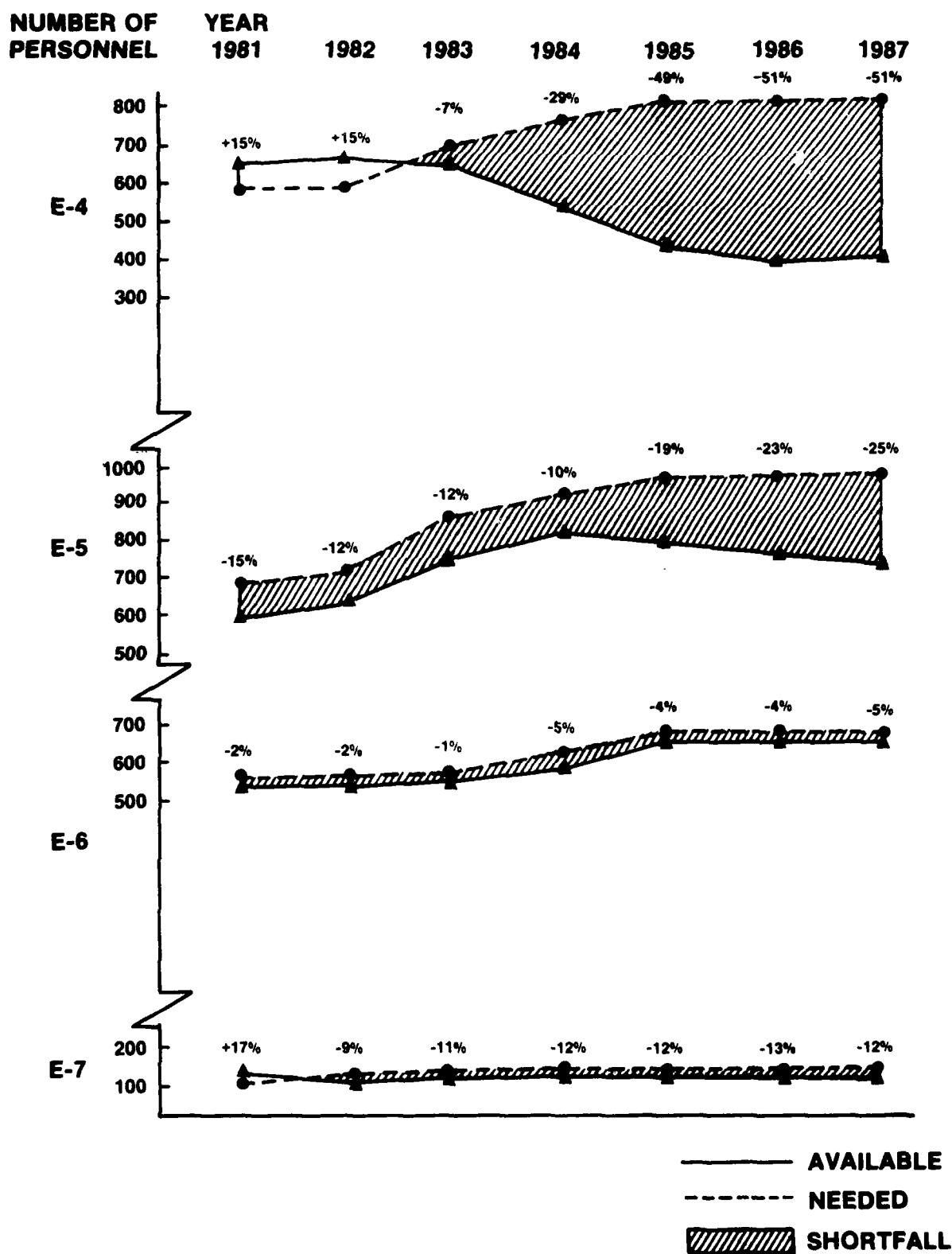
AVIATION STRUCTURAL MECHANIC (SAFETY EQUIPMENT) (AME)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	825 1.42 ---	785 1.28 ---	620 1.26 ---	592 1.34 ---	607 1.48 ---	642 1.67 ---	685 1.91 ---
<b>E-4</b>	669 3.48 582 14.95	671 3.54 585 14.70	644 3.17 690 -6.67	531 3.02 750 -24.20	410 2.88 800 -48.75	393 2.76 800 -50.87	396 2.65 800 -50.50
<b>E-5</b>	580 6.25 680 -14.71	620 6.32 705 -12.06	747 5.86 850 -12.12	824 5.56 915 -9.95	790 5.41 978 -19.22	757 5.57 978 -22.60	736 5.66 978 -24.74
<b>E-6</b>	522 13.45 530 -1.51	518 13.55 530 -2.26	535 13.12 540 -.93	570 12.65 600 -5.00	623 12.53 650 -4.15	621 12.98 650 -4.46	617 13.30 650 -5.08
<b>E-7</b>	126 18.22 108 16.67	100 18.50 110 -9.09	107 17.95 120 -10.83	106 17.97 120 -11.67	107 17.71 122 -12.30	106 17.33 122 -13.11	107 16.86 122 -12.30
<b>E-8</b>	0	0	0	0	0	0	0
<b>E-9</b>	0	0	0	0	0	0	0
<b>E-4/9</b>	1897 8.05 1900 -.16	1909 7.94 1930 -1.09	2033 7.55 2200 -7.59	2031 7.53 2385 -14.84	1930 7.85 2550 -24.31	1877 8.10 2550 -26.39	1856 8.20 2550 -27.22
<b>Total</b>	2722 6.04 2365 ---	2694 6.00 2405 ---	2653 6.08 2675 ---	2623 6.13 2875 ---	2537 6.33 3040 ---	2519 6.46 3040 ---	2541 6.51 3040 ----

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 580	(Projected No. of men at end of FY)
Means LOS 6.25	(Average Length of Service)
Manpower Requirements 680	(CNO estimates of number required)
End Strength Status -14.71	(Percentage over or under requirements)

# AVIATION STRUCTURAL MECHANIC (SAFETY EQUIPMENT) (AME)



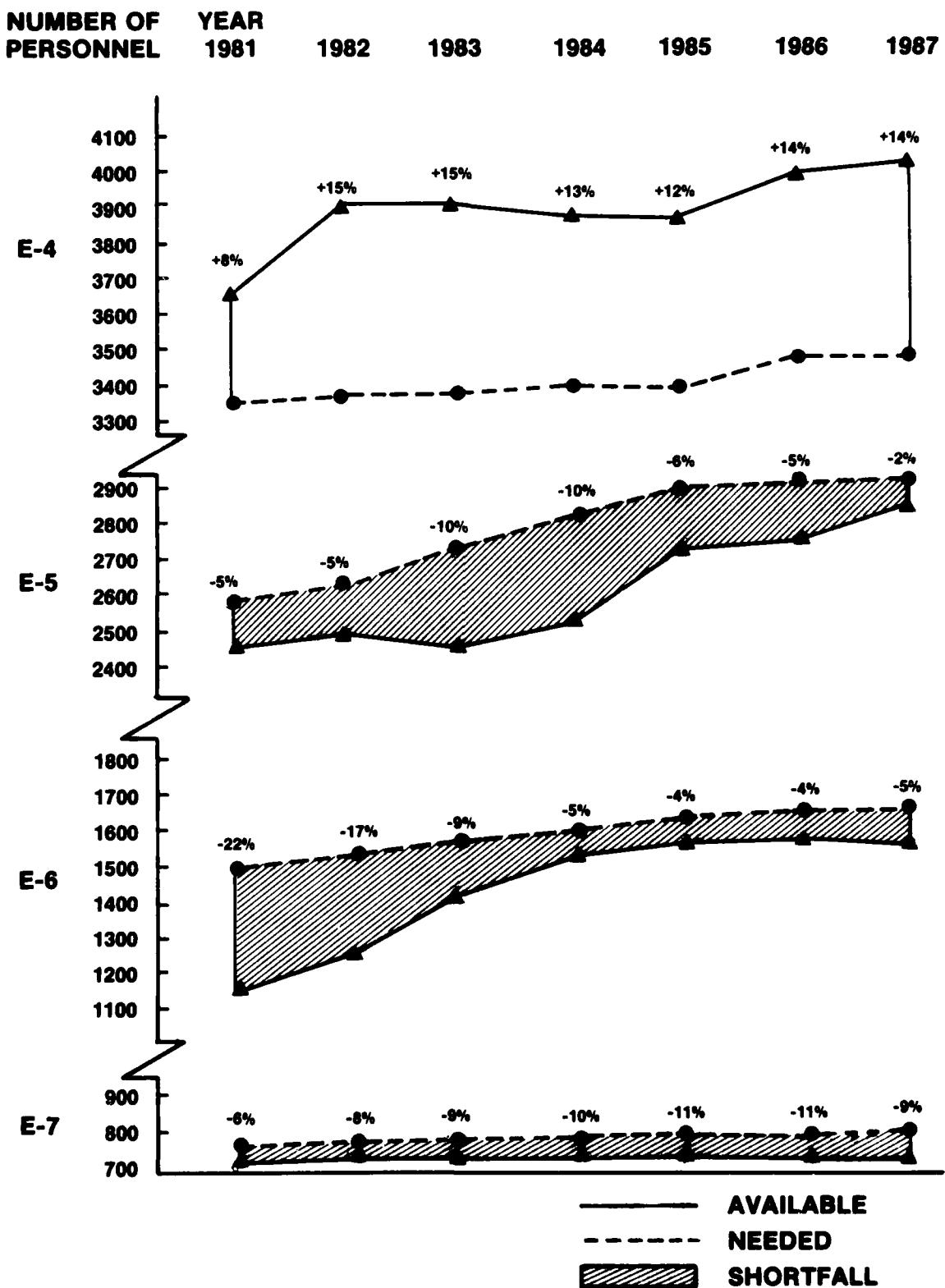
BOILER TECHNICIAN (BT)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	6753 1.79 ---	6469 1.95 ---	6541 2.11 ---	6437 2.30 ---	6351 2.41 ---	6008 2.64 ---	5872 2.83 ---
<b>E-4</b>	3607 2.97 3328 8.38	3875 3.04 3375 14.81	3867 3.21 3363 14.99	3821 3.38 3388 12.78	3801 3.48 3389 12.16	3943 3.57 3465 13.80	3960 3.67 3465 14.29
<b>E-5</b>	2487 5.75 2610 -4.71	2518 5.95 2660 -5.34	2476 6.11 2750 -9.96	2552 6.27 2835 -9.98	2754 6.34 2925 -5.85	2785 6.61 2935 -5.11	2864 6.86 2935 -2.42
<b>E-6</b>	1172 10.11 1500 -21.87	1277 9.59 1540 -17.08	1427 9.51 1575 -9.40	1520 9.80 1600 -5.00	1576 10.11 1645 -4.19	1578 10.37 1650 -4.36	1567 10.73 1650 -5.03
<b>E-7</b>	722 16.38 770 -6.23	725 16.08 785 -7.64	726 15.66 800 -9.25	721 15.55 805 -10.43	719 15.31 810 -11.23	726 15.02 815 -10.92	739 15.14 815 -9.33
<b>E-8</b>	206 19.59 242 -14.88	211 19.68 248 -14.92	215 19.66 252 -14.68	218 19.89 255 -14.51	218 20.22 256 -14.84	224 19.81 260 -13.85	227 19.47 260 -12.69
<b>E-9</b>	150 21.97 190 -21.50	158 22.20 192 -17.71	167 22.40 195 -14.36	171 22.70 197 -13.20	175 22.82 200 -12.50	175 22.71 200 -12.50	179 22.55 200 -10.50
<b>E-4/9</b>	8344 6.71 8640 -3.43	8764 6.60 8800 -.41	8878 6.81 8935 -.64	9003 7.03 9080 -.85	9243 7.14 9225 .20	9431 7.23 9325 1.14	9536 7.41 9325 2.26
<b>Total</b>	15097 4.51 10315 ---	15233 4.66 10520 ---	15419 4.82 10660 ---	15440 5.05 10865 ---	15594 5.22 11065 ---	15439 5.44 11190 ---	15408 5.67 11190 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 2487	(Projected No. of men at end of FY)
Means LOS 5.75	(Average Length of Service)
Manpower Requirements 2610	(CNO estimates of number required)
End Strength Status -4.71	(Percentage over or under requirements)

# BOILER TECHNICIAN (BT)



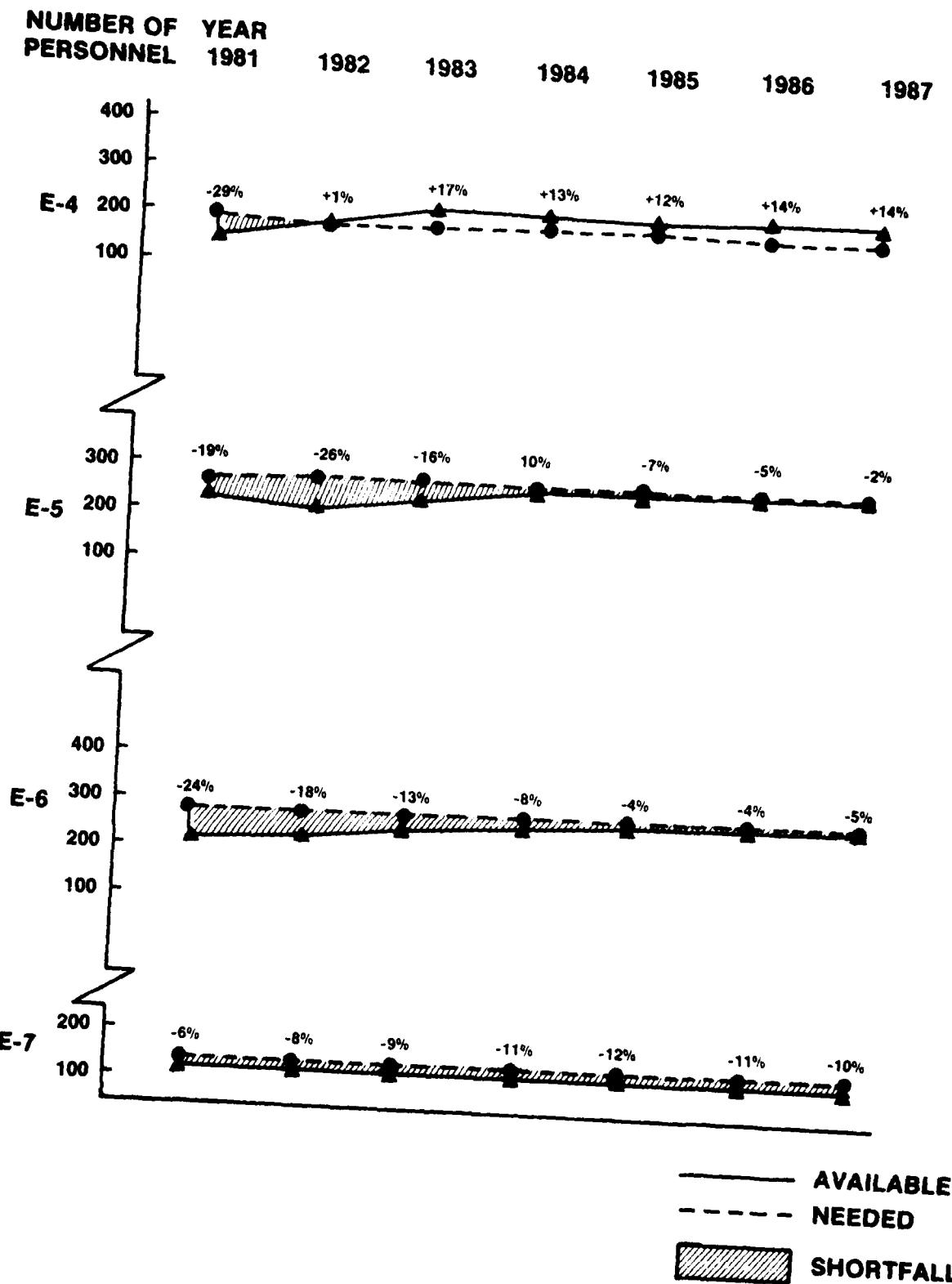
CRYPTOLOGIC TECHNICIAN (INTERPRETIVE BRANCH) (CTI)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	563 1.36 ---	626 1.46 ---	680 1.58 ---	756 1.86 ---	812 2.08 ---	842 2.47 ---	859 2.85 ---
<b>E-4</b>	140 3.34 196 -28.57	195 3.18 193 1.04	229 3.35 195 17.44	218 3.52 193 12.95	216 3.43 193 11.92	222 3.49 195 13.85	223 3.72 195 14.36
<b>E-5</b>	231 5.43 284 -18.66	213 5.58 288 -26.04	246 5.31 293 -16.04	264 5.30 293 -9.90	272 5.45 293 -7.17	281 5.65 296 -5.07	289 5.93 296 -2.36
<b>E-6</b>	221 12.18 290 -23.79	238 11.92 290 -17.93	254 11.85 293 -13.31	270 11.65 295 -8.47	283 11.26 295 -4.07	282 11.76 295 -4.41	280 12.21 295 -5.08
<b>E-7</b>	110 16.55 117 -5.98	111 16.76 120 -7.50	109 16.86 120 -9.17	107 17.22 120 -10.83	106 17.61 120 -11.67	107 17.58 120 -10.83	108 17.30 120 -10.00
<b>E-8</b>	24 20.58 28 -14.29	24 21.29 28 -14.29	24 21.04 28 -14.29	24 21.79 28 -14.29	24 22.33 28 -14.29	24 22.54 28 -14.29	24 22.42 28 -14.29
<b>E-9</b>	12 22.25 15 -20.00	13 23.04 16 -18.75	14 23.79 16 -12.50	14 24.79 16 -12.50	14 25.79 16 -12.50	14 26.79 16 -12.50	14 27.71 16 -12.50
<b>E-4/9</b>	738 9.48 930 -20.65	794 9.21 935 -15.08	876 8.86 945 -7.30	897 8.95 945 -5.08	915 8.93 945 -3.17	930 9.11 950 -2.11	938 9.33 950 -1.26
<b>Total</b>	1301 5.96 1135 ---	1420 5.80 1140 ---	1556 5.68 1150 ---	1653 5.71 1150 ---	1727 5.71 1150 ---	1772 5.96 1155 ---	1797 6.23 1155 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength	231	(Projected No. of men at end of FY)
Means LOS	5.43	(Average Length of Service)
Manpower Requirements	284	(CNO estimates of number required)
End Strength Status	-18.66	(Percentage over or under requirements)

# CRYPTOLOGIC TECHNICIAN (INTERPRETIVE BRANCH) (CTI)



**CRYPTOLOGIC TECHNICIAN (MAINTENANCE BRANCH) (CTM)**

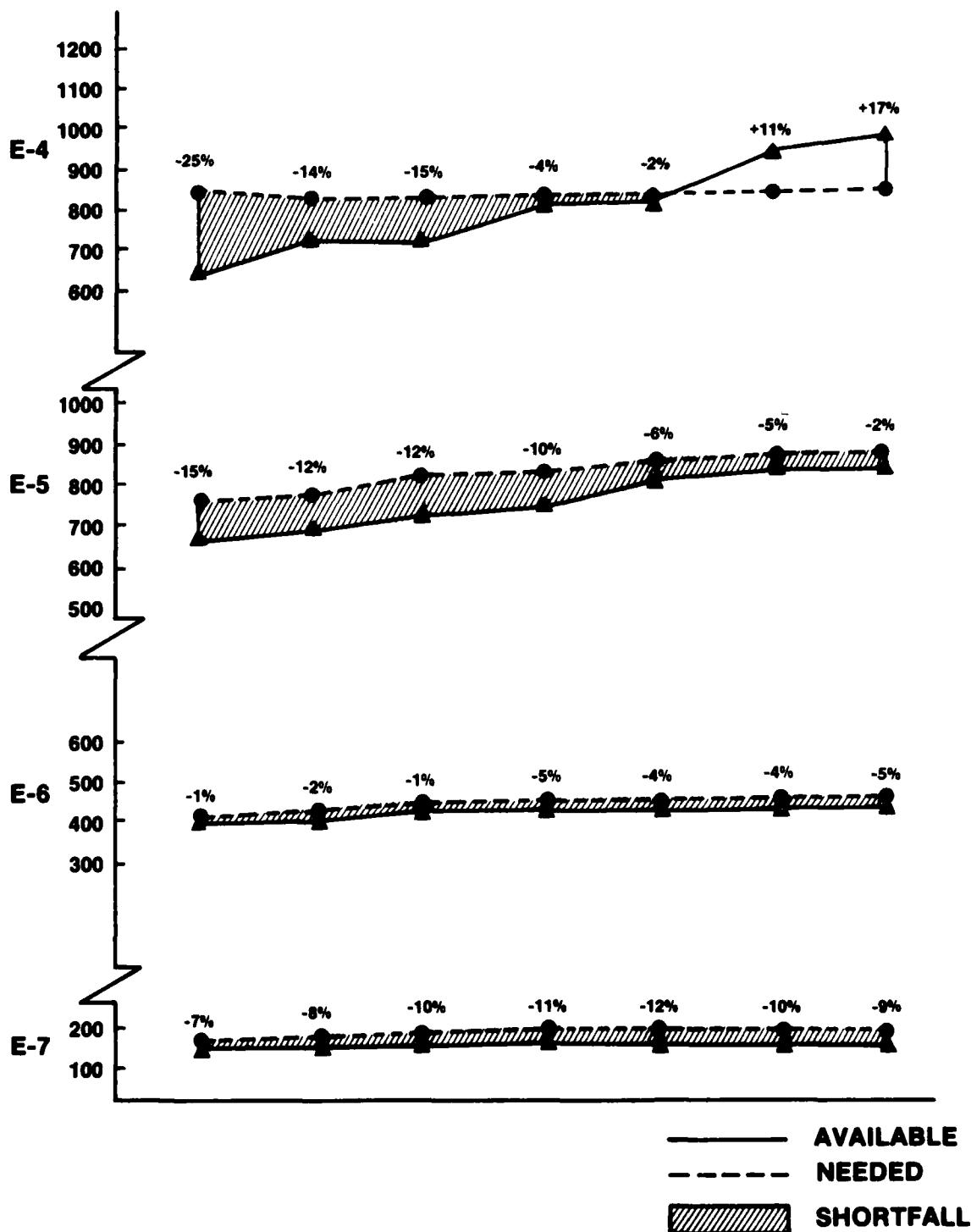
<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	186 2.30 ---	193 2.48 ---	211 2.75 ---	254 2.74 ---	287 3.10 ---	326 3.36 ---	346 3.87 ---
<b>E-4</b>	655 2.06 879 -25.48	725 1.77 847 -14.40	721 1.78 850 -15.18	820 1.94 852 -3.76	839 2.01 856 -1.99	971 2.28 871 11.48	1015 2.46 871 16.53
<b>E-5</b>	644 5.01 755 -14.70	677 5.27 770 -12.08	717 5.11 815 -12.02	743 5.46 825 -9.94	815 5.56 865 -5.78	830 6.03 875 -5.14	854 6.31 875 -2.40
<b>E-6</b>	414 10.65 420 -1.43	423 10.75 433 -2.31	453 10.72 456 -.66	439 11.26 462 -4.98	446 11.58 465 -4.09	449 11.82 470 -4.47	446 11.92 470 -5.11
<b>E-7</b>	156 16.06 167 -6.59	157 16.30 170 -7.65	161 16.64 178 -9.55	161 17.13 180 -10.56	161 17.69 182 -11.54	163 17.68 182 -10.44	165 17.51 182 -9.34
<b>E-8</b>	47 19.33 55 -14.55	47 19.78 55 -14.55	48 20.23 56 -14.29	48 20.94 56 -14.29	48 21.63 56 -14.29	48 22.00 56 -14.29	49 22.07 56 -12.50
<b>E-9</b>	19 21.92 24 -20.83	21 22.02 25 -16.00	21 22.64 25 -16.00	22 23.05 25 -12.00	23 23.76 26 -11.54	23 23.59 26 -11.54	23 23.24 26 -11.54
<b>E-4/9</b>	1935 6.63 2300 -15.87	2050 6.51 2300 -10.87	2121 6.57 2380 -10.88	2233 6.65 2400 -6.96	2332 6.78 2450 -4.82	2484 6.85 2480 .16	2552 6.94 2480 2.90
<b>Total</b>	2121 6.25 2300 ---	2243 6.16 2300 ---	2332 6.22 2380 ---	2487 6.25 2400 ---	2619 6.38 2450 ---	2810 6.44 2480 ---	2898 6.57 2480 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 644	(Projected No. of men at end of FY)
Means LOS 5.01	(Average Length of Service)
Manpower Requirements 755	(CNO estimates of number required)
End Strength Status -14.70	(Percentage over or under requirements)

