APRIL 2006 STATUS OF FORCES SURVEY
OF ACTIVE-DUTY MEMBERS:
TABULATIONS OF RESPONSES

Introduction to the Survey

The *Human Resources Strategic Assessment Program* (HRSAP), Defense Manpower Data Center (DMDC), conducts both Web-based and paper-and-pencil surveys to support the personnel information needs of the Under Secretary of Defense for Personnel and Readiness [USD(P&R)]. These surveys assess the attitudes and opinions of the entire Department of Defense (DoD) community on a wide range of personnel issues. An exclusively Web-based survey program, known as the *Status of Forces Surveys* (SOFS), provides data several times per year on active-duty and Reserve component members and DoD civilian employees. Paper-and-pencil surveys are used to supplement Web-based surveys to obtain data on sensitive topics (e.g., sexual harassment) and from populations who may have limited Internet access (e.g., spouses of active and Reserve members).

This report contains tabulations of responses from the active-duty SOFS Web survey conducted March 13 to May 4, 2006. This introduction (1) summarizes the survey content, (2) defines the total population surveyed and the subgroups used in tabulations of responses, (3) summarizes the survey methodology,[1] and (4) provides details on how to use the tabulations. The tabulations and a copy of the survey items follow this introduction.[2]

Survey Content

The topics covered in the *April 2006 Status of Forces Survey of Active-Duty Members* included those in the *Status of Forces Surveys of Active-Duty Members' Long-Term Content Plan*. The long-term content plan is at page 611. As indicated in that plan, there is a series of items included on all active-duty SOFS. These questions cover overall satisfaction, retention intention, perceived readiness, stress, tempo, and permanent change-of-station (PCS) moves. In addition, items were included on deployments since September 11, 2001, impact of deployments, programs and services, child care, spouse employment, education and access to technology, compensation, financial health, relatives serving in the Armed Forces, the military retirement system, and PCS moves. The survey was subdivided into the following 17 topic areas:

1. *Background Information*—Service, gender, paygrade, education, marital status, spouse employment status, race/ethnicity, dependents, and location (both geographic and on/off base).

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[1] Details on survey methodology are reported by Riemer and Kroeger (2003) and DMDC (2006b).
[2] Refer to DMDC (2006a) to view a screen-shot version of the survey as it appeared on the Web.

2. *Satisfaction*—Satisfaction with aspects of the military (e.g., compensation) and overall satisfaction with the military way of life.

3. *Retention*—Likelihood to stay on active duty, spouse/family support to stay on active duty, and commitment to serve.

4. *Tempo*—PCS moves, days worked overtime, time away from permanent duty station, and the impact of time away on career intentions.

5. *Readiness*—Individual and unit preparedness, and training effectiveness.

6. *Stress*—Level of stress in work and personal life.

7. *Deployments Since September 11, 2001*—Number of times deployed for operations, time spent away, location of deployments, days spent in a combat zone, combat involvement, deployment expectations, and stop-loss.

8. *Impact of Deployments*—Concerns while deployed, emotional/behavioral impact of deployment on service member, post-deployment support services received, emotional/behavioral impact of deployment on children, and ways children cope with deployment.

9. *Programs and Services*—Use and satisfaction of Military OneSource and reasons for not using Military OneSource.

10. *Child Care*—Use of child care, satisfaction with on- and off-base child care, amount spent on child care, and days missed due to lack of child care.

11. *Spouse Employment*—Time spent finding employment after PCS, ratings of qualifications and skills, income contribution to household, reasons for working part-time, description of how job was found, and importance of working.

12. *Education and Access to Technology*—Spouse's enrollment in school and reasons for not attending, spouse's educational attainment, and family's use of home computers and Web access for on-line education courses and homework.

13. *Compensation*—Satisfaction with various forms of military compensation, importance of factors used to determine total military compensation, and military opportunities and benefits relative to non-military high school classmates.

