

I. Survey Supporting Statement. 1

The following information and supporting documentation is required for the Defense Manpower Data Center's (DMDC's) survey organization, the Human Resources Strategic Assessment Program (HRSAP), to review Department of Defense/Office of the Secretary of Defense (DoD/OSD) surveys in compliance with Department of Defense Instruction (DoDI) 1100.13, "Surveys of DoD Personnel"; see DoDI 1100.13 for the definition of a survey. All information should be provided or addressed by the office submitting the request for a survey review. However, if the information is not applicable to the proposed project, it can be addressed by entering "Does Not Apply."

Submissions should follow "DMDC Survey Standards"; see Section II of this document.

A. Name of Survey Research Project.

Collecting Compensation Preferences from Active and Guard/Reserve Service members, and Military Retirees

B. Names and Contact Information of the Survey's Principal Investigator and Government Sponsor.

Principle Investigator: Military Compensation and Retirement Modernization Commission, Dan Huck, Deputy Director, 703-692-1935, daniel.huck@mcrmc.gov

Government Sponsor: The Honorable Jessica Wright, Under Secretary of Defense for Personnel and Readiness

C. Need for the Survey. Explain why the survey (or focus group) is necessary. Provide a description of what will be surveyed or assessed and how the survey (or focus group) will be conducted. Identify any Congressional, DoD, or other requirement, regulation, and/or directive to collect this information. If applicable, identify the DoD contract, grant, or other funding source for this collection.

Section 671, et. seq., of the National Defense Authorization Act for Fiscal Year 2013, Pub. L. 112-239, 126 Stat. 1787 (2013) (amended by National Defense Authorization Act for Fiscal Year 2014, Pub. L. 113-66, 127 Stat. 672 (2013)), established the Military Compensation and Retirement Modernization Commission (MCRMC or "Commission") as an independent establishment of the Federal Government charged with developing recommendations to modernize military compensation. Section 680 of the statute provides the funding source for the survey.

The statutory language directs that, in formulating its recommendations, the Commission "...pay particular attention to the interrelationships and interplay of impact between and among the various programs of the Federal Government, especially as those programs influence decisions of persons about joining the uniformed services and of members of the uniformed services about remaining in

the services.”¹ This and other language in the statute make it clear that any recommendations developed must consider the potential interdependencies between and among the various compensation components. MCRMC therefore intends to adopt a holistic approach to examining ways to modernize and improve military compensation. The preference-based survey approach and subsequent analysis of results will provide valuable input to the Commissioners’ deliberations.

In attempting to objectively measure compensation preferences across a broad cross-section of populations either directly or indirectly benefiting from various forms of military compensation, we have designed and will field a data collection instrument on a web-enabled platform that engages respondents in an interactive experience to capture their preferences for different levels and mixes of compensation components. In our extensive review of other surveys conducted of military personnel and their families, we have determined that no available sources cover the necessary demographic diversity of participants using a preference-analytic approach to measure relative perceived value of different levels and combinations of compensation (pay and benefits).

The Service members and military retirees in the survey sample will receive an email invitation directing those who choose to participate in the survey to a website hosting the preference-based analytic tool. They will also receive reminder notices via email, if necessary. Please see “Invitation Letter and Reminder Notices” (Attachment A) for initial email invitation and reminder notices.

Unlike traditional surveys, participants will express their preferences by moving sliders on an interface for levels and combinations of benefits (please refer to “Illustrations of the User-Interface Design” (Attachment B) for an illustration of this). Based on other pilot studies using this preference measurement platform, we anticipate participants can complete the activity in 20-30 minutes. We also intend to imbed help screens of how the system works and roll-over explanations of the intent of a question item.

Fundamentally, the purpose of the Commission is to formulate and examine alternative configurations for military compensation, and then recommend changes. Rather than traditional satisfaction ratings for current compensation components, a preference-based approach that poses alternative features and levels of a feature for some component of military compensation more closely addresses the objectives of the Commission. While there have been some pilot studies using a preference analytic approach to alternative configurations of military compensation, none have employed a large scale scientific sample that accurately reflects cross-sections of the Active Duty, Reserve/National Guard, and military retiree populations, which would enable the findings to be attributed to these populations (and sub-groups) with any degree of statistical precision.²

¹ National Defense Authorization Act for Fiscal Year 2013, Pub. L. 112-239, §671(a)(3); 126 Stat. 1632, 1787 (2013) (amended by the National Defense Authorization Act for Fiscal Year 2014, Pub. L. 113-66, §1095 (2013)).

² There have been two pilot studies that have employed the True Choice Solutions preference analytic approach on groups of US military personnel. See: Harrison, Todd. *Rebalancing Military Compensation: An Evidence Based Approach* (Washington DC: Center for Strategic and Budgetary Analysis, 2012), v.; U.S. Behavioral Research

The surveys cited relied on small samples, wherein the results could not be considered representative of the population from which the samples were drawn.

The True Choice Solutions (TCS) platform and methodology represents an improved approach to preference measurement compared to conventional forced choice or conjoint exercises.³ The methodology applied in the TCS platform captures and synthesizes participant preference data, at the individual-level, to derive utility or preference functions across a range of benefit features and subcategories within each benefit feature. These preferences can be combined via TrueChoice Solutions' patented econometric algorithms in ways that enable analysts to evaluate plausible combinations of benefit features in terms of the total utility or preference for the offering. Moreover, when combined with actual cost data to deliver the reconfigured compensation package, various benefit/cost measures can be computed to guide decision makers in making realistic and cost-effective choices. The operating assumption here is that preference measures (like satisfaction) correlate with other behavioral measures such as retention and, by employing a capability such as the one developed by TCS, can be a valuable tool in configuring a more cost-effective compensation system to maintain the desired size and composition of the all-volunteer force.