# CRYPTOLOGIC TECHNICIAN (MAINTENANCE BRANCH) (CTM)

NUMBER OF PERSONNEL	YEAR	1981	1982	1983	1984	1985	1986	1987
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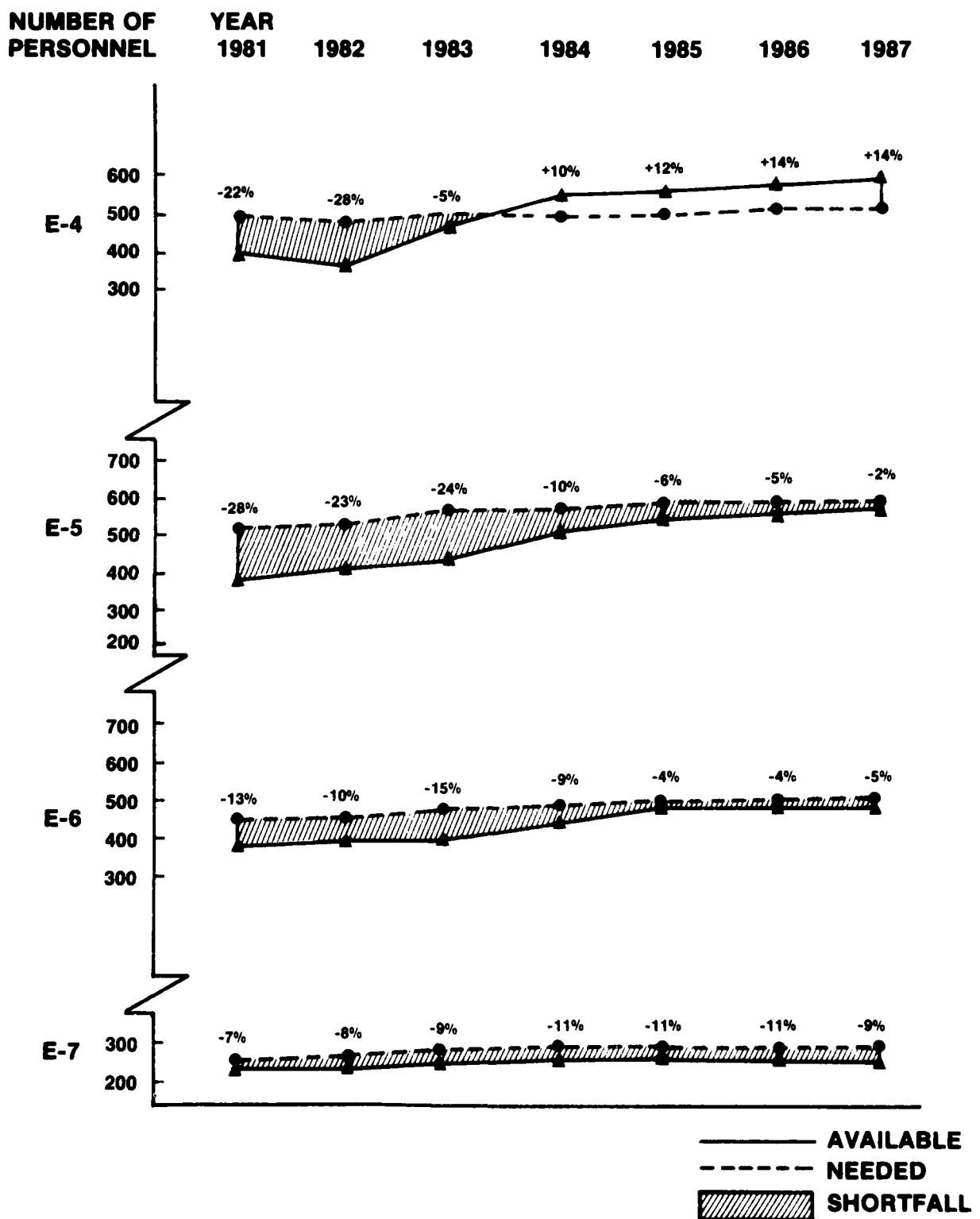
CRYPTOLOGIC TECHNICIAN (TECHNICAL BRANCH) (CTT)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	524 .99 ---	662 1.11 ---	666 1.22 ---	700 1.38 ---	729 1.51 ---	805 1.75 ---	854 2.03 ---
<b>E-4</b>	371 2.83 476 -22.06	334 2.63 461 -27.55	444 2.48 468 -5.13	518 2.63 471 9.98	533 2.64 476 11.97	568 2.83 500 13.60	572 2.99 500 14.40
<b>E-5</b>	360 5.18 500 -28.00	399 4.82 518 -22.97	419 4.61 552 -24.09	499 4.46 555 -10.09	537 4.57 570 -5.79	546 4.89 575 -5.04	561 5.29 575 -2.43
<b>E-6</b>	412 11.91 475 -13.26	439 11.26 486 -9.67	439 10.56 515 -14.76	476 10.33 525 -9.33	512 10.20 535 -4.30	517 10.55 540 -4.26	512 10.92 540 -5.19
<b>E-7</b>	212 16.42 227 -6.61	212 16.53 230 -7.83	223 16.31 246 -9.35	226 16.45 253 -10.67	231 16.54 260 -11.15	232 16.46 260 -10.77	236 16.31 260 -9.23
<b>E-8</b>	54 19.67 63 -14.29	53 20.14 63 -15.87	57 19.64 67 -14.93	58 20.09 68 -14.71	59 20.64 69 -14.49	60 20.28 70 -14.29	61 20.16 70 -12.86
<b>E-9</b>	19 23.13 24 -20.83	22 23.14 27 -18.52	23 24.28 27 -14.81	24 24.54 28 -14.29	26 24.42 30 -13.33	26 24.12 30 -13.33	27 24.57 30 -10.00
<b>E-4/9</b>	1428 8.97 1765 -19.09	1459 8.79 1785 -18.26	1605 8.09 1875 -14.40	1801 7.76 1900 -5.21	1898 7.77 1940 -2.16	1949 7.90 1975 -1.32	1969 8.13 1975 -.30
<b>Total</b>	1952 6.83 2032 ----	2121 6.40 2055 ----	2271 6.08 2146 ----	2501 5.97 2171 ----	2627 6.04 2211 ----	2754 6.10 2246 ----	2823 6.28 2246 ----

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 360	(Projected No. of men at end of FY)
Means LOS 5.18	(Average Length of Service)
Manpower Requirements 500	(CNO estimates of number required)
End Strength Status -28.00	(Percentage over or under requirements)

# CRYPTOLOGIC TECHNICIAN (TECHNICAL BRANCH) (CTT)



DATA SYSTEMS TECHNICIAN (DS)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	908 1.71 ---	967 2.00 ---	974 2.37 ---	1036 2.77 ---	1078 3.27 ---	1093 3.80 ---	1039 4.47 ---
<b>E-4</b>	997 2.13 921 8.25	1119 1.92 975 14.77	1222 1.96 1063 14.96	1334 2.04 1068 24.91	1384 2.15 1083 27.79	1645 2.45 1098 49.82	1846 2.78 1098 68.12
<b>E-5</b>	895 4.93 860 4.07	940 4.89 940 0	1004 4.75 1040 -3.46	954 4.75 1060 -10.00	1017 4.66 1080 -5.83	1024 5.18 1080 -5.19	1054 5.57 1080 -2.41
<b>E-6</b>	490 8.57 700 -30.00	581 8.70 760 -23.55	648 8.73 800 -19.00	758 9.12 835 -9.22	824 9.71 860 -4.19	822 10.62 860 -4.42	817 11.52 860 -5.00
<b>E-7</b>	227 15.92 245 -7.35	236 16.30 255 -7.45	254 16.70 280 -9.29	259 17.27 290 -10.69	267 17.84 300 -11.00	272 18.53 305 -10.82	276 19.12 305 -9.51
<b>E-8</b>	32 17.84 33 -3.03	36 18.75 34 5.88	35 19.27 36 -2.78	37 19.82 36 2.78	39 20.40 36 8.33	38 20.92 36 5.56	34 21.29 36 -5.56
<b>E-9</b>	16 19.44 21 -23.81	17 20.32 21 -19.05	18 21.17 36 -2.78	18 21.94 21 -14.29	18 22.72 21 -14.29	18 23.28 21 -14.29	19 23.45 21 -9.52
<b>E-4/9</b>	2657 5.73 2780 -4.42	2929 5.69 2985 -1.88	3181 5.70 3240 -1.82	3360 5.88 3310 1.51	3549 6.11 3380 5.00	3819 6.37 3400 12.32	4046 6.64 3400 19.00
<b>Total</b>	3565 4.71 2786 ---	3896 4.78 2991 ---	4155 4.92 3246 ---	4396 5.15 3316 ---	4627 5.45 3386 ---	4912 5.80 3406 ---	5085 6.20 3406 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 895

(Projected No. of men at end of FY)

Means LOS 4.93

(Average Length of Service)

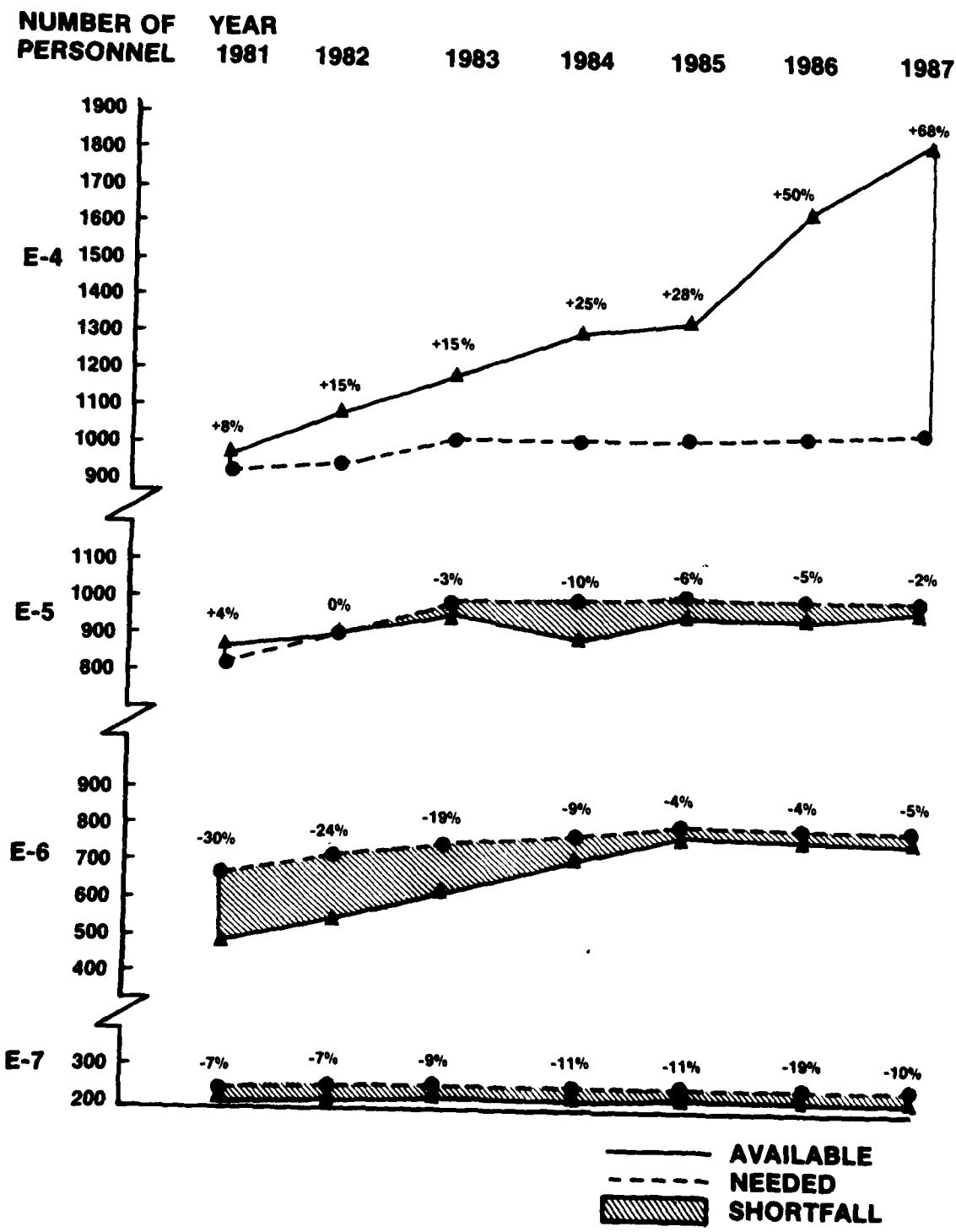
Manpower Requirements 860

(CNO estimates of number required)

End Strength Status +4.07

(Percentage over or under requirements)

## DATA SYSTEMS TECHNICIAN (DS)



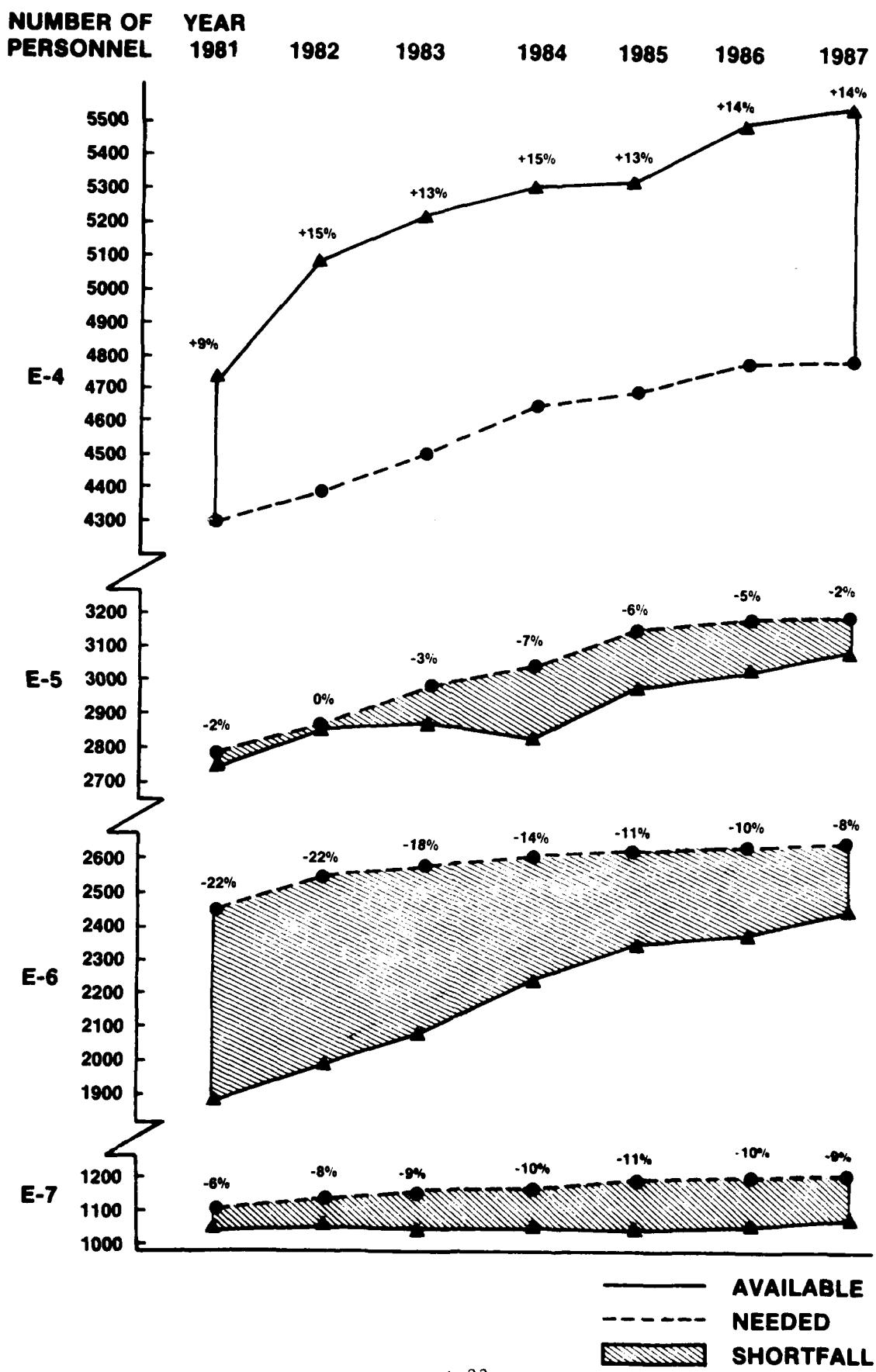
ELECTRICIAN'S MATE (EM)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	5040 1.49	5295 1.73	5824 2.02	5978 2.26	5941 2.37	5581 2.56	5309 2.74
	---	---	---	---	---	---	---
	---	---	---	---	---	---	---
<b>E-4</b>	4719 2.66	5073 2.50	5198 2.52	5277 2.58	5300 2.62	5467 2.70	5491 2.78
	4330 8.98	4418 14.83	4520 15.00	4678 12.80	4725 12.17	4805 13.78	4805 14.28
<b>E-5</b>	2729 4.91	2851 4.97	2887 4.94	2817 4.86	2976 4.76	3013 4.76	3098 4.79
	2775 -1.66	2855 -.14	2975 -2.96	3040 -7.34	3150 -5.52	3175 -5.10	3175 -2.43
<b>E-6</b>	1907 9.62	2001 9.27	2099 9.04	2255 9.02	2346 9.18	2387 9.27	2429 9.40
	2450 -22.16	2550 -21.53	2575 -18.49	2610 -13.60	2650 -11.47	2650 -9.92	2650 -8.34
<b>E-7</b>	1054 15.12	1062 15.16	1068 15.11	1062 15.33	1065 15.32	1078 15.09	1097 15.03
	1125 -6.31	1150 -7.65	1175 -9.11	1185 -10.38	1200 -11.25	1210 -10.91	1210 -9.34
<b>E-8</b>	380 19.31	399 19.46	423 19.47	427 19.81	434 20.02	444 19.76	450 19.75
	445 -14.61	470 -15.11	495 -14.55	500 -14.60	510 -14.90	515 -13.79	515 -12.62
<b>E-9</b>	121 23.32	127 23.37	140 23.52	143 23.62	146 24.10	150 23.81	154 23.84
	153 -20.92	155 -18.06	164 -14.63	165 -13.33	167 -12.57	172 -12.79	172 -10.47
<b>E-4/9</b>	10910 6.45	11513 6.28	11815 6.26	11981 6.32	12267 6.37	12539 6.37	12719 6.44
	11278 -3.26	11598 -.73	11904 -.75	12178 -1.62	12402 -1.09	12527 .10	12527 1.53
<b>Total</b>	15950 4.88	16808 4.84	17639 4.86	17959 4.97	18208 5.06	18120 5.20	18028 5.35
	12353 ---	12713 ---	13089 ---	13433 ---	13702 ---	13852 ---	13852 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 2729	(Projected No. of men at end of FY)
Means LOS 4.91	(Average Length of Service)
Manpower Requirements 2775	(CNO estimates of number required)
End Strength Status -1.66	(Percentage over or under requirements)

# ELECTRICIAN'S MATE (EM)



ELECTRONICS WARFARE TECHNICIAN (EW)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	593 1.50 ---	784 1.44 ---	935 1.57 ---	909 1.82 ---	812 2.15 ---	870 2.56 ---	820 2.78 ---
<b>E-4</b>	593 2.10 591 .34	613 2.08 625 -1.92	676 2.08 652 3.68	750 2.23 686 9.33	789 2.20 704 12.07	801 2.30 704 13.78	805 2.30 704 14.35
<b>E-5</b>	620 4.77 525 18.10	644 4.59 545 18.17	674 4.46 570 18.25	728 4.29 595 22.35	787 4.41 610 29.02	767 4.73 615 24.72	749 4.85 615 21.79
<b>E-6</b>	259 8.13 465 -44.30	293 7.73 515 -43.11	306 7.65 545 -43.85	314 7.85 585 -46.32	320 7.96 600 -46.67	351 7.84 600 -41.50	383 7.83 600 -36.17
<b>E-7</b>	283 15.79 302 -6.29	279 16.10 302 -7.62	281 15.83 310 -9.35	282 15.77 315 -10.48	289 15.63 325 -11.08	290 15.47 325 -10.77	295 15.56 325 -9.23
<b>E-8</b>	51 19.01 60 -15.00	51 19.52 60 -15.00	51 19.48 60 -15.00	51 20.05 60 -15.00	51 20.56 60 -15.00	52 20.90 60 -13.33	52 21.69 60 -13.33
<b>E-9</b>	17 20.56 22 -22.73	19 21.29 23 -17.39	20 21.85 23 -13.04	21 22.69 24 -12.50	23 23.11 26 -11.54	23 23.85 26 -11.54	23 24.67 26 -11.54
<b>E-4/9</b>	1823 6.63 1965 -7.23	1899 6.52 2070 -8.26	2008 6.29 2160 -7.04	2146 6.16 2265 -5.25	2259 6.13 2325 -2.84	2284 6.28 2330 -1.97	2307 6.40 2330 -.99
<b>Total</b>	2416 5.38 2200 ---	2683 5.04 2312 ---	2943 4.79 2450 ---	3055 4.86 2565 ---	3071 5.08 2640 ---	3154 5.25 2645 ---	3127 5.45 2645 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 620

(Projected No. of men at end of FY)

Means LOS 4.77

(Average Length of Service)