14. *Financial Health*—Sources of income or financial support, expected annual retirement pay, annual military earnings, annual spouse earnings, annual income from other sources, rent/mortgage payments, value of financial assets and real estate, payments on personal unsecured debt, interest

rates, payments on vehicle loans and leases, financial problems, and details on predatory loan practices.

15. *Relatives Serving in Armed Forces*—Family members currently serving on active duty and currently deployed to combat zones and degree of comfort with simulataneous family member deployments.

16. *Retirement System*—Concerns about current military retirement system and impact of a possible change in the retirement system on Service member's desire to stay.

17. *PCS moves*—Preference of time between PCS moves if deployed within the next 2 years versus not deployed within the next 2 years.

Population and Reporting Categories

The target population for all active-duty SOFS consists of active-duty members of the Army, Navy, Marine Corps, and Air Force, excluding National Guard and Reserve members, (1) who have at least 6 months of service at the time the questionnaire is first fielded and (2) are below flag rank. Survey results are presented for the total population and by a variety of reporting categories. To form the reporting categories for the tabulations, respondents are classified primarily by survey self-report. If the self-reported data are missing, then DMDC's *Active Duty Master Edit File* data, at the time of sampling, are used to impute the subgroup classification. Survey results are tabulated by: Service, paygrade, location, education level, race/ethnicity, family status, gender, officer/enlisted by gender, and Service by paygrade. Definitions for reporting categories follow:

- *Service*—The categories include *Army*, *Navy*, *Marine Corps*, and *Air Force*.

- *Paygrade*—The *Enlisted* subgroup includes all enlisted paygrades (E1-E9). The *Enlisted* subgroup is broken into the following groups: *3 to 5 years* (i.e., first-term decision window), *6 to 9 years* (i.e., second-term decision window), *E1-E4s*, and *E5-E9s*. The *Officers* subgroup includes warrant officers (W1-W5) and commissioned officers (O1-O3 and O4-O6).

- *Location*—Geographic locations (Figure 1, page 4) are collapsed into geographic regions as defined by the *Department of Defense Worldwide Manpower Distribution by Geographic Area* (DoD Washington Headquarters Services, 2001). The primary classification distinguishes *Overseas* from *US (including territories)*. *US (including territories)* includes respondents with permanent duty stations located in the 50 states, the District of Columbia, Puerto Rico, and United States territories or possessions. Within the *Overseas* classification, two regions can be reported separately: (1) *Europe*, which includes countries such as Bosnia-Herzegovina, Germany, Italy, Serbia, and the United Kingdom; and (2) *Asia and Pacific*, which includes countries such as Australia, Japan, and Korea. Housing locations

are classified primarily for financial analyses based on whether respondents are provided housing directly or by allowance, rather than community analyses based on geographic location of the housing. From self-report data, *On Base* includes living in or aboard ship, in barracks/dorm/BEQ/ UEPH/BOQ/UOPH[3] military facilities, or in on-base military family housing. *Off Base* includes living in military family housing off base, in privately owned or rented housing, or in privatized military housing. If the self-reported data are missing, then On Base and Off Base are imputed from personnel record data indicating whether the respondent qualifies to receive either Basic Allowance for Housing (BAH) or Overseas Housing Allowance (OHA), respectively.

Figure 1*.*
Geographic Locations Used for Analyses

Legend	
US (including territories).........	⬛
Europe................................	▨
Asia & Pacific.......................	▦
Other..................................	⬜

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[3] Bachelor/Base Enlisted Quarters, Unaccompanied Enlisted Personnel Housing, Bachelor Officers' Quarters, and Unaccompanied Officers Personnel Housing, respectively.

- *Education*—Respondents are classified based on self-reported educational attainment. *No College* includes anyone without college credit. *Some College* includes those with some college credit, including a 2-year degree, but does not include those with a 4-year degree. *Four-year Degree* includes those with a 4-year degree and those with some graduate school, but no graduate or professional degree. *Graduate/Professional Degree* includes those with masters, doctorates, and first professional degrees (i.e., MA/MS/MEng/MBA/MSW/PhD/MD/JD/DVM).

