



INSTITUTE FOR DEFENSE ANALYSES

Sharing the Burden and Risk: An Operational Assessment of the Reserve Components in Operation Iraqi Freedom

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OFFICE OF THE SECRETARY OF DEFENSE
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JAN 23 2017

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FOR: SECRETARY OF DEFENSE

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FROM: MajGen Arnold L. Punaro, USMCR (Ret), Chairman, Reserve Forces Policy Board

SUBJECT: Transmittal of Institute for Defense Analyses Report for the Reserve Forces Policy Board titled "Sharing the Burden and Risk: An Operational Assessment of the Reserve Components in Operation Iraqi Freedom."

- The RFPB is a federal advisory committee established to provide you with independent advice and recommendations on strategies, policies and practices designed to improve and enhance the capabilities, efficiency, and effectiveness of the reserve components.
- On September 5, 2012, Secretary of Defense Leon Panetta met with the RFPB and tasked the Board with providing advice and recommendations regarding four questions: the best ways to use the reserve components in support of Defense Strategic Guidance; the right balance or mix of active and reserve component forces; the cost to maintain a strong reserve; and how the Department can achieve cost savings in relation to the reserve components.
- In response, on February 11, 2014, the RFPB delivered a report to SECDEF titled "Report of the Reserve Forces Policy Board on Reserve Component Use, Balance, Cost and Savings: A Response to Questions from the Secretary of Defense," with twelve recommendations concerning Secretary Panetta's questions.
- Recommendation #3 was to study the effectiveness of the Reserve Component. The Board recommended DoD charter an independent and impartial study to assess the operational effectiveness of the reserve components to better understand how well, or how poorly, operational missions were performed in Iraq and Afghanistan after September 11, 2011, and to determine necessary changes to strategies, policies, and practices to maintain or improve their performance. This recommendation was approved and the study was funded.
- The final report for Phase I of the study, titled "Sharing the Burden and Risk: An Operational Assessment of the Reserve Components in Operation Iraqi Freedom" was completed on December 9, 2016 and is provided for your consideration when making future decisions about the Total Force. Primary findings and recommendations of the study are below.

Findings:

1. Analysis of aggregated tactical level data depicted no sizeable differences between active component (AC) and RC forces in measurable metrics.
2. Strategic and operational leaders were generally pleased with RC contributions and performance in support of OIF.

3. DoD was not well prepared for large scale mobilization.
4. Disaggregation of the Time-Phased Force and Deployment Data (TPFDD) and list had major implications to services utilization of RC.
5. Relationships between the AC and the RC mattered.
6. Readiness levels mattered; individual and collective.
7. Friction between AC and RC formations varied.
8. Performance data was not systematically collected/archived DoD-wide.

Recommendations:

1. The use of RC forces should be a major topic of service and Joint Professional Military Education (JPME).
 2. DoD mobilization policies should be revised to establish decision criteria for when mobilizations should favor individual volunteers vice full unit mobilizations.
 3. Infrastructure readiness for mobilizations should be reported.
 4. The DoD should prioritize all opportunities for AC and RC engagement and exercise mobilizations to promote greater trust and confidence across all components.
 5. DoD should permanently establish "Individual Accounts" for all RCs just as it does for ACs.
 6. To the extent possible, RC forces should have the same systems and equipment as their AC counterparts.
 7. The DoD should ensure that operational performance assessments for all operations are captured and maintained by the Joint Staff.
- Phase II of the study, examining the operational effectiveness of the reserve components during Operation Enduring Freedom (in Afghanistan), is currently underway and will be complete in 2017. The RFPB will forward the results as soon as they are available.

COORDINATION: NONE

Attachment:

Institute for Defense Analyses Report, "Sharing the Burden and Risk: An Operational Assessment of the Reserve Components in Operation Iraqi Freedom"

Prepared by: Col Bart Pester, 703-681-0600



The Institute for Defense Analyses is a non-profit corporation that operates three federally funded research and development centers to provide objective analyses of national security issues, particularly those requiring scientific and technical expertise, and conduct related research on other national challenges.

About This Publication

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IDA Paper P-8177

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Operational Assessment of the Reserve
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Executive Summary

During Operation Iraqi Freedom (OIF) and Operation New Dawn (OND), Americans witnessed the mobilization of hundreds of thousands of reserve component (RC) members who answered the call of duty to serve their nation during a time of conflict. The U.S. Department of Defense (DOD) tracks the individuals deployed in various databases, while history offices, lessons learned organizations, and numerous publications highlight OIF operations. What is absent is how well the individuals and organizations performed with respect to standards, doctrine, and expectations, given resourcing, equipping, training, and time constraints. The Reserve Forces Policy Board (RFPB) tasked the Institute for Defense Analyses (IDA) to conduct an operational assessment of RC forces in support of OIF/OND, from the years 2003 to 2011. To the extent possible, IDA was to identify data that could be used to quantify RC performance and where comparative analyses could be conducted.

A. Background

The armed forces were already involved in operations both at home and abroad when OIF commenced. No-fly zones were being maintained over Iraq, Operation Enduring Freedom (OEF) and Operation Noble Eagle (ONE) were underway, along with other global operations. RC forces were already being utilized to meet these commitments. States also used their National Guard forces following the September 11, 2001, terrorist attacks, placing members in airports for additional security.

Correspondence between senior DOD leadership leading up to OIF features requests by the Services to increase the number of RC members involuntarily mobilized, and an Office of the Secretary of Defense (OSD) response to those requests, which could be characterized as both cautioned and incremental.¹ This correspondence also depicts an iterative learning process on how RC forces could be used.² There was a general concern regarding overutilization of the RC and a preference for seeking individuals to mobilize voluntarily vice involuntarily mobilizing entire RC units.³ It is important to understand this context regarding future RC use.

¹ Donald H. Rumsfeld, Memorandum for Secretaries of the Military Departments and Chairman of the Joint Chiefs of Staff, Subject: Partial Mobilization (World Trade Center and Pentagon Attacks) and Redlegation of Authority Under Title 10, United States Code, Sections 123, 1123a, 527, 12006, 12302, and 112305, 12011, and 12012, 9 September 2001.

² David S.C. Chu, Information Memorandum for the Secretary of Defense, Subject: Ordering the National Guard to Federal Active Duty, 7 November 2002.

³ William J. Haynes, II, General Counsel Information Memorandum for the Secretary of Defense, Subject: Arming National Guard Personnel in Title 32 Status, 27 March 2002.

B. Research Methodology

The first phase of the research entailed identifying operational data that could be used for assessments. Operational assessments are defined in joint doctrine as a continuous process that supports decision making by measuring the progress toward accomplishing a task or achieving an objective, with the assessment process commencing with the initiation of joint operational planning.⁴ IDA engaged the Joint Staff, the military Services, combatant commands, OSD, and others to see what assessments had been conducted and also commenced a literature review on OIF assessments. Due to the absence of a DOD-wide repository of operational performance data, IDA had to rely on other data sources in order to conduct the assessment for the second phase of the research.

1. Data Extracts

IDA queried the Defense Manpower Data Center (DMDC) for data extracts identifying monthly deployments from September 2001 through December 2014. This data would answer questions related to "who" served in OIF during what time periods.

2. Other Sources of Data

IDA was able to locate and acquire these sources of data for analysis: Significant Activities (SIGACTs) database; Theater History of Operations Reports (THOR)/Mission Report (MISREP) Analysis Tool; mobility databases; DMDC's Defense Casualty Analysis System; accidental injury data from the Services; archived histories, testimonies, interviews, after action reports, and surveys; and studies conducted by other research organizations.

Since IDA was tasked to comment on the entire mobilization and deployment process, it was necessary to interview relevant senior officials who could provide contextual insights into the decisions associated with operational planning, readiness, personnel and force management, and the conduct of the OIF. Interview participants consisted of over 100 officials and included: Chairmen of the Joint Chiefs of Staff; combatant and other warfighting commanders at all echelons; Military Service Chiefs; Chiefs of the National Guard Bureau; key DOD senior civilians; RC chiefs; State Adjutant Generals; and readiness and mobilization chiefs of the Joint Staff and the Services. Interviews were conducted "not for attribution" and, to the extent possible, when an official was from one Military Service and had supervision of or could comment on the performance of another Military Service and component, IDA documented those remarks. IDA used as many of the sources of data that could be applied to a specific Military Service.

⁴ Ibid.

C. Findings

1. Analysis of Aggregated Tactical Level Data Depicted No Sizeable Differences Between Active Component (AC) and RC Forces in Measurable Metrics

Analysis of SIGACTs, THOR/MISREP, and mobility data indicate that RC forces did what they were tasked to do, with no sizeable differences in performance from that of their AC counterparts. Combined with analysis of deployment data, casualty data, and mishap data, findings depict a shared burden and shared risk.

2. Strategic and Operational Leaders Were Generally Pleased with RC Contributions and Performance in Support of OIF

RC contributions and performance met the intent of leaders at the strategic and operational levels. RC members served the nation during a period of conflict. Without the RC, the nation could not have conducted OIF, met other global commitments, and preserved the All-Volunteer Force.

3. DOD Was Not Well Prepared for Large Scale Mobilization

From both interviews and archived materials, initially, leaders generally lacked knowledge regarding the use of RC forces, including mobilization authorities and duty status. There was also confusion as to whether the administrative chain of command or the operational chain of command would be responsible for personnel and legal actions associated with RC forces. Over time, resource investments and institutional experience mitigated some of these impacts.

4. Disaggregation of the Time-Phased Force and Deployment Data (TPFDD) and List Had Major Implications to Services Utilization of RC

The decision was made not to use the TPFDD and list for OIF.⁵ According to research participants, the TPFDD would entail an early alert of RC members. According to joint doctrine, the TPFDD is a critical component of the Joint Operation Planning Process, enabling commanders to assess risks to their plans and then sequence support for the joint force. This disaggregation of the operational plan from the TPFDD would ultimately dictate how the Military Services would be able to source their RC forces in support of OIF, posing force management challenges; RC individuals and organizations often had little advance notice regarding mobilizations. Furthermore, some individuals and units were mobilized and then trained to conduct new missions. TPFDD sourcing for these skills

⁵ Donald H. Rumsfeld, Transcript of Interview with *The Washington Post*, 20 September 2003.

and missions, in many cases, did not exist. The global force management system of today, with supporting infrastructure and systems, did not exist and would later evolve.

5. Relationships Between the AC and the RC Mattered

According to research participants, familiarity between AC and RC counterparts (from previous experiences and professional military education) improved the effectiveness of RC utilization. These relationships, over time, also built a foundation of trust that in many cases did not previously exist.

6. Readiness Levels Mattered; Individual and Collective

Individual readiness challenges added to the burden of cross-leveling personnel in organizations prior to deployment. Limited exposure to the equipment and systems of AC counterparts created a cycle of frustration and expectation mismatch between the AC and the RC. When RC forces had the same equipment and were trained on the same systems as their AC counterparts, they were more easily interchangeable.

7. Friction Between AC and RC Formations Varied

In functions where the RC brought to bear their military and civilian experience, minimal performance friction with the AC seemed to exist. The greatest performance friction appeared in ground combat discussions at division level and below; specifically, in Army National Guard Brigades and Marine Corps Reserve Infantry Battalions.

8. Performance Data Was Not Systematically Collected/Archived DOD-Wide

IDA used a variety of data sources to address the question of RC operational effectiveness. It was apparent that some of this data was collected at various times; despite the fact that joint doctrine describes how this data should be defined and captured, there was no enterprise-wide archiving of this data from OIF.

D. Recommendations

1. The Use of RC Forces Should be a Major Topic of Service and Joint Professional Military Education (JPME)

The DOD conducts operations as a Joint, Combined, Total Force; therefore, all military leaders should have a basic knowledge of mobilization authorities and duty statuses for the RC of all Services, and the benefits and limitations associated with each. DOD should consider developing this knowledge earlier in leaders' careers.

2. DOD Mobilization Policies Should be Revised to Establish Decision Criteria for When Mobilizations Should Favor Individual Volunteers Vice Full Unit Mobilizations

Reliance on individual volunteers may come at the expense of having the option of mobilizing units for operations and sustainment of those operations, and may add to the burden of personnel turnover and cross-leveling.

3. Infrastructure Readiness for Mobilizations Should be Reported

The DOD should have informed knowledge at all times regarding its ability to conduct large scale mobilizations and the associated risks.

4. The DOD Should Prioritize All Opportunities for AC and RC Engagement and Exercise Mobilizations to Promote Greater Trust and Confidence across All Components

While relationships were developed during OIF, future generations of AC and RC leaders should not wait for a mobilization in order to build relationships. Professional Military Education (PME), exercises, and current operations should all involve a heavy mix of AC and RC. In the absence of mobilizations, DOD should institutionalize exercise mobilizations in order to educate, train, and assess mobilization procedures and policy.

5. DOD Should Permanently Establish "Individual Accounts" for All RCs Just As It Does For ACs.

AC forces have "individual" accounts that provide allowances for Service members who are in trainee status, transient, and separating from the force. Those same types of accounts should be considered for RC units so that there can be better manning of RC formations and, potentially, less cross-leveling of personnel during mobilization.

6. To the Extent Possible, RC Forces Should Have the Same Systems and Equipment as Their AC Counterparts

More effective and efficient use can be made of RC forces if they have the same systems and equipment to train on and deploy with as their AC counterparts.