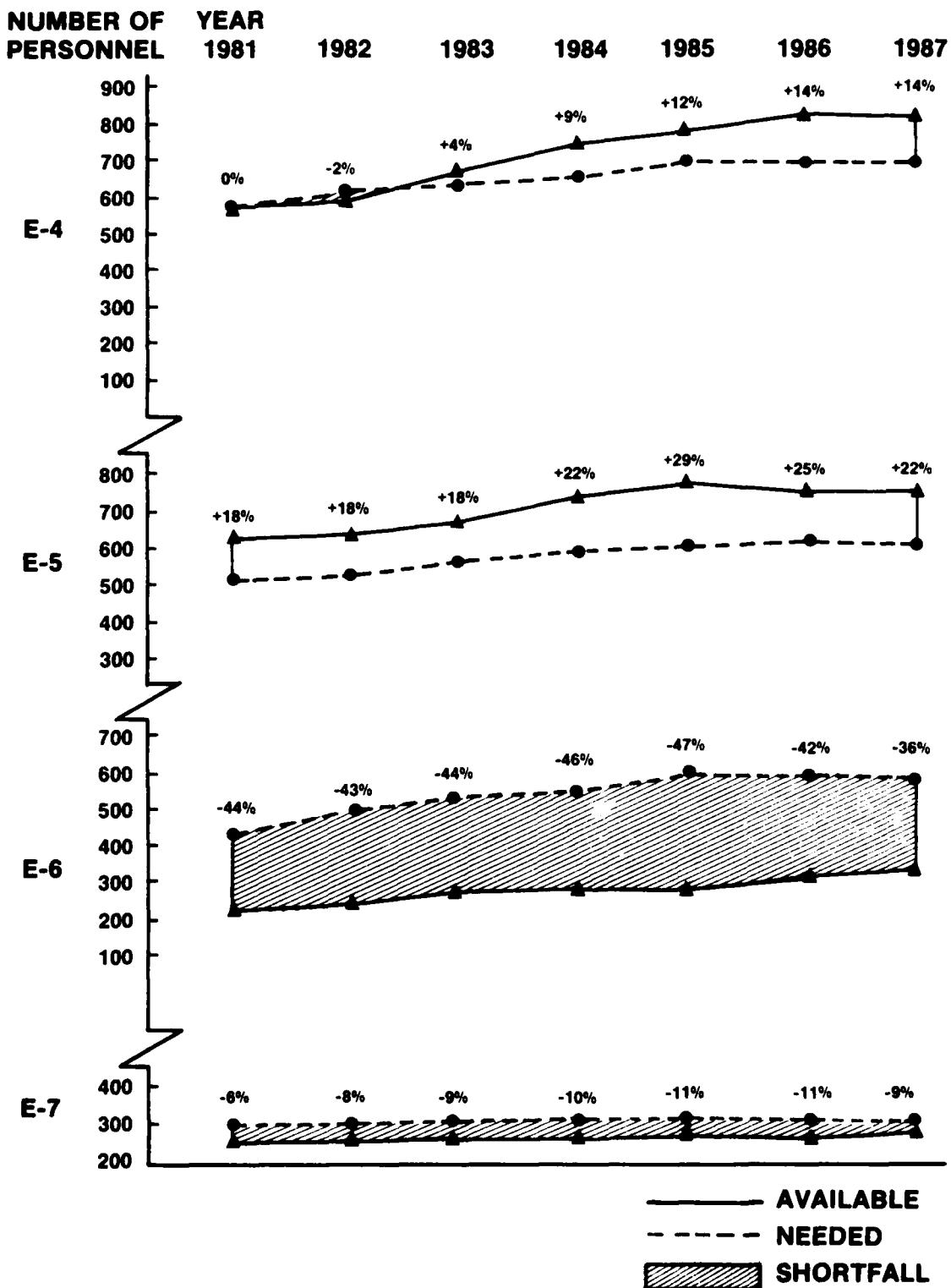
Manpower Requirements 5 25

(CNO estimates of number required)

End Strength Status +18.10

(Percentage over or under requirements)

# ELECTRONICS WARFARE TECHNICIAN (EW)



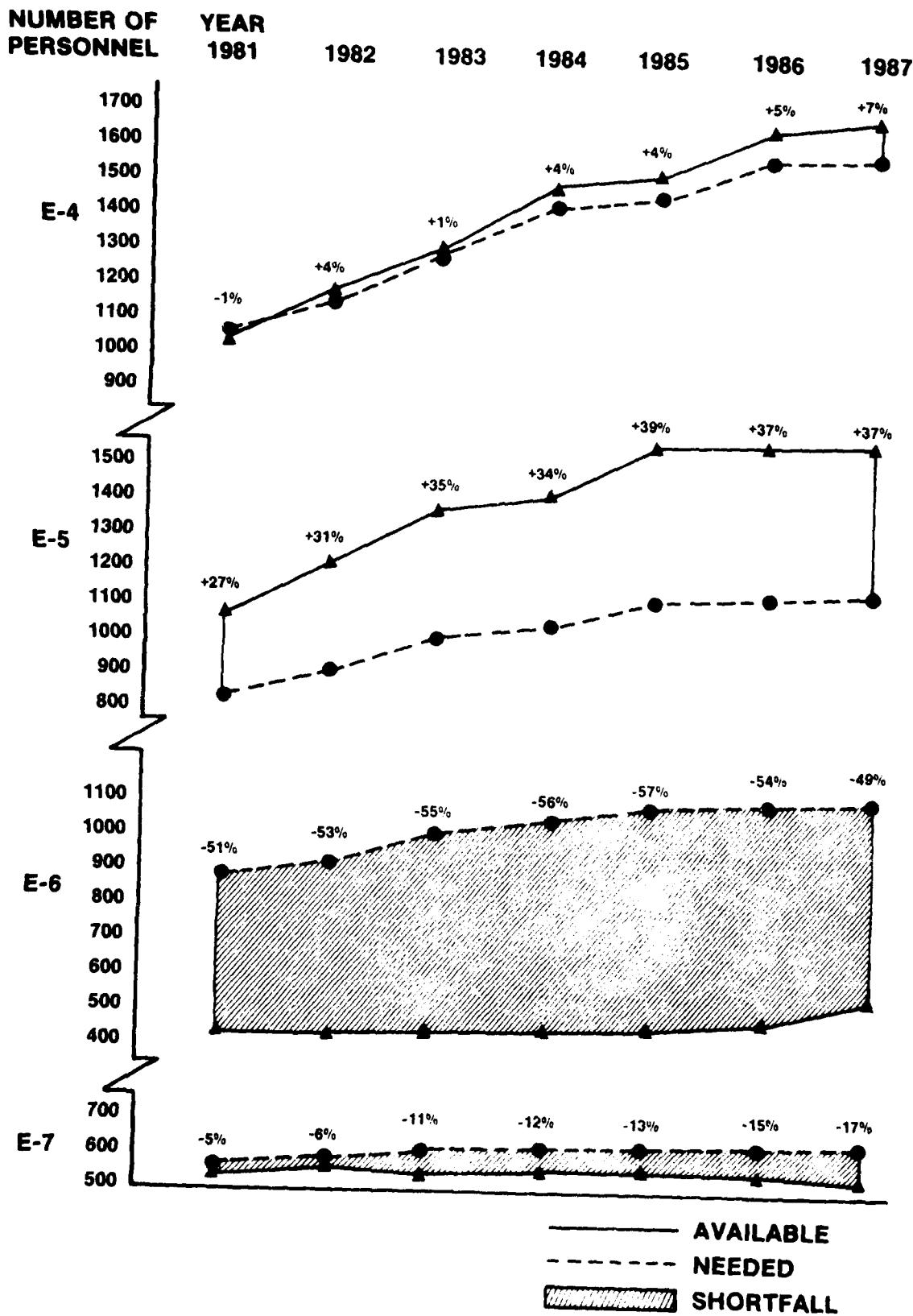
FIRE CONTROL TECHNICIAN (GUN FIRE CONTROL) (FTG)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	745 1.65 ---	836 1.53 ---	798 1.88 ---	687 2.41 ---	584 2.81 ---	587 3.16 ---	612 3.50 ---
<b>E-4</b>	1022 1.96 1032 -.97	1171 1.80 1130 3.63	1282 1.73 1265 1.34	1449 1.78 1397 3.72	1486 1.87 1425 4.28	1601 1.82 1530 4.64	1640 1.82 1530 7.19
<b>E-5</b>	1065 4.42 840 26.79	1201 4.17 920 30.54	1353 4.01 1000 35.30	1398 4.04 1040 34.42	1541 3.97 1110 38.83	1556 4.37 1135 37.09	1552 4.51 1135 36.74
<b>E-6</b>	426 8.24 870 -51.03	427 7.65 900 -52.56	434 7.42 970 -55.26	447 7.37 1010 -55.74	448 7.43 1050 -57.33	488 7.23 1060 -53.96	538 7.19 1060 -49.25
<b>E-7</b>	546 14.35 573 -4.71	562 13.98 600 -6.33	554 13.64 625 -11.36	555 13.56 628 -11.62	550 13.46 635 -13.39	544 13.20 640 -15.00	529 12.72 640 -17.34
<b>E-8</b>	0	0	0	0	0	0	0
<b>E-9</b>	0	0	0	0	0	0	0
<b>E-4/9</b>	3059 5.90 3315 -7.72	3361 5.43 3550 -5.32	3623 5.08 3860 -6.14	3849 4.95 4075 -5.55	4025 4.88 4220 -4.62	4189 4.88 4365 -4.03	4259 4.83 4365 -2.43
<b>Total</b>	3804 5.07 3520 ---	4197 4.65 3800 ---	4421 4.51 4160 ---	4536 4.56 4415 ---	4609 4.62 4575 ---	4776 4.66 4735 ---	4871 4.66 4735 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength	1065	(Projected No. of men at end of FY)
Means LOS	4.42	(Average Length of Service)
Manpower Requirements	840	(CNO estimates of number required)
End Strength Status	+26.79	(Percentage over or under requirements)

# FIRE CONTROL TECHNICIAN (GUN FIRE CONTROL) (FTG)



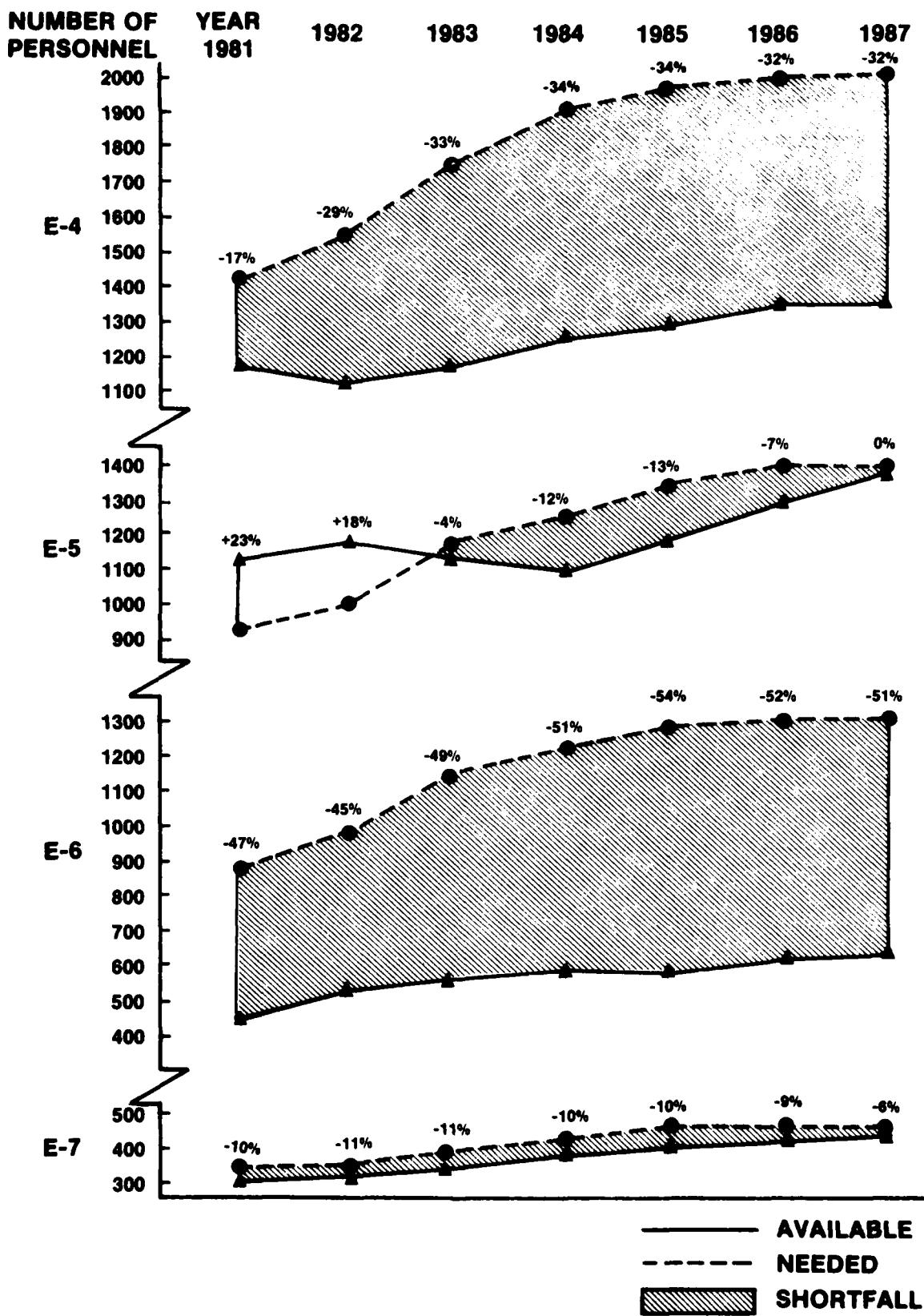
FIRE CONTROL TECHNICIAN (SURFACE MISSILE FIRE CONTROL) (FTM)

<u>Rate</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>
<b>E-1/3</b>	356 1.93 ---	351 1.96 ---	443 1.84 ---	511 1.93 ---	601 2.10 ---	680 2.16 ---	576 3.11 ---
<b>E-4</b>	1164 2.65 1400 -16.86	1101 2.25 1540 -28.51	1150 2.01 1725 -33.33	1228 1.99 1870 -34.33	1274 1.97 1930 -33.99	1325 2.03 1960 -32.40	1324 1.96 1960 -32.45
<b>E-5</b>	1142 5.02 930 22.80	1184 5.14 1005 17.81	1133 5.18 1175 -3.57	1099 5.02 1250 -12.08	1171 4.87 1340 -12.61	1292 4.79 1385 -6.71	1379 4.79 1385 -.43
<b>E-6</b>	472 8.03 890 -46.97	544 7.61 985 -44.77	579 7.59 1130 -48.76	599 7.92 1212 -50.70	593 8.21 1280 -53.67	619 8.37 1300 -52.38	634 8.44 1300 -51.23
<b>E-7</b>	343 15.57 380 -9.74	356 14.99 400 -11.00	390 13.75 440 -11.36	417 13.12 465 -10.32	448 12.86 500 -10.40	460 13.08 505 -8.91	474 13.30 505 -6.14
<b>E-8</b>	0	0	0	0	0	0	0
<b>E-9</b>	0	0	0	0	0	0	0
<b>E-4/9</b>	3121 5.76 3600 -13.31	3185 5.66 3930 -18.96	3252 5.51 4470 -27.25	3343 5.44 4800 -30.35	3489 5.41 5050 -30.97	3696 5.43 5150 -28.23	3811 5.47 5150 -26.00
<b>Total</b>	3477 5.37 3855 ---	3536 5.29 4200 ---	3695 5.07 4750 ---	3854 4.97 5090 ---	4087 4.92 5340 ---	4376 4.93 5440 ---	4387 5.16 5440 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 1142	(Projected No. of men at end of FY)
Means LOS 5.02	(Average Length of Service)
Manpower Requirements 930	(CNO estimates of number required)
End Strength Status +22.80	(Percentage over or under requirements)

# FIRE CONTROL TECHNICIAN (SURFACE MISSILE FIRE CONTROL) (FTM)



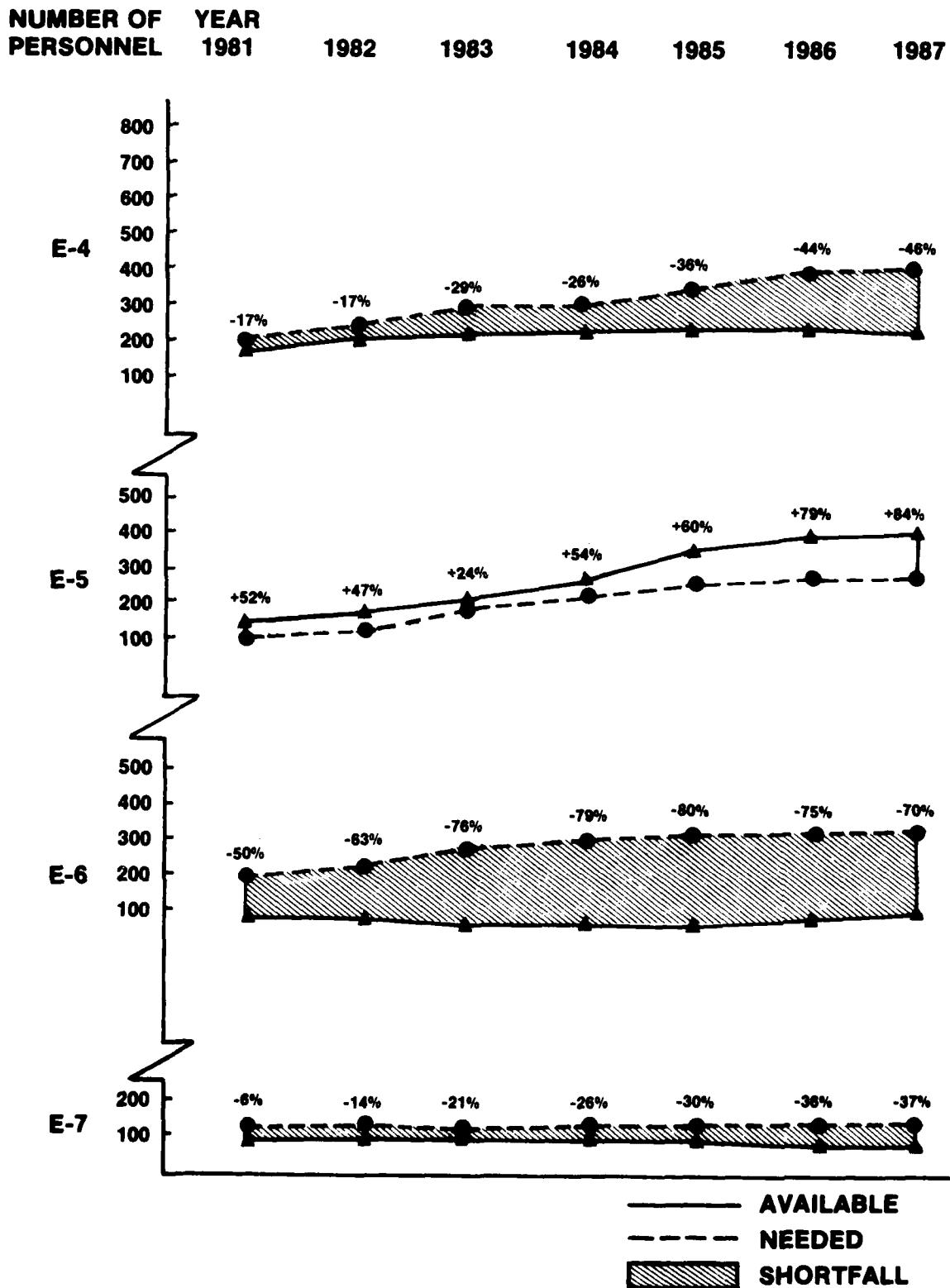
GAS TURBINE SYSTEM TECHNICIAN (ELECTRICAL) (CSE)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	176 1.07 ---	186 1.13 ---	198 1.24 ---	207 1.31 ---	202 1.35 ---	206 1.32 ---	184 1.42 ---
<b>E-4</b>	172 1.58 207 -16.91	200 1.55 241 -17.01	212 1.58 297 -28.62	223 1.68 300 -25.67	225 1.68 350 -35.71	222 1.69 398 -44.22	216 1.69 398 -45.73
<b>E-5</b>	167 4.45 110 51.82	193 3.82 131 47.33	217 3.43 175 24.00	286 3.48 185 54.59	345 3.67 215 60.47	384 3.83 215 78.60	396 3.93 215 84.19
<b>E-6</b>	88 8.91 175 -49.71	75 7.91 205 -63.41	60 7.87 250 -76.00	59 7.79 282 -79.08	60 7.50 300 -80.00	75 6.90 300 -75.00	89 6.83 300 -70.33
<b>E-7</b>	106 13.70 113 -6.19	106 13.80 123 -13.82	101 13.86 128 -21.09	98 14.37 133 -26.32	95 14.78 135 -29.63	88 14.93 137 -35.77	87 15.17 137 -36.50
<b>E-8</b>	0	0	0	0	0	0	0
<b>E-9</b>	0	0	0	0	0	0	0
<b>E-4/9</b>	533 6.10 605 -11.90	574 5.41 700 -18.00	590 5.00 850 -30.59	666 4.86 900 -26.00	725 4.83 1000 -27.50	769 4.78 1050 -26.76	788 4.88 1050 -24.95
<b>Total</b>	709 4.85 607 ---	760 4.36 705 ---	788 4.06 870 ---	875 4.02 930 ---	927 4.07 1045 ---	975 4.05 1095 ---	972 4.23 1095 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 167	(Projected No. of men at end of FY)
Means LOS 4.45	(Average Length of Service)
Manpower Requirements 110	(CNO estimates of number required)
End Strength Status 51.82	(Percentage over or under requirements)