- *Race/Ethnicity*—Respondents are classified based on self-reported categories consistent with requirements of the *Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity* (1997). *Total Minority* includes all persons marking one or more of the races other than White and/or marking that they are Spanish/Hispanic/Latino. *Non-Hispanic Black* includes persons marking only[4] Black or African American and not reporting being Spanish/Hispanic/Latino. *Hispanic* includes anyone marking that they are Spanish/Hispanic/Latino, regardless of how they answered the question on race.

- *Family Status*—Respondents are classified based on self-reported marital status, spouse employment, and legally dependent children (ages 22 and under). Except for *Working Spouse*, missing data can be imputed from personnel record data if the respondents do not answer these questions.[5] *Single* includes those who have never been married or are divorced/widowed and have not remarried. *Married* includes those who are married or legally separated. *With Child(ren)* includes those with dependent child(ren) aged 22 and under, regardless of where the child(ren) live(s). *Working Spouse* includes those members whose spouse is working as measured by the U.S. Census Bureau's Current Population Survey (CPS) questions, and those in military service. *Dual Service Spouse* includes military members married to (including separated from) another military member (active or Reserve components).

- *Gender*—This category is self-explanatory.

- *Service by Paygrade*—The categories include each of the Services by enlisted and officer paygrade groups.

Survey Methodology

The Web survey administration process began on March 13, 2006, with the mailout of notification letters to sample members. This notification letter explained why the survey was being conducted, how the survey information would be used, and why

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[4] Persons marking they are Black or African American <u>and</u> another race are not in this category.
[5] Because there are no personnel record data for working spouses, this category cannot be imputed.

participation was important. Throughout the administration period, additional e-mail and postal reminders were sent to encourage survey participation. Data were collected on the Web between March 27, 2006 and May 4, 2006.

Single-stage, nonproportional stratified random sampling[6] procedures were used. The sample consisted of 39,313 individuals drawn from the sample frame constructed from DMDC's *Active-Duty Master Edit File*. Members of the sample became ineligible if they indicated in the survey or by other contact (e.g., telephone calls to the data collection contractor) that they were not on active duty as of the first day of the Web survey, March 27, 2006 (1.19% of sample).

Completed surveys (defined as 50% or more of the survey questions asked of all participants are answered) were received from 10,396 eligible respondents. The overall weighted response rate for eligibles, corrected for nonproportional sampling, was 33%. Data were weighted to reflect the population of interest. These weights reflect (1) the probability of selection, (2) a nonresponse adjustment factor to minimize bias arising from differential response rates among demographic subgroups, and (3) a poststratification factor to force the response-adjusted weights to sum to the counts of the target population as of the month the sample was drawn and to provide additional nonresponse adjustments.

Table 1 (pages 8-9) shows the number of respondents and the portion of total respondents in each reporting group. Also shown are the estimated number of members and the portion of total members in each reporting group. Differences in the percentages of respondents and population for the reporting categories reflect differences in the number sampled, as well as differences in response rates.[7]

Tabulation Procedures

Tabulations[8] for each question from the survey are shown on a set of facing pages. The text of the questions and response options are shown at the top of the even-numbered pages with only the question repeated on the odd-numbered pages. To compress the width of columns in the tables, the response options are shown with a number, letter, or DNA (i.e., *Does not apply*); then that number, letter, or DNA is used as the column heading for the responses. The central feature of the tabulations is the percentage of members choosing the response options indicated by the column

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[6] In stratified random sampling, all members of a population are categorized into homogeneous groups. For example, members might be grouped by gender and Service (e.g., all male Army personnel in one group, all female Navy personnel in another). Members are chosen at random within each group. Small groups are oversampled in comparison to their proportion of the population so there will be enough responses from small groups to analyze. Weights are used so that groups are correctly represented in the analyses.