The TCS graphical user interface (GUI) presents the survey in an easy to use, Flash-based format. The original hypothesis was that such a data collection tool could be integrated in real decision situations, thereby generating more realistic responses and highly predictive preference data. The TCS proprietary technology utilized here is based on a decomposition approach that estimates individual preferences in a real-time iterative, econometric process. The GUI enables an interaction with respondents that is not perceived as a survey, but rather as an advisory dialogue. It also helps minimize survey fatigue and often results in a completion rate of 90 percent or more. We are aware that the TCS survey approach is not traditional. We are gathering appropriate materials to defend the approach if it becomes necessary.

- D. Use of the Information.** Describe how, by whom, and for what purpose the information is to be used. What specific actions will be taken or considered based upon this information? Unless this is a new survey, describe how the information has been used in the past.

In preparing compensation options for the Commissioners' consideration, MCRMC needs to quantify the relative value key military groups attach to alternative levels and components of compensation. MCRMC and its Contractor will analyze this information, along with other sources, to gauge the potential impact on the force of any changes in compensation the Commissioners may be considering.

Institute for Behavioral and Social Sciences, Personnel Assessment Research Unit, *Pilot Results – The Use of Real-time Preference Measurement Technology to support the Retention of Enlisted Personnel* (Fort Belvoir, VA, 2010).

³ Marketers sometimes have thought (or been taught) that the word “conjoint” refers to respondents evaluating features of products or services “CONsidered JOINTly.” In reality, the adjective “conjoint” derives from the verb “to conjoin,” meaning “joined together.” The key characteristic of conjoint analysis is that respondents evaluate product profiles composed of multiple conjoined elements (attributes or features). In the TCS approach, preference for each benefit-feature is measured independently and then the resulting utility functions can be combined in different ways to examine the composite value or preference for alternative compensation configurations.

- E. Use of Information Technology.** Does the survey involve the use of Internet, other technological collection techniques (e.g., electronic response submission), or have a Web-based option? If yes, provide a short description.

Yes. Potential survey participants need access to a computer (work station, notebook or tablet). They will be notified via email and directed to a website that hosts the survey. See the response to question item J for an explanation of how this survey will be conducted.

- F. Non-Duplication.** Does this survey duplicate data collected in any current or recent survey or existing administrative data? Explain why the information cannot be obtained from existing data or other planned future data collection(s).

No. As discussed in Section C “Need for the Survey,” previous attempts at gathering the compensation preferences of military personnel did not employ a large scientific sample that accurately reflects cross-sections of the Active Duty, Reserve/National Guard, and military retiree populations, which would enable the findings to be attributed to these populations (and sub-groups) with any degree of statistical precision. The surveys cited in Section C of this application relied on small samples, wherein the results could not be considered representative of the population from which the samples were drawn.

Please refer to Section C for further details.

- G. Less Frequent Collection.** What would be the consequences if the survey were conducted less frequently or not conducted? If there are technical or legal obstacles to reducing the burden in this manner, please explain.

The survey will be conducted one time for the key groups (Active, Guard/Reserve and Retirees). Without this survey, MCRMC be unable to efficiently and effectively quantify compensation preferences across approximately 2.2 million military personnel.

- H. Gifts or Payment.** Will any payments, incentives, or gifts be given to respondents?

No.

- I. Informed Consent.** Is informed consent being obtained? If so, provide a copy of the informed consent document. Are respondents informed of the potential risks and benefits of participation? Are respondents informed that participation is voluntary as per DMDC guidelines? Are all questions voluntary as per DMDC guidelines, such that respondents can skip any questions if they want to?

Yes. A “Consent Information and Privacy Advisory Statement” (please see Attachment C) will be displayed on the first screen image of each respondent’s session. On this first screen image, participants will also be advised that participation is voluntary. Consent is affirmed by participating in the online session. This language is similar to what DOD and others have used for surveys of military personnel. PLEASE NOTE: The content language in Attachment C

will be reviewed and revised by Ms. Cindy Allard, the OSD Chief Privacy Officer.

J. Protection of Information.

1. Will any identifiers (e.g., names, Social Security Numbers [SSNs], e-mail addresses, Internet Protocols [IP] addresses, street addresses, telephone numbers) remain attached to the answers once they have been received from the respondent?

No. The Contractor will not have access to the e-mail addresses, as the e-mail addresses will be removed from the dataset before it is given to the Contractor.

2. Will demographic data that become part of the dataset be so specific as to enable a respondent to be identified?

MCRMC plans to request that all the summary demographics listed in “Variables Used to Stratify the Sampling Frame” (Attachment D) be appended to each email address record received from DMDC.

Before sending these files to the Contractor, MCRMC will remove the email address and replace it with a unique alpha numeric ID code. This step will be taken to prevent any explicit PII variables from being included in the database available to the Contractor.

After combining the demographics (taken from administrative record files) with the content provided by survey participants, MCRMC believes that the likelihood of identifying an individual is extremely remote. Some of the demographic variables used for reporting purposes are group level demographics (such as grade level groups) that do not lend themselves to person-specific identification. The geographic variable covers very broad regions (“US and US territories” or “All Other”). The deployment variable has three categories that should have relatively large respondents in each.

If an instance arises where a reporting stratum had 30 or fewer respondents, MCRMC will merge these records into another larger stratum or suppress the data altogether. In either case, MCRMC intends to report findings that are relevant to our mission and satisfy tests of statistical significance. This threshold reporting standard will require sample sizes much larger than 30 individuals.