# GAS TURBINE SYSTEM TECHNICIAN (ELECTRICAL) (GSE)



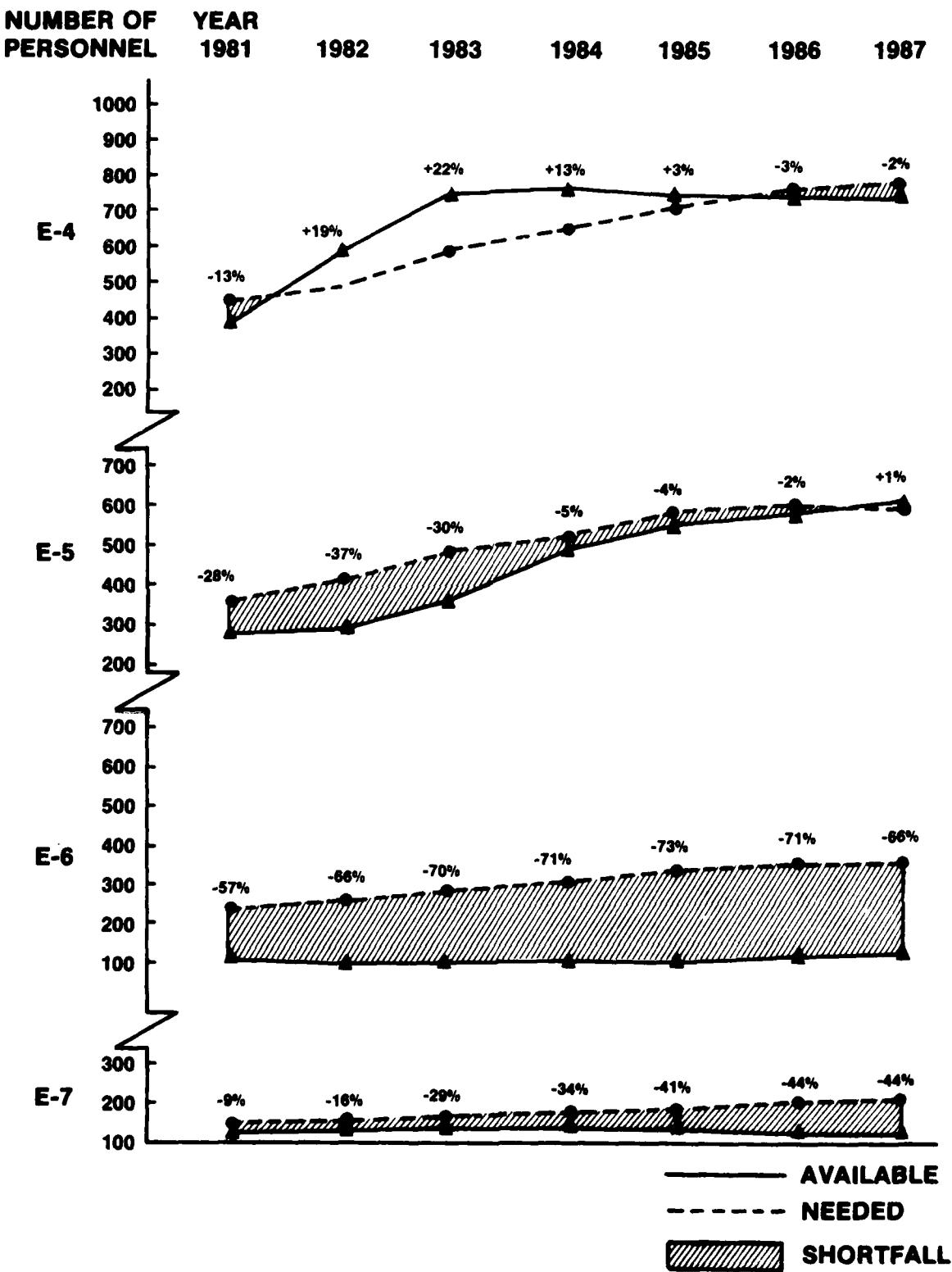
GAS TURBINE SYSTEM TECHNICIAN (MECHANICAL) (GSM)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	439 1.14 ---	494 1.30 ---	502 1.39 ---	488 1.45 ---	510 1.51 ---	499 1.54 ---	445 1.76 ---
<b>E-4</b>	384 1.39 443 -13.32	587 1.40 495 18.95	725 1.60 595 21.85	739 1.66 655 12.82	728 1.66 705 3.26	727 1.65 750 -3.07	735 1.65 750 -2.00
<b>E-5</b>	242 4.44 335 -27.76	251 4.40 400 -37.25	329 3.90 470 -30.00	487 3.77 515 -5.44	550 3.86 575 -4.35	586 4.03 600 -2.33	608 4.14 600 1.33
<b>E-6</b>	94 9.91 222 -57.66	85 9.38 250 -66.00	86 9.05 285 -69.82	86 8.86 300 -71.33	93 8.41 340 -72.65	101 8.26 350 -71.14	119 8.03 350 -66.00
<b>E-7</b>	123 14.46 135 -8.89	130 14.82 155 -16.13	131 15.13 185 29.19	132 15.24 200 -34.00	129 15.02 220 -41.36	125 14.92 225 -44.44	126 14.77 225 -44.00
<b>E-8</b>	0	0	0	0	0	0	0
<b>E-9</b>	0	0	0	0	0	0	0
<b>E-4/9</b>	843 5.13 1135 -25.73	1053 4.41 1300 -19.00	1271 4.09 1535 -17.20	1444 4.04 1670 -13.53	1500 4.04 1840 -18.48	1539 4.07 1925 -20.05	1588 4.12 1925 -17.51
<b>Total</b>	1282 3.76 1158 ---	1547 3.42 1335 ---	1773 3.33 1685 ---	1932 3.39 1790 ---	2010 3.40 1970 ---	2038 3.45 2055 ---	2033 3.61 2055 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 242	(Projected No. of men at end of FY)
Means LOS 4.44	(Average Length of Service)
Manpower Requirements 335	(CNO estimates of number required)
End Strength Status -27.76	(Percentage over or under requirements)

# GAS TURBINE SYSTEM TECHNICIAN (MECHANICAL) (GSM)



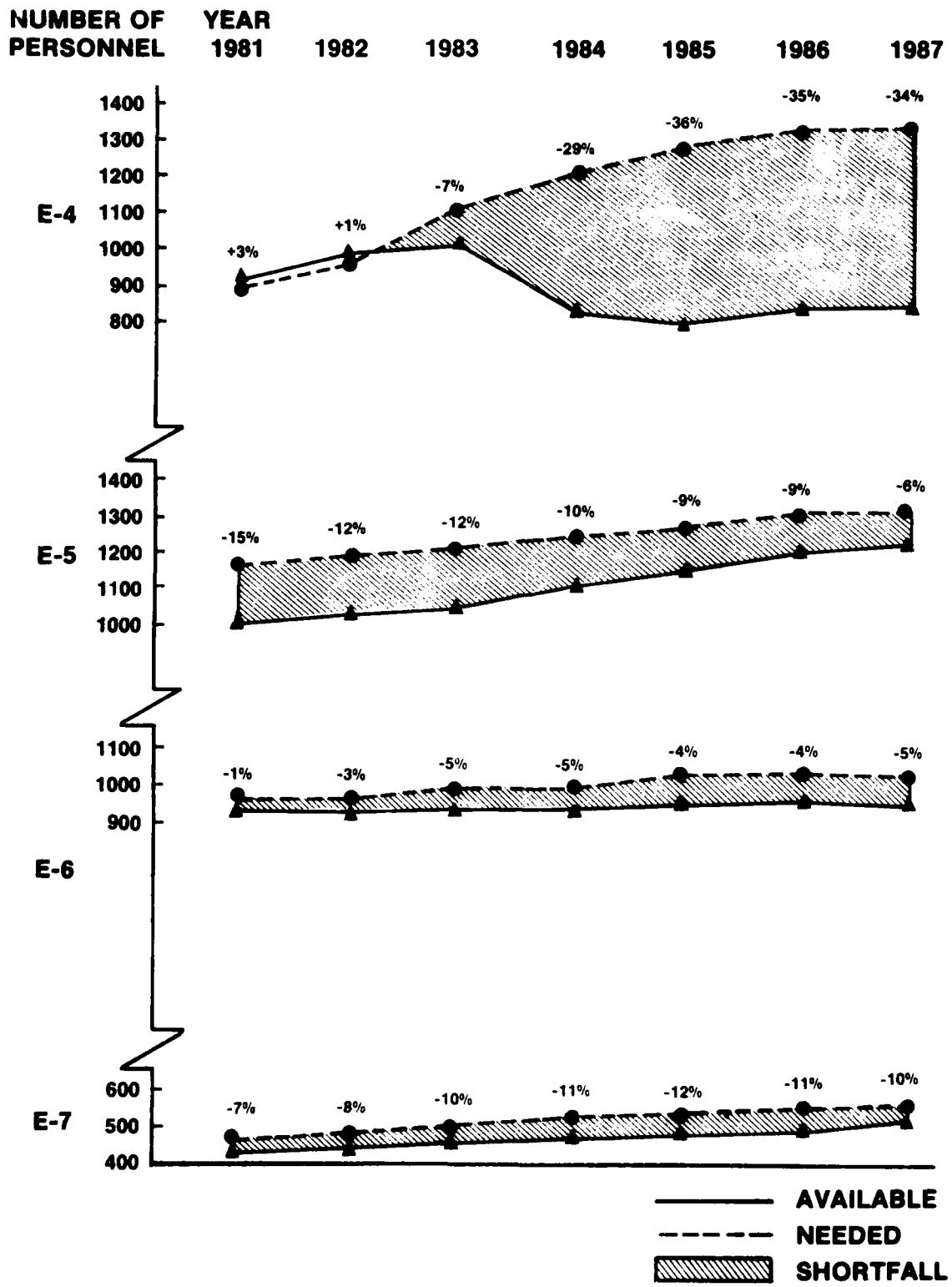
**GUNNER'S MATE (GUNS) (GMG)**

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	2019	1866	1981	2136	2329	2239	2002
	1.50	1.65	1.65	1.84	1.92	2.17	2.57
	---	---	---	---	---	---	---
	---	---	---	---	---	---	---
<b>E-4</b>	940	1003	1037	855	819	858	871
	3.30	3.13	3.33	3.37	3.34	3.33	3.28
	913	990	1120	1200	1280	1325	1325
	2.96	1.31	-7.41	-28.75	-36.02	-35.25	-34.26
<b>E-5</b>	1002	1055	1087	1135	1171	1203	1237
	5.91	5.60	5.65	5.71	5.86	6.11	6.31
	1175	1200	1235	1260	1285	1315	1315
	-14.72	-12.08	-11.98	-9.92	-8.87	-8.52	-5.93
<b>E-6</b>	938	939	940	945	967	965	959
	11.84	11.51	11.07	10.99	11.27	11.69	12.07
	950	965	990	995	1010	1010	1010
	-1.26	-2.69	-5.05	-5.03	-4.26	-4.46	-5.05
<b>E-7</b>	428	442	466	473	485	497	506
	17.62	17.44	17.11	16.75	16.52	16.41	16.41
	462	480	515	530	550	560	560
	-7.36	-7.92	-9.51	-10.75	-11.82	-11.25	-9.64
<b>E-8</b>	0	0	0	0	0	0	0
<b>E-9</b>	0	0	0	0	0	0	0
<b>E-4/9</b>	3308	3439	3530	3408	3442	3523	3573
	8.37	8.01	7.93	8.12	8.28	8.42	8.55
	3500	3635	3860	3985	4125	4210	4210
	-5.49	-5.39	-8.55	-14.48	-16.56	-16.32	-15.13
<b>Total</b>	5327	5305	5511	5544	5771	5762	5575
	5.76	5.77	5.67	5.70	5.71	5.99	6.40
	4000	4185	4475	4635	4805	4925	4925
	---	---	---	---	---	---	---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 1002	(Projected No. of men at end of FY)
Means LOS 5.91	(Average Length of Service)
Manpower Requirements 1175	(CNO estimates of number required)
End Strength Status -14.72	(Percentage over or under requirements)

# GUNNER'S MATE (GUNS) (GMG)



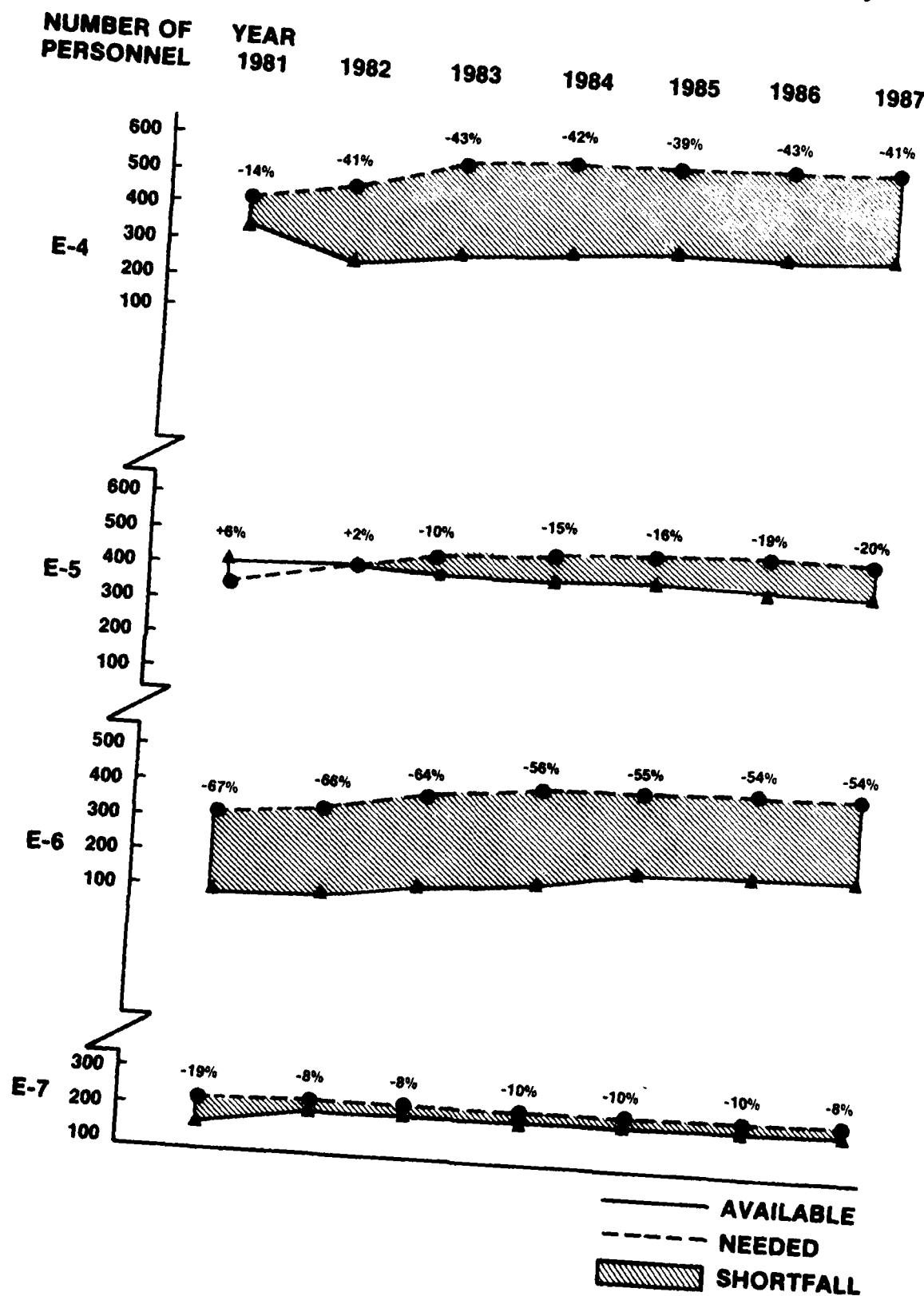
GUNNER'S MATE (MISSILES) (GMM)

<u>Rate</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>
<b>E-1/3</b>	427 1.33 ---	536 1.39 ---	603 1.51 ---	623 1.64 ---	617 1.81 ---	636 2.10 ---	574 2.49 ---
<b>E-4</b>	359 2.99 418 -14.11	273 2.97 461 -40.78	294 2.97 520 -43.46	320 2.88 548 -41.61	339 2.89 555 -38.92	321 2.80 560 -42.68	330 2.84 560 -41.07
<b>E-5</b>	401 5.19 380 5.53	422 5.04 412 2.43	404 5.16 450 -10.22	401 5.03 470 -14.68	412 4.85 490 -15.92	405 4.75 500 -19.00	399 4.75 500 -20.20
<b>E-6</b>	110 9.23 330 -66.67	119 8.11 354 -66.38	146 7.86 400 -63.50	188 8.17 430 -56.28	204 8.53 450 -54.67	209 8.77 455 -54.07	211 9.01 455 -53.63
<b>E-7</b>	197 14.59 242 -18.60	224 14.48 243 -7.82	229 14.38 250 -8.40	227 14.73 252 -9.92	230 14.80 255 -9.80	234 14.94 260 -10.00	238 15.08 260 -8.46
<b>E-8</b>	0	0	0	0	0	0	0
<b>E-9</b>	0	0	0	0	0	0	0
<b>E-4/9</b>	1067 6.60 1370 -22.12	1038 6.88 1470 -29.39	1073 6.89 1620 -33.77	1136 6.88 1700 -33.18	1185 6.85 1750 -32.29	1169 6.97 1775 -34.14	1178 7.07 1775 -33.63
<b>Total</b>	1494 5.09 1495 ---	1574 5.01 1605 ---	1676 4.96 1765 ---	1759 5.02 1855 ---	1802 5.13 1905 ---	1805 5.26 1930 ---	1752 5.57 1930 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 401	(Projected No. of men at end of FY)
Means LOS 5.19	(Average Length of Service)
Manpower Requirements 380	(CNO estimates of number required)
End Strength Status +5.53	(Percentage over or under requirements)

# GUNNER'S MATE (MISSILES) (GMM)



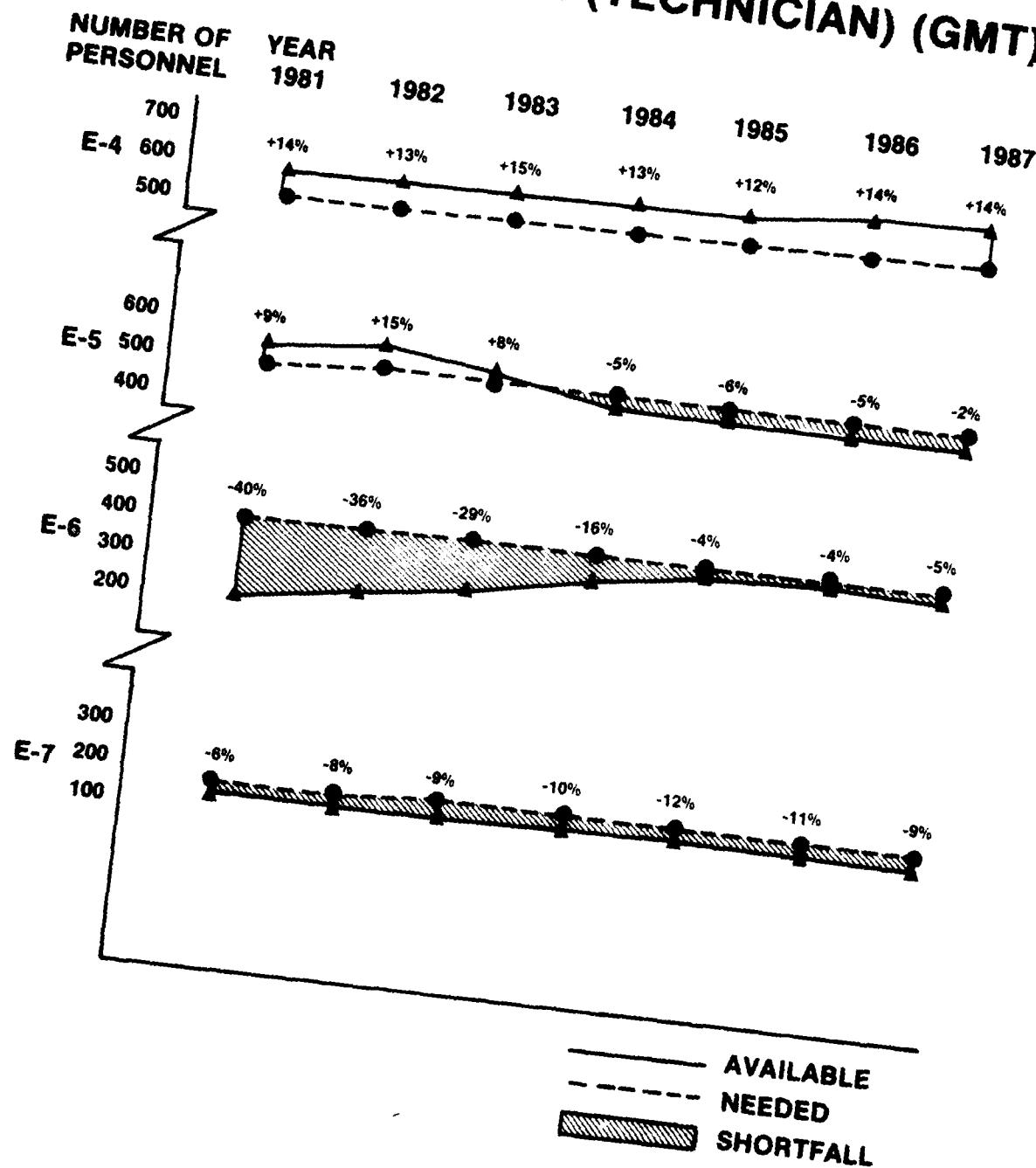
GUNNER'S MATE (TECHNICIAN) (GMT)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	668 1.36	798 1.39	952 1.64	1155 2.03	1226 2.42	1313 2.77	1377 3.19
	---	---	---	---	---	---	---
	---	---	---	---	---	---	---
<b>E-4</b>	577 2.84	570 2.83	589 2.95	588 3.33	593 3.53	602 3.82	605 4.22
	504	503	513	522	529	529	529
	14.48	13.32	14.81	12.64	12.10	13.80	14.37
<b>E-5</b>	538 5.33	573 5.41	542 5.64	475 5.89	471 5.80	475 6.12	488 6.52
	495	500	500	500	500	500	500
	8.69	14.60	8.40	-5.00	-5.80	-5.00	-2.40
<b>E-6</b>	295 10.59	319 9.61	352 9.38	418 9.44	474 9.59	475 10.09	471 10.65
	495	495	496	496	496	496	496
	-40.40	-35.56	-29.03	-15.73	-4.44	-4.23	-5.04
<b>E-7</b>	183 17.25	180 16.87	183 16.42	182 16.19	182 16.08	184 16.14	187 16.62
	195	195	202	203	206	206	206
	-6.15	-7.69	-9.41	-10.31	-11.65	-10.68	-9.22
<b>E-8</b>	39 19.81	44 20.23	49 20.68	49 20.74	49 21.13	49 21.13	50 21.70
	46	52	57	57	57	57	57
	-15.22	-15.38	-14.04	-14.04	-14.04	-14.04	-12.28
<b>E-9</b>	12 22.92	12 23.58	15 23.50	15 24.43	15 24.83	15 25.03	15 25.10
	15	15	17	17	17	17	17
	-20.00	-20.00	-11.76	-11.76	-11.76	-11.76	-11.76
<b>E-4/9</b>	1644 7.20	1698 7.06	1730 7.21	1727 7.55	1784 7.68	1800 7.99	1816 8.44
	1750	1760	1785	1795	1805	1805	1805
	-6.06	-3.52	-3.08	-3.79	-1.16	-.28	.61
<b>Total</b>	2312 5.51	2496 5.25	2682 5.23	2882 5.33	3010 5.54	3113 5.79	3193 6.18
	1950	1965	1995	2010	2020	2020	2020
	----	---	---	---	---	---	---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 538	(Projected No. of men at end of FY)
Means LOS 5.33	(Average Length of Service)
Manpower Requirements 495	(CNO estimates of number required)
End Strength Status 8.69	(Percentage over or under requirements)

## GUNNER'S MATE (TECHNICIAN) (GMT)



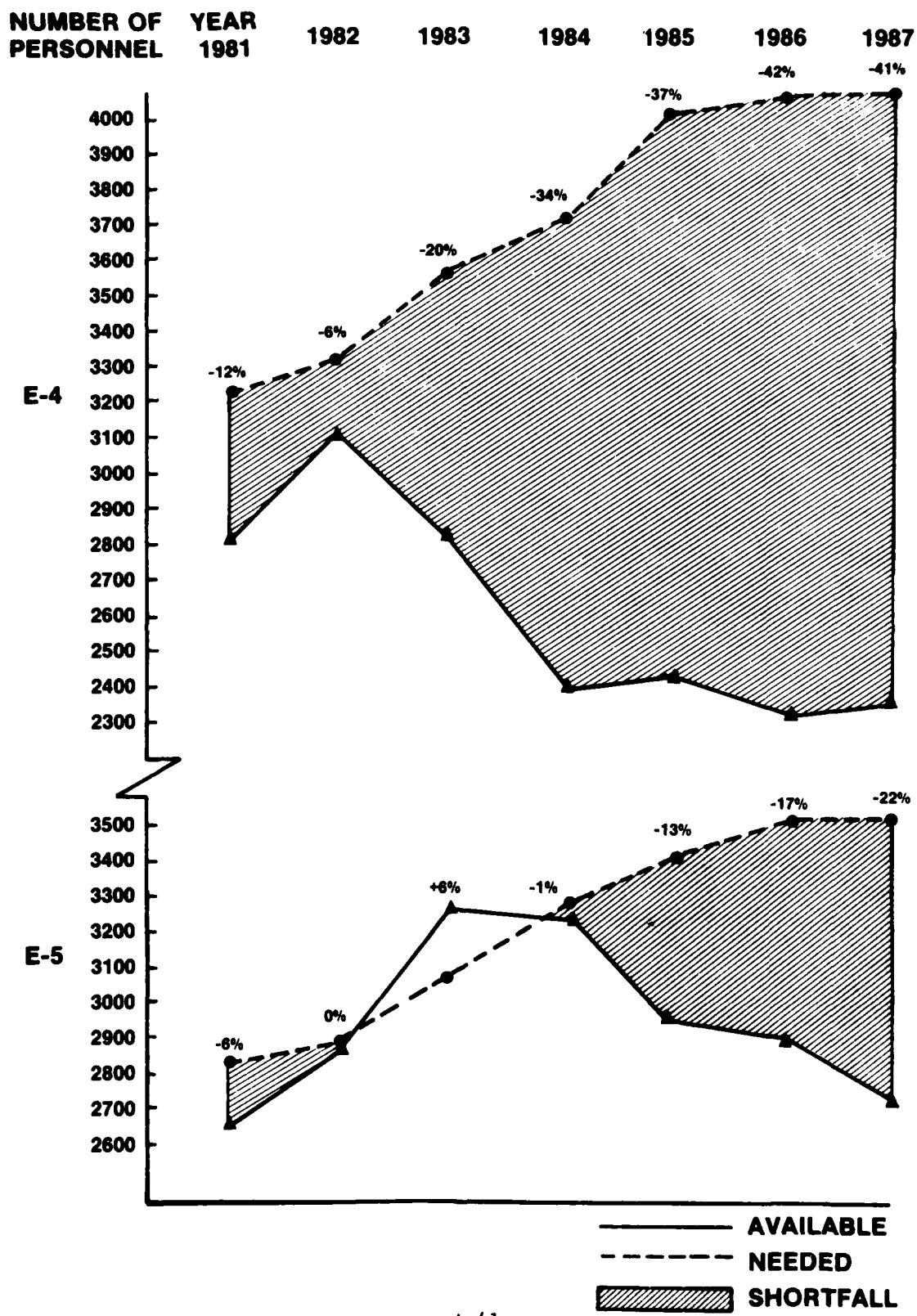
HULL MAINTENANCE TECHNICIAN (HT)