[7] There is also a slight difference in treatment of missing data. Cases with missing data are included in counts of respondents, but are excluded in population estimates.

[8] Details of data editing and preparation are provided by DMDC (2006a).

heading. Within a set of response options, percentages may not add to 100% due to rounding error.

Where an item lends itself to presentation as an average, that average is also shown as both a number estimate and in a bar chart. The averages lend themselves to a quick scan for reporting groups differing from other similarly defined groups. Where a true response continuum is available (e.g., number of children, nights away), the mean of that continuum is presented; in other cases, the responses are averages of the numeric scales presented with the response options. Where there is a simple binomial response (e.g., yes/no), only one percentage is presented. In this case, the bar chart represents that percentage.

On each page of tabulations, the first column lists the reporting group shown in that row. The second column, *Percent Responding*, lists the portion of the reporting group represented in the estimates in that row. In most cases, if this percentage is not 100, it reflects item nonresponse, and the table note indicates that "Percent responding are Service members who answered the question."

Not all questions will apply to every respondent. Where possible, the Web survey is programmed to skip respondents over questions that do not apply to them. For example, Q44 (Since September 11, 2001, how many times have you been deployed?) does not apply to those who marked in Q43 that they were not deployed for any operation since September 11, 2001. The table note for this question indicates, "Percent responding are Service members who answered the question and had been deployed for at least one operation since September 11, 2001 (Q43)."

The survey does not always skip questions that do not apply to the respondents. In the tabulations, *Does not apply* responses are typically included in the percentages in the *Percent Responding* column. For example, Q5 asked members to indicate how many years they had been in a relationship with their current significant other. Survey participants can indicate that the question does not apply. Q5 is also an example requiring caution in interpreting responses because Q5 was within a skip pattern and had an individual item response of *Does not apply*.

Combining Information From Multiple Items

Tabulations in this volume generally present data for individual survey questions. There are three exceptions. The first type of exception is where the results for multiple items are presented on a single set of pages.

- In Q15, members are asked how many dependents they have in each of the age ranges. For this question, the tabulations show the percentage of the reporting category with dependents in that age range. The averages shown on these pages are based only on those with at least one dependent and; therefore, show the average number of dependents for those who have dependents.

Table 1.
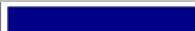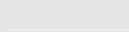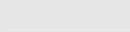*Number of Respondents and Estimated Population by Reporting Categories*

	Respondents		Estimated Population				
	Count	Percent	Totals		Percent		
OVERALL AND SERVICE							Max ME
Total	10,396	100%	1,311,928	± 13,789	100%		
Army	3,541	34%	450,998	± 7,166	34%		± 1%
Navy	2,471	24%	348,339	± 8,389	27%		± 1%
Marine Corps	1,939	19%	165,008	± 4,777	13%		± 1%
Air Force	2,445	24%	347,583	± 7,227	26%		± 1%
PAYGRADE							
Enlisted	6,373	61%	1,097,422	± 13,679	84%		± 1%
3 to 5 Years of Service	2,150	21%	297,995	± 13,235	23%		± 1%
6 to 9 Years of Service	1,159	11%	181,637	± 10,269	14%		± 1%
E1 – E4	2,569	25%	499,883	± 12,454	38%		± 1%
E5 – E9	3,804	37%	597,539	± 9,748	46%		± 1%
Officers	4,023	39%	214,506	± 3,049	16%		± 1%
W1 – W5	654	6%	16,862	± 1,932	1%		± 1%
O1 – O3	1,587	15%	110,746	± 2,974	8%		± 1%
O4 – O6	1,782	17%	86,899	± 2,324	7%		± 1%
LOCATION							
US (Incl. Territories)	8,651	83%	1,087,865	± 17,628	83%		± 1%
Overseas	1,745	17%	224,063	± 12,466	17%		± 1%
Europe	842	8%	106,806	± 8,378	8%		± 1%
Asia and Pacific	821	8%	104,067	± 9,858	8%		± 1%
On Base	2,973	29%	481,282	± 17,864	37%		± 2%
Off Base	7,423	71%	830,646	± 17,190	63%		± 2%
EDUCATION							
No College	1,791	17%	352,572	± 17,207	27%		± 2%
Some College	4,523	44%	683,830	± 18,215	52%		± 2%
4-year Degree	2,246	22%	170,410	± 8,276	13%		± 1%
Grad/Prof Degree	1,835	18%	104,879	± 3,984	8%		± 1%
RACE/ETHNICITY							
Non-Hispanic White	6,676	64%	823,206	± 12,833	63%		± 1%
Total Minority	3,706	36%	487,412	± 11,918	37%		± 1%
Non-Hispanic Black	1,641	16%	227,894	± 12,404	17%		± 1%
Hispanic	1,220	12%	153,682	± 10,194	12%		± 1%