As described in “Application Hosting and Security Plan” (Attachment H), the TCS application and data will be hosted on a secure server environment (Amazon AWS) that meets, FedRAMP, DIACAP, and FISMA standards. Survey data will be collected through a 128-bit SSL connection. Access to the data analyses tools in the TCS application will require secure login to a 128-bit SSL connection and be strictly limited to those MCRMC and TCS personnel performing the analyses.

In addition to the survey questions, the TCS application will ask two self-reported demographic and six other items. Topics covered include type of permanent duty location (on ship, off/on post), travel-time to various locations, type of health insurance coverage, and types of participating retirement plans. There are also two self-reported demographic questions used (enlisted/officer, and family status), primarily for quality control purposes. These self-reported question items are listed in Attachment K.

MCRMC staff had an in-person meeting with Ms. Cindy Allard, the OSD Privacy Official, and covered in detail our data request of DMDC, the content we plan to gather from participants, and the security measures taken to protect these data. In order to address DMDC concerns about possible respondent identification, MCRMC met with Ms. Cindy Allard, Chief, OSD/JS Privacy Office on March 7, 2014. During that meeting, Ms. Allard opined that she did not believe the aggregation of demographic categories in our sampling plan responses would be a cause for concern. Her sentiments, however, were caveated with the fact that she would have to review our complete DMDC application.

3. Could a user of the survey's dataset analyze responses to multiple demographic questions to identify specific individuals?

Any variables that potentially disclose the identity of specific individuals due to small respondent count will be collapsed into the rest of the analysis dataset. Other disclosure avoidance techniques, such as recoding respondent email addresses and collapsing categories, will be implemented as necessary.

As mentioned in section J 2 above and depicted in Attachment K, there are only two self-reported demographic items asked: Whether you are enlisted or officer; and which one of four family status categories apply. In discussions with Ms. Cindy Allard, she indicated that it is preferable to ask Service members to self-report some demographic items to both validate content already gathered in developing the sampling frame and to lesson concerns that survey administrators have gathered extensive personal information that obviates the need to ask for such information on the survey. At the same time, MCRMC is sensitive to the reporting burden placed on participants and therefore wanted to limit the collection of information from participants that was not readily available from other electronic sources (such as from DMDC).

The remaining six self-reported items request information that would not normally be considered demographic and are also not available through other electronic sources. These six items included three on drive-times to various facilities (medical and commissary); one on duty location (on ship and on- or off-post); and one each on health insurance and retirement plans. (Refer to Attachment K for details.)

For the 8 self-reported items (including demographics) MCRMC does not believe this poses by itself a potential privacy risk. Please see Attachment K

for further details. However, disaggregating the file using the demographic attributes appended to individual records by DMDC could result in very small cells. For this reason, MCRMC intends to impose limits of no fewer than 30 records in a given cell for analysis purposes and plans to limit reporting its findings to only those cells that meet tests of statistical significance.

4. Can the survey returns be monitored (e.g., by lithocodes on the questionnaire or cookies sent by a Web server) to determine who has or has not completed a survey?

No. We will do a match-merge on the unique code at regular intervals to identify those respondents who need a reminder notice.

5. Will commercial off-the-shelf (COTS) software be used to administer the survey on the Web? If so, list and describe.

Yes, MCRMC has contracted with National Capitol Contracting LLC (NCC) to deploy a web-enabled COTS product developed by TrueChoice Solutions (TCS). There are no plans to substantively alter the software. If DOD and others need a demonstration of the TCS platform, we can arrange this. For an example of a previous TCS survey of military personnel conducted on behalf of the Center for Strategic and Budgetary Assessments (CSBA) please visit <http://www.truechoicetest.com/?loc=CSBA>. While the look and feel of this CSBA survey is similar, the question items developed by MCRMC differ substantially. (Please see Attachments E, F, and G for survey questions).

6. Who will have access to the completed collection instruments and the resulting electronic database(s)?

Only the Contractor and select MCRMC personnel will have access to the electronic database created from the survey. These data will be summarized for use by MCRMC. The Contractor will not have access to any respondent PII data (*i.e.*, email addresses). The contract with NCC provides that any data supplied by respondents, as well as any databases and analyses, remain the property of the Federal Government. None of the information can be released by the Contractor without consent of the MCRMC.

7. How will hard copies of the information be controlled, and eventually destroyed, to protect confidentiality?

The contract provides that the Contractor may not disseminate, disclose or publish any information, basic research, or findings regarding this effort outside MCRMC without the explicit approval of MCRMC and shall destroy all records and data sets at the direction of MCRMC and certify its destruction. The Commission will maintain custody of hard copy information on its secure premises. When the Commission terminates, hard copies of any data or analyses pertaining to the survey will be disposed of in accordance with applicable Government regulations.

8. Disclosure Avoidance. What steps will be taken to prevent identification of data related to a specific respondent or non-respondent from being disclosed?

As explained above, the only PII is the email address of the respondent. The email addresses will reside in electronic form on a secure WHS workstation and server that is FISMA and DIACAP compliant. A MCRMC Federal employee will perform the notifications on a WHS workstation and server using email addresses supplied by DMDC. The Contractor will not have access to these email addresses.

“Application Hosting and Security Plan” (Attachment H) provides details on the security measures for hosting the data collection platform and “Illustration of Email Notification Process on a DIACAP Compliant DOD Server and Workstation” (Attachment I) for sending out the email invitations.

As mentioned in J.3, in addition to PII, any variables that potentially disclose the identity of specific individuals due to small respondent count will be collapsed into the rest of the analysis dataset. Other disclosure avoidance techniques, such as recoding respondent email addresses and collapsing categories, will be implemented as necessary.

9. What is the smallest size (n) that will be used for the analysis/presentation of results – typically 5 or more is the minimum?