<u>Rate</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>
<b>E-1/3</b>	6152 1.49 ---	5623 1.53 ---	5656 1.62 ---	5686 1.81 ---	5813 1.96 ---	5657 2.20 ---	5496 2.42 ---
<b>E-4</b>	2839 3.04 3240 -12.38	3134 2.93 3332 -5.94	2856 3.01 3576 -20.13	2453 2.93 3707 -33.83	2482 2.96 3970 -37.48	2370 2.94 4060 -41.63	2408 2.94 4060 -40.69
<b>E-5</b>	2666 5.18 2840 -6.13	2889 5.18 2890 -.03	3255 5.10 3085 5.51	3228 5.17 3275 -1.44	2960 5.27 3400 -12.94	2900 5.28 3500 -17.14	2729 5.27 3500 -22.03
<b>E-6</b>	1543 10.64 2325 -33.63	1640 10.37 2375 -30.95	1810 10.19 2550 -29.02	2024 10.12 2700 -25.04	2203 10.21 2800 -21.32	2330 10.47 2800 -16.79	2438 10.76 2800 -13.00
<b>E-7</b>	1059 15.59 1130 -6.28	1044 15.59 1130 -7.61	1036 15.58 1140 -9.12	1039 15.66 1160 -10.43	1034 15.68 1165 -11.24	1042 15.63 1170 -10.94	1061 15.60 1170 -9.32
<b>E-8</b>	200 19.90 235 -14.89	200 19.79 235 -14.89	203 19.90 238 -14.71	209 19.96 245 -14.69	213 20.18 250 -14.80	215 19.66 250 -14.00	218 19.33 250 -12.80
<b>E-9</b>	83 24.22 105 -20.95	89 24.22 108 -17.59	95 24.62 111 -14.41	98 24.74 113 -13.27	100 25.09 115 -13.04	105 24.52 120 -12.50	107 24.51 120 -10.83
<b>E-4/9</b>	8390 7.31 9875 -15.04	8996 7.06 10070 -10.67	9255 7.15 10700 -13.50	9051 7.43 11200 -19.19	8992 7.61 11700 -23.15	8962 7.79 11900 -24.69	8959 7.93 11900 -24.71
<b>Total</b>	14542 4.85 10740 ---	14619 4.94 10965 ---	14911 5.05 11655 ---	14737 5.26 12225 ---	14805 5.39 12800 ---	14619 5.63 13000 ---	14455 5.84 13000 ---

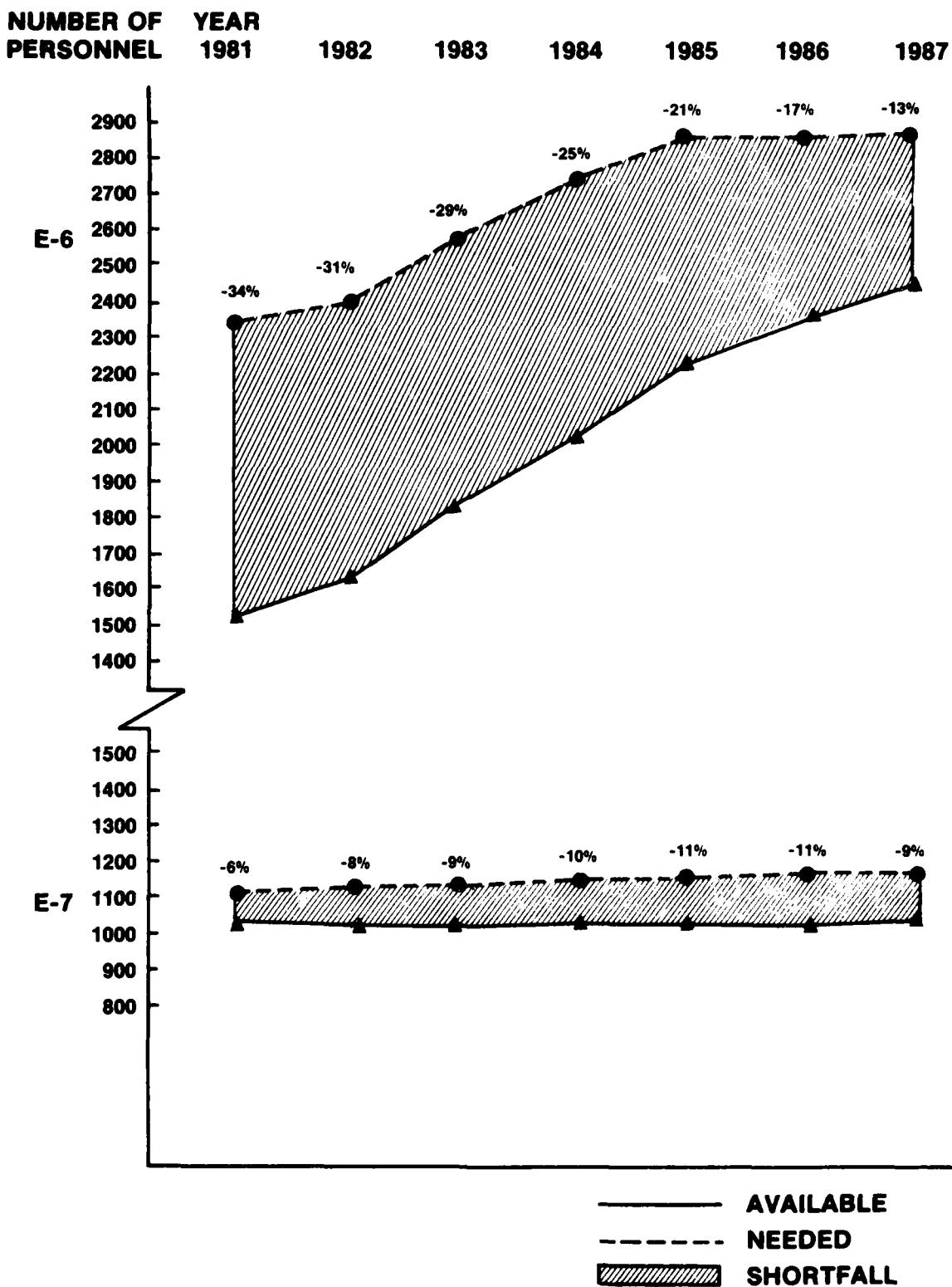
**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 2666	(Projected No. of men at end of FY)
Means LOS 5.18	(Average Length of Service)
Manpower Requirements 2840	(CNO estimates of number required)
End Strength Status -6.13	(Percentage over or under requirements)

# HULL MAINTENANCE TECHNICIAN (HT)



## HULL MAINTENANCE TECHNICIAN (HT) (CONTINUED)



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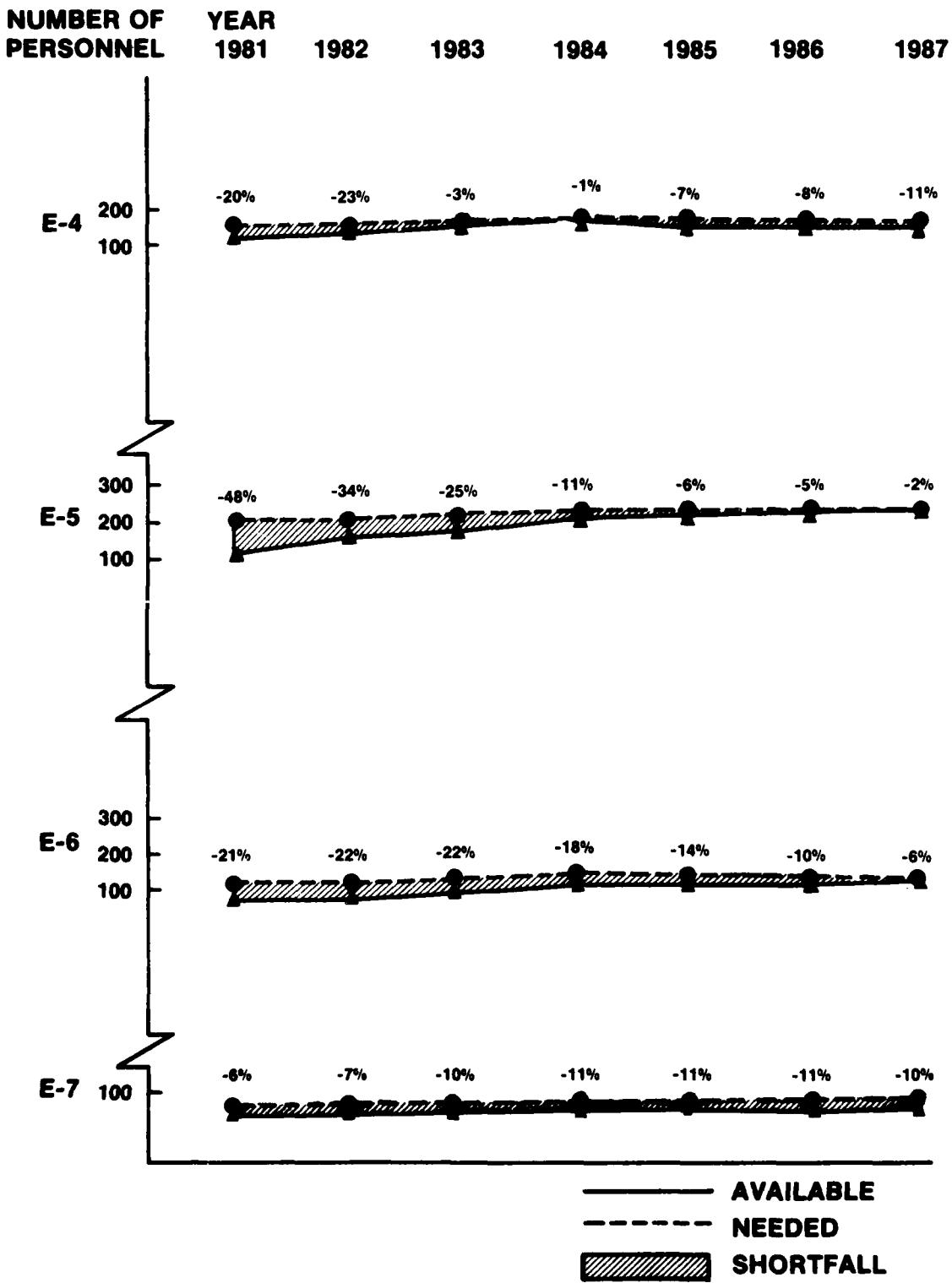
INSTRUMENTMAN (1M)

<u>Rate</u>	FY81	FY82	FY83	FY84	FY85	FY86	FY87
<b>E-1/3</b>	219 1.18 ---	269 1.22 ---	278 1.33 ---	281 1.34 ---	255 1.61 ---	237 1.82 ---	225 2.10 ---
<b>E-4</b>	117 2.84 146 -19.86	119 2.61 155 -23.23	148 2.54 153 -3.27	155 2.73 156 -.64	150 2.58 162 -7.41	149 2.59 162 -8.02	144 2.55 162 -11.11
<b>E-5</b>	92 4.93 178 -48.31	119 4.6/ 180 -33.89	142 4.62 190 -25.26	173 4.43 195 -11.28	187 4.41 198 -5.56	188 4.46 198 -5.05	194 4.62 198 -2.02
<b>E-6</b>	96 11.73 122 -21.31	98 11.91 125 -21.60	108 11.89 138 -21.74	119 11.61 145 -17.93	125 11.08 145 -13.79	131 11.16 145 -9.66	137 11.50 145 -5.52
<b>E-7</b>	48 14.88 51 -5.88	53 15.03 57 -7.02	56 15.95 62 -9.68	55 16.52 62 -11.29	55 16.88 62 -11.29	55 16.70 62 -11.29	56 16.59 62 -9.68
<b>E-8</b>	13 20.42 15 -13.33	14 20.79 16 -12.50	15 21.17 17 -11.76	16 21.56 17 -5.88	17 21.97 18 -5.56	16 21.00 18 -11.11	16 21.06 18 -11.11
<b>E-9</b>	4 21.50 5 -20.00	4 22.50 5 -20.00	4 23.50 5 -20.00	4 24.50 5 -20.00	4 25.50 5 -20.00	4 26.50 5 -20.00	4 27.50 5 -20.00
<b>E-4/9</b>	370 8.05 517 -28.43	407 7.89 538 -24.35	473 7.65 565 -16.28	522 7.51 580 -10.00	538 7.44 590 -8.81	543 7.45 590 -7.97	551 7.65 590 -6.61
<b>Total</b>	589 5.49 543 ---	676 5.23 564 ---	751 5.31 591 ---	803 5.35 610 ---	793 5.56 625 ---	780 5.74 625 ---	776 6.04 625 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 92	(Projected No. of men at end of FY)
Means LOS 4.93	(Average Length of Service)
Manpower Requirements 178	(CNO estimates of number required)
End Strength Status-48.31	(Percentage over or under requirements)

# INSTRUMENTMAN (IM)



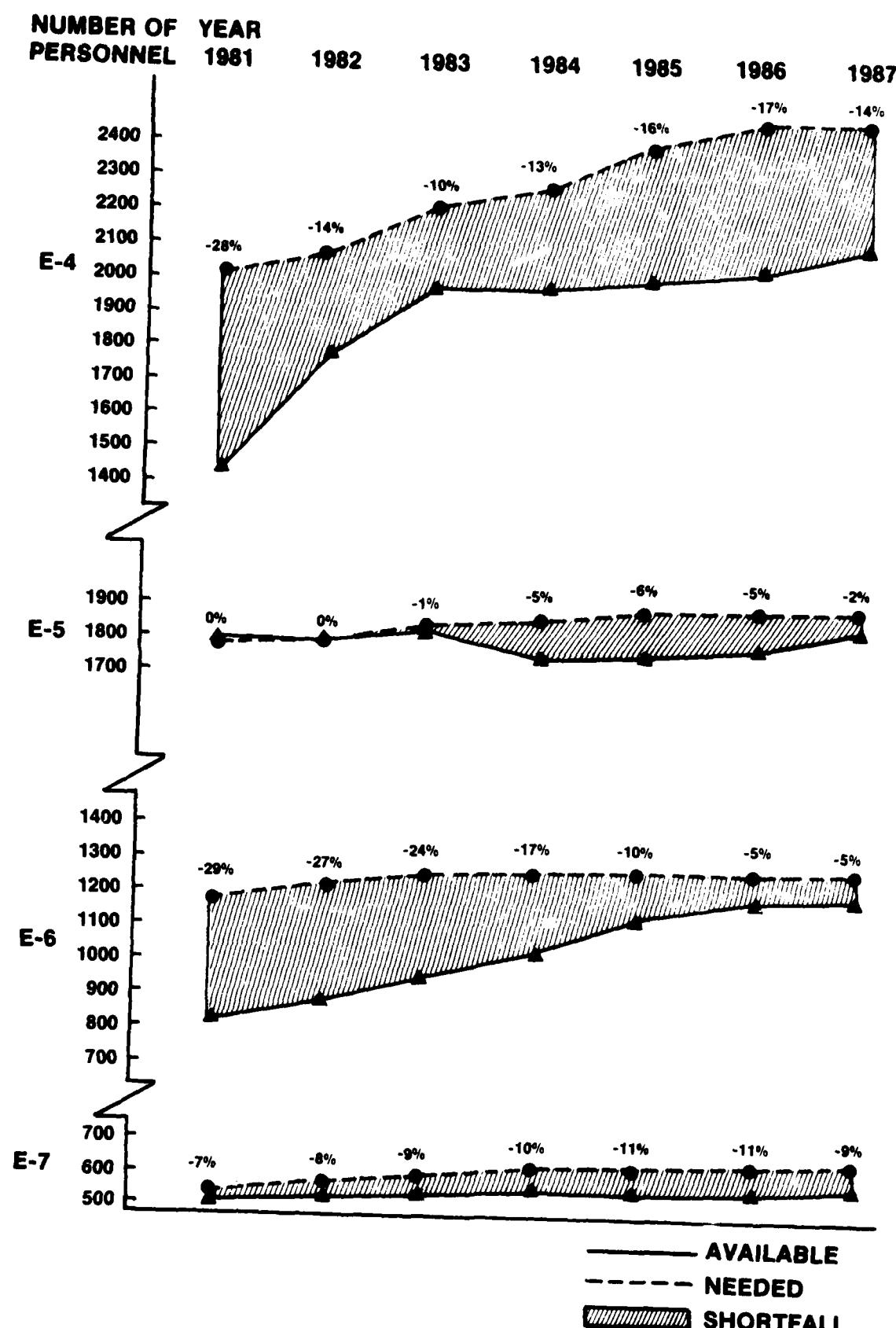
INTERIOR COMMUNICATIONS ELECTRICIAN (IC)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	3677 1.49	3546 1.57	3755 1.59	3882 1.75	4026 1.88	3932 2.07	3762 2.31
	---	---	---	---	---	---	---
	---	---	---	---	---	---	---
<b>E-4</b>	1444 2.59	1788 2.71	1980 3.00	1970 3.23	1996 3.34	2025 3.46	2099 3.57
	2010 -28.16	2070 -13.62	2205 -10.20	2267 -13.10	2380 -16.13	2435 -16.84	2435 -13.80
<b>E-5</b>	1791 4.72	1789 4.77	1814 4.92	1751 5.00	1765 5.04	1784 5.08	1834 5.19
	1785 .34	1790 .06	1825 .60	1850 -5.35	1875 -5.87	1880 -5.11	1880 -2.45
<b>E-6</b>	840 9.69	891 9.13	947 9.00	1037 9.05	1127 9.17	1192 9.31	1192 9.74
	1180 -28.81	1215 -26.67	1240 -23.63	1245 -16.71	1250 -9.84	1255 -5.02	1255 -5.02
<b>E-7</b>	520 15.73	550 15.70	568 15.51	573 15.57	576 15.64	588 15.62	598 15.67
	560 -7.14	595 -7.56	625 -9.12	640 -10.47	650 -11.38	660 -10.91	660 -9.39
<b>E-8</b>	60 20.13	55 20.59	56 20.89	58 21.17	60 21.35	60 21.75	61 21.58
	65 -7.69	65 -15.38	65 -13.85	68 -14.71	70 -14.29	70 -14.29	70 -12.86
<b>E-9</b>	21 22.79	18 23.83	18 24.50	19 24.34	20 24.20	20 23.70	21 23.60
	22 -4.55	22 -18.18	21 -14.29	22 -13.64	23 -13.04	23 -13.04	23 -8.70
<b>E-4/9</b>	4676 6.46	5091 6.23	5383 6.28	5408 6.49	5544 6.61	5669 6.73	5805 6.86
	5622 -16.83	5757 -11.57	5981 -10.00	6092 -11.23	6248 -11.27	6323 -10.34	6323 -8.19
<b>Total</b>	8353 4.27	8637 4.32	9138 4.35	9290 4.51	9570 4.62	9601 4.82	9567 5.07
	6232 ----	6382 ----	6611 ----	6737 ----	6913 ----	6998 ----	6998 ----

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 1791	(Projected No. of men at end of FY)
Means LOS 4.72	(Average Length of Service)
Manpower Requirements 1785	(CNO estimates of number required)
End Strength Status .34	(Percentage over or under requirements)

# INTERIOR COMMUNICATIONS ELECTRICIAN (IC)



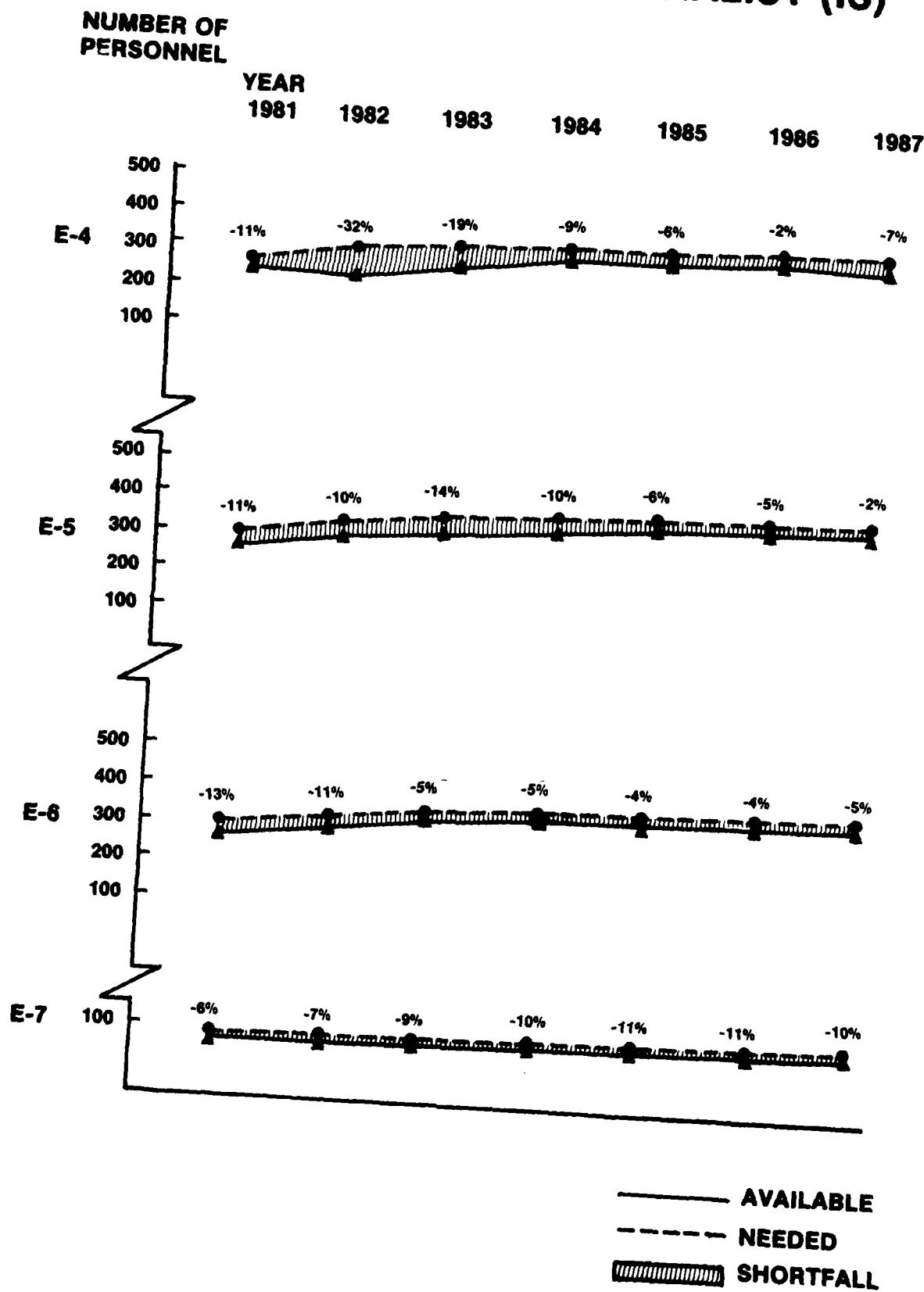
INTELLIGENCE SPECIALIST (IS)