Table 1 (continued)

	Respondents		Estimated Population			
	Count	Percent	Totals		Percent	Max ME
FAMILY STATUS						
Single w/ Child(ren)	704	7%	75,437	± 7,390	6%	± 1%
Single w/o Child(ren)	2,560	25%	442,467	± 18,142	34%	± 2%
Married w/ Child(ren)	5,263	51%	558,542	± 14,627	43%	± 2%
Married w/o Child(ren)	1,869	18%	235,482	± 13,711	18%	± 2%
Working Spouse	3,957	38%	458,359	± 16,254	35%	± 2%
Dual Service Spouse	1,055	10%	114,899	± 8,907	9%	± 1%
GENDER						
Male	8,496	82%	1,123,676	± 13,835	86%	± 1%
Enlisted	5,123	49%	941,839	± 13,866	72%	± 1%
Officers	3,373	32%	181,837	± 2,922	14%	± 1%
Female	1,900	18%	188,251	± 6,820	14%	± 1%
Enlisted	1,250	12%	155,583	± 6,743	12%	± 1%
Officers	650	6%	32,669	± 1,213	2%	± 1%
SERVICE BY PAYGRADE						
Army Enlisted	2,212	21%	375,708	± 7,237	29%	± 1%
E1 – E4	917	9%	170,826	± 6,895	13%	± 1%
E5 – E9	1,295	12%	204,882	± 5,148	16%	± 1%
Army Officers	1,329	13%	75,290	± 2,171	6%	± 1%
O1 – O3	364	4%	34,272	± 1,547	3%	± 1%
O4 – O6	459	4%	27,846	± 1,222	2%	± 1%
Navy Enlisted	1,582	15%	297,184	± 8,337	23%	± 1%
E1 – E4	604	6%	125,514	± 7,775	10%	± 1%
E5 – E9	978	9%	171,670	± 5,272	13%	± 1%
Navy Officers	889	9%	51,155	± 1,464	4%	± 1%
O1 – O3	402	4%	27,484	± 1,530	2%	± 1%
O4 – O6	448	4%	21,735	± 1,141	2%	± 1%
Marine Corps Enlisted	999	10%	147,769	± 4,749	11%	± 1%
E1 – E4	454	4%	90,576	± 4,838	7%	± 1%
E5 – E9	545	5%	57,193	± 2,677	4%	± 1%
Marine Corps Officers	940	9%	17,239	± 828	1%	± 1%
O1 – O3	395	4%	9,308	± 866	1%	± 1%
O4 – O6	437	4%	6,194	± 273	0%	± 1%
Air Force Enlisted	1,580	15%	276,761	± 7,117	21%	± 1%
E1 – E4	594	6%	112,967	± 4,988	9%	± 1%
E5 – E9	986	9%	163,794	± 6,026	12%	± 1%
Air Force Officers	865	8%	70,821	± 1,483	5%	± 1%
O1 – O3	426	4%	39,682	± 1,884	3%	± 1%
O4 – O6	438	4%	31,125	± 1,599	2%	± 1%

The second exception is where members can provide multiple answers to a single question (e.g., race).