Where results for a sub-group of the sample needs to be attributed as statistically representative of its parent population, the Commission expects to generate a respondent sample size of 100-250 for each sub-group analyzed. The preferred sample size depends on the desired margin of error for prescribed confidence intervals when the results are intended to be representative of the overall population from which the sample was drawn.

A complete cross-classification of the sample defined by all demographic selection criteria will generate many sub-groups (domains) that fall below the prescribed threshold for minimum sample size. Even though data could be reported for cells where the number of observations is far less than the prescribed minimum sample size without risk of exposing personal information, MCRMC intends to report only on results that meet a standard test of statistical significance. Findings from the survey will be integrated into the MCRMC final report scheduled for release in February 2015. MCRMC has retained a statistician with expertise in survey sample design to advise on these and other matters.

We do not plan to publish detailed tables with small cells. When the analysis table has a cell with a small number of respondents, we will collapse cells. The summary survey information will be included in the Commission’s report as appropriate.

The attached MCRMC Phase 2 Sample tables display the minimum counts of completed surveys by stratum (among other items). The average completed

surveys per stratum in the tables show the range is typically between 100 and 250. These counts are sufficient to satisfy the tests of statistical significance established in the sample design.

10. Will the answers of individuals ever be shared with their leadership, or anyone else, in such a manner that they can link the answers with an individual with some degree of confidence?

No

11. If you are collecting identifiers and the responses will be retrieved by an identifier, provide the Privacy Act System of Records Notice (SORN) Identification (ID) number and title and address, and whether a Privacy Impact Assessment (PIA) has been accomplished. Include a copy of the SORN and the PIA in the survey coordination package. Will the collection, retention, and use of the information be consistent with the SORN?

MCRMC will not collect identifiers from respondents.

K. Sensitive Questions.

1. Does the survey contain any sensitive questions (e.g., income, religious beliefs, discrimination, medical and health issues, sexual behaviors)? Provide justification for any questions of a sensitive nature and any explanation provided to respondents related to asking sensitive questions

There will be no questions of a sensitive nature.

2. Could answering any question implicate the respondent in violating the law (e.g., Uniform Code of Military Justice [UCMJ])? If unsure, check with legal counsel for a determination.

No.

- L. Presentation or Publication of Results.** How will the results be used? To whom will results be presented, and how (e.g., presentations to DoD leaders and decision makers, presentations at conferences, speaking engagements, presentations or briefings to other Federal Government stakeholders, and any planned reports or publications)? Provide a timeline for the entire project, including the field begin and end dates of the survey, estimated completion date of the presentation/report, its publication date, as well as any other scheduled actions.

By statute, MCRMC is obligated to prepare a report on its findings and recommendations with respect to any changes in military compensation for delivery to the President and the Congress in February 2015. MCRMC expects that information obtained through this survey will be considered during Commission deliberations. Survey results will not be published in a separate report.

Pending DOD review and approval and release of email records by DMDC, MCRMC expects to launch the data collection effort in the field in June 2014. The survey will be in the field for 6-8 weeks for each sample.

M. Collections Employing Statistical and Non-Statistical Methods.

1. Description of the Activity. Describe the potential respondent universe and any sampling or other method used to select respondents. Estimate the expected response rates for the collection as a whole, as well as including the actual response rates achieved during the last survey, if previously conducted.

The target populations for this include both active and reserve component Service members and current military retirees. MCRMC will request data from DMDC's Data Request System (DRS) and Human Resources Strategic Assessment Program (HRSAP) files for our sampling frame. The population will be explicitly stratified by variables expected to have correlation with respondent preference on type of benefits, such as: pay group, family status (single or married, with or without child(ren)), region (duty location), deployment status (never deployed, deployed in the last two years but not currently deployed, currently deployed or deployed prior to two years); and for the retirees population: current age group, current family status, rank group (before retirement), and duty status before retirement (active, reserve or guard components). The sample will be a probability sample selected through a stratified random sample. To increase precision of the sample, in addition to using stratification as described above we will also take into account the following variables for sampling through an implicit stratification: service or reserve component, gender, and disability status for retiree population, whenever these variables are available in the sampling frame.

Based on historical response rates to surveys of military personnel provided by DMDC and others, MCRMC estimates the response rates will be above 15 percent. Surveys conducted by DMDC, such as the Status of Forces Surveys, generated response rates between 20-25 percent. The Don't Ask-Don't Tell Survey (conducted by Westat) and the Workplace and Gender Relations Survey produced similar response rates.

MCRMC realizes that response rates can vary considerably across key subgroups (for junior enlisted, for example, response rates are typically quite low). As a result, the size of the demographic sub-groups (strata) contacted will be adjusted relative to their overall population size to generate sufficient numbers of respondents in each strata. MCRMC plans to use historical response rates from sources mentioned in the preceding paragraph to adjust for this. MCRMC realizes that it will have to adjust for non-response bias and it is developing an appropriate methodology to apply when survey results are complete.

N. Survey Procedures. Describe any of the following if they are used in the survey.

1. Statistical Methodologies for Stratification and Sample Selection.

- a) Type of sampling design (e.g., probability vs. convenience, simple random sampling, stratified, cluster, multi-stage).

The Commission expects this will be a two-stage, non-proportional stratified random sample. The first phase of two samples currently in use includes 68,271 active duty and 59,621 reserve component Service members. This request for a second phase includes an additional 118,276 active duty and 232,117 reserve component Service member email address records.

The intent of this data collection effort is to capture sufficient information to exercise the preference-based modeling and analysis components of the system, and to attribute these results (mean estimates for a response item) to the populations from which the samples were drawn. The results of these modeling and analyses efforts will provide insights into how Service members value various components (and levels within components) of compensation. When integrated with actual cost data on pays and benefits, MCRMC can estimate the dollar value of Service members' preferences for alternative levels and combinations of compensation components—and compare these estimates to the actual cost of the benefit or service. We plan to use these results in conjunction with other research and modeling efforts we have underway. We believe this approach will strengthen the credibility of Commission's recommendations and their eventual adoption.