<u>Rate</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>
<b>E-1/3</b>	299 .92	369 1.05	379 1.05	380 1.14	331 1.37	302 1.53	322 1.63
	---	---	---	---	---	---	---
	---	---	---	---	---	---	---
<b>E-4</b>	236 2.51	204 2.01	258 2.10	290 2.17	299 2.15	315 2.25	300 2.36
	266	302	319	319	319	322	322
	-11.28	-32.45	-19.12	-9.09	-6.27	-2.17	-6.83
<b>E-5</b>	257 4.74	294 4.47	298 4.23	318 4.26	343 4.36	346 4.51	356 4.79
	290	325	345	353	365	365	365
	-11.38	-9.54	-13.62	-9.92	-6.03	-5.21	-2.47
<b>E-6</b>	249 11.93	267 11.75	296 11.50	300 11.48	304 11.88	306 12.39	304 12.86
	285	300	310	316	318	320	320
	-12.63	-11.00	-4.52	-5.06	-4.40	-4.37	-5.00
<b>E-7</b>	77 15.98	79 16.26	80 16.00	80 16.04	80 16.07	80 16.14	81 16.12
	82	85	88	89	90	90	90
	-6.10	-7.06	-9.09	-10.11	-11.11	-11.11	-10.00
<b>E-8</b>	28 19.00	28 19.71	28 20.00	28 20.82	28 21.32	28 20.96	29 20.95
	33	33	33	33	33	33	33
	-15.15	-15.15	-15.15	-15.15	-15.15	-15.15	-12.12
<b>E-9</b>	11 21.95	12 21.92	13 -22.50	13 22.12	13 23.04	13 23.58	13 23.27
	14	15	15	15	15	15	15
	-21.43	-20.00	-13.33	-13.33	-13.33	-13.33	-13.33
<b>E-4/9</b>	858 7.91	884 7.88	973 7.54	1029 7.37	1067 7.43	1088 7.58	1083 7.88
	970	1060	1110	1125	1140	1145	1145
	-11.55	-16.60	-12.34	-8.53	-6.40	-4.98	-5.41
<b>Total</b>	1157 6.10	1253 5.87	1352 5.72	1409 5.69	1398 6.00	1390 6.27	1405 6.45
	1175	1280	1335	1350	1365	1370	1370
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**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 257	(Projected No. of men at end of FY)
Means LOS 4.74	(Average Length of Service)
Manpower Requirements 290	(CNO estimates of number required)
End Strength Status -11.38	(Percentage over or under requirements)

# INTELLIGENCE SPECIALIST (IS)



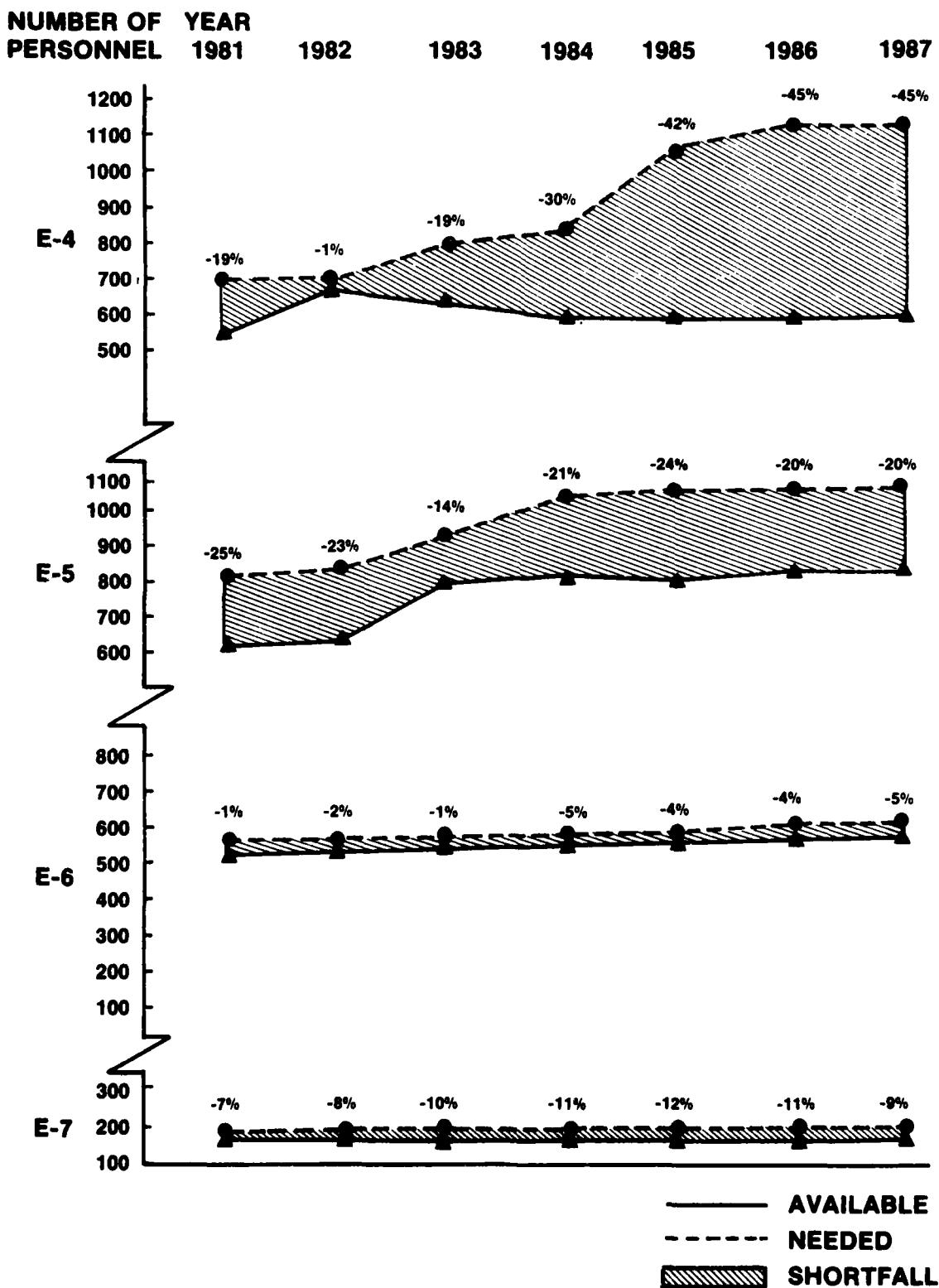
MACHINERY REPAIRMAN (MR)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	1542 1.37 ---	1474 1.40 ---	1511 1.50 ---	1541 1.74 ---	1590 1.90 ---	1555 2.21 ---	1494 2.55 ---
<b>E-4</b>	593 3.12 733 -19.10	725 2.94 735 -1.36	679 3.02 835 -18.68	605 2.95 860 -29.65	625 2.99 1080 -42.13	616 3.05 1125 -45.24	620 3.03 1125 -44.89
<b>E-5</b>	642 5.50 855 -24.91	681 5.53 880 -22.61	821 5.29 950 -13.58	840 5.50 1060 -20.75	823 5.63 1080 -23.80	863 5.80 1080 -20.09	867 6.07 1080 -19.72
<b>E-6</b>	537 11.59 545 -1.47	536 11.87 548 -2.19	566 12.02 570 -.70	556 12.26 585 -4.96	561 12.29 585 -4.10	564 12.81 590 -4.41	560 12.92 590 -5.08
<b>E-7</b>	185 16.53 198 -6.57	183 16.54 198 -7.58	181 16.63 200 -9.50	183 16.70 205 -10.73	184 16.65 208 -11.54	187 16.65 210 -10.95	191 16.58 210 -9.05
<b>E-8</b>	43 19.41 50 -14.00	42 19.90 50 -16.00	43 20.27 50 -14.00	43 20.97 50 -14.00	43 21.03 50 -14.00	43 21.52 50 -14.00	44 21.84 50 -12.00
<b>E-9</b>	15 23.97 19 -21.05	16 24.31 19 -15.79	17 24.85 20 -15.00	17 25.56 20 -15.00	18 26.00 20 -10.00	19 26.34 20 -5.00	19 26.82 20 -5.00
<b>E-4/9</b>	2015 7.87 2400 -16.04	2183 7.56 2430 -10.16	2307 7.59 2625 -12.11	2244 7.85 2780 -19.28	2254 7.91 3023 -25.44	2292 8.14 3075 -25.46	2301 8.26 3075 -25.17
<b>Total</b>	3557 5.05 2640 ---	3657 5.08 2680 ---	3818 5.18 2890 ---	3785 5.36 3065 ---	3844 5.42 3333 ---	3847 5.74 3395 ---	3795 6.01 3395 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 642	(Projected No. of men at end of FY)
Means LOS 5.50	(Average Length of Service)
Manpower Requirements 855	(CNO estimates of number required)
End Strength Status -24.91	(Percentage over or under requirements)

# MACHINERY REPAIRMAN (MR)



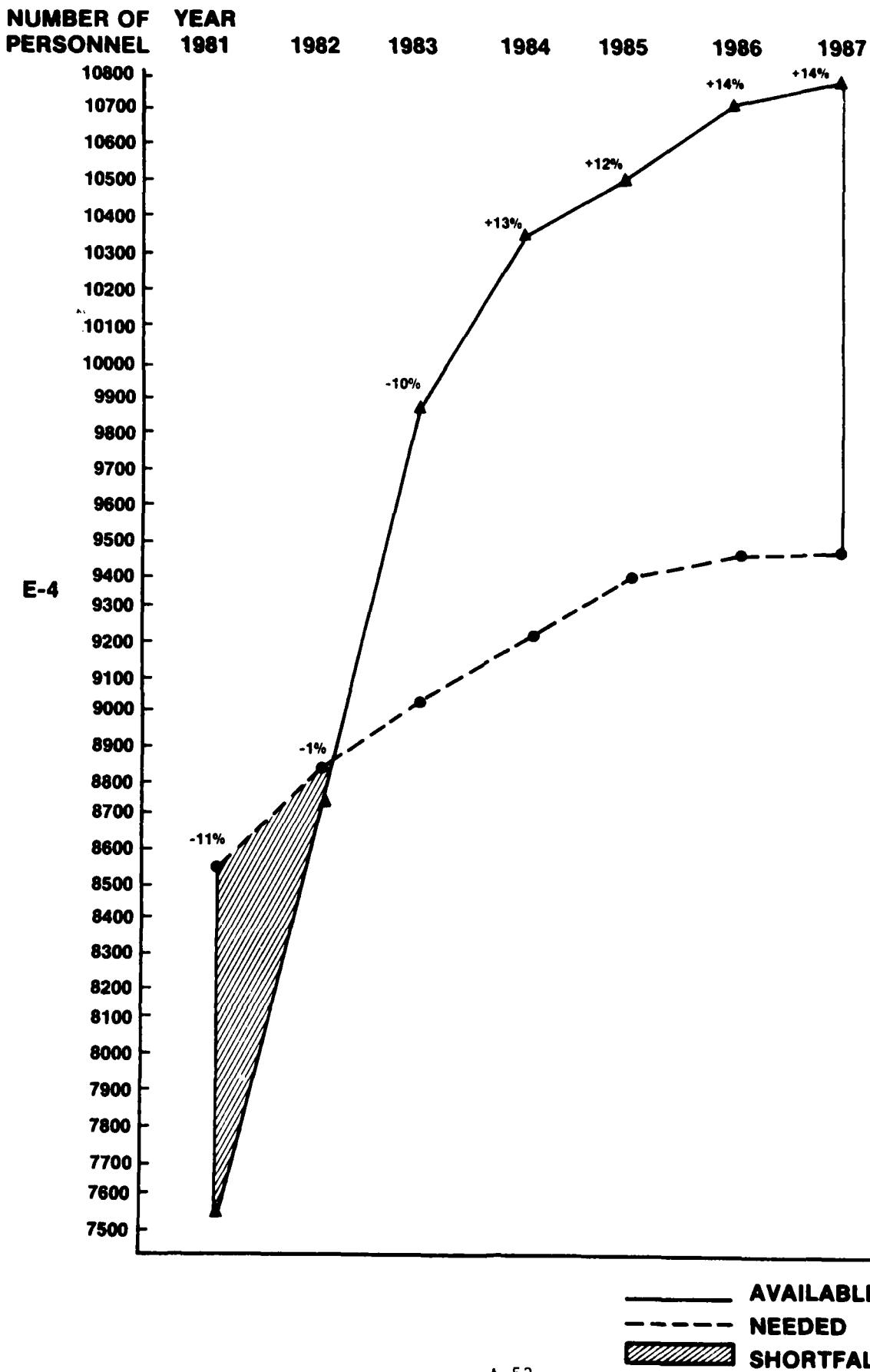
MACHINIST'S MATE (MM)

Rate	FY81	FY82	FY83	FY84	FY85	FY86	FY87
E-1/3	11336 1.54 ---	11098 1.65 ---	11031 1.76 ---	11363 1.93 ---	11102 2.05 ---	10488 2.25 ---	
E-4	7564 2.77 8540 -11.43	8744 2.57 8830 -.97	9861 2.68 9025 9.26	10382 2.85 9204 12.80	10529 3.00 9388 12.15	10738 3.14 9438 13.77	10784 3.29 9438 14.26
E-5	6243 4.78 5835 6.99	6650 4.98 6035 10.19	6670 4.94 6170 8.10	6546 4.89 6270 4.40	6772 4.82 6395 5.90	6706 4.86 6400 4.78	6736 4.85 6400 5.25
E-6	3504 9.03 5150 -31.96	3558 8.69 5335 -33.31	3767 8.50 5450 -30.88	4010 8.57 5490 -26.96	4161 8.73 5525 -24.69	4303 8.81 5535 -22.26	4413 8.97 5535 -20.27
E-7	1851 14.56 1975 -6.28	1881 14.56 2035 -7.57	1880 14.34 2070 -9.18	1872 14.29 2090 -10.43	1873 14.26 2110 -11.23	1889 14.26 2120 -10.90	1923 14.39 2120 -9.29
E-8	657 18.79 770 -14.68	683 18.83 805 -15.16	701 18.77 820 -14.51	708 18.93 830 -14.70	711 19.02 835 -14.85	721 18.74 835 -13.65	730 18.63 835 -12.57
E-9	284 21.66 360 -21.11	295 21.77 360 -18.06	312 21.80 365 -14.52	317 22.02 366 -13.39	325 22.10 372 -12.63	325 22.02 372 -12.63	332 21.91 372 -10.75
E-4/9	20103 6.37 22630 -11.17	21811 6.11 23400 -6.79	23191 5.97 23400 -2.97	23835 6.00 24250 -1.71	24371 6.07 24625 -1.03	24682 6.14 24700 -.07	24918 6.27 24700 .88
Total	31439 4.63 24380	32788 4.62 25305	34289 4.61 25960	34866 4.71 26470	35734 4.79 26903	35784 4.94 27000	35406 5.15 27000

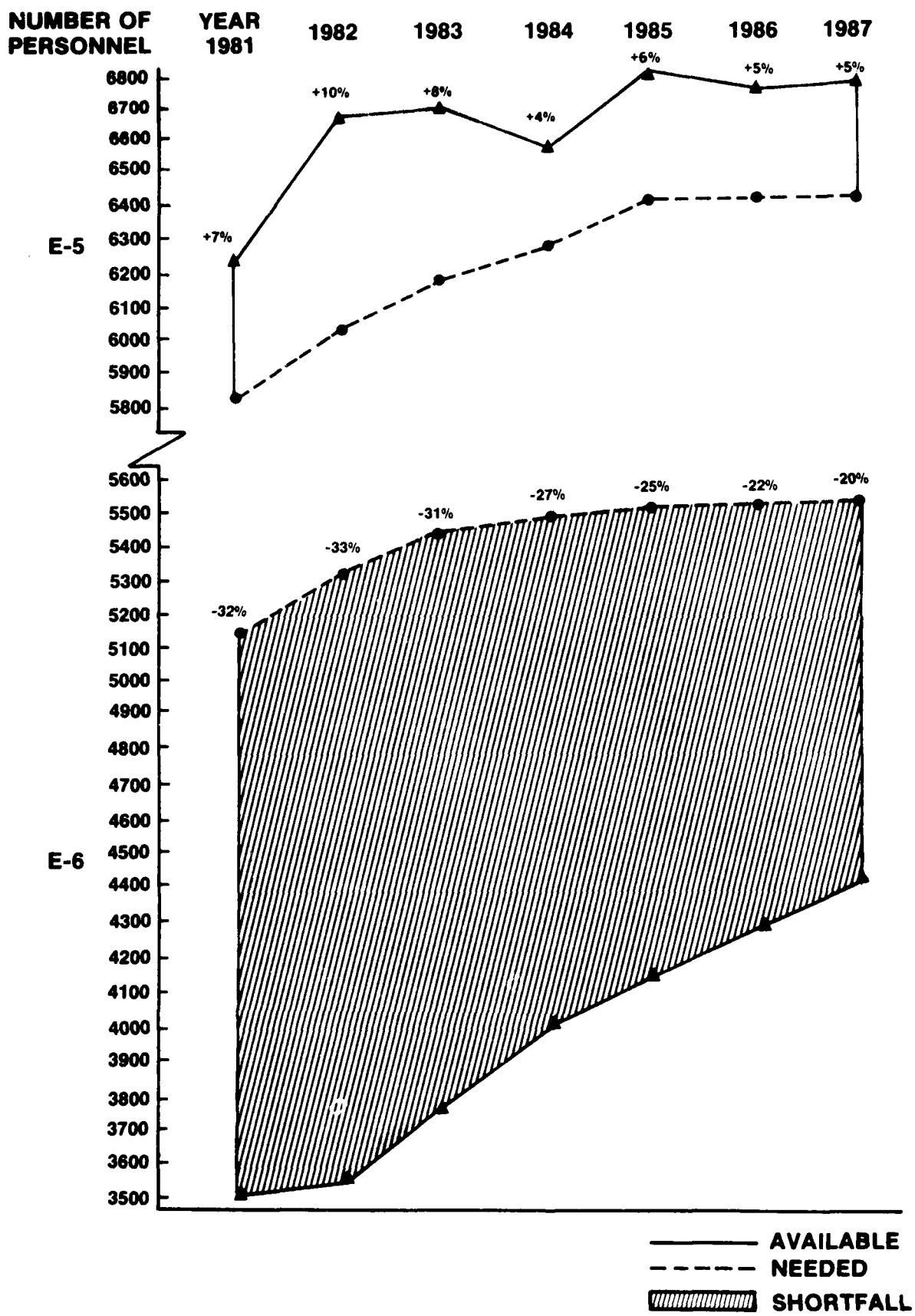
Explanation: Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 6243	(Projected No. of men at end of FY)
Means LOS 4.78	(Average Length of Service)
Manpower Requirements 5835	(CNO estimates of number required)
End Strength Status 6.99	(Percentage over or under requirements)

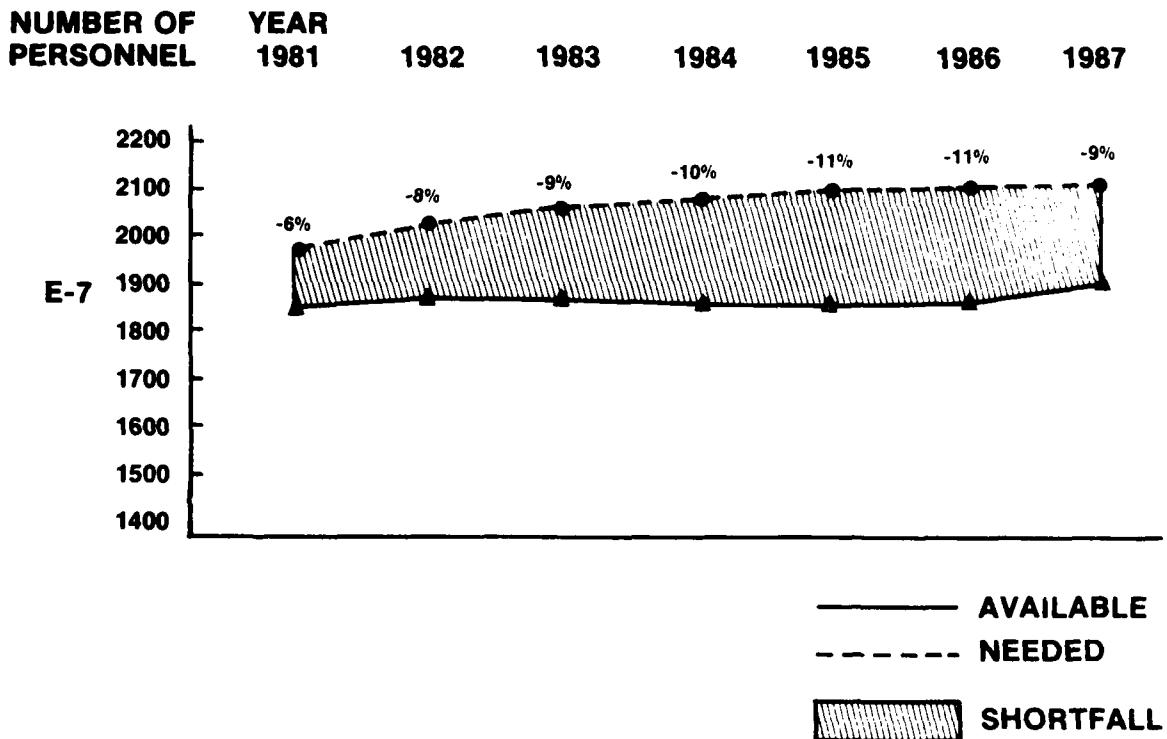
# MACHINIST'S MATE (MM)