- In Q18, members are asked to mark one or more races. The tabulations show the percentage who responded that they were White, Black, American Indian/Alaska Native, Asian, and/or Native Hawaiian/Other Pacific Islander. Respondents who indicated more than one race are also shown in the percentage of More Than One Race Marked. For example, if a respondent indicated they were Asian and White, they were counted in the percentage as Asian, White, and More Than One Race Marked.

The third exception pertains to composite measures on this survey, which include spouse employment and organizational commitment.

- Spouse employment indicators are derived from Q6-Q12 and are comparable to employment measures used in the U.S. Census Bureau's *Decennial Census* and *Current Population Survey* (CPS). Two sets of tabulations are presented. In the first set, labor force participation is shown for the spouses of those in the reporting category. The four categories contain percentages of (civilian) employed, unemployed, not in the labor market, and Armed Forces member. Those not in the labor market include those who are permanently or temporarily not working or not actively looking for work.[9] The second set of data shows only those in the labor market. That is, the percent responding are married Service members who answered the items and whose spouses are in the labor market (civilian employed, unemployed but looking for work, and in the Armed Forces). The unemployment rates shown in these tables are the percent of those who need or want to work and are unemployed. These rates are comparable to those reported monthly by the Bureau of Labor Statistics based on the CPS data.

- Three measures of organizational commitment (Q27) are presented. *Affective Commitment* can be defined as emotional attachment to, an identification with, and an involvement in an organization (Q27a, b, e, h, j, and m). *Continuance Commitment* can be defined as attachment based on the perceived costs of leaving an organization (Q27c, f, i, l, and n). *Normative Commitment* can be defined as a sense of obligation to remain in an organization (Q27d, g, and k). In the tabulations, individual items in this measure are presented first; after the individual item, there are three sets of tabulation pages that show composite measure results. Lower scores on these measures indicate less organizational commitment, whereas higher scores represent more commitment.

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[9] Those who have not actively looked for work in the past 4 weeks are considered to be out of the labor market. This category includes some percentage of spouses who are in the midst of a PCS move and, therefore, only temporarily out of the labor market.

Margins of Error

The complex sample design required weighting to produce population estimates (e.g., percent female).[10] Because of the weighting, conventional formulas for calculating the margin of error will overstate the reliability of the estimate. For this report, variance estimates were calculated for the report using SUDAAN[©] PROC DESCRIPT (Research Triangle Institute, 2004).

By definition, sample surveys are subject to sampling error. Standard errors are estimates of the variance around population parameters, such as percentages or means, and are used to construct margins of error (i.e., confidence interval half-widths). Percentages and means in these tabulations are reported with margins of error based on 95% confidence intervals. In order to compress the data display, only the maximum margin of error (Max ME) for each reporting category is shown. That is, the tab volume shows only the largest margin of error for the percentages or means in each row. For each average shown in these tabulations, its margin of error is also printed.

Estimates may be unstable based on a small number of observations or relatively large variance in the data or weights. Particularly unstable estimates are suppressed or annotated in these tabulations. The following rules are used:

- "0" indicates that no one in any reporting group selected the response option,

- NR indicates the estimate is *Not Reportable* because it was based on fewer than 30 respondents or the relative standard error was high. NR frequently occurs for percent responding and not for the percentage estimates because the sample sizes in the "percent responding" cell are relatively small (i.e., 31 to 140), making it difficult to reliably estimate extreme values (i.e., percentages greater than 95% or less than 5%),

- NA indicates the question was *Not Applicable* because the question did not apply to respondents in the reporting category based on answers to previous questions,

- no Max ME is printed when all percentages in the row are shown as NR,

- no margin of error is printed for an average when it is shown as NR.

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[10] This differential weighting means that only certain statistical software procedures, such as SUDAAN, correctly calculate standard errors, variances, or tests of statistical significance for stratified samples.
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