7. The DOD Should Ensure That Operational Performance Assessments for All Operations are Captured and Maintained by the Joint Staff

Capturing this data during operations would permit objective, quantitative assessments of performance and, perhaps, provide additional information for Joint Operational Planning.

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1. Introduction

From the 2003 commencement of Operation Iraqi Freedom (OIF) to the subsequent years of sustaining the forces and capabilities necessary to conduct that conflict, the American public witnessed the mobilization of hundreds of thousands of reserve component (RC) service members that answered the call of duty to serve their nation during a time of conflict. The Department of Defense (DOD) tracked the number of RC members mobilized during this period and various Defense Manpower Data Center (DMDC) databases captured which service members were mobilized and deployed. Government history offices, lessons learned organizations, and hundreds of publications highlight who deployed in support of OIF and Operation New Dawn (OND) campaigns and what these individuals and organizations did. This report does not replicate those products. What is absent from those products is how well the individuals and organizations performed – with respect to standards, doctrines, and expectations, given the constraints of resourcing, equipping, training, and time to prepare for overseas deployment.

The Reserve Forces Policy Board (RFPB) commissioned the Institute for Defense Analyses (IDA) to conduct an operational assessment of RC forces in support of OIF/OND from the years 2003 to 2011. To the extent possible, IDA was to identify data that could be used to quantify RC performance and where comparative analyses could be conducted between active component (AC) and RC forces. IDA was to comment on the entire mobilization and deployment process. The first phase of the research consisted of identifying if there was data available to conduct such an assessment, and where quantitative or qualitative evaluations might be most suitable. The second phase of the research involved collecting the data and conducting the actual assessments.

A. Background

When OIF combat operations commenced in 2003, the armed forces were already involved in operations both at home and abroad in support of the combatant commands (CCMDs). The second year of Operation Enduring Freedom (OEF) had commenced, Operation Noble Eagle (defense of the homeland) was underway, and operations were still being conducted in the Balkans, the Sinai Peninsula, and elsewhere globally. Additionally, the United States was still maintaining no-fly zones over Iraq. To varying degrees and levels of effort, RC forces were already being utilized by the military services to meet these operational commitments. States also were using their National Guard forces following the terrorist attacks of September 11, 2001, placing service members in airports for additional security and to reassure the American public.

Correspondence between the senior leadership of the DOD during the time period leading up to OIF highlights requests by the Services to increase the number of RC

members involuntarily mobilized, and a response to those requests characterized as both a cautioned and incremental approach.⁶ This correspondence also depicts an iterative learning process on how RC forces could be used at the Federal vice state level.⁷ There was a general concern about over dependence or overutilization of the RC. As an example, questions arose regarding use of force and arming the National Guard forces while in Title 32 status performing airport security support.⁸ These types of questions were ultimately answered by DOD General Counsel or adjudicated within the Office of the Under Secretary of Defense for Personnel and Readiness (OUSD(P&R)). There was a general preference of seeking individual members of the RC to mobilize voluntarily vice involuntarily mobilizing entire units from the RC.⁹ It is important to understand this context as it will relate to later decisions regarding RC use in support of OIF.

B. Research Methodology

As previously described, the first phase of the research entailed identifying operational data that could be used for assessments. Operational assessments are defined as a "continuous process that supports decision making by measuring the progress toward accomplishing a task, creating a condition, or achieving an objective."¹⁰ Joint doctrine highlights that the assessment process commences with the initiation of joint planning for an operation, with an emphasis on transparency and credibility; identifying both measures of effectiveness (MOEs) and measures of performance (MOPs).¹¹ IDA immediately engaged the Joint Staff, the Military Services, combatant commands, the Office of the Secretary of Defense (OSD), the National Guard Bureau (NGB), and sister research organizations to see what operational assessments had been conducted and what data existed that could be used for this research project. IDA also commenced a literature review on OIF operational performance and assessments. Ultimately, for the second phase of the research, IDA was unable to locate any DOD-wide repository of unit operational

⁶ Donald H. Rumsfeld, Memorandum for Secretaries of the Military Departments and Chairman of the Joint Chiefs of Staff, Subject: Partial Mobilization (World Trade Center and Pentagon Attacks) and Redlegation of Authority Under Title 10, United States Code, Sections 123, 1123a, 527, 12006, 12302, and 112305, 12011, and 12012, 19 September 2001, and subsequent correspondence to the Chairman of the Joint Chiefs of Staff, to the Service Secretaries, and to the Under Secretary of Defense for Personnel and Readiness.

⁷ David S.C. Chu, Information Memorandum for the Secretary of Defense, Subject: Ordering the National Guard to Federal Active Duty, 7 November 2002, and subsequent correspondence involving the Service Secretaries, the General Counsel, and with the Secretary of Defense clarifying the extent to which reserve components could be utilized within existing legal authorities.

⁸ Donald H. Rumsfeld, "Snowflake" to General Richard Myers, 25 May 2002.

⁹ William J. Haynes, II, General Counsel Information Memorandum for the Secretary of Defense, Subject: Arming National Guard Personnel in Title 32 Status, 27 March 2002.

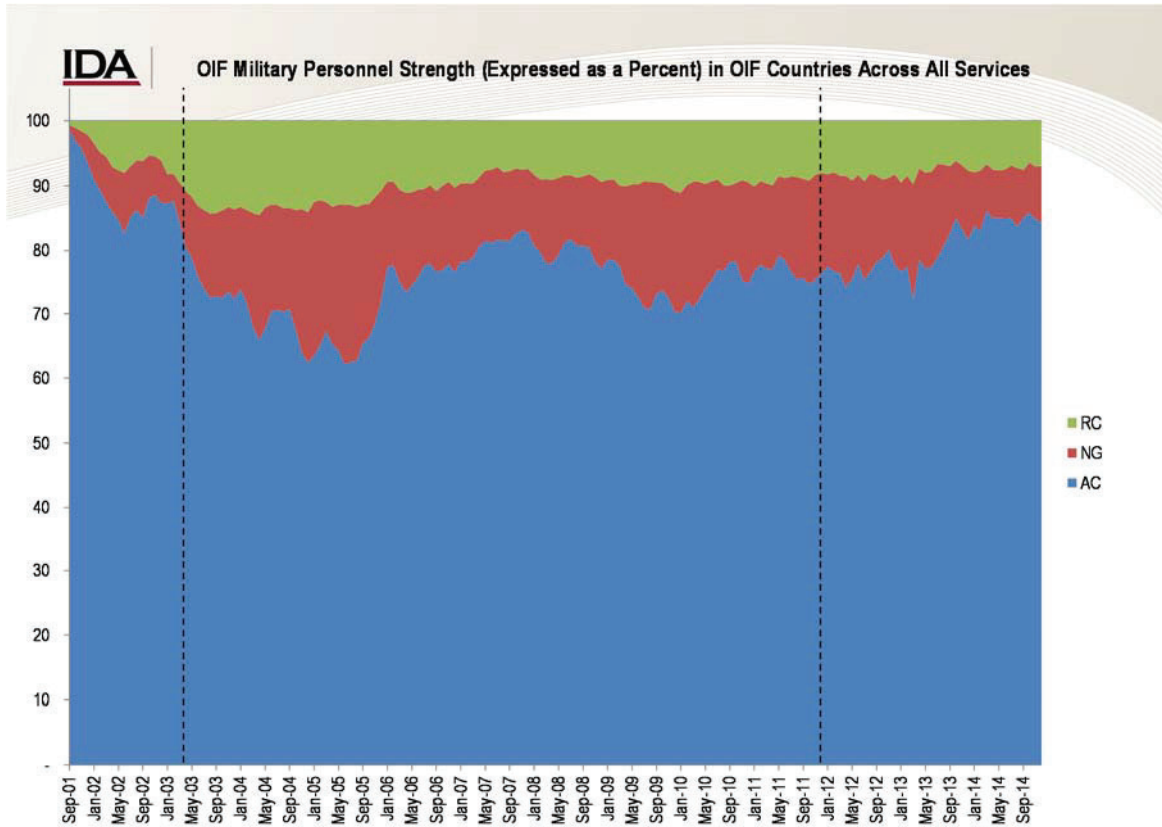
¹⁰ Joint Doctrine Note 1-15, *Operation Assessment*, 15 January 2015.

¹¹ Ibid.

performance data and would have to rely on other data sources to develop MOEs and MOPs to conduct assessments.

1. Data Extracts

Concurrent with engagement efforts, IDA queried the Defense Manpower Data Center (DMDC) in order to obtain a data extract of the personnel deployment file, which would identify monthly armed forces deployments (i.e., Air Force, Army, Coast Guard, Marine Corps, and Navy) by component from September 2001 through December 2014. This data would answer questions related to "who" served in OIF during what time periods by component. This data would also serve as denominators when considering rates associated with performance and levels of effort. In Figure 1, OIF military personnel strength is depicted as a percentage of the total deployed force by component, where RC refers to service members from the Federal reserves and NG refers to those in the National Guard.



Source: DMDC Data Extract.

Figure 1. OIF Military Personnel Strength by Percentage of Component

2. Other Sources of Data

In addition to the DMDC personnel deployment data, IDA was able to locate and secure the following other sources of data for analysis:

- The Significant Activities (SIGACTs) database from OIF
- Theater History of Operations Reports (THOR)/Mission Report (MISREP) Analysis Tool
- Mobility Databases (Logistics, Installations, and Mission Support – Enterprise View; Global Decision Support System)
- DMDC’s Defense Casualty Analysis System
- Non-hostile, accidental injury data (“mishap data”) from each of the Services’ Safety Centers, which was compiled and provided by the Office of the Under Secretary for Personnel and Readiness
- Archived histories, testimonies, interviews, after action reports, surveys
- Other studies conducted by research organizations
- Archived Combat Studies Institute (CSI) interview transcripts

Since IDA was tasked to comment on the entire mobilization and deployment process, it was necessary to interview officials who could provide contextual insights into the data and were in a position of authority associated with the conduct of OIF. These officials could provide keen insights into decision making processes associated with operational planning, readiness, personnel management, force management, and the conduct of the OIF. These IDA-conducted interviews consisted of over 100 officials and included:

- Chairmen of the Joint Chiefs of Staff
- Combatant and other warfighting commanders at all echelons
- Military Service Chiefs
- Chiefs of the National Guard Bureau
- Key DOD Senior Civilians
- Reserve Component Chiefs
- State Adjutants General
- Readiness and mobilization chiefs of the Joint Staff and the Services

In order to solicit these key insights, all interviews were conducted in a "not for attribution" means. Transcripts of interviews were then qualitatively coded using NVivo software so that IDA could determine emerging themes. To the extent possible, when an

official was from one Military Service and had supervision of or could comment on the performance of another Military Service and component, IDA documented those remarks.

In the subsequent chapters, IDA used as many of the sources of data that could be applied to a specific Military Service for the purposes of an operational performance assessment. For example, the SIGACTs data primarily pertains to ground forces; therefore, this data was only used for Army and Marine Corps analyses. The THOR/MISREP Analysis Tool contains aviation strike data; therefore, this data was used in Air Force and Navy analyses. Finally, the Air Mobility Command (AMC) databases (Logistics, Installations, and Mission Support – Enterprise View; Global Decision Support System) were used in Air Force assessments.

C. Document Overview

This document consists of six parts. The first part provides a summary of the research scope, background, and methodology. It is followed by chapters on: (1) Army RC; (2) Air Force (USAF) RC; (3) Navy (USN) and Coast Guard (USCG) Reserves; (4) Marine Corps (USMC) Reserve; and (5) Research Findings and Recommendations. Appendices include a list of research participants, a Naval Intelligence Vignette, assessment of the CSI-archived interviews, a description of the Navy aviation strike data methodology, and a description of the THOR/MISREP methodology. Since both the SIGACTs data and the THOR aviation strike data are classified, a complete write up of these assessments are included in a separate, classified appendix.

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2. Army

This chapter begins with an overview of the data sources used in the assessment of Army forces. The overview is followed by a brief description of some of types of missions performed by Army RC units and individuals in OIF, then a more detailed discussion regarding operational effectiveness.