## MACHINIST'S MATE (MM) (CONTINUED)



## MACHINIST'S MATE (MM) (CONTINUED)



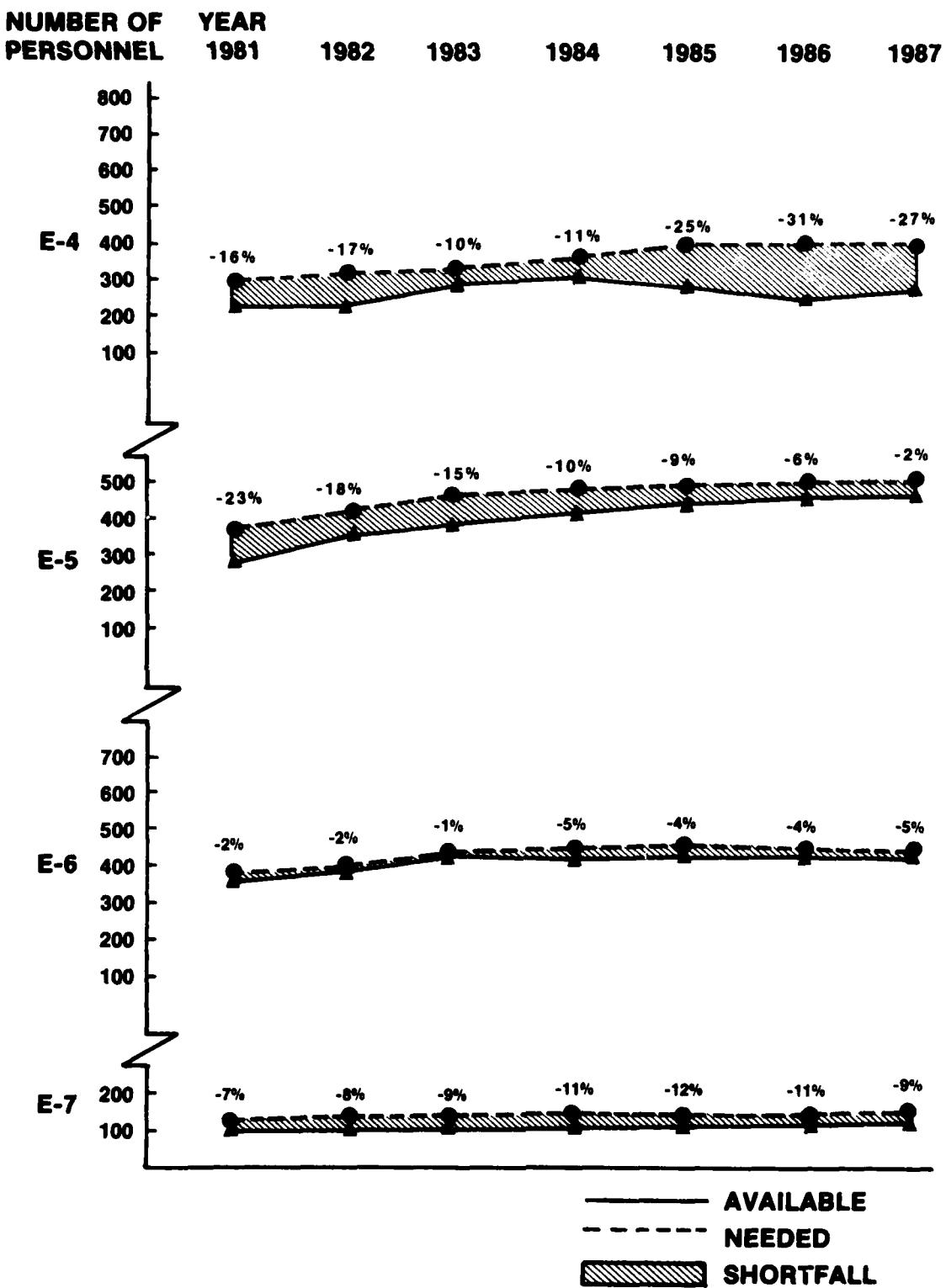
OCEAN SYSTEMS TECHNICIAN (OT)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	525 1.06 ---	592 1.13 ---	557 1.26 ---	543 1.34 ---	546 1.34 ---	553 1.39 ---	562 1.35 ---
<b>E-4</b>	283 2.72 337 -16.02	286 2.60 343 -16.62	318 2.53 355 -10.42	345 2.74 386 -10.62	302 2.77 403 -25.06	279 2.65 403 -30.77	294 2.70 403 -27.05
<b>E-5</b>	292 5.04 380 -23.16	353 4.69 430 -17.91	393 4.52 465 -15.48	432 4.62 480 -10.00	447 4.57 490 -8.78	460 4.82 490 -6.12	478 5.09 490 -2.45
<b>E-6</b>	368 11.45 375 -1.87	391 12.01 400 -2.25	421 12.23 425 -.94	413 12.63 435 -5.06	422 12.25 440 -4.09	421 13.00 440 -4.32	418 13.52 440 -5.00
<b>E-7</b>	117 16.65 126 -7.14	118 17.27 128 -7.81	119 17.65 131 -9.16	125 17.96 140 -10.71	137 17.77 155 -11.61	142 18.04 160 -11.25	146 17.98 160 -8.75
<b>E-8</b>	37 19.85 38 -2.63	36 20.61 38 -5.26	35 21.41 38 -7.89	36 22.06 38 -5.26	39 22.68 40 -2.50	40 23.42 40 0	40 23.70 40 0
<b>E-9</b>	15 22.10 19 -21.05	17 21.97 21 -19.05	18 23.22 21 -14.29	18 24.11 21 -14.29	19 24.82 22 -13.64	20 25.55 22 -9.09	20 26.25 22 -9.09
<b>E-4/9</b>	1112 8.51 1275 -12.78	1201 8.54 1360 -11.69	1304 8.43 1435 -9.13	1369 8.50 1500 -8.73	1366 8.6 1550 -11.87	1362 9.13 1555 -12.41	1396 9.29 1555 -10.23
<b>Total</b>	1637 6.12 1460 ---	1793 6.09 1567 ---	1861 6.29 1670 ---	1912 6.46 1750 ---	1912 6.58 1820 ---	1915 6.90 1825 ---	1958 7.01 1825 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 292	(Projected No. of men at end of FY)
Means LOS 5.04	(Average Length of Service)
Manpower Requirements 380	(CNO estimates of number required)
End Strength Status -23.16	(Percentage over or under requirements)

# OCEAN SYSTEMS TECHNICIAN (OT)



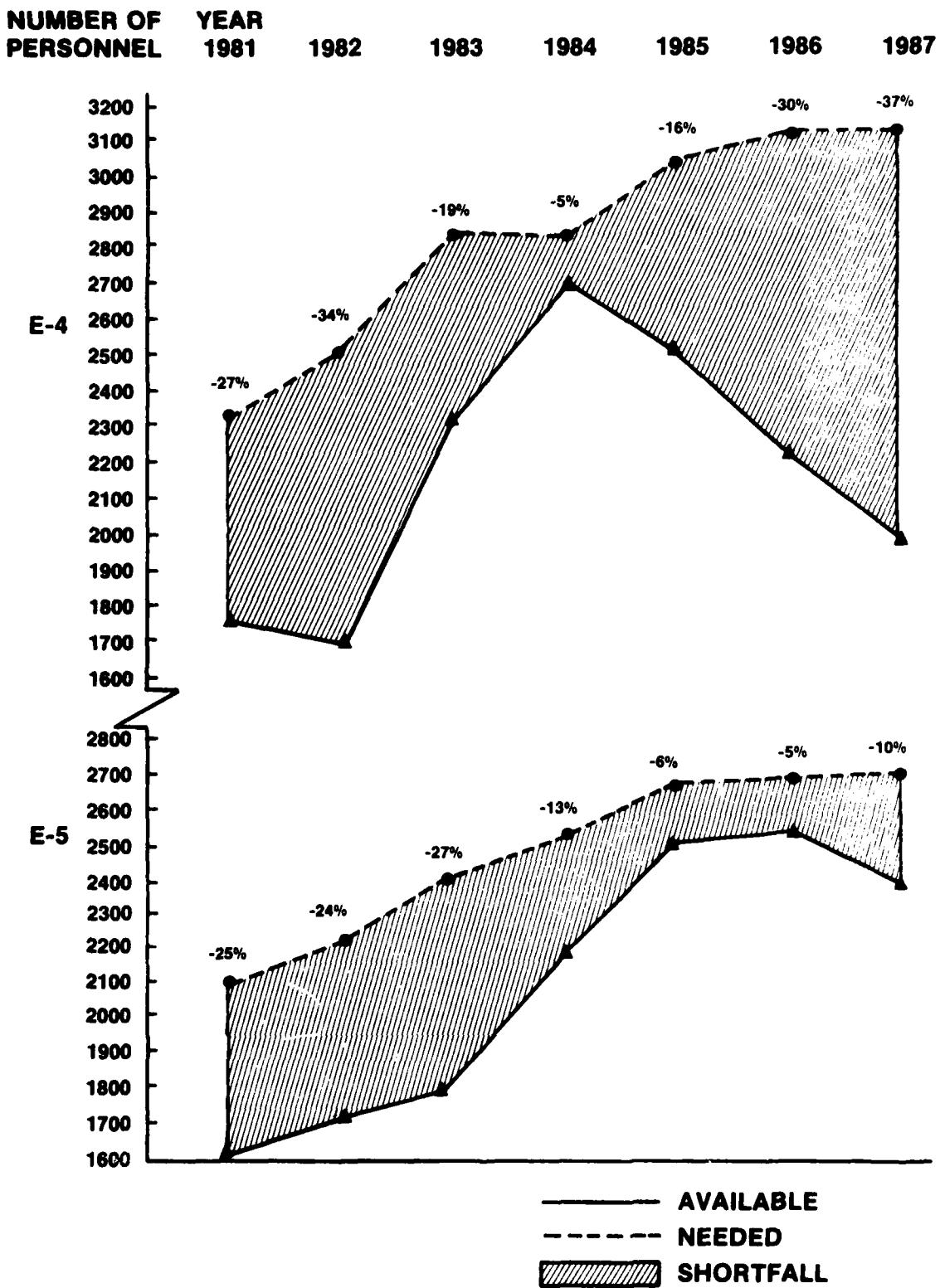
OPERATIONS SPECIALIST (OS)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	4550 1.14 ---	5808 1.22 ---	5907 1.39 ---	5315 1.57 ---	4713 1.68 ---	4298 1.77 ---	4868 1.64 ---
<b>E-4</b>	1708 2.95 2349 -27.29	1669 2.68 2545 -34.42	2316 2.58 2865 -19.16	2727 2.78 2875 -5.15	2562 2.88 3053 -16.08	2209 2.93 3135 -29.54	1988 2.92 3135 -36.59
<b>E-5</b>	1627 5.38 2170 -25.02	1738 5.20 2290 -24.10	1795 4.97 2450 -26.73	2241 4.58 2565 -12.63	2548 4.52 2700 -5.74	2595 4.71 2725 -4.77	2450 4.96 2725 -10.09
<b>E-6</b>	936 10.31 1715 -45.42	987 9.88 1760 -43.92	1038 9.73 1875 -44.64	1095 9.81 1945 -43.70	1152 9.99 2000 -42.40	1218 10.11 2025 -39.85	1333 10.24 2025 -34.17
<b>E-7</b>	567 16.31 605 -6.28	587 16.04 635 -7.56	622 15.69 685 -9.20	636 15.40 710 -10.42	653 15.30 735 -11.16	659 15.46 750 -10.95	671 15.67 740 -9.32
<b>E-8</b>	191 20.31 224 -14.73	195 20.48 230 -15.22	199 20.85 233 -14.59	200 21.21 235 -14.89	203 21.50 238 -14.71	207 21.46 240 -13.75	210 21.64 240 -12.50
<b>E-9</b>	49 23.54 62 -20.97	53 23.37 65 -18.46	57 23.68 67 -14.93	61 23.86 70 -12.86	65 24.05 74 -12.16	65 23.99 75 -13.33	67 23.98 75 -10.67
<b>E-4/9</b>	5078 7.43 7125 -28.73	5229 7.25 7525 -30.51	6027 6.68 8175 -26.28	6960 6.33 8400 -17.14	7180 6.45 8800 -18.41	6953 6.79 8940 -22.23	6719 7.19 8940 -24.84
<b>Total</b>	9628 4.46 9650 ---	11037 4.08 10265 ---	11934 4.06 11325 ---	12275 4.27 11650 ---	11893 4.56 12150 ---	11251 4.87 12315 ---	11587 4.86 12315 ---

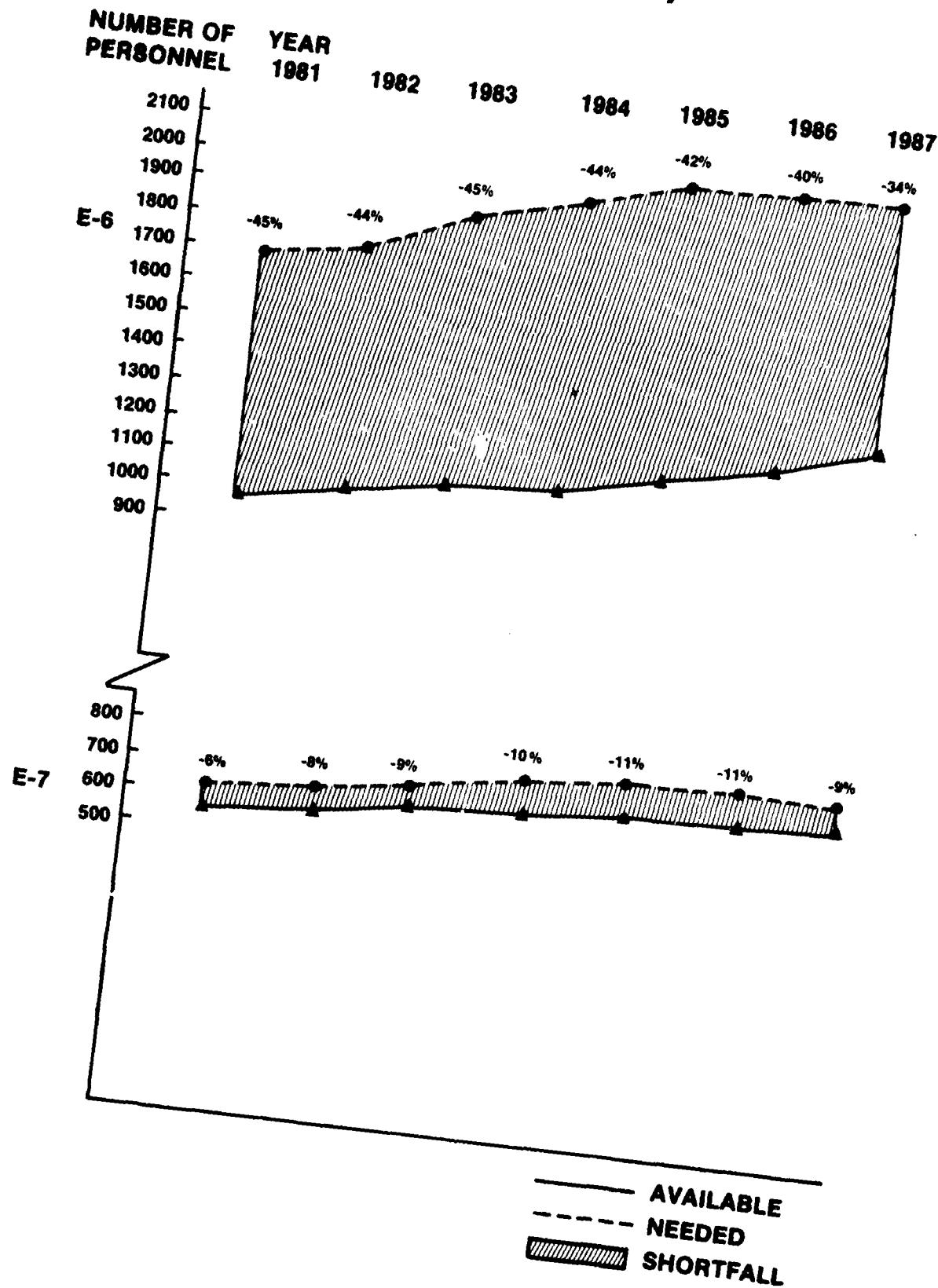
**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 1627	(Projected No. of men at end of FY)
Means LOS 5.38	(Average Length of Service)
Manpower Requirements 2170	(CNO estimates of number required)
End Strength Status -25.02	(Percentage over or under requirements)

# OPERATIONS SPECIALIST (OS)



## OPERATIONS SPECIALIST (OS) (CONTINUED)



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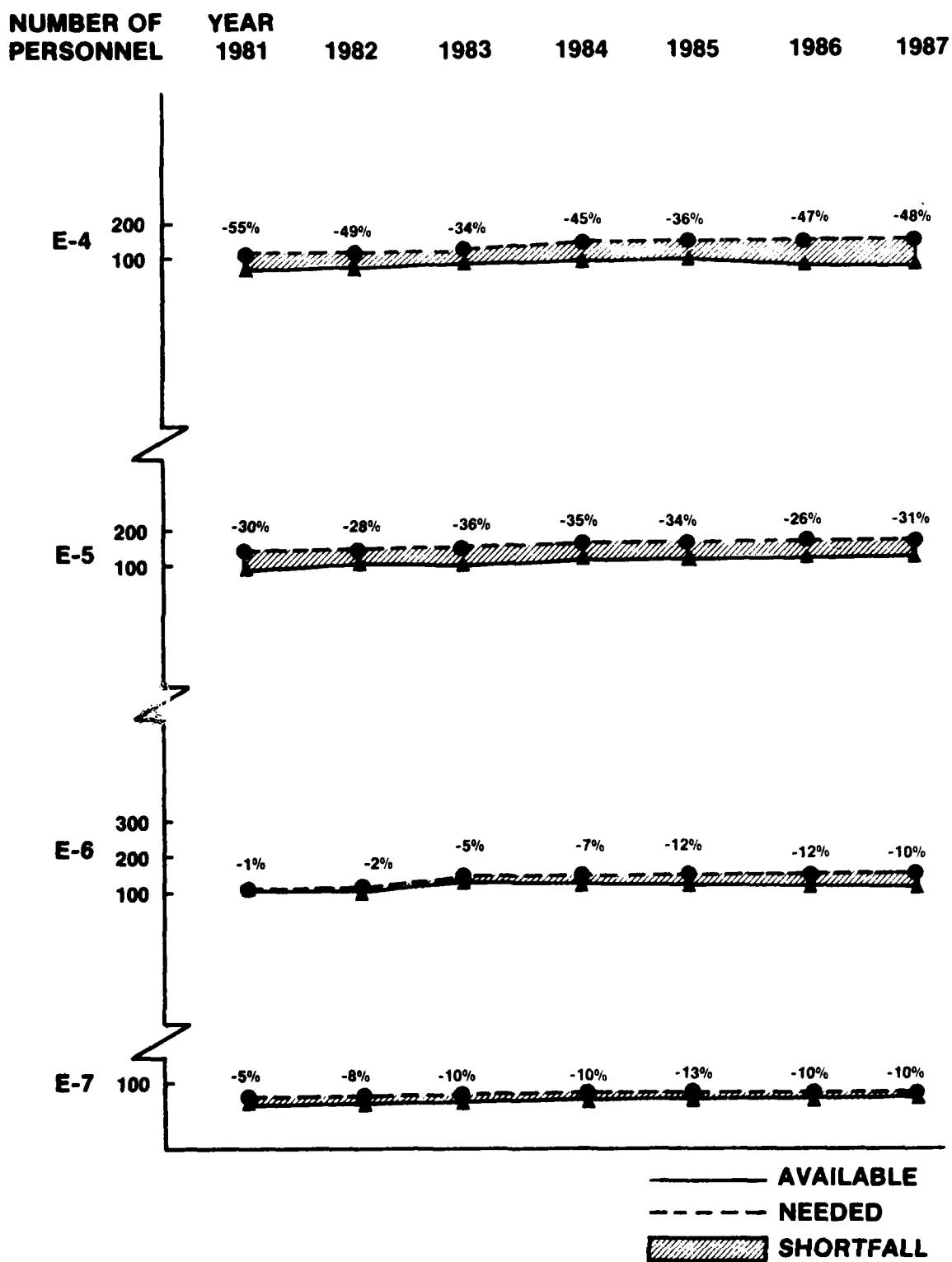
OPTICALMAN (OM)

<u>Rate</u>	FY81	FY82	FY83	FY84	FY85	FY86	FY87
<b>E-1/3</b>	127 1.16 ---	162 1.15 ---	168 1.20 ---	172 1.28 ---	156 1.47 ---	154 1.60 ---	139 1.36 ---
<b>E-4</b>	47 2.80 105 -55.24	54 2.70 105 -48.57	73 2.62 110 -33.64	74 2.57 134 -44.78	83 2.70 129 -35.66	68 2.66 129 -47.29	67 2.77 129 -48.06
<b>E-5</b>	69 5.15 98 -29.59	73 5.09 101 -27.72	68 4.72 107 -36.45	78 4.38 120 -35.00	79 4.35 120 -34.17	89 4.32 120 -25.83	83 4.44 120 -30.83
<b>E-6</b>	95 11.75 96 -1.04	97 12.40 99 -2.02	106 12.30 112 -5.36	107 12.29 115 -6.96	106 12.39 120 -11.67	106 12.63 120 -11.67	108 12.98 120 -10.00
<b>E-7</b>	35 17.24 37 -5.41	36 17.75 39 -7.69	36 17.64 40 -10.00	36 18.11 40 -10.00	35 18.59 40 -12.50	36 18.50 40 -10.00	36 18.75 40 -10.00
<b>E-8</b>	9 20.50 11 -18.18	9 21.06 11 -18.18	9 21.61 11 -18.18	9 22.06 11 -18.18	9 22.50 11 -18.18	9 21.50 11 -18.18	10 21.20 11 -9.09
<b>E-9</b>	2 24.00 3 -33.33	2 25.00 3 -33.33	3 23.83 3 0	3 24.83 3 0	3 25.83 3 0	3 26.50 3 0	3 23.50 3 0
<b>E-4/9</b>	257 9.50 350 -26.57	271 9.59 358 -24.30	295 9.21 383 -22.98	307 9.03 423 -27.42	315 8.93 423 -27.53	311 9.14 423 -26.48	307 9.49 423 -27.42
<b>Total</b>	384 6.74 374 ---	433 6.43 383 ---	463 6.31 411 ---	479 6.25 453 ---	471 6.46 453 ---	465 6.65 453 ---	446 6.96 453 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 69	(Projected No. of men at end of FY)
Means LOS 5.15	(Average Length of Service)
Manpower Requirements 98	(CNO estimates of number required)
End Strength Status -29.59	(Percentage over or under requirements)