- b) Variables used to stratify the sampling frame, if applicable.

Please refer to “Variables Used to Stratify the Sampling Frame” (Attachment D) for a complete breakdown of the stratification variables and reporting domains.

Note that MCRMC intends to solicit participation from military retirees. We understand this retiree group falls outside the scope of DOD's review and approval procedures and requires instead OMB approval. The Commission has a request underway with OMB. The questions for this retiree group are of a similar nature but modified some to reflect their demographic and other circumstances.

MCRMC also took into account possible discrepancies between results obtained through administrative record files and the same information self-reported by survey participants. Discrepancies can arise for question items that exhibit more change activity, such as deployment status and family status. MCRMC has included family status as a self-reported variable, but does not presently include deployment status as self-reported. MCRMC is considering including deployment status as a self-reported item after the beta test is complete in May 2014.

- c) Proposed overall sample size.

The current sample plan includes 68,271 active duty and 59,271 reserve component Service member email address records. The MCRMC Phase 2 Sample, attached, document the need for much larger samples in the second phase of an additional 118,276 active duty and 232,117 reserve component Service member email address records.

- d) Proposed sample size per relevant subgroup (e.g., Service, pay grade, gender, etc.)

The size of the sample to contact Service members will vary depending largely on historical response rates. DMDC has provided a file of these response rates by key demographic groups that we intend to use to estimate sample sizes for those to be contacted in each sub-group (strata). We understand that the actual file that DMDC provides that satisfies the contact sample sizes we estimate for each strata will be smaller than the sum of all strata. This is because a given contact record will typically satisfy the demographic profile in more than one strata.

The participant sample sizes need to be of sufficient size to generate the statistical precision required for attributing results to the population parameters from which the sample was derived. The attached MCRMC Phase 2 Sample displays the minimum counts of completed surveys by stratum (among other items). The range of completed surveys per stratum is between 100 and 250. These counts are sufficient to satisfy the tests of statistical significance.

- e) How will potential participants be recruited (provide copies of any recruiting materials, letters, notification e-mails and reminders)?

We intend to solicit participation through emails to the target populations. Based on prior military survey experience, we would initiate 4-6 follow up reminders. Attachment A contains a copy of the revised initial invitation and reminder notice.

In an effort to increase survey response, MCRMC has substantially expanded its outreach efforts to raise awareness across key stakeholder groups, including military personnel and their influencers such as spouses, the military and civilian leadership, military and veteran service organizations, etc. The expectation is that greater awareness about the survey and its importance will translate into improved response among those receiving an invitation to participate. In addition, the Commissioners and staff have included remarks about the survey at every opportunity during public hearings and visits to military facilities.

Some of the media vehicles MCRMC is using to expand its outreach efforts include:

National Guard, 18 JUN 14:
<http://www.nationalguard.mil/News/ArticleView/tabid/5563/Article/9483/commission-seeks-service-members-compensation-preferences.aspx>

Military.com, 18 JUN 14:

<http://www.military.com/military-report/weigh-in-on-your-future-pay-and-benefits>

US Family Health Plan, 17 JUN 14:

<http://www.usfhp.com/what-parts-of-your-compensation-package-do-you-value-the-most/>

Federal Soup, 9 JUN 14 (subscription):

www.federalsoup.com/

Air Force Sergeants Association, 6 JUN 14:

<https://www.hqafsa.org//AM/Template.cfm?Section=HomeChapter>

Air Force SA Chapter 1674, http://afsachapter1674.org/?page_id=88

National Association of Uniformed Services (ROA Bulletin)

U.S. Army Reserve Operational Force Update Mass E-mail (to approx. 195,000) with Armed Force Press Service Story

American Forces Press Service (AFPS), 3 JUN 14,

<http://www.defense.gov/news/newsarticle.aspx?id=122391>

Link to AFPS article posted to USAR Facebook page,

<https://www.facebook.com/usarmyreserve?fref=nf>

- Facebook Fans: 362K
- Reach: 11,016⁴
- Likes: 325⁵
- Shares: 14⁶ (to include the Army Reserve Family Programs page (3,053 fans))

National Guard:

- 54 State and Territory Public Affairs Officers received the press release and AFPS link
- NGB posted AFPS link on their Facebook page, Twitter, Google+, 18 JUN 14
 - Likes: 146,959

⁴ Reach is the number of unique people who received impressions of a Facebook Page post. Reach might be less than impressions since one person can see multiple impressions.

⁵ When you click “Like” on a Facebook page, in an advertisement, or on Facebook content, you are making a connection. A story about your like will appear on your Timeline and may also appear in your News Feed. You may be displayed on the Page you connected to, in advertisements about that Page, or in social plugins next to the content you like.

⁶ The Share button lets you write something about a link and choose the audience you want to post to.

- Twitter followers: 142,000

U.S. Army:

- Website homepage: <http://www.army.mil/article/128051/>, 16 JUN 14
- Social media: Pending response from social media manager
- U.S. Army Acquisition Support Center: posted to Facebook page – <https://www.facebook.com/usaasc>
 - Facebook Fans: 1,303

Soldiers Magazine on Twitter: <https://twitter.com/SoldiersMag>

Marine Forces Reserve:

- Posted the AFPS story link on their Facebook page, <https://www.facebook.com/marforres>
 - Facebook Fans: 110,000
 - Reach: 10,260
 - Likes: 714
 - Shares: 17 shares
- AFPS story was posted to their website, <http://www.marforres.marines.mil/MarineReserveNewsPhotos/MarineReserveNews/NewsArticleDisplay/tabid/7930/Article/165806/mission-seeks-service-members-compensation-preferences.aspx>

Air Force Reserve

- AFRC public website on 4 June: <http://www.afrc.af.mil/news/story.asp?id=123413237>
- Posted the AFPS story link on their Facebook page, www.facebook.com/usairforcereserve
 - Facebook Fans: 6,711
 - Reach: 1500
 - Likes: 7
 - Shares: 9
 - Several of their wings were asked to share it on their Facebook pages

Naval Reserve:

- Posted the AFPS story link on their Facebook page, <https://www.facebook.com/U.S.NavyReserve>
 - Facebook Fans: 29,681

Coast Guard Reserve:

- Posted MCRMC press release on their website

U.S. Central Command:

- Col. Patrick S. Ryder, USAF, Director, Public Affairs, 16 JUN 14
 - Shared information on social media platforms

SpouseBuzz:

- Link to MCRMC press release posted to Facebook:
<http://www.afrc.af.mil/news/story.asp?id=123413237>
- Posted the AFPS story link on their Facebook page,
www.facebook.com/usairforcereserve
 - Facebook Fans: 12,000
 - Reach: 1,022
 - Likes: 4
 - Shares: 13
 - Several of their wings were asked to share it on their Facebook pages

For the future:

Expanding communication network to include Service members' spouse organizations via social media platforms

- f) Will anyone under the age of 18 be included in the survey? If so, provide copy of document obtaining consent (or assent).

No.

- g) Are any potentially vulnerable populations being targeted (e.g., prisoners, pregnant women, or individuals with impaired decision making ability)?

No.

- h) What anticipated response rate was used to determine the sample size? Is there any way to reduce the sample size so as to lower respondent burden?

For active duty and reserve component participants, we have revised our estimates downward and now are assuming an aggregate response rate of 8 percent for active duty and 4 percent for reserve component Service members.

- i) What criteria were used to determine who will receive a survey?

This is dictated by the statute prescribing the purpose and scope of the Commission's review, which can be found in the National Defense Authorization Act for Fiscal Year 2013, Pub. L. 112-239, 126 Stat. 1787 (2013) (amended by National Defense Authorization Act for Fiscal Year 2014, Pub. L. 113-66 (2013)).

j) What is the source of contact information for the sample?

We intend to rely on records sourced through DMDC and DFAS (retiree email addresses).

2. Estimation Procedures. Will the survey results be statistically adjusted/weighted so that they better estimate the population? If so, explain how this will be performed. If weighting will not be done, provide justification.

Yes. These data will be weighted to reflect the total population counts for each subgroup, according to the standards established by DMDC in prior survey research projects and with the help of a contracted statistician.

Response data will be weighted to reflect each parent population at of the time of the survey using an industry standard three-stage process.

These weights cover three areas:

- Weights to account for selection probability;
- Weights to adjust for non-response; and,
- Weights to account for known population values not included in the original stratification.

This form of weighting produces survey estimates of population totals, proportions, and means (as well as other statistics) that are representative of their respective populations. Unweighted survey data, in contrast, are likely to produce biased estimates of population statistics.

Adjustment for selection probability – Probability samples, such as the samples for junior enlisted (E1-E4) are selected from lists and each member of the list has a known nonzero probability of selection. For example, if a list contained 100,000 members in a demographic subgroup and the desired sample size for the subgroup was 1,000, one in every one hundredth member of the list would be selected. During weighting, this selection probability (1/100) is taken into account. The base, or first, weight used to adjust the sample is the reciprocal of the selection probability. In this example, the adjustment for selection probability (base weight) is 100 for members of this subgroup.

Adjustments for nonresponse – Most sampled members do not respond to a survey. Continuing the previous example, if only 15 percent of the 1,000 sample members—150—provided data, weights are needed to project the sample up to the subgroup population total (100,000). To adjust for nonresponse, the base weights are multiplied by the reciprocal of the nonresponse rate. In this example, the base weight (100) is multiplied by the reciprocal of the nonresponse rate (6.67) to create a new weight of 667. Thus, the weighted sample now sums to the subgroup population total of 100,000 (150*667).

Achieving a high response rate is often viewed as the primary mechanism for ensuring sample representativeness, however, in reality, low response rates do not necessarily indicate nonresponse bias and high response rates do not guarantee that a survey is free of nonresponse bias.⁷

In fact, bias can be introduced if the effort to increase overall response rates impacts sub-groups differentially. For example, if efforts to increase the overall response rate increase response from sample members who are already likely to respond a great deal, while only increasing response from those less likely to respond very little or not at all, the gap between responders and non-responders may become even greater.

In determining sample size for this survey, MCRMC has taken into account both the precision requirement and response rate in surveying the military population. The pre-specified precision requirement was used to derive the minimum sample size that would provide adequate precision for our estimates. This minimum sample size was then inflated by the response rate to get the final sample size released for the survey. Note that, first, generally the response rate from surveying the military population, including the one we used here, is very low. Second, the actual response rate faced during data collection may not be exactly the same as the one used in sample size calculation potentially due to different time of data collection, different topic, questions and instrument, and many other factors that contribute to response rate. Hence, in considering target survey response, the main goal of survey response is to ensure obtaining an adequate number of completions, while nonresponse will be accounted for through weighting adjustments.

MCRMC will perform a nonresponse bias analysis. The goals of this analysis are to evaluate whether there is a potential nonresponse bias when survey estimation is computed based on respondents only (without any nonresponse adjustment) and to assess variables appropriate for nonresponse adjustment procedures. When there is an indication of a potential nonresponse bias, nonresponse adjustments are needed to correct the estimates. One post-data collection statistical procedure commonly used to address nonresponse bias is weighting adjustment. Using the nonresponse bias analyses, we will determine whether and how to best adjust the weights for nonresponse. The nonresponse adjusted weight is designed to account for differences in the propensity to respond to a survey, as well as potential differences in survey outcomes between respondents and non-respondents. Once weighting adjustments are performed, our data analyses then will be conducted using these nonresponse adjusted weights.

Adjustment to known population values –Because the sample design and adjustments for nonresponse cannot take into account all demographic differences related to who responds to a survey and how they respond,

⁷ Groves RM. 2006. “Nonresponse rates and nonresponse bias in household surveys.” *Public Opinion Quarterly*. 70:646–75; Groves R., Peytcheva E. 2008. “The impact of nonresponse rates on nonresponse bias.” *Public Opinion Quarterly*. 72:1–23.

auxiliary information may be used to increase the precision of survey estimates. For this reason, a third and final weighting adjustment is computed that reproduces population totals for important demographic groupings related to who responds to a survey and how they might answer the survey. Suppose, for example, the known population for the subgroup was 8,500 living off-post and 1,500 living on-post, but the nonresponse-adjusted weighted estimates from the respondents was 7,000 living off-post and 3,000 living on-post. If we chose to report results between those living on- and off-post, we should dampen this possible bias and reproduce known population totals, the weights would be adjusted by 1.21 for off-post and 0.50 for on-post so that the final weights would give unbiased estimates of the total and for on- and off-post in the subgroup.

MCRMC is investigating what data may be available to make adjustments to known population variables. MCRMC staff will likely pull data from DMDC's DRS and HRSAP files to identify population totals for key demographic groupings. One source of some potential non-response bias is drawing the samples in a manner that may under- or over-represent Service (Army, Navy, etc.) membership. While MCRMC does not intend to report results by Service, there may be some bias in responses that is uniquely Service-specific. Because Service membership is on the records provided in the sample, MCRMC can test to see if response information does differ (given tests of statistical significance) by Service, when controlling for other key variables, such as military grade. MCRMC and its contractors can then make adjustments to reporting results, should it detect a bias attributed to under- or over-representation by Service membership among respondents.

To assist in dealing with adjustments for known population variables and other sampling topics, MCRMC has retained the services of two senior statisticians from Mathematica Policy Research with considerable expertise in sample design for large scale survey efforts.⁸

3. Maximization of Response Rates, Non-Response, Discuss methods used to maximize response rates and to address instances of non-response. Will any non-response studies or analyses be conducted?

We are aware of seasonality and time of day as factors to consider in soliciting a response, as well as the incremental (but diminishing) improvement in response using reminder notices (2-3). We realize that personal letters can also have a positive effect on response, but we consider this cost-prohibitive at this time. We also intend to over/under sample key demographic groups and will rely on survey sampling statistician's (Mathematica) experience in this area in drawing the sample to compensate for variations in non-response.

⁸ The credentials of Drs. Amang S. Sukasih and Michael D. Sinclair are available on request. Both have extensive experience in sample frame development, sample selection, weighting, imputation for missing data, non-response adjustment, and variance estimation, among other topics.

4. Tests of Procedures. Describe any pre/pilot tests of procedures or methods to be undertaken. Testing of potential respondents is encouraged as a means of refining proposed surveys to reduce respondent burden, as well as to improve the survey instrument utility.

MCRMC intends to exercise beta tests with its Contractor to test out the functionality and intuitiveness of the web-enabled survey platform prior to full roll-out. The software platform also has built-in capabilities with a dashboard display that monitors real-time completion behaviors of respondents and those engaged in beta tests. We can use this information to make some adjustment in functionality and screen image displays if necessary before or after official launch.

6. Statistical Consultation. Provide name, organization and contact information for individual(s) consulted on statistical aspects of the design.

Drs. Amang S. Sukasih and Michael D. Sinclair, Mathematica Policy Research. Contact Dan Huck 703-692-1965 or daniel.huck@mcrmc.gov

7. Collection and Analysis. Provide name, organization, and contact information of person(s) who will actually collect and analyze the survey data.

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ATTACHMENTS TO THIS DOCUMENT

ATTACHMENT A— Revised Invitation Letter and Reminder Notices

ATTACHMENT B— Illustrations of the User-Interface Design

ATTACHMENT C— Consent Information and Privacy Advisory Statement

ATTACHMENT D— Variables Used to Stratify the Sampling Frame

ATTACHMENT E— Survey Questions for Active Duty Personnel

ATTACHMENT F— Survey Questions for Reserve Component Personnel

ATTACHMENT G— Survey Questions for Military Retirees

ATTACHMENT H— Application Hosting and Security Plan

ATTACHMENT I— Illustration of Email Notification Process

ATTACHMENT J— Importance Ranking and Relative Satisfaction Ratings for Pay and Benefit Attributes

ATTACHMENT K— Demographic and Other Self-Reported Question Items

MCRMC Phase 2 Sample

DMDC SURVEY STANDARDS

A. **Survey Design/Question Formulation.**

1. Be aware of respondent burden; do not burden respondents with lengthy surveys that contain redundant or repetitive questions.
2. Use language of instructions, questions, and response alternatives written so that all respondents can understand them.
3. Choose words and questions that have unambiguous meanings.
4. Participation in surveys and focus groups should be voluntary.
5. Respondents should be able to skip individual questions that they do not want to answer unless the response is essential for rest of the survey (e.g., asking marital status for a Spouse Survey).
6. Questions about the respondent's race and ethnicity must conform to Office of Management and Budget (OMB) standards for Federal surveys; see http://www.whitehouse.gov/sites/default/files/omb/assets/information_and_regulatory_affairs/re_guidance2000update.pdf.
7. Wording for questions on marital status, education, retention, racial discrimination, sexual harassment and sexual assault should conform to accepted standards/practice commonly used in DoD/DMDC surveys unless adequate justification is provided.
8. Questions that ask the respondent to provide information about other people should be limited to areas in which most respondents would know this information.
9. Questions from copyrighted scales need permission for their use from the copyright owner
10. Consistently use highlighting (e.g., bolding, italicizing, or capitalization) to differentiate question stems, instructions, and response options. This applies regardless of whether the instrument is self-administered or interviewer-administered.
11. Consider the use of instructions (e.g., "*Mark Yes or No to each*") to tell respondents how to complete individual items or sets of items.
12. Response options should include all possible alternatives (which may be all possible alternatives or all likely alternatives or Other); the alternatives should be mutually exclusive.
13. Response options should be appropriate to the question being asked and should be balanced between positive and negative options.

14. For questions where there is a socially desirable answer, consider following a general question with one that is more specific (e.g., follow “Have you read any books in the past 12 months?” with “In the past four weeks, have you had a chance to start and finish a book?”).
15. Avoid biased or leading questions.
16. Limit questions to a simple idea or a single reference; avoid double-barreled questions (those that ask about 2 distinct constructs)
17. If using different administration modes, a question should have the same meaning in each mode, even if it should be worded differently across modes.

B. Question Organization.

1. Make it clear to respondents where to start answering questions.
2. Make it easy for respondents to go where you want them to go after giving each answer.
3. Begin with questions that are easy, enjoyable, or interesting.
4. Identify questions that could be subject to context effects (e.g., ratings on a general subject can be affected by preceding questions that ask about specific aspects of that subject). Decide if it is important to compare the results from such a question to results from the same question asked in a different survey. If so, ask the question in the same context that it was or will be asked in the other survey.
5. Ask sensitive questions toward the end of the survey.
6. Try to keep questions on the same topic together.
7. Arrange topics so that they flow in a natural or sensible way and have section headings for different survey topics
8. Decide whether one or several questions will better obtain the desired information on a concept. Remember that if each concept were measured with several questions, the survey would likely be too long.
9. Avoid asking a large number of open-ended questions. Add “Please do not include personally identifiable information (PII) to the instructions for open-ended questions.”
10. If you include open-ended questions that are both positive and negative, ask for the positive first and then for the negatives, as shown in the examples below:
 - “Is there anything in particular that you like about...?”
 - (If Yes) “What do you like about...?”

- “Is there anything in particular that you dislike about...?”
 - (If Yes) “What do you dislike about...?”

II. DMDC’S ROLE IN REVIEWING DOD SURVEYS?

DoD internal information collections must be licensed and approved in accordance with DoDI 8910.01, “Information Collection and Reporting”, Directive-type Memorandum 12-004, “DoD Internal Information Collections”, and DoD Manual (DoDM) 8910.1-M, “DoD Procedures for Management of Information Requirements”. All DoD surveys that require licensing/approval must be reviewed by DMDC in accordance with DoDI 1100.13.

Visit the DoD Internal Information Collections Website at http://www.dtic.mil/whs/directives/corres/intinfocollections/iic_home.html for guidance on the DoD internal information collections approval process.

A. Surveys Reviewed by DMDC. DMDC conducts technical and scientific review of all DoD/OSD surveys that require licensing and approval, that include one or more of the categories detailed below.

1. Surveys that include more than one DoD/OSD Component.
 - a) An example includes a survey requested by a DoD/OSD Component (e.g., Defense Agency) that requires participation of personnel from more than one other DoD/OSD Component (e.g., Army and Navy).
2. Surveys that include a DoD/OSD Component other than the Component Requesting the Survey.
 - a) An example includes a survey requested by a DoD/OSD Component (e.g., Army) that requires participation of personnel from another DoD/OSD Component (e.g., Navy).
 - b) Note: The Navy and Marine Corps are considered part of the same DoD/OSD Component; therefore, they are not required to submit a survey for review to DMDC review unless members of other Components are also included in the survey or the survey is sponsored by another Component (e.g. USD P&R).
3. Surveys that include Members of the Public, including Contractors.
 - a) An example includes a survey requested by a DoD/OSD Component (e.g., Air Force) that requires participation of contract personnel supporting the Air Force or any other sponsoring DoD/OSD Component.

B. Materials Required By DMDC To Conduct a Survey Review.

1. A request for a survey review via DMDC’s Data Request System (DRS) (<https://www.dmdc.osd.mil/dmdcrs>). To ensure the request is assigned and tracked correctly, enter “Survey Review” in the request, not “Survey Data”. Also enter the name of the survey as the title of the request entered in the DRS, which will help distinguish it from other requests for review.

- a) If you have not previously used the DRS, click the link provided above and follow the instructions to obtain an account.
2. Completion of the Survey Supporting Statement (Section I of this document).
3. Final or nearly final copies of survey instruments or interview/focus group protocols, including links to Web instruments. All survey communications, including but not limited to e-mail messages, cover letters, reminder e-mails and web screens, and instructions to potential respondents.
4. The DD Form 2936, “Request for Approval of a DoD Internal Information Collection”.

III. REFERENCES.

1. DoD Instruction 1100.13, "Surveys of DoD Personnel," November 21, 1996
2. DoD Instruction 8550.01, "DoD Internet Services and Internet-Based Capabilities," September 11, 2012
3. DoD Instruction 8910.01, "Information Collection and Reporting," March 6, 2007
4. Directive-type Memorandum 12-004, "DoD Internal Information Collections," April 24, 2012
5. DoD Manual 8910.1-M, "DoD Procedures for Management of Information Requirements," June 30, 1998