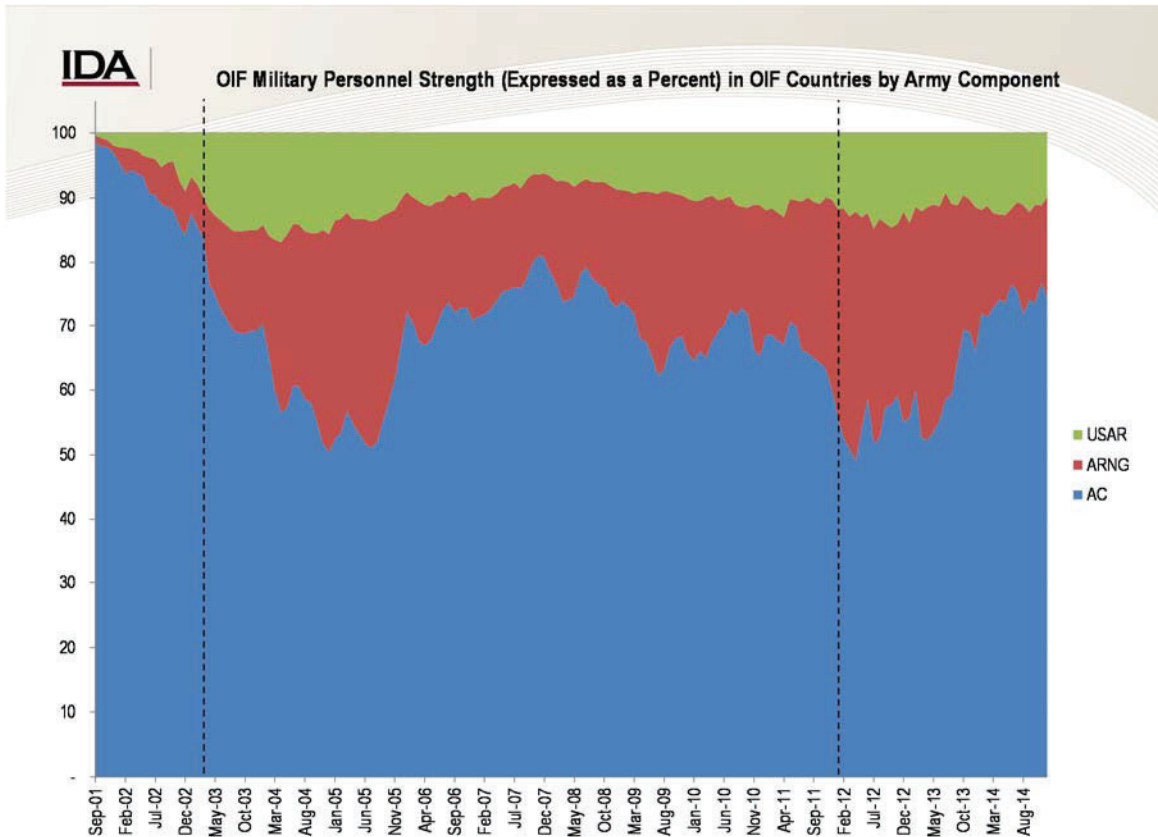
A. Data Sources

In order to consider operational assessments of Army RC forces, IDA first captured the DMDC data extracts, by component, to determine a baseline of Army forces throughout the OIF campaign. In Figure 2, IDA depicts the military strength over time, by component, as a percentage of the Army contribution to OIF. One can see that there are periods in the 2004-2005 timeframe and again in 2012-2013 where the combined personnel strength of the Army's RC matched the strength of the AC. Based on assumptions made during the creation of the all-volunteer armed forces (AVF), one would anticipate that in a protracted or large scale conflict, the Army would heavily rely at times on its RC personnel, especially with roughly half of the Army's strength residing in the RC.¹² According to the FY2003 Defense Manpower Requirements Report, Army National Guard (ARNG) and United States Army Reserve (USAR) combined strength accounted for 46 percent of the overall Army manpower, the highest percentage of any Military Service (USAF 34 percent, USN and USMC both at 19 percent).¹³

Since the intent of the research was to center on operational assessments with respect to standards, doctrines, expectations, readiness, and resource levels, sources of data used in Army force assessments included SIGACTs, casualty data, mishap data, CSI-archived interview transcripts, and IDA-conducted interviews. IDA considered any performance judgments described in the abundant documents and books published by history and lessons learned offices, documents from individuals with specific comparative knowledge, and reports from sister research organizations. IDA is extremely grateful for the assistance provided by these organizations and offices in support of this research effort.

¹² Thomas S. Gates. *The Report of the President's Commission on an All-Volunteer Armed Force*, U.S. Government Printing Office, Washington, D.C., February 1970.

¹³ Office of the Under Secretary of Defense for Personnel and Readiness, *Defense Manpower Requirements Report, Fiscal Year 2003*, April 2002.



Source: DMDC Data Extract.

Figure 2. Army OIF Military Personnel Strength by Percentage of Component

1. SIGACTs

An analysis of SIGACTs was previously conducted on behalf of OSD Cost Assessment and Program Evaluation (CAPE), and primarily focused on data associated with enemy initiated attacks (EIAs). For this research, analysis of SIGACTs was extended to consider the time periods of 2003-2011, and included an assessment of non-EIAs. For the Army, analysis entailed 172,000 data points, with roughly 146,000 SIGACTs from the AC and another 26,000 from Army RCs. The full description of the analysis of these SIGACTs is presented in the supporting classified appendix.

2. Casualty Data

IDA received a data extract from DMDC on Service member casualties in Iraq from the Defense Casualty Analysis System. The casualty data, extracted on October 6, 2015, identified each “casualty” (i.e., U.S. personnel Killed in Action (KIA) by hostile actions, non-hostile KIA, and Wounded in Action (WIA)) by incident date, unit, Service, and Component for incidents that occurred in Iraq during the period March 2003 through

October 2014. For each Service, IDA computed the number of hostile casualties per 1,000 people deployed to Iraq by both Service and Component.

3. Mishap Data

IDA received non-hostile, accidental injury data (“mishap data”) from each of the Services’ Safety Centers, which was compiled and provided by the Office of the Under Secretary for Personnel and Readiness (OUSD(P&R)).¹⁴ The data included all individuals involved in mishaps during the period October 2001 through August 2015. These mishaps were defined by category (i.e., afloat, aviation, ground, motor vehicle, or weapons); mishap class (i.e., A, B, C, or D), which is based on the total direct mishap cost and the severity of the injury/occupational illness; and severity of the injury sustained, if applicable. If an injury was sustained, then the data also indicated whether the individual lost any time (e.g., hours, days, etc.) away from work due to the injury.

4. Combat Studies Institute Archived Interview Transcripts

CSI maintains hundreds of archived OIF-related interviews that IDA accessed for this research. Starting with general officer interviews, the IDA research team qualitatively coded 109 interviews, working down officer ranks, concluding with lieutenant colonel and some major interviews. Distribution of the archived interviews, by component, was 59 AC, 28 ARNG, and 22 USAR. Each interview was uploaded into NVivo qualitative analysis software and coded for comments related to:

- Mission type
- Type of contribution (i.e., full spectrum operations (FSO), augmentation, etc.)
- RC mobilization period (i.e., alert to mobilization, mobilization to latest arrival date, etc.)
- Readiness
- Training
- Assessments of performance
- Sentiment (positive, negative, mixed, or neutral)

¹⁴ Air Force data was directly obtained from the Air Force Safety Automated System (AFSAS). The Army’s aviation and ground data were obtained from the Force Risk Reduction (FR2) tool, which is managed by the USD(P&R), Personnel Risk Reduction (PRR) that is under the Office of the Executive Director for Force Resiliency (OEDFR).

5. Other Studies, Reports, Lessons Learned, Histories

The Army documented "what" both AC and RC forces did in support of OIF via numerous publications, history and lessons learned offices, War College theses, and books produced by leaders at all levels and representing all components of the Army. As part of this research, IDA considered these documents, Government Accountability Office (GAO) reports, Congressional Budget Office (CBO) reports, Congressional Research Service (CRS) publications, materials provided by First U.S. Army, research by the RAND Corporation, testimonies, and official correspondence by the Army leadership, the Joint Staff, U.S. Central Command and its subordinate commands, and OSD.

6. IDA-Conducted Interviews

In order to obtain contextual insights related to performance and decision making processes associated with operational planning, readiness, personnel management, force management, and the conduct of the OIF, IDA conducted "not for attribution," semi-structured interviews with senior officials representing the Army, other Military Services, US Central Command, the Joint Staff, OSD Personnel and Readiness, and other organizations. Research participants included Service Chiefs, Reserve Component Chiefs, Combatant and other operational commanders, Chairmen of the Joint Chiefs of Staffs, Service and Joint Readiness Chiefs, State Adjutant Generals, Chiefs of the National Guard Bureau, Under Secretaries of Defense, Assistant Secretaries of Defense for Reserve Affairs, Service Assistant Secretaries for Manpower and Reserve Affairs, and others. Like the CSI-archived interviews, transcripts from IDA-conducted interviews were coded in NVivo software. A list of research participants can be found in Appendix A.

B. Mission Support of OIF

The *On Point: The United States Army in Operation Iraqi Freedom* series, *The Indispensable Force: The Post-Cold War Operational Army Reserve, 1990-2010*, as well as numerous unit and component histories provide excellent sources of information regarding detailed order of battle for both AC and RC Army units during OIF/OND. These publications also provide narratives regarding employment, whether as individuals or as task organized units once deployed into the operational theater.

During the years of OIF/OND, the ARNG provided key capabilities such as division headquarters, division support commands, special forces, area support groups, ordnance groups, military police and sustainment commands. The ARNG also provided combat maneuver brigades and battalions, engineer and combat support brigades, battlefield surveillance, signal, field artillery/fires, air defense, chemical, combat/theater aviation, maneuver enhancement, military intelligence, medical commands, and other organizations up to the brigade level.

To set the theater of operations and to conduct and sustain the campaign, the USAR provided theater support, engineer, and sustainment commands, training divisions, military police, civil affairs, and psychological operations commands. The USAR also provided engineer, signal, military police, quartermaster, aviation, ordnance, training support medical/combat medical, transportation, maintenance, adjutant general, contract supervision, and chaplain units and commands from the group and brigade to the detachment level. With 50 percent of Army capability and capacity residing in the RC, these capabilities had to be part of the sourcing/force management solution for the sustainment of OIF/OND and matched AC contribution of forces at several periods, according to the DMDC data.

1. Preparations and Disaggregation of the TPFDD

When the decision was made to execute OIF, Army AC and RC forces were already committed or forward-stationed both domestically and globally in locations such as the Sinai, the Balkans, South Korea, Germany, Afghanistan, Italy, and elsewhere. The decision to disaggregate the TPFDD from the operational plan and not to conduct early alerts for members of the RC meant that doctrinal timing and synchronization would be off for the operation. The flow of required forces, from mobilization to arrival in theater, would proceed via ad hoc means. Research participants from both Army AC and RC and from other Services who were involved in the planning, readiness, personnel management, and force management decision making processes made it very clear that the secondary and tertiary impacts of the disaggregation limited how each Service would be able to use their RCs in OIF. In many cases, this disaggregation resulted in extremely short alert-to-mobilization times, resulting in little-to-no predictability for the RC, as well as less ready units being deployed ahead of others. For example, over 10,000 USAR soldiers received as little as three-to-five days' notification of mobilization when supporting OIF 1.¹⁵ Since the majority of Army RC personnel have other full time careers and jobs, such short alert-to-mobilization times provided almost no time for the RC members and their employers to respond to the impending mobilization.¹⁶ Furthermore, once deployed, with TPFDD disaggregation, RC units would not receive their equipment in a timely manner because synchronization of the shipping was off and the equipment had not yet arrived in the operation theater.

¹⁵ James R. Helmly, Lieutenant General, Chief, Army Reserve, Memorandum for the Chief of Staff, U.S. Army Subject: Readiness of the United States Army Reserve, 20 December 2004, describing the magnitude of the late alert notifications in OIF 1.

¹⁶ Comments by Army RC research participants.

2. Army Modularity and Transformation

In order to meet ongoing operational requirements/demands associated with OIF, OEF, and to permit time for the Army AC to conduct transformation to modular brigade combat teams (BCTs), research participants described the decision to mobilize and deploy five ARNG combat maneuver brigades. According to participants, these brigades were given purposeful missions and sectors that would provide the greatest probability of success based on given levels of readiness and post-mobilization training. Looking at the DMDC data in Figure 2, it is during this specific period of the conflict that Army RC personnel contributions matched AC contributions in 2005.

3. Individual Augmentees

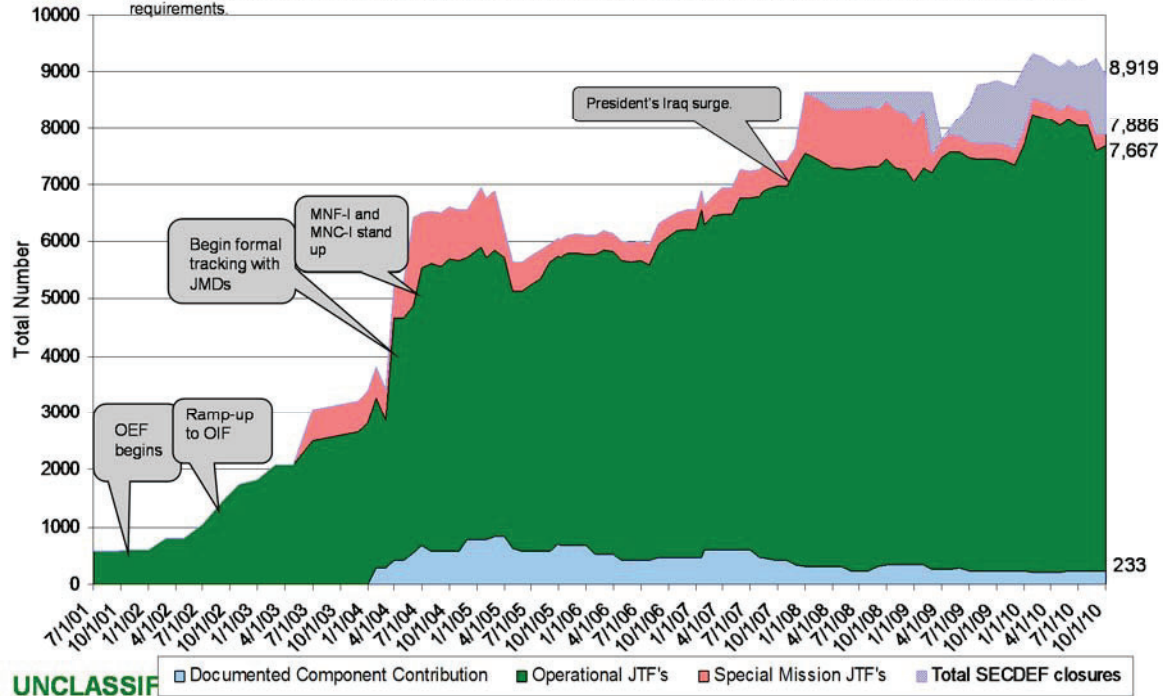
RC members deployed to fill numerous individual augmentee requirements, both Service and joint (domestic and abroad). Coalition and joint operational staffs, for example, and training teams were oftentimes staffed via Joint Manning Documents (JMDs) which are defined as unfunded, temporary manpower requirements of a CCMD.¹⁷ These requirements significantly increased following September 11, 2001, as depicted in the 2010 United States Joint Forces Command Joint Individual Augmentee (JIA) trend line (Figure 3). Army AC and RC members filled many of these Service and joint individual augmentee positions in order to sustain OIF/OND; the Army Worldwide Individual Augmentation System archived these contributions.

¹⁷ Joint Publication 1.0, *Joint Personnel Support*, 31 May 2016.



Joint Individual Augmentation (JIA) Trend Line

Source: Joint Manning Document Requirements as of 30 September 2010. Shows JIA requirements portion of the JMDs. Does not include Unit-fill, Contractor, Other Government Agency or Coalition positions which, with JIA, comprise Total JMD requirements.



Source: United States Joint Forces Command, September 2010.

Figure 3. JIA Trend Line, September 2010

4. Non-Standard Missions – In-Lieu-Of and Ad-Hoc Sourcing

In addition to mobilizing for "standard" unit missions either to free up the Army AC to deploy in support of global operations or to conduct the operations themselves (such as in the Balkans and the Sinai), RC units were part of "non-standard" OIF sourcing solutions that the AC would otherwise not have been able to fill. These types of operations oftentimes required unit personnel to learn new skills or operate in different environments:

- **In-lieu-of forces**—units trained and deployed to execute missions outside of their core competencies; for example, Army artillery units that are trained and then deployed to fill requirements for military police units.
- **Ad-hoc forces**—temporary units formed by consolidating individuals and equipment from various commands or services and then training these personnel

to meet mission requirements; for example, the transition teams that trained Iraqi forces.¹⁸

C. Operational Effectiveness

This section provides a description of what IDA synthesized from sources of data such as reports, testimonies, lessons learned, histories, and CSI-archived and IDA-conducted interviews. The section is organized under the major topics of readiness, personnel and force management, training, and specific performance assessments.

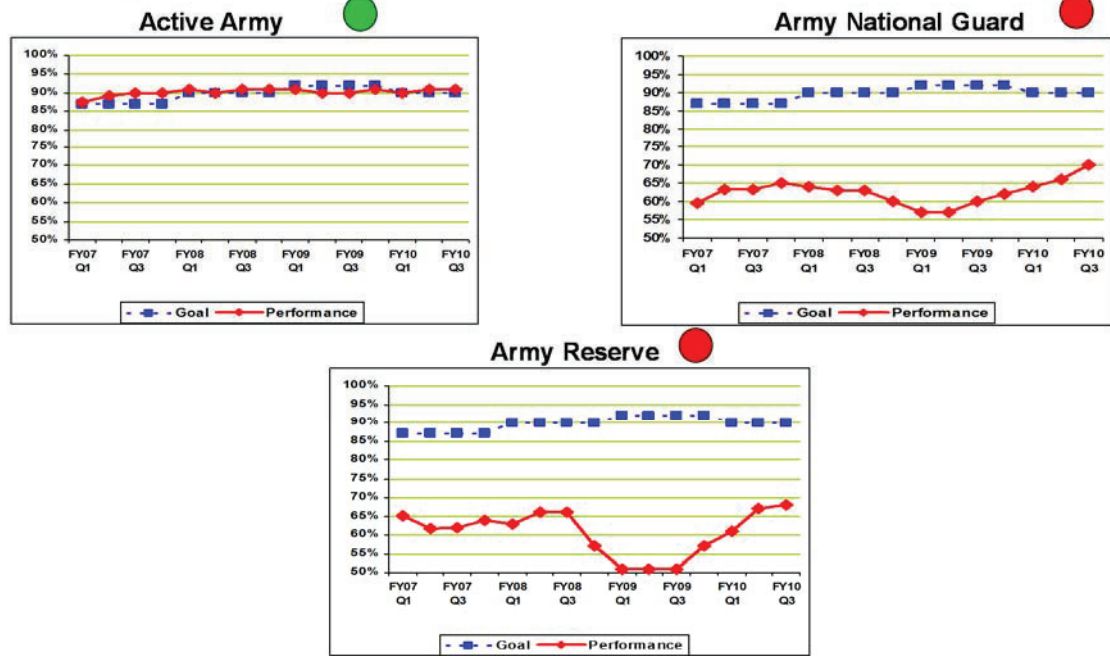
1. Readiness

Individual and unit readiness of the Army RC was a major topic of concern not only from the perspectives of Army AC and RC leaders, but also from the leaders of other Services that were involved in force sourcing decisions for OIF, or would be receiving capabilities provided by the Army RC. Some research participants from other Services had not worked with units with such equipment and training shortfalls. Also aware and concerned about Army RC readiness were the National Guard Bureau (NGB), State Adjutant Generals (TAGs), Office of the Secretary of Defense (OSD), and others. In terms of individual readiness, the topic of medical and dental readiness tended to surface the most, since there was a large disparity between AC and RC readiness levels, and soldiers would be rendered non-deployable if not deemed ready. RC units would have to cross-level personnel from other units in order to replace non-deployable soldiers. Figure 4, taken from a 2010 OUSD(P&R) *Monitoring the Status of the Force* presentation, depicts this difference in terms of goals and actual performance for all Army components.

¹⁸ Government Accountability Office (GAO)-08-670, *Joint Policy Needed to Better Manage the Training and Use of Certain Forces to Meet Operational Demands*, May 2008.



Medically Ready Army



Return to Measure

Return Medically Ready Aggregate

Medically Ready – Navy 32

Source: OUSD(P&R), Monitoring the Status of the Force, 2010.

Figure 4. Army Medical Readiness by Component

In terms of unit readiness, except for some very specific capabilities, Army RC units were maintained at the lowest readiness levels that the Army felt that they could take the risk, given limited resources. This meant that if these RC units were required for mobilization and overseas deployment, they would have to be manned, equipped, and trained to bring them up to much higher levels of readiness. According to the February 2001 National Guard and Reserve Equipment Report (NGRER), there was concern regarding interoperability and compatibility between AC and RC units, since units were "frequently equipped differently even when organized to conduct the same or similar combat mission."¹⁹ Figures in this NGRER depict Army RCs with the lowest percentage of equipment available to meet mobilization requirements compared to all other RCs.²⁰

¹⁹ National Guard and Reserve Equipment Report for Fiscal Year 2002, February 2001, p.1-2.

²⁰ Ibid.

For the actual RC members mobilized in support of OIF, oftentimes, the first time that they were exposed to the same systems and equipment of their AC counterparts was either at their mobilization site, at their mission rehearsal exercise, or once deployed and into the operational theater.²¹ The interoperability and compatibility concerns of the FY2002 NGRER became a reality, since this late fielding had the effect of creating a cycle of frustration and expectation mismatch between the RC and the AC. Both research participants and the CSI-archived interviews highlighted this frustration. Participants described how equipment purchases from the use of Overseas Contingency Operations funds, and institutional experience gained through adaptations, knowledge, and many deployments, mitigated many of these issues over the years of the OIF/OND campaign.

2. Personnel and Force Management

To meet the large force requirements associated with the commencement of OIF, to sustain those operations, and to meet other global requirements, Army AC and RC made extensive use of Stop Loss to maintain unit strength, enhance unit integrity, and maintain as much unit cohesion as possible for deploying units.²² The Army would continue to use Stop Loss until it was permitted to grow the size of its force and when overseas demands for forces diminished. Upon assuming office, Secretary of Defense Robert Gates provided guidance to the entire DOD about minimizing the use of Stop Loss. For Army enlisted, both AC and RC, the height of Stop Loss use took place in March of 2005 when almost 16,000 soldiers were under this authority.²³ In addition to the use of Stop Loss, the Army made use of the Individual Ready Reserve (IRR) to fill gaps in deploying units, conducted force rebalancing/restructuring efforts, modularized their forces, and grew the size of their force (approximately 65,000 AC, 8,200 ARNG, and 1,000 USAR).²⁴

Both Army AC and RC missed accession goals for appropriate numbers of recruits as the OIF/OND conflict continued. Subsequently, the Army chose to admit soldiers who "did not meet the standard entrance requirements for reasons such as prior criminal misconduct."²⁵ In FY2008, roughly 12 percent of all recruits admitted by the AC had a

²¹ Comments by multiple Army RC research participants, other Service RC research participants, and by civilian research participants.

²² Charles A. Henning, Congressional Research Service Report for Congress, *U.S. Military Stop Loss Program: Key Questions and Answers*, 10 July 2009.

²³ Ibid.

²⁴ United States Government Accountability Office (GAO)-09-256 Report to the Subcommittee on Military Personnel, Committee on Armed Services, House of Representatives, *Army Needs to Focus on Cost-Effective Use of Financial Incentives and Quality Standards in Managing Force Growth*, May 2009.

²⁵ Ibid.

conduct waiver, while others entered both the USAR and ARNG.²⁶ Waivers were also granted for those without high school degrees. The all-volunteer force (AVF) "outsourced defense to the willing, . . ., if you needed to expand the force, it took a long time, . . ., you could not mass-produce highly trained, well-led, technically educated modern units."²⁷ When instituted, "it was generally not expected that an AVF could be sustained during a protracted period of combat."²⁸ The Gates Commission, in its 1970 report regarding the creation of an AVF, even recommended standby conscription "which could be put into effect promptly if circumstances require mobilization of large numbers."²⁹ Yet, the AVF did not break and the Army eventually was able to end the enlistment of those with serious conduct waivers without the nation having to consider a standby conscription.

Research participants discussed cross-leveling of personnel in order to meet deployment requirements.³⁰ Much literature and research has been conducted on this issue since the commencement of OIF/OND. For example, the RAND Corporation considered many of the factors related to leadership stability in Army RC units.³¹ Army regulations outline the criteria for non-deployable soldier status and two of those criteria are non-completion of Initial Entry Training (IET) and non-completion of Basic Officer Leadership Course (BOLC) or Warrant Officer Basic Course (WOBC).³² These are the military occupational specialty (MOS) and branch qualifying courses for both enlisted soldiers and officers. AC units do not receive individuals until these courses have been completed. Instead, the Army AC maintains a Trainees, Transients, Holders, and Students (TTHS) account where this manpower remains until no longer in trainee status.

RC soldiers are assigned to units prior to the completion of these training/courses; therefore, while in a non-deployable status, the soldier still counts against end strength and force structure allowance adding to the potential requirement for cross-leveling of mobilizing units. In a 2010 USAR information paper, new officers wait an average of 293

²⁶ Ibid.

²⁷ Daniel P. Bolger, *Why We Lost: A General's Inside Account of the Iraq and Afghanistan Wars*, Houghton Mifflin Harcourt Publishing, New York, 2014, p.xxxviii.

²⁸ Memorandum to the Chairman of the Defense Science Board, Final Report of the Defense Science Board Task Force on *Deployment of Members of the National Guard and Reserve in the Global War on Terrorism*, 4 September 2007.

²⁹ Thomas S. Gates, *The Report of the President's Commission on an All-Volunteer Armed Force*, U.S Government Printing Office, Washington, D.C. February 1970.

³⁰ Cross-leveling refers to replacing personnel from deploying units (who are not deployable) with deployable personnel from other, non-deploying units.

³¹ Thomas F. Lippiatt and J. Michael Polich, *Leadership Stability in Army Reserve Component Units*, RAND National Security Research Division, 2013.

³² Department of the Army Personnel Policy Guidance for Overseas Contingency Operations, dated 1 July 2009.

days from their commission date to their BOLC report date.³³ For the ARNG, in 2009, there were 46,491 soldiers that had not completed their IET, 6,524 soldiers enrolled in officer producing courses, and 3,880 warrant and commission officers that had not completed their WOBC/BOLC.³⁴ Based on the FY2010 Defense Manpower Requirements Report, this number represents over 16 percent of the ARNG strength.³⁵ While the USAR did institute a TTHS-like account, RC research participants suggested that prior to the onset of major operations involving the RC, those same types of accounts should be considered for all RC units so that there can be better manning of formations and potentially less cross-leveling of personnel during mobilization.

In terms of force management policy, the Army ultimately decided that forces would deploy for a 12-month duration in order to sustain the requirements of OIF. This would vary in OIF 1 and during the commencement of OIF surge operations, when deployments were extended to 15 months. This policy varied from previous deployments and had cascading impacts for the Army RC. According to a December 2004 memorandum from the Chief of the Army Reserve (CAR) to the Army Chief of Staff, different deployment policies for Guantanamo Bay, the Sinai, and the Balkans, followed by periods of demobilization were adding to the cross-leveling requirement and leading to readiness issues with the USAR.³⁶ Previous demands to mobilize only volunteers from the USAR instead of units and a series of restrictive mobilization policies were also cited as contributing to what was "rapidly degenerating into a broken force."³⁷ Additionally, the memorandum cited the Army's rapid demobilization of USAR forces, only to mobilize the same soldiers again in three months.³⁸ A Land Warfare Paper, published in 2009 by the Army War College, described the processes for mobilizing RC units as "arcane, opaque, and generally poorly understood except by the specialists who work with them."³⁹

Concerns regarding overuse of the RC led Secretary of Defense Robert Gates to publish a January 2007 memorandum limiting involuntary mobilizations to a maximum of one year, and directing that the mobilization of ground combat, combat support, and

³³ United States Army Reserve Command Information Paper, *AR BOLC Quota Utilization*, 4 March 2010.

³⁴ Kelly C. MacNealy, Program Research Project. *Manning Army National Guard Units for Deployment*, U.S. Army War College, Carlisle Barracks, PA 17013, 5 November 2009.

³⁵ Defense Manpower Requirements Report for Fiscal Year 2010, May 2010, p.2.

³⁶ James R. Helmly, Chief Army Reserve Memorandum to Chief of Staff, U.S. Army, Subject: Readiness of the United States Army Reserve, 20 December 2004.

³⁷ Ibid.

³⁸ Ibid.

³⁹ Dennis P. Chapman, *The Land Warfare Papers*. Number 74, "Manning Reserve Component Units for Mobilization: Army and Air Force Practice," September 2009.

combat service support would be managed on a unit basis.⁴⁰ Since RC forces from other Services did not routinely deploy for 12 months (Service force management models varied significantly), the Army and organizations supported by the Army and its RC were heavily impacted by this policy. Army AC and RC units would now deploy for different periods of time, adding to the complexity of force sourcing solutions. Research participants highlighted that the requirement of the 12-month mobilization policy fundamentally changed how certain RC units would be utilized in support of OIF/OND. Army focus shifted to prioritize and optimize missions where essential tasks could be accomplished in the shortest post-mobilization time in order to maximize deployment time. It was also at this point that ARNG combat maneuver brigades were no longer routinely sourced to replace AC brigades in OIF for *land-owning, full-spectrum* operations, as previously done. These missions required readiness proficiency on a greater number of tasks.

3. Training

With limited alert time prior to mobilization, especially during the early years of OIF, both the CSI-archived interviews and the participants of IDA-conducted interviews highlighted a number of concerns regarding the value and relevancy of post-mobilization training, as these related to missions that would actually be performed in OIF. Exercises and collective training were valued by RC research participants and also highlighted in the CSI interviews, but there was pervasive tension between what RC commanders knew were collective training requirements and needs (post-mobilization) and the given post-mobilization focus on individual tasks, that had oftentimes already been conducted by the RC units (pre-mobilization), at the expense of collective training. According to RC research participants, this collective and individual training friction had to be "adjudicated" based on existing relationships, commander intervention, or by intervention of TAGs or USAR commanders. Interview participants from both the AC and RC reiterated that relationships mattered significantly. If AC and RC leaders had worked together, attended professional military education (PME) together, had gone to warfighter exercises, or deployed together on previous missions, then a basic relationship had been established that both AC and RC leaders valued and laid the foundation for both trust and confidence.

The OIF/OND campaign was a joint and combined operation and, once deployed, Army forces were task-organized and employed as the mission dictated. For the Army RC, not only was this the first time many units worked with Army AC units while deployed, it was the first time employed in a contingency operation working with or for other Services and coalition partners. Archived material and participant interviews highlight this gap in training preparation. Additionally, a CSI study of Operation Al Fajr highlights challenges

⁴⁰ Robert M. Gates, Secretary of Defense Memorandum for the Secretaries of the Military Departments, Chairman of the Joint Chiefs of Staff, and Under Secretaries of Defense, Subject: Utilization of the Total Force, 19 January 2007.

with interoperability that were overcome by "well educated and professional Army and Marine leaders at the lieutenant colonel and colonel levels...to synchronize operations."⁴¹ Communications systems were not compatible, tactics and procedures were different, and dissimilar systems slowed the "disbursement" of intelligence information.⁴² In this case, AC officers were able to overcome these interoperability challenges, but joint training for both the AC and RC is certainly merited to address challenges in the future.

Feedback and lessons learned during OIF/OND helped shape the content of pre-deployment training and the training that individuals and organizations received once deployed into the theater of operations. Additionally, U.S. Central Command issued guidance on required individual training based on lessons learned from OIF, which was incorporated by the Army and the other Services.⁴³ U.S. Army Forces Command and First U.S. Army, working with Army Component Commands, would tailor training for both AC and RC units identified for deployment, develop mobile training teams, and incorporate lessons into combat training centers and for use during culminating or mission rehearsal exercises.⁴⁴ U.S. Army Training and Doctrine Command ensured that individual training and education would incorporate OIF lessons as well. In fact, the Army would not only train its own forces and personnel, but some from other Services as well.⁴⁵ With the 2007 DOD policy of 12 months maximum involuntarily mobilization, the Army also emphasized pre-mobilization training for deployment, to the extent that it could.⁴⁶

One area of training deficiency, repeatedly highlighted by research participants, CSI transcripts, and literature, was foreign language and regional and cultural competence (LREC). The Iraq Study Group, led by James Baker and Lee Hamilton, commented that U.S. efforts in Iraq "are handicapped by Americans' lack of language and cultural understanding."⁴⁷ Previous IDA research, that entailed visiting Language Training Detachments, indicated interest in LREC training for deploying forces. As the throughput

⁴¹ Matt. M. Mathews, *Operation AL FAJR: A Study in Army and Marine Corps Joint Operations*. Combat Studies Institute Press, Fort Leavenworth, KS, 2006.

⁴² Ibid.

⁴³ United States Department of Defense Inspector General Report No. D-2008-078, *Training Requirements for U.S. Ground Forces Deploying in Support of Operation Iraqi Freedom*, 9 April 2008.

⁴⁴ 1st United States Army IDA Information Briefing, 27 June 2013.

⁴⁵ Hearing Before the Readiness Subcommittee of the Committee on Armed Services House of Representatives One Hundred Tenth Congress First Session (H.A.S.C. No. 110-81), *The Use of In Lieu Of, Ad Hoc and Augmentee Forces in Operations Enduring Freedom and Iraqi Freedom*, 31 July 2007.

⁴⁶ Ellen M. Pint, et al. *Active Component Responsibility in Reserve Component Pre- and Postmobilization Training*, RAND Corporation, 2015.

⁴⁷ James A. Baker, III and Lee H. Hamilton, *The Iraq Study Group Report*, Vintage Books: New York, 2006.

of RC soldiers through these detachments appeared limited, LREC training was not a priority.⁴⁸

4. Performance

The following section summarizes some of the unclassified analyses related to RC performance not previously described in this chapter.

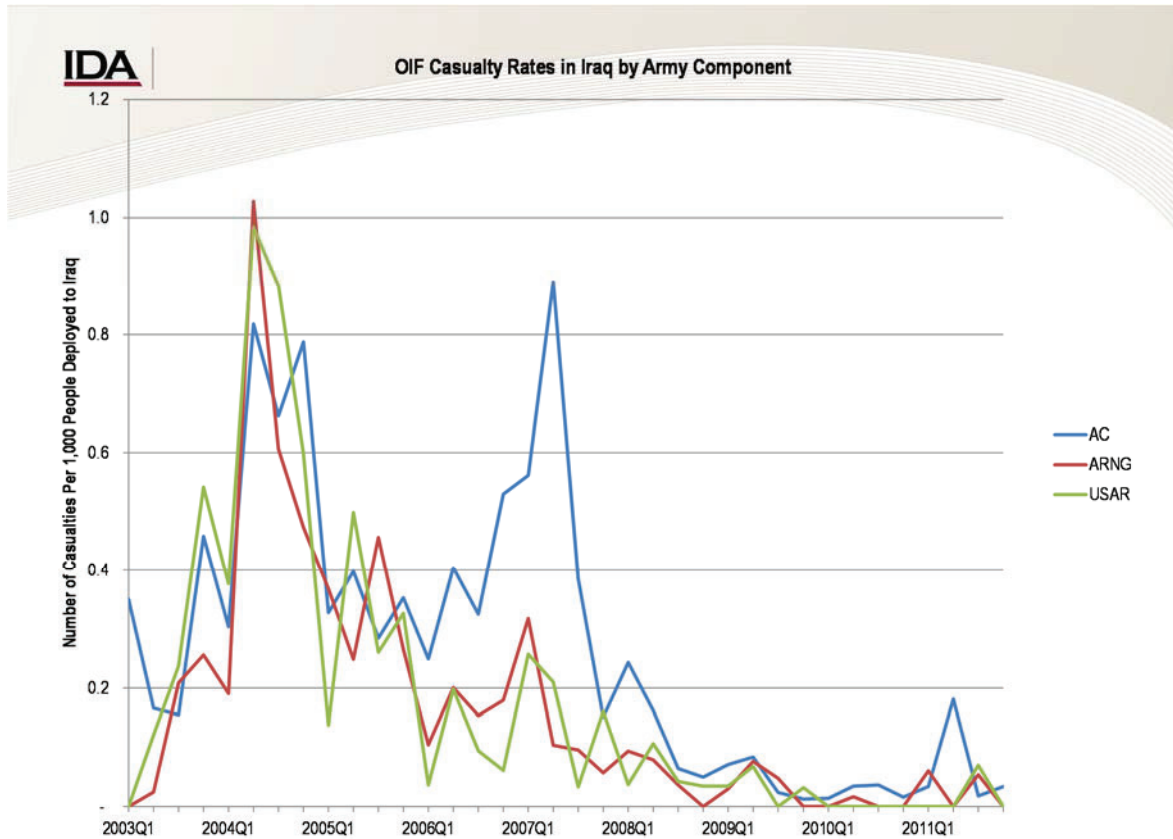
a. SIGACTS

For this analysis, IDA was able to assess 172,000 Army SIGACTs reports as described earlier in the chapter, with detailed results presented in the classified supporting appendix. In terms of the SIGACTs reporting from 2003 to 2011, AC and RC shares for EIAs and non-EIAs were generally consistent over time, although the mission profiles differed for Army AC and RC. In terms of improvised explosive device (IED) outcomes, aggregated IED casualty rates were usually lower and neutralization rates higher for the RC compared to the AC. Regarding analysis of both EIA and non-EIA events, differences between Army AC and RC measures of interest were minimal.

b. Casualty and Mishap Data

Analysis of casualty and mishap data does not directly depict performance, but it can provide other insights with regards to AC and RC OIF contributions.

⁴⁸ Joseph F. Adams, et al., *Enhancing and Managing Regionally Oriented Individuals and Organizations*, IDA Paper P-5161, June 2014.



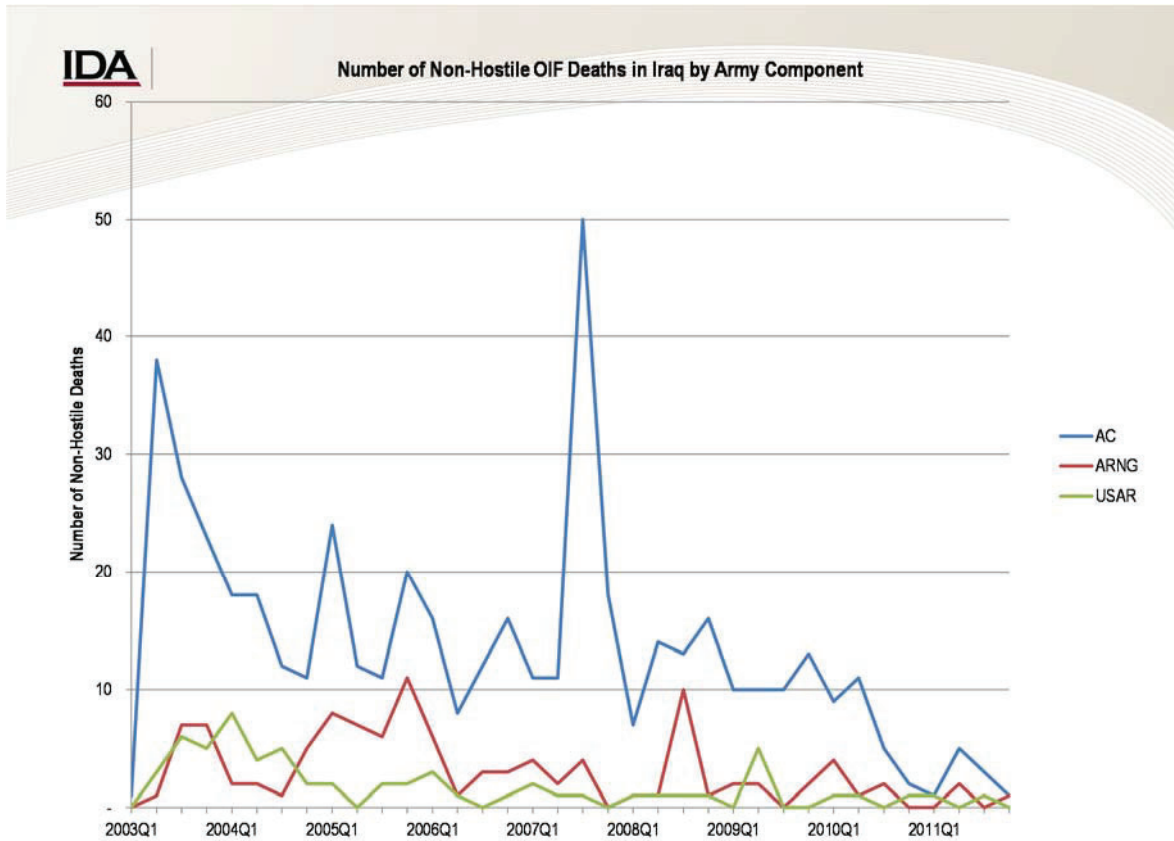
Source: DMDC's Defense Casualty Analysis System.

Figure 5. OIF Casualty Rates by Army Component (Per Thousand Deployed)

In Figure 5, Army casualties by component are considered in terms of the number of personnel deployed. Casualty rates are computed per 1,000 deployed soldiers of a component. One observes that in the 2004-2006 time period, Army RC casualty rates exceeded that of the AC during several points; whereas, in the 2007 time period, the AC casualty rates were higher than RC rates. Again, casualty rates do not necessarily depict performance, nor do they show total numbers; but, they do indicate a shared burden and risk.

In terms of non-hostile deaths in OIF, the numbers are much smaller than the casualty numbers. Figure 6⁴⁹ takes a look at the raw numbers. IDA computed fatality rates as a percentage of deployment man-months based on data identifying the component.

⁴⁹ When parsing the accident data further, the presence of data where the component is not identified frustrates attempts to conduct extensive analysis for this research.



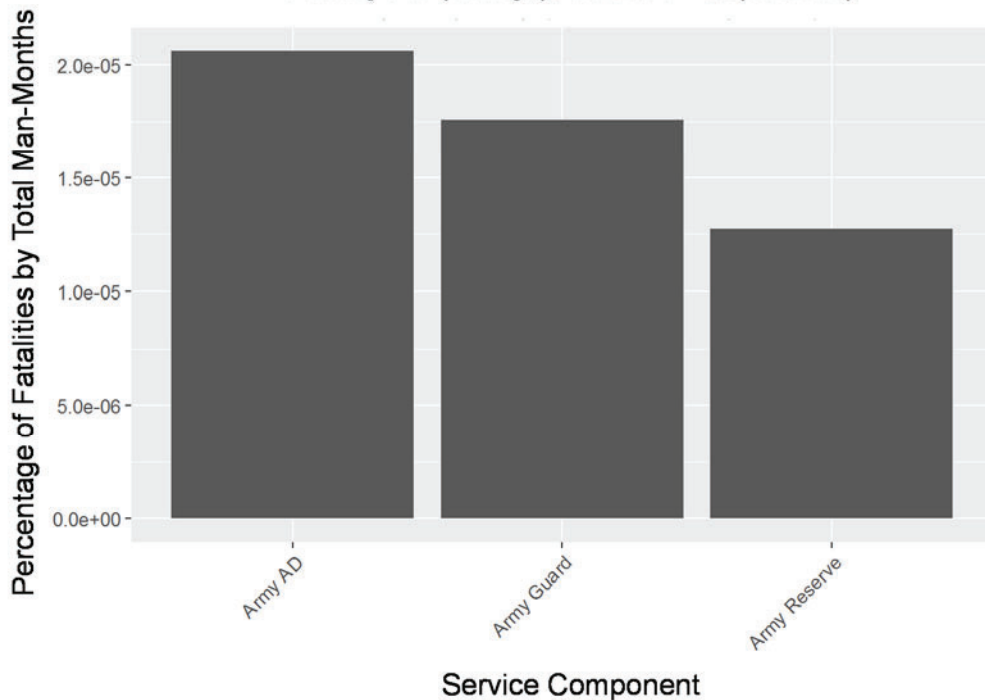
Source: Army Force Risk Reduction (FR2) Tool.

Figure 6. OIF Non-Hostile Deaths by Army Component

In Figure 7, these rates are presented as a percentage. Again, these are not performance data per se, but depict certain aspects of effort or contribution to the operation. Overall observations are that non-hostile fatalities showed a slight downward trend over time and, as a percentage of deployed soldiers, accidental fatality rates declined strongly over time. Though IDA plotted mishaps by Service, component, category, and severity of injury for those who were supporting OIF statistically significant differences in mishaps between the Active and the Reserve Components did not exist.

IDA | Fatalities as Percentage of Deployments, Army

Fatality Frequency (Oct. 2001 – Sept. 2015)



Source: Army Force Risk Reduction (FR2) Tool.

Figure 7. OIF Fatalities as a Percentage of Deployments by Army Component

c. Additional Comments from IDA-Conducted Interviews

Research participants, especially those who had worked at the strategic and operational level, were pleased overall with RC contributions and performance in OIF/OND and commented that they met their intent. Participants representing all of the Services and components highlighted that when needed, RC forces and individuals served, whether in voluntary or involuntary status, and enabled the Army to sustain its level of effort for as long as it did without breaking. Participants from all components also described how the extensive use of the Army RC kept the Nation's communities supporting Service members for as long as they did.

The research participants, not only from the Army, but representing other Services, described how the Army was simply not ready for large scale mobilizations at the onset of OIF. The Army had not invested in that infrastructure and infrastructure was not in place. Conditions would not improve until resourcing levels, investments, equipment purchases, and institutional experience, gained through years of mobilizing and deploying RC forces, mitigated these impacts.

Research participants from all Services and components brought up the subject of good order and discipline. Cases such as detainee abuse at Abu Ghraib Prison, the atrocities at Mahmudiyah, and others involving both AC and RC soldiers are tragic and documented.^{50,51} Participants highlighted confusion at the highest levels about whether the operational or administrative chains of command would be responsible for personnel actions, to include both judicial and non-judicial discipline. Participants also mentioned reliefs of command, so IDA attempted to obtain both disciplinary and command relief data for analysis. This data was not made available at the time of this paper.

As previously described, research participants stressed how relationships mattered and how the development of relationships between components and between Services built the foundation of trust and teamwork necessary to prosecute the campaign. In terms of operational communities and organizational staffs, those that possessed periodic operational/deployment, warfighter, and training center experience with their AC counterparts and with joint entities, seemed to integrate easier once mobilized and deployed in support of OIF. According to transcripts and interviews, with regard to functions and missions where RC organizations and individuals brought to bear their vast experiences, to include those from outside of military service, minimal performance friction with the AC seemed to exist. From archived material and from interviews of both AC and RC personnel, the greatest friction appeared in ground combat discussions at the division level and below and focused on ARNG combat maneuver brigades and staffs.

d. Analysis of CSI-Archived Interviews

Comments interrogated by the qualitative coding of archived CSI interviews have been incorporated, to the extent possible, throughout this chapter. Full discussions describing analysis of these interviews is provided in greater depth in Appendix B.

D. Conclusion

This chapter described sources of data for the Army portion of the research, considered the missions supporting OIF/OND, and then described operational effectiveness and performance, to the extent possible. With limited actual performance data collected and available for analyses, IDA analyzed SIGACTs and observed that with both EIA and non-EIA measures, aggregated tactical data depicted little difference between Army AC and RC forces, although mission profiles differed. IDA also observed the shared burden associated with component casualty rates and non-hostile fatalities. Comments from research participants, representing all Services and components, added contextual

⁵⁰ Anthony M. Taguba, Article 15-6 Investigation of the 800th Military Police Brigade, 26 February 2004.

⁵¹ John H. Cushman, *Chain of Command Performance of Duty, 2d Brigade Combat Team, 101st Airborne Division, 2005-06: A Case Study Offered to the Center for the Army Professional Ethic*, 2 June 2011.

information regarding observations and expectations associated with RC performance that would otherwise have not been highlighted in either CSI archives or from the SIGACTs or DMDC data. In the next chapter is an assessment of the Air Force and its components.

3. Air Force

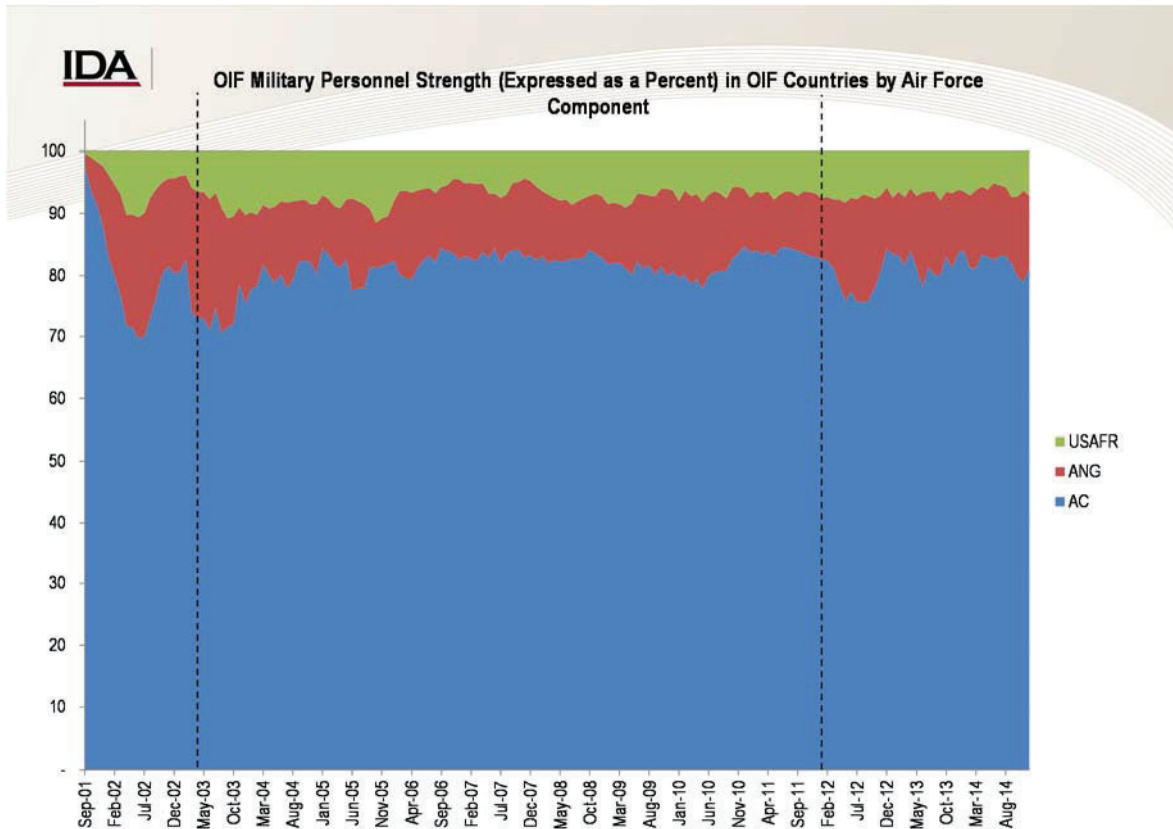
The previous chapter considered Army RC contributions and performance in OIF. In this chapter, IDA will look at Air Force contributions and commence with a discussion on data sources used and a description of mission support provided by Air Force RC in support of OIF, followed by a discussion on operational effectiveness.

A. Data Sources

In order to consider the performance of Air Force Reserve Components (ARC), IDA first queried the Director for Studies, Analyses, and Assessments, Headquarters USAF, in order to determine what performance assessments and data might be available for this research from the OIF time period. IDA was informed that this type of data, broken out by component, was not readily available. The April 2003 United States Air Force's Central Command paper, "Operation Iraqi Freedom: By the Numbers," highlighted that data was captured by the assessment and analysis division of the command, but the data highlighted what was accomplished and did not answer how well it was accomplished and by whom.⁵²

Using DMDC data extracts, Figure 8 shows several spikes in the use of the ARC in support of OIF, with the largest taking place during the commencement of OIF. But, the percentages of contributions over time are much more consistent between the components than what was observed in the previous chapter. Air Force AC, or "Regular" Air Force (RegAF), provided between 70 and 80 percent of military personnel strength in OIF according to DMDC data; yet, it is known that outside of the "OIF countries," a greater percentage of USAF personnel were provided from the ARC based on mobility data and comments from research participants.

⁵² T. Michael Mosely, *Operation Iraqi Freedom: By the Numbers*, United States Air Force Central Assessment and Analysis Division, 30 April 2003, retrieved at www.comw.org/pda/fulltext/oifcentaf.pdf.



Source: DMDC Data Extract.

Figure 8. Air Force OIF Military Personnel Strength by Percentage of Component

1. Mobility Databases (Logistics, Installations, and Mission Support – Enterprise View; Global Decision Support System) from Air Mobility Command

Air Mobility Command (AMC) provided IDA with data on airlift and tanker flights and maintenance and aircraft availability. Their “Global Decision Support System” database tracks every AMC flight (several flights or legs may constitute one mission), including the unit aircraft, source of crew (active, guard, reserve, or mixed), type of mission, takeoff/landing base, and whether or not the flight was on time and, if not, the reason for the delay or failure to complete the flight.

2. THOR/MISREP Analysis Tool

Data was gathered from two databases, the THOR database and the MISREP Analysis Tool (MAT) database. The THOR database collected MISREPS from October 2001 to February 2012. The MAT contains reliable data on MISREPS from March 2007 to present day. The MISREP structure has evolved over the course of the last 15 years, with the more

recent reports having additional fields than the earlier reports, although there is a common core of information that is present in all MISREPS.

3. Other Studies, Reports, Lessons Learned, Histories, and Testimonies

IDA considered other documents that had been archived, testimonies, and material from history, lessons learned, and assessment offices. IDA also considered reports from other research organizations, the Congressional Budget Office, and the Government Accountability Office.

4. IDA-Conducted Interviews

IDA conducted purposeful interviews of both RegAF and ARC leaders who could comment on various aspects regarding ARC utilization, force sourcing and management, training, personnel management, and performance. A list of research participants is provided in Appendix A.

B. Mission Support to OIF

When OIF commenced, the Air Force was already heavily engaged globally and providing domestic operations in support of Operation Noble Eagle. In order to meet all of these requirements, the USAF relied on the ARC to support and assist with the accomplishment of these missions. The ARC was already in theater before OIF, supporting Operations Southern Watch and Northern Watch for over a decade prior to the 2003 invasion. The Air National Guard (ANG) had 236 aircraft deployed for the first month of OIF, the Air Force Reserve (AFR) 70. This number does not include strategic airlift aircraft operating domestically or the “tanker bridge” over the Atlantic which included ARC aircraft for OIF support. The April 2003 report entitled, "Operation Iraqi Freedom - By the Numbers,"⁵³ breaks out the aircraft numbers as follows, excluding special operations force aircraft:

⁵³ T. Michael Mosely, *Operation Iraqi Freedom: By the Numbers*, United States Air Force Central Assessment and Analysis Division, 30 April 2003, retrieved at www.comw.org/pda/fulltext/oifcentaf.pdf.

Table 1. ARC Aircraft Used in OIF 1

ARC OIF 1 Aircraft		
Type	ANG	AFR
A-10	47	12
F-16	45	6
KC-135	57	22
C-130	72	6
E-8	9	0
MC-130P	2	0
EC-130	1	6
B-52	0	6
HC-130	0	4
HH-60	3	6
Totals	236	68

Source: T. Michael Mosely, *Operation Iraqi Freedom: By the Numbers*, United States Air Force Central Assessment and Analysis Division, April 30, 2003.

From DMDC data and other sources, the RegAF contributed about 85 percent of the total deployed Air Force Service personnel during OIF. The remaining 15 percent of deployed Air Force Service personnel came from the ARC. In the initial combat phase of OIF, 7,207 ANG personnel deployed along with 2,084 AFR personnel.⁵⁴ ARC units and elements served side by side, integrated with RegAF personal and aircraft in Air Expeditionary Forces (AEF) throughout the campaign.⁵⁵ ANG airlift squadrons, air refueling squadrons, rescue units, air operations groups, medical groups, security forces squadrons, and civil engineering squadrons, among others, all mobilized in support of overseas contingency operations. AFR A-10s, B-52s, and F-16s, along with a full range of support personnel, were all operational during the first hours of the air campaign of OIF.⁵⁶ The Air Force Special Operations Command's (AFSOC) 919th Special Operations Wing (SOW), a reserve unit, was also very active in support of OIF. The 919th SOW's 5th Special Operations Squadron is a reserve associate unit alongside the 1st Special Operations Wing's 9th SOS, flying regular Air Force MC-130P Combat Shadows.

RC deployment counts and percentages of deploying force understate ARC contributions to OIF in the form of domestic-based tanker and airlift support, massive reach back, and a surge in ARC personnel conducting missions domestically, enabling greater numbers of RegAF personnel and assets to deploy to the theater of operations. For

⁵⁴ Ibid.

⁵⁵ John Brinkerhoff, Joseph Adams, Robert Magruder, IDA, *National Guard and Reserve Participation in Selected Military Operations after 9/11*, IDA P-4806, January 2012.

⁵⁶ Ibid.

example, strategic airlift out of domestic east coast bases and air tanker stations over the Atlantic were handled by ARC units that were Continental United States (CONUS)-based, as were unmanned aerial vehicles flying in Iraq that were often controlled by ANG personnel. ARC security units and individual mobilization augmentees (IMAs) replaced RegAF counterparts so the latter could deploy.

The ARC deployed supplemental manpower and small detachments to bases both in Iraq and outside Iraq to support OIF; everything from logistics and airfield security to providing U.S. Central Command Air Forces (CENTAF) historians. In this effort, they would be integrated with RegAF personnel and with personnel from other Services, such as an AFR IMA working at a combatant command headquarters. Many USAF personnel would end up in Army or Marine Corps units far from airfields during the joint and coalition OIF campaign.

While the OIF campaign continued and eventually became OND, the USAF still provided major capabilities projecting not only from bases in the region, but also globally. One can observe some of the most heavily employed USAF specialties by analyzing DMDC deployment data. Table 2 lists the most deployed ANG enlisted occupations in OIF.

Table 2. Most Deployed ANG Enlisted Occupations in OIF

3P	Security Forces
2A67	Aerospace Prop/Equip
2A55	Aircraft Maintenance
2W	Aircraft Armament/Munition
3M	Services
3E7	Fire Protection
2S	Material Management
2A37	Tactical Aircraft Maintenance
2T2	Air Transportation
1A2	Aircraft Loadmaster

Source: DMDC Data Extract.

Using the same DMDC data, Table 3 shows the most deployed ANG officer occupations.

Table 3. Most Deployed ANG Officer Occupations

11M	Mobility Pilot
11F	Fighter Pilot
11A	Airlift Pilot
14N	Intelligence
46	Nurse
12A	Airlift Navigator
32E	Civil Engineer
21R	Logistics Readiness
21A	Aircraft Maintenance
12M	Mobility Combat Systems

Source: DMDC Data Extract.

Looking at the AFR, very similar demands on ARC personnel are depicted in Tables 4 and 5.

Table 4. Most Deployed AFR Enlisted Occupations

2T2	Air Transportation
3P	Security Forces
2A55	Aircraft Maintenance
1A2	Aircraft Loadmaster
2A6	Aircraft Maintenance
4N	Aerospace Med Surgical
1A1	Flight Engineer
3E7	Fire Protection
2T1	Vehicle Operations
2S	Material Management

Source: DMDC Data Extract.

Table 5. Most Deployed AFR Officer Occupations

11M	Mobility Pilot
46	Flight Nurse
14N	Intelligence
12M	Mobility Combat Systems
21R	Logistics Readiness
11F	Fighter Pilot
32E	Civil Engineer
21A	Aircraft Maintenance
41A	Health Services Admin
31P	Security Forces

Source: DMDC Data Extract.

One reason why these occupations were in high demand is that USAF personnel fulfilled many "non-standard" mission requirements in support of the ground operations in OIF. In many cases, these "in-lieu-of" (ILO) requirements were in place of Army units that did not have enough capacity to meet and sustain all of these demands. A discussion on the subject of ILO requirements is presented later in this chapter.

C. Operational Effectiveness

In this section, ARC readiness, personnel and force management, and performance in support of OIF are described. A full description of the THOR/MISREP Analysis Tool assessment is provided in the classified appendix.

1. Readiness

The USAF adopted the AEF program in 2000 to provide the regional combatant commanders with balanced expeditionary packages of air combat power on a rotational basis. Ten AEFs were created of which two were to be ready at any one time. In the AEF program, units and sub-units from the Air Force administrative chain of command are assembled into expeditionary units in the operational chain of command. In effect, AEFs are pre-planned, task-organized packages of air combat power. The AEF concept has been in use to manage the readiness and flow of Air Force units to the CENTCOM area of operations from 2001 to present. From the outset, the AEFs included RegAF and ARC units. In 2003, the USAF Chief of Staff noted that OIF marked the first time that the AEF concept was fully implemented in combat operations: "Through our 10 AEFs, our AEF Prime capabilities, and our AEF mobility assets, we demonstrated our ability to package forces, carefully selecting the most combat ready forces from our Total Force; build and present expeditionary forces; and flow them to the theaters of operation in a timely and

logical sequence.”⁵⁷ In recent years, the ARC has contributed about 25 percent of each AEF rotation.⁵⁸ Every AEF rotation cycle includes ARC units for both CONUS and Outside the Continental United States (OCONUS) missions.⁵⁹

The ARC is maintained at C-1 readiness level goals, requiring that reserve airmen be available to deploy anywhere within 72 hours. Senior ARC interview participants stressed that the common training and standards, former AC personnel in the ARC, the inclusion of the ANG and AFR in big exercises with the RegAF and in AEFs, combined with the commitment from previous USAF Leadership for a seamless force, enabled successful mobilization and integration in OIF AEF operations. A prior Chief of the AFR emphasized that “72 hours, you pick a place, we are ready to go.” With the surge in operational deployments and CONUS support to OIF/OEF, it did get harder for some parts of the ARC to maintain readiness. Sometimes there was less funding and less time for training and exercises; however, training standards remained the same across components. An AFR general who was mobilized in 2003 for 10 months in Iraq stressed that “we are not the Army Force Generation (ARFORGEN) model, this is a Reserve-friendly model; we are 100 percent ready all the time.” An AFR research participant, reporting on the experience, shared that they were expecting their OIF assignment, 1½ days of briefings were conducted as a group, orders were processed, and they headed over—all “very routine” as practiced and experienced on previous missions.

RAND’s 2014 report, “Suitability of Missions for the Air Force Reserve Components,” likewise found that unit readiness did not vary by Component.⁶⁰ The authors stated, “While there are no direct metrics to measure performance in actual operations, there are indirect measures. These indirect measures include expeditionary wing commander comments on performance and whether there is a difference in types of units requested by component commanders. We are unaware of any cases in Operation Noble Eagle, Operation Iraqi Freedom, or OEF where either of these indirect measures indicated a readiness difference between AC and RC forces.”⁶¹

According to the NGRER for FY2002, both the AFR and the ANG were listed as having 99 percent of the equipment available to meet mobilization requirements with

⁵⁷ Gen John Jumper, *Sight Picture*, May 2003, quoted in ACC History, 2003, p.6.

⁵⁸ John C. Truesdell, Deputy Assistant Secretary of the Air Force for Reserve Affairs, in *Changes Needed to Transform National Guard and Reserves to Sustainable Operational Force* presentation to the Commission on the National Guard and Reserves, Washington, D.C., 12 April 2007, p.12.

⁵⁹ Harry J. Lundy, *Total Force Integration is Key to Current and Future Success*, (Langley AFB, VA: Air Combat Command Public Affairs), 21 May 2010.

⁶⁰ Albert Robbert, et al., RAND, *Suitability of Missions for the Air Force Reserve Components*, 2014, p. xii.

⁶¹ *Ibid.*, 34.

substitutions.⁶² Additionally, the ANG was listed as having only a 0.7 percent total value of equipment shortage excluding substitutions, while the AFR's shortage was 0.4 percent.⁶³ By FY2008, the ANG was still reporting a total value of equipment shortage of 0.5 percent, while the AFR's shortage had increased to 4 percent.⁶⁴ These figures indicate an ARC that has been very ready in terms of equipment. Equipment and technology, however, are big drivers or screening criteria for mission selection. During IDA-conducted interviews, there were several instances where interview participants described a preference for ANG flying units over AFR units because the reserve units did not have the same equipment as the RegAF; whereas, the ANG was able to procure the equipment via political support.

2. Personnel and Force Management

The official Air Combat Command history reported “myriad difficulties” in planning forces for OIF due to “the ever-shifting requirements of U.S. Air Forces Central Command, delayed or irregular deployment orders from the Office of the Secretary of Defense, changes in available forward operating locations, and various political, diplomatic, and logistical restrictions on operations in and around Iraq.”⁶⁵ The last minute denial by Turkey to allow U.S. ground forces to enter Iraq from that country and “OSD’s slow and intermittent release of deployment orders” further complicated force planning. Research participants personally described how the lack of any mobilization predictability forced them to put their lives and their civilian careers in abeyance, but that they were willing to do so in support of the nation and face any resulting repercussions. An ANG general noted that “ANG mobilization is all about volunteerism.” States would also volunteer for missions. Units and “rainbow units” (where ARC units and personnel rotated in and out) deployed in support of contingency operations and it was easier to switch out more frequently for systems like the KC-135. There was no shortage of ARC volunteers and interview participants estimated at least half of ANG serving in OIF/OEF were volunteers. AFR participants estimated that at the start of OIF/OEF, 80-100 percent of the AFR serving in OIF/OEF was voluntary. Research participants also referenced “administrative type problems” associated with mobilizing the ARC, requiring work-arounds. Participants noted that the overall DOD mobility system was not set up for protracted war. One of the challenges mentioned by interview participants was the different categories of statutory authorities to mobilize, with different rules and a variety of healthcare and retirement benefits.

⁶² National Guard and Reserve Equipment Report for Fiscal Year 2002, February 2001, p.1-3.

⁶³ Ibid.

⁶⁴ National Guard and Reserve Equipment Report for Fiscal Year 2008, February 2007, p.1-3.

⁶⁵ Air Combat Command History Office, *History of Air Combat Command, 1 January-31 December 2003*, July 2004.

As described in the readiness section, AEF “buckets” (timelines for possible deployment) provided predictability; however, it should be noted that the AEF was built for non-steady state, contingency operations like Northern Watch and Southern Watch of not long duration joint force campaigns. Since RegAF airmen tended to deploy longer than ARC airmen, especially the ANG/AFR airmen rotating through AEF duty, the RegAF OIF manning was well over 80 percent. A major reason for the higher percentage of RegAF OIF deployment rates over the course of OIF was that usually many reserve functions and personnel categories (such as IMAs) were, by design, assigned to CONUS locations as backfill to replace AC forces to enable them to deploy abroad. Many ARC IMAs performed extra or full time duty to help replace RegAF personnel who were deployed to theater. So, while the ARC accounts for about 15 percent of deployed AF personnel for OIF, the percent of ARC personnel supporting OIF (including those in CONUS) was considerably higher. With ARC personnel handling air defense and other CONUS-based missions and able to provide more CONUS duty when needed, the RegAF was enabled to deploy more personnel overseas. Included in these numbers were some ARC deployments to Europe that enabled RegAF airmen stationed there to deploy into CENTCOM’s Area of Operations.

The AEF Program enabled ARC units to alternate with other ARC units to fulfill an extended ANG or AFR deployment. Often, the RC units were “rainbowed,” meaning different units rotated aircraft and personnel in, typically for two-to-four months.⁶⁶ For example, three ARC units could rotate their sub-elements to meet a 180-day rotation requirement, and each ARC unit could rotate its personnel in and out during its tours. Another variation is for a flight of aircraft from three squadrons to unite to form a full expeditionary squadron for a given mission.

ANG personnel also served in RegAF units that deployed overseas, usually for short duration assignments, and it appeared to be a 100 percent RegAF unit and deployment. Sometimes, RegAF tanker units needed additional crew and would ask nearby Guard tanker units for volunteers. The Guardsmen who served, did so “invisibly”—so there is no database notation that a RegAF tanker unit deploying overseas had members of the ANG (often from several states) deploying with them. This is another example of invisible ARC support that is not reflected in databases and largely unknown to the DOD.

None of the research participants interviewed by IDA mentioned shortfalls in the number, readiness, or quality of ARC airmen during OIF. But, they did report an “insatiable demand for intelligence, surveillance, and reconnaissance (ISR), A-10 aircraft, other Combat Air Force, RED HORSE (Rapid Engineer Deployable Heavy Operational Repair Squadron Engineer), Civil Engineers, and Security Forces.” Part of this demand came from

⁶⁶ John Brinkerhoff, Joseph Adams, Robert Magruder, IDA, *National Guard and Reserve Participation in Selected Military Operations after 9/11*, IDA P-4806, January 2012, p.54.

ILO requirements. From roughly 2004 to 2010, the AF provided “joint sourcing” assignments in the form of ILOs in both Iraq and Afghanistan. ILOs were essentially Service personnel provided by other Services to take the place of an Army requirement because the Army was inadequately resourced and manned to meet all of requirements. Indeed, the largest enlisted AFSC that the USAF (RegAF and ARC) deployed for OIF was security forces. Already in late 2003, the Army began to seek help from other Services to fill Army shortfalls and, by early 2004, the USAF provided about 2,000 security forces for OIF for the Army.⁶⁷ As the operational demands on the Army and Marines continued to increase, by FY2007, about 25 percent of AF personnel serving in CENTCOM were filling joint sourcing positions.⁶⁸ As described in a 2006 *Associated Press* article, “U.S. Airmen are increasingly on the ground in Iraq, driving in convoys and even working with detainees - a shift in the Air Force's historic mission that military officials call necessary to bolster the strapped Army.” In 2006, 1,500 airmen were assigned to convoy operations in Iraq with an additional 1,000 working with detainees, training Iraqis, and performing other work not associated with normal USAF operations. The numbers of Air Force personnel in CENTCOM spanned the range of 1,900 to 6,000 positions by 2008. For fields like logistics and security forces, the AF eventually reached a position where the deployment operational tempo (OPTEMPO) strained AF manpower.⁶⁹

During OIF, the USAF was pursuing several Total Force Integration initiatives to create more integrated units. In AFSOC, the creation of an air operations center associate unit and a classic associate wing supporting special operations at Hurlburt Field took place. The goal was to leverage ARC experience levels and increase the number of people available to support active duty surges.⁷⁰ A participant noted, “Through total force integration, AFSOC can increase combat capability by better posturing the Reserve to more effectively support the SOF [special operations force] mission.”⁷¹

The 919th Special Operations Wing currently is the only special operations wing in the AFR. The wing has provided personnel to support AFSOC taskings, in addition to ARC AEF requirements relating to security forces, civil engineering, communications, logistics, supply, transportation, services, and personnel functions. In a classic association with the

⁶⁷ Air Combat Command History Office, *History of Air Combat Command*, 1 January-31 December 2003, July 2004.

⁶⁸ Comments by Marke F. Gibson, USAF, Hearing Before the Readiness Subcommittee of the Committee on Armed Services, House of Representatives, 110th Congress, 1st Session, *The Use of In Lieu Of, Ad Hoc and Augmentee Forces in Operations Enduring Freedom and Iraqi Freedom*, 31 July 2007.

⁶⁹ John Ausink, et al., *Managing Air Force Joint Expeditionary Taskings in an Uncertain Environment*, RAND, 2011, pp.xi, 1.

⁷⁰ *AFSOC, AFRC develop new reserve associate missions for 919th SOW*, Denise Boyd, Air Force Special Operations Command Public Affairs, published 23 October 2007.

⁷¹ Ibid.

Air Force Special Operations Air Warfare Center (AFSOAWC), the 919th also provided operations and maintenance personnel to support the aviation foreign internal defense and combat aviation advisor programs.⁷² Reservists played key roles as language instructors at the AFSOAWC. The wing also conducted U-28 and C-145A formal training unit flight instruction, through this association, and employed the MQ-1 Predator unmanned aerial system in a geographically separated classic association with the 27th Special Operations Wing at Cannon Air Force Base (AFB). One research participant interviewed by IDA who served in AFSPC units noted that the 919th had a long tradition of very active employment in AFSPC campaigns from the First Gulf War on, and was increasingly active over the years in OIF and OEF.

3. Performance

In this section, IDA synthesizes data sources listed at the beginning of the chapter and provides an assessment of ARC performance in support of OIF.

a. Air Mobility, Transport AC-RC Performance Metrics Comparison

While data to make quantitative comparisons of ARC performance relative to RegAF in OIF is largely nonexistent, IDA did develop a methodology to compare the quality of performance between components in strategic mobility, which was probably the most important USAF contribution to the boots-on-the-ground-dominated Iraq campaign. AMC provided IDA with data on airlift and tanker flights and maintenance and aircraft availability. The Global Decision Support System (GDSS) database tracks every AMC flight (several flights or legs may constitute one mission), including the unit aircraft, source of crew (active, guard, reserve, or mixed), type of mission, takeoff/landing base, and whether or not the flight was on time and, if not, the reason for the delay or failure to complete the flight. Reasons for delay are coded, such as weather, uncontrollable events (bird strikes), as well as errors such as aircrew errors (code 219: “Crew duties performed improperly (or not performed)”).

IDA selected a month at random to compare the percent of missions flown by components and examine their respective human error rates. In January 2005, there were over 9,000 AMC missions.⁷³ To focus specifically on OIF and OEF contributions, only Priority 1 Contingency Operations missions (excluding training and low priority missions) were selected. Of the more than 9,000 missions flown, the AFR handled seven percent and the ANG two percent. As with other OIF deployment/in theater work, these percentages

⁷² <http://www.919sow.afrc.af.mil/About/FactSheets/tabid/2435/Article/188254/919th-special-operations-wing.aspx>.

⁷³ The sample size for this month was very large (thousands of missions in the month, at least several hundred for each component).

undercount ARC contributions since the RC often served in CONUS locations, enabling greater numbers of Active Component Air Force Service personnel and assets to deploy to theater. IDA shared its methodology and assumptions with AMC analysts to be sure there were no misinterpretations or erroneous conclusions. IDA looked for delay codes that could be a basis for comparing AC-RC performance and selected the following seven human error delay codes depicted in Figure 9 as a basis for rating a crew or unit’s personnel as responsible for a delay.⁷⁴

<u>Error Code</u>	<u>Description</u>	<u># Errors in Jan 2005</u>
219	Crew duties performed improperly (or not performed)	39
279	Deviation required due to scheduling/planning error at originating unit include originating units International Civil Aviation Organization in the remarks, i.e., parking Maximum (aircraft) on the Ground, improper ground time, etc.	9
300	Transportation management (Air Terminal Operations Center, Port Operations) duties not performed or performed improperly	1
302	Load plan incorrect less than 6 hours prior to departure, new load plan generated, required refilling of flight plans and/or aircrew departure papers, etc.	4
303	Transportation personnel duties performed improperly (or not performed), delayed mission departure	9
901	Maintenance personnel (aircraft maintenance personnel and operations personnel, i.e. Maintenance Operations Center and plans and scheduling) duties performed improperly (or not performed), delayed mission	14
904	Maintenance personnel order the wrong part from supply	8

Source: Air Mobility Command Instruction 10-202 Volume 6, March 15, 2011.

Figure 9. Human error delay codes, January 2005 snapshot

Because all USAF operations, and strategic mobility in particular, involve some associate units (two AF components sharing aircraft), some mixed crews, and, sometimes, a plane from one unit flown by another, IDA used a second USAF database, the Logistics, Installations, and Mission Support View (LIMS-EV), to see if the unit owning the aircraft matched the AMC GDSS database. There were some instances where it did not.

The results showed very low human error mission delays, only about one percent for the RegAF and ANG and a much smaller 0.3 percent for the AFR using the GDSS database. The LIMS-EV database, based on what component owned the aircraft at the time, but not necessarily the component flying the crew, had different results that were not as relevant since the analysis was using human error codes, so the aircrew component assigned by AMC was more relevant. If missions where the two databases conflicted were discarded,

⁷⁴ IDA vetted this methodology and assumptions with AMC analysts to ensure that there were no validity issues.

the results were closer to the AMC GDSS database of a little less than one percent errors for RegAF and ANG and none for the AFR.

An AFR advantage in fewer human errors could be explained by the experience of the personnel and more longevity using the aircraft. But, the USAF does integrated operations, so components dependent on each other operate at shared bases and often with mixed ground and support crews or mixed aircrews (especially in strategic airlift, associate units). Since the sample size of the data was very large (thousands of missions in the month, at least several hundred for each component), the methodology was vetted with airlift experts and AMC analysts to ensure that IDA's approach was rigorous and fair. The statistical conclusion is that the ARC and RegAF airlift airmen performed the same quality of work, with a slight advantage for the AFR.

Another month was selected randomly in 2007 (during surge operations in OIF) and the comparison repeated of percent human errors in airlift missions in theater. For this analysis, IDA excluded the missions flown by AEFs in theater since there was more mixing of RegAF and ARC ground and aircrew personnel. Excluding the AEF airlift missions did not change the pattern. For CENTCOM area of responsibility (AOR) priority 1 (contingency operations) missions in April 2007, from the AMC GDSS database, the human error-caused delays as a percent of missions flown that month were: RegAF: 0.6 percent; ANG: 0.7 percent; AFR: 0.3 percent. Again, the RegAF and ANG had about the same human error rates, the AFR slightly less. Collaborating with the IDA test and evaluation division, the AMC error rate was tested to see if the error rate differences by component were statistically significant or not (i.e., could be just random differences). IDA used a binomial distribution since the outcomes were error or no error, and ran the Beta distribution statistical significance test for the AMC error rates by component in Excel at the 95 percent confidence level. Both the overlap in 95 percent confidence intervals and p value scores suggested that the differences in error rates by component were not statistically significant and could be due to random error. RegAF and ARC aircraft, personnel, and units appear interchangeable with no difference in quality.

b. THOR/MISREP Analysis Tool

When looking for performance metrics in combat by air forces that can be measured repeatedly and reliably, the most direct reporting of air strike success provides unambiguous criteria. Airstrike success is a culmination of the entire kill chain of events and is susceptible to perturbations from the airplane itself, the weapon's performance, the targeting accuracy, the aircrew's skill, and the target's ability to maneuver away from or survive the attack. For this reason, the MISREP was used as the basis for data collection as each of these areas of concern is capable of being captured in the standard MISREP report.

Theater requirements for CENTCOM specify that a MISREP will be filed after every mission for all aircraft operating for the Combined Air Operations Center (CAOC), which includes USAF, USN, USMC, and coalition forces. The MISREP is a source of objective data (altitude, speed, time over target, etc.) and subjective data (“good hit”) that lends itself to aggregation and analysis. From 2007 onward, rotary wing aircraft from USAF, USN, USMC, and allies were also recorded in the MAT database.

Data was gathered from two databases, the THOR database and the MAT database. The THOR database collected MISREPS from October 2001 to February 2012. The MAT contains reliable data on MISREPS from March 2007 to present day. MISREP structure has evolved over the course of the last 15 years, so the more recent reports have additional fields that were not present in the earlier reports, although there is a common core of information that is present in all MISREPS.

Since the October 7, 2001, start of OEF, THOR and MAT have amassed a total of approximately 135,000 records from Operations OIF/OND, OEF, Freedoms Sentinel, and Inherent Resolve. There was a period of overlap between THOR and MAT in the 2007 to 2012 time period. By examining 21 unique fields in each corresponding record, approximately 6,500 records were identified as duplicate MISREPS from the OIF Major Combat Operations (MCO) phase. This was due to several reasons. Historically, data collection lags behind combat planning and execution. Given the frenetic pace of operations, there was delay before recordkeeping systems eventually caught up. Thus, details, such as unit affiliation may have become lost or confused as MISREPs were filled in well after the event occurred. When evaluating the