# OPTICALMAN (OM)



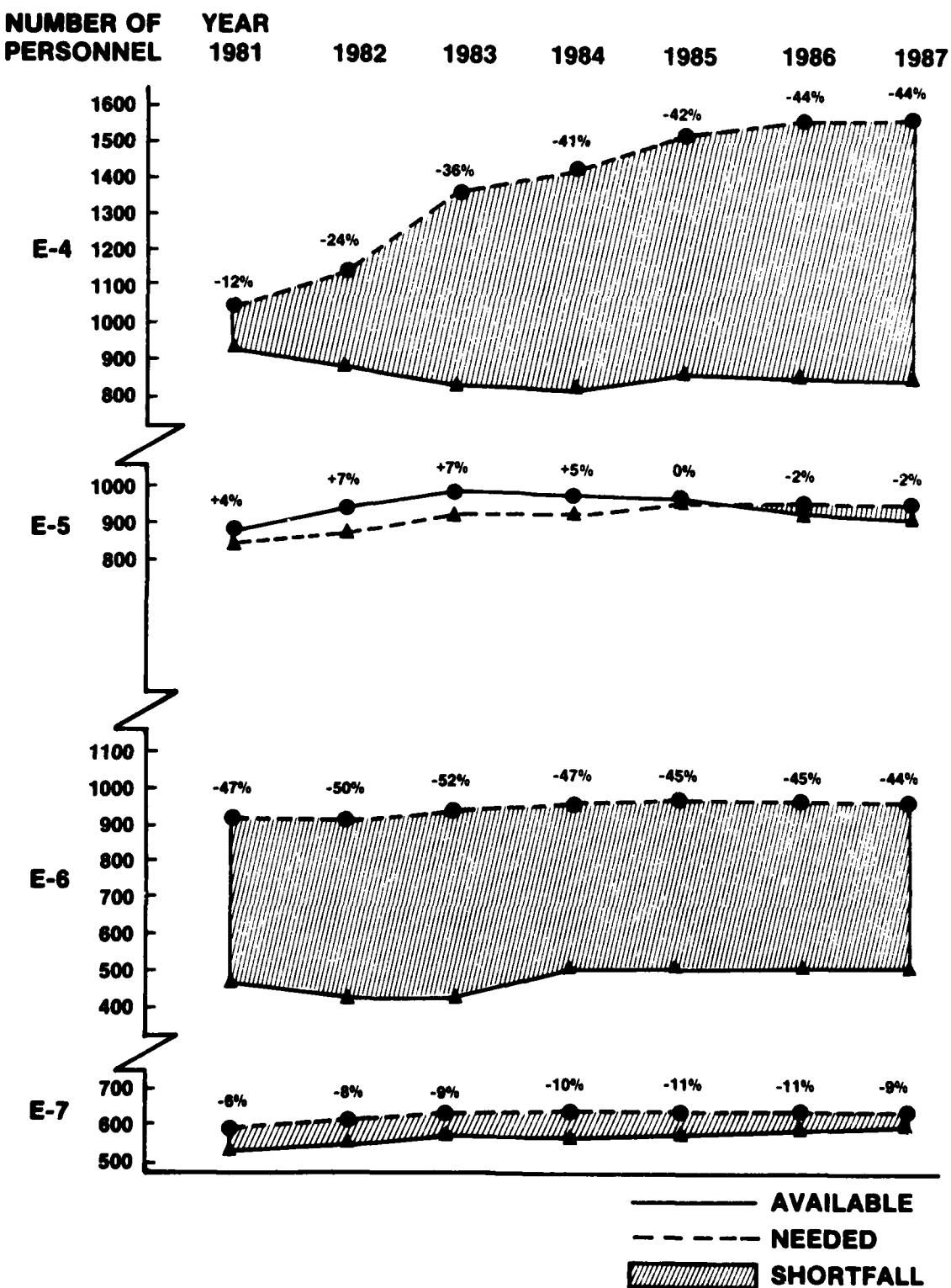
QUARTERMASTER (QM)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	1089 1.45 ---	1847 1.47 ---	1963 1.62 ---	2004 1.78 ---	2081 1.88 ---	2058 2.12 ---	1942 2.44 ---
<b>E-4</b>	951 3.03 1086 -12.43	903 3.03 1183 -23.67	872 2.99 1372 -36.44	854 3.06 1437 -40.57	893 3.09 1531 -41.67	877 3.14 1555 -43.60	877 3.06 1555 -43.60
<b>E-5</b>	876 5.38 845 3.67	944 5.17 885 6.67	994 5.10 930 6.88	983 5.02 935 5.13	951 5.13 950 .11	948 5.14 965 -1.76	949 5.16 965 -1.66
<b>E-6</b>	486 9.94 910 -46.59	454 9.35 915 -50.38	453 8.67 945 -52.06	507 8.71 965 -47.46	529 8.74 965 -45.18	534 8.83 965 -44.66	537 9.04 965 -44.35
<b>E-7</b>	582 16.44 622 -6.43	598 15.97 647 -7.57	600 15.56 660 -9.09	596 15.65 665 -10.38	594 15.47 670 -11.34	601 15.30 675 -10.96	613 15.24 675 -9.19
<b>E-8</b>	97 20.92 117 -17.09	104 21.35 123 -15.45	124 20.95 145 -14.48	128 21.11 150 -14.67	136 21.29 160 -15.00	142 21.28 165 -13.94	144 21.76 165 -12.73
<b>E-9</b>	38 23.76 45 -15.56	39 24.42 47 -17.02	41 24.52 48 -14.58	42 25.00 48 -12.50	43 25.31 49 -12.24	44 25.68 50 -12.00	45 24.59 50 -10.00
<b>E-4/9</b>	3030 8.23 3625 -16.41	3042 8.08 3800 -19.95	3084 7.96 4100 -24.78	3110 8.05 4200 -25.95	3146 8.09 4325 -27.26	3146 8.16 4375 -28.09	3165 8.22 4375 -27.66
<b>Total</b>	4839 5.69 4050 ---	4889 5.59 4230 ---	5047 5.50 4545 ---	5114 5.59 4650 ---	5227 5.61 4785 ---	5204 5.77 4845 ---	5107 6.02 4845 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 876	(Projected No. of men at end of FY)
Means LOS 5.38	(Average Length of Service)
Manpower Requirements 845	(CNO estimates of number required)
End Strength Status +3.67	(Percentage over or under requirements)

## QUARTERMASTER (QM)



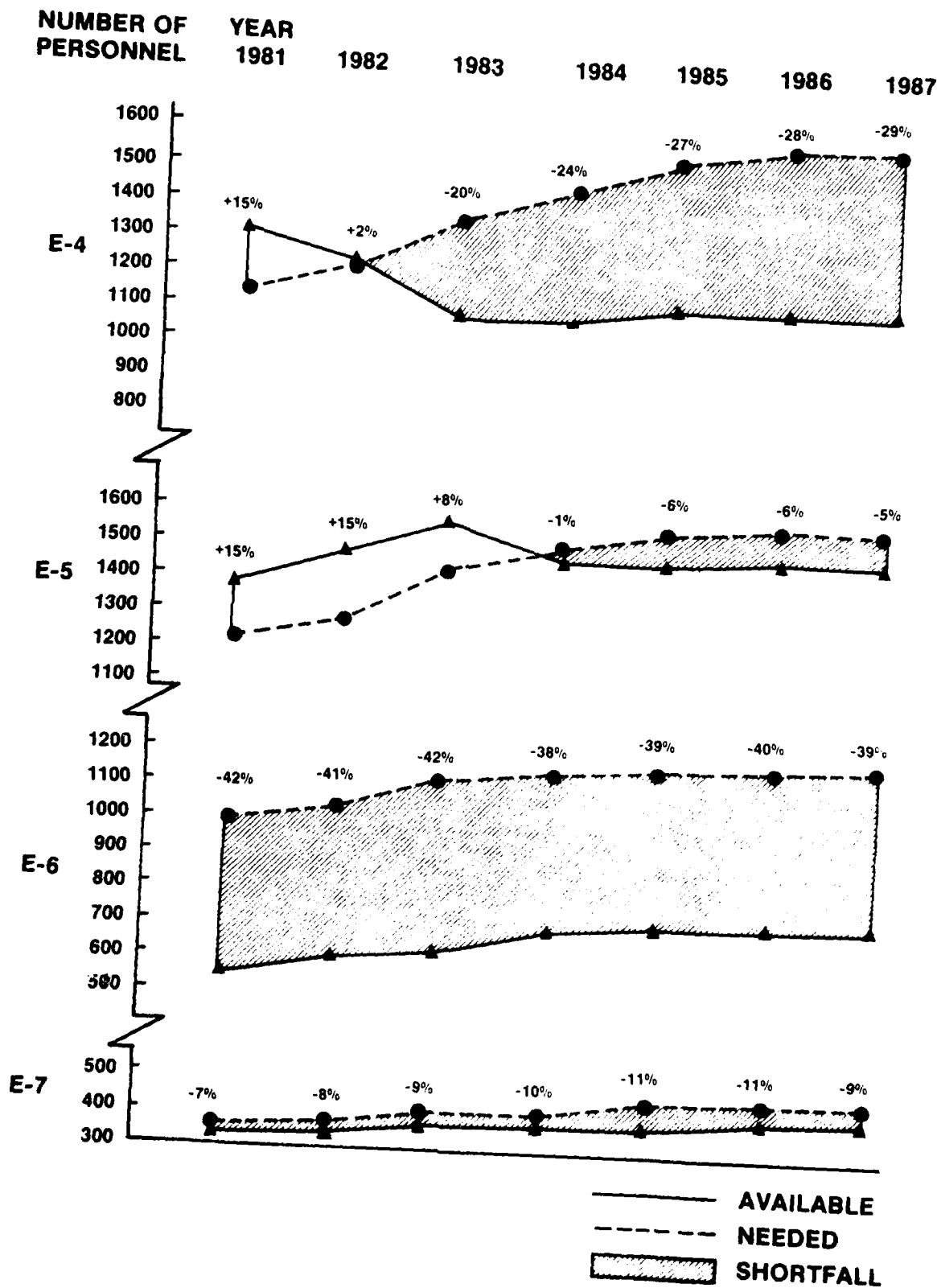
SONAR TECHNICIAN (SURFACE) (STG)

<u>Rate</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>
<b>E-1/3</b>	1116 1.75 ---	1106 1.54 ---	1224 1.72 ---	1272 1.88 ---	1305 2.07 ---	1348 2.36 ---	1219 2.87 ---
<b>E-4</b>	1331 2.45 1158 14.94	1254 2.42 1225 2.37	1095 2.27 1365 -19.78	1094 2.27 1445 -24.29	1114 2.33 1530 -27.19	1124 2.31 1570 -28.41	1120 2.29 1570 -28.66
<b>E-5</b>	1364 4.53 1190 14.62	1443 4.63 1250 15.44	1512 4.55 1395 8.39	1433 4.47 1450 -1.17	1410 4.43 1500 -6.00	1450 4.45 1535 -5.54	1462 4.43 1535 -4.76
<b>E-6</b>	580 9.25 1000 -42.00	614 8.43 1040 -40.96	646 7.52 1115 -42.06	704 7.44 1140 -38.25	720 7.66 1180 -38.98	720 7.62 1190 -39.50	726 7.71 1190 -38.99
<b>E-7</b>	344 15.42 368 -6.52	356 15.49 385 -7.53	386 15.29 425 -9.18	385 14.82 430 -10.47	399 14.25 450 -11.33	414 13.68 465 -10.97	422 13.70 465 -9.25
<b>E-8</b>	104 18.74 129 -19.38	109 19.03 130 -16.15	115 19.21 135 -14.81	115 19.92 135 -14.81	119 20.37 140 -15.00	121 20.29 140 -13.57	122 20.31 140 -12.86
<b>E-9</b>	25 23.70 24 4.17	21 23.50 24 -12.50	21 24.02 24 -12.50	21 24.02 24 -12.50	22 24.59 25 -12.00	22 24.36 25 -12.00	23 24.33 25 -8.00
<b>E-4/9</b>	3748 6.04 3869 -3.13	3797 6.05 4054 -6.34	3752 6.03 4624 -18.86	3752 6.03 4624 -18.86	3784 6.08 4825 -21.58	3851 6.02 4925 -21.81	3875 6.05 4925 -21.32
<b>Total</b>	4864 5.06 4659 ---	4903 5.03 4879 ---	5024 4.98 5574 ---	5024 4.98 5574 ---	5089 5.05 5825 ---	5199 5.07 5925 ---	5094 5.29 5925 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 1364	(Projected No. of men at end of FY)
Means LOS 4.53	(Average Length of Service)
Manpower Requirements 1190	(CNO estimates of number required)
End Strength Status +14.62	(Percentage over or under requirements)

# SONAR TECHNICIAN (SURFACE) (STG)



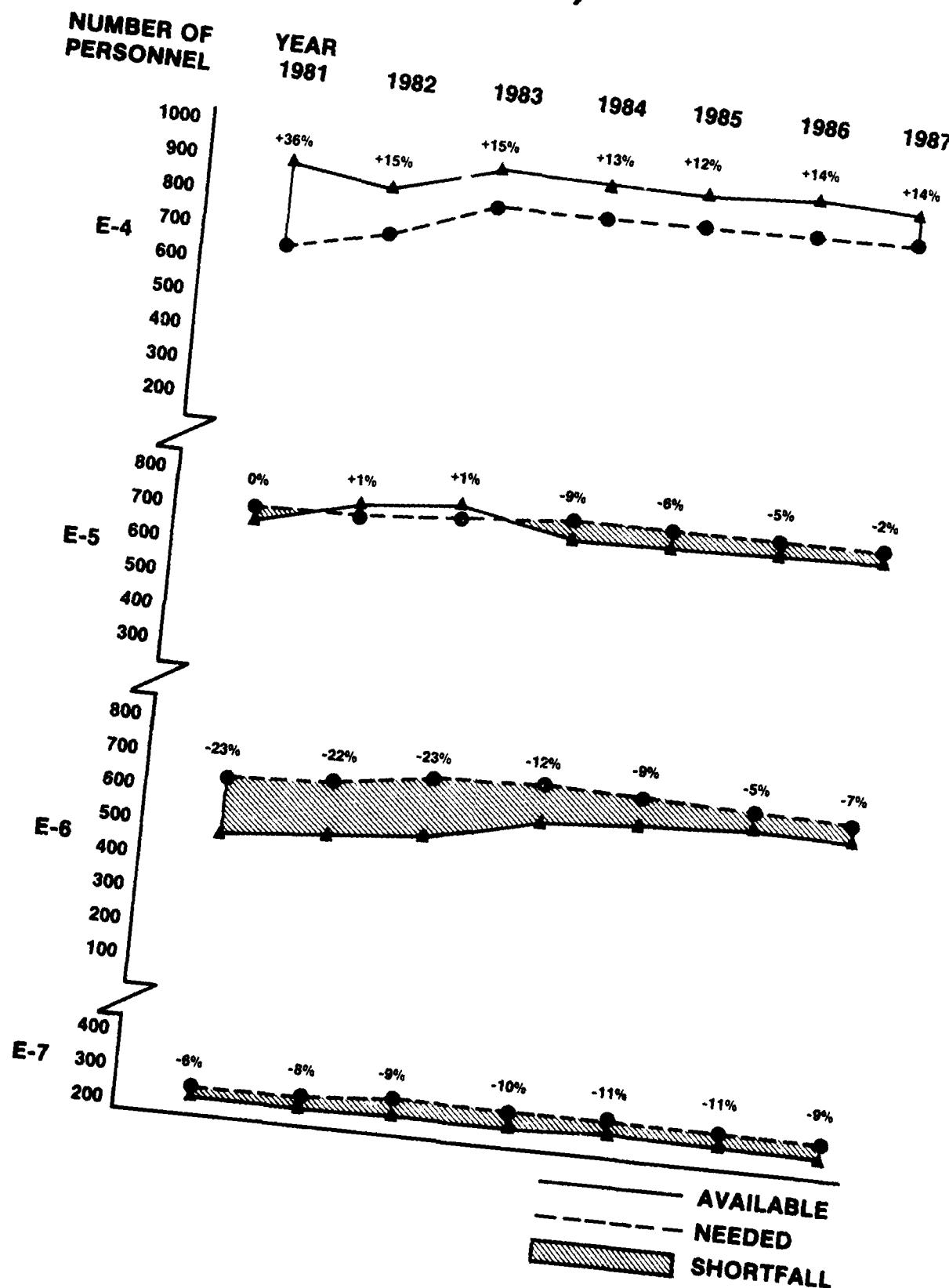
SONAR TECHNICIAN (SUBMARINE) (STS)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	1003 1.96	942 2.35	751 2.51	833 2.92	868 3.28	895 3.77	899 4.06
	---	---	---	---	---	---	---
	---	---	---	---	---	---	---
<b>E-4</b>	899 2.66	829 2.40	923 2.15	904 2.17	900 2.17	921 2.21	926 2.26
	662 35.80	722 14.82	803 14.94	802 12.72	803 12.08	810 13.70	810 14.32
<b>E-5</b>	672 4.78	724 4.71	771 4.77	702 4.67	725 4.51	731 4.57	752 4.51
	674 .30	720 .56	760 1.45	770 -8.83	770 -5.84	770 -5.06	770 -2.34
<b>E-6</b>	493 7.60	519 7.62	540 7.56	624 7.77	648 8.15	671 8.22	658 8.28
	640 -22.97	665 -21.95	700 -22.86	710 -12.11	710 -8.73	710 -5.49	710 -7.32
<b>E-7</b>	269 14.09	268 14.06	277 13.57	273 13.66	274 13.82	276 13.70	281 13.52
	287 -6.27	290 -7.59	305 -9.18	305 -10.49	308 -11.04	310 -10.97	310 -9.35
<b>E-8</b>	130 18.38	138 18.49	147 18.65	148 18.83	147 19.11	151 18.80	153 18.55
	152 -14.47	163 -15.34	172 -14.53	173 -14.45	174 -15.52	175 -13.71	175 -12.57
<b>E-9</b>	22 21.18	25 21.98	27 22.72	29 23.43	31 24.11	33 24.68	34 25.18
	28 -21.43	30 -16.67	31 -12.90	31 -6.45	30 3.33	31 6.45	31 9.68
<b>E-4/9</b>	2485 6.44	2503 6.48	2685 6.28	2680 6.45	2725 6.55	2783 6.59	2804 6.57
	2443 1.72	2590 -3.36	2771 -3.10	2791 -3.98	2795 -2.50	2806 -.82	2806 -.07
<b>Total</b>	3488 5.15	3445 5.35	3436 5.46	3513 5.61	3593 5.76	3678 5.90	3703 5.96
	2823 ---	2995 ---	3196 ---	3221 ---	3230 ---	3246 ---	3246 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 672	(Projected No. of men at end of FY)
Means LOS 4.78	(Average Length of Service)
Manpower Requirements 674	(CNO estimates of number required)
End Strength Status -.30	(Percentage over or under requirements)

# SONAR TECHNICIAN (SUBMARINE) (STS)



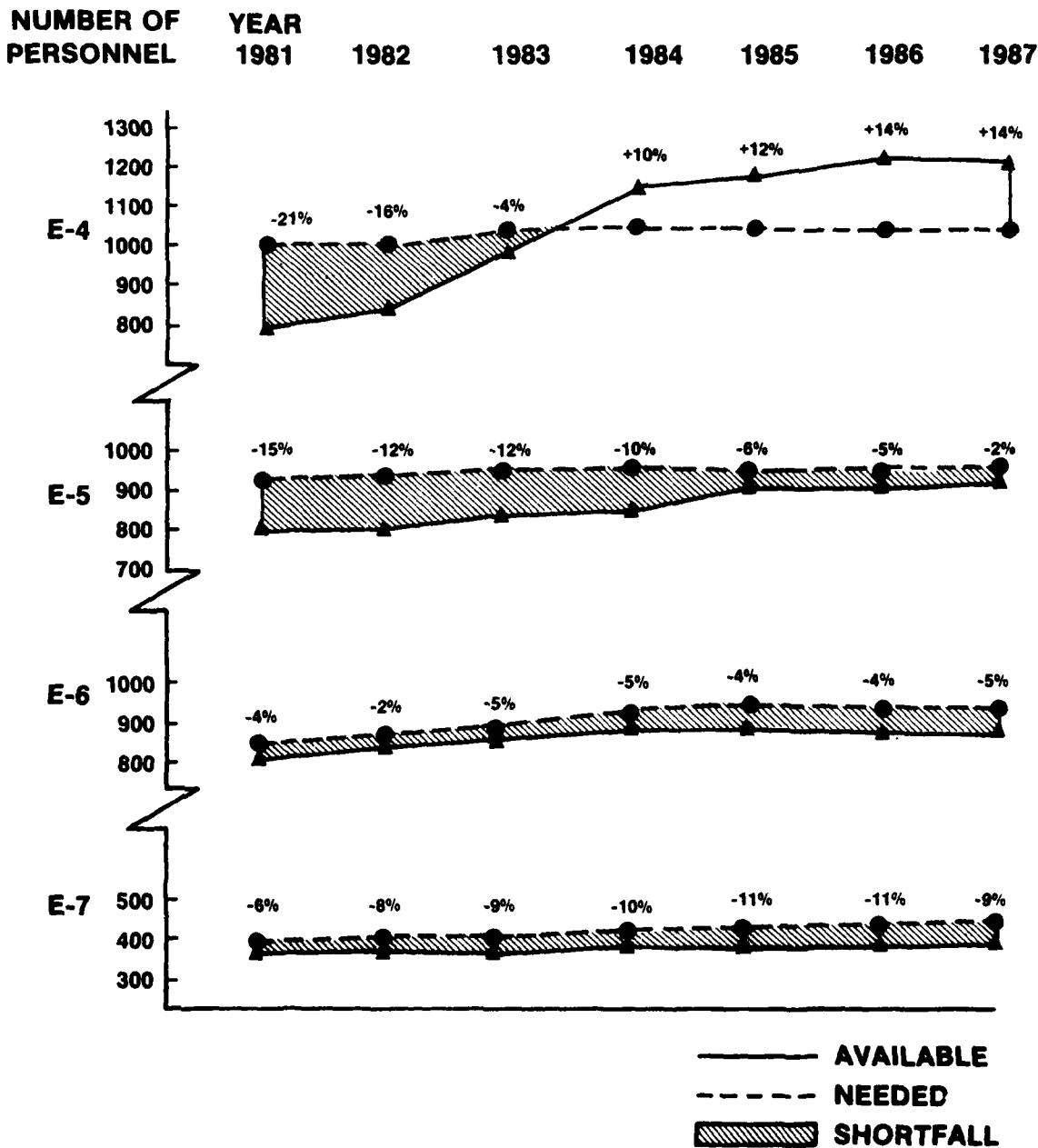
TORPEDOMAN'S MATE (TM)

<b>Rate</b>	<b>FY81</b>	<b>FY82</b>	<b>FY83</b>	<b>FY84</b>	<b>FY85</b>	<b>FY86</b>	<b>FY87</b>
<b>E-1/3</b>	1472 1.41 ---	1596 1.42 ---	1656 1.57 ---	1642 1.72 ---	.729 1.97 ---	1796 2.18 ---	1867 2.50 ---
<b>E-4</b>	800 2.80 1016 -21.26	870 2.57 1034 -15.86	1019 2.66 1063 -4.14	1183 2.85 1078 9.74	1195 3.06 1066 12.10	1222 3.31 1074 13.78	1227 3.50 1074 14.25
<b>E-5</b>	800 5.22 938 -14.71	829 5.08 943 -12.09	853 4.93 970 -12.06	887 4.90 985 -9.95	928 4.97 985 -5.79	935 5.23 985 -5.08	961 5.41 985 -2.44
<b>E-6</b>	823 11.34 854 -3.63	851 10.56 870 -2.18	876 9.92 920 -4.78	903 10.02 950 -4.95	924 10.21 965 -4.25	922 10.43 965 -4.46	916 10.74 965 -5.08
<b>E-7</b>	356 17.44 380 -6.32	351 17.27 380 -7.63	355 16.80 390 -8.97	359 16.46 400 -10.25	360 16.22 405 -11.11	365 15.97 410 -10.98	372 15.88 410 -9.27
<b>E-8</b>	83 19.81 97 -14.43	83 19.69 98 -15.31	90 19.58 105 -14.29	94 19.74 110 -14.55	95 19.75 111 -14.41	96 19.36 111 -13.51	97 19.29 111 -12.61
<b>E-9</b>	79 23.87 100 -21.00	82 24.24 100 -18.00	87 24.41 102 -14.71	88 24.88 102 -13.73	90 24.83 103 -12.62	92 23.88 105 -12.38	94 23.88 105 -10.48
<b>E-4/9</b>	2941 8.66 3385 -13.12	3066 8.19 3425 -10.48	3280 7.76 3550 -7.61	3514 7.60 3625 -3.06	3592 7.70 3635 -1.18	3632 7.83 3650 -.49	3667 8.00 3650 .47
<b>Total</b>	4413 6.24 3765 ---	4662 5.88 3820 ---	4936 5.68 3965 ---	5156 5.73 4055 ---	5321 5.84 4070 ---	5428 5.96 4090 ---	5534 6.15 4090 ---

**Explanation:** Within the cells for each rate and rating by fiscal year, the data are presented as follows; for example, for the E-5 in Fy81, the estimates are:

End Strength 800	(Projected No. of men at end of FY)
Means LOS 5.22	(Average Length of Service)
Manpower Requirements 938	(CNO estimates of number required)
End Strength Status -14.71	(Percentage over or under requirements)

## TORPEDOMAN'S MATE (TM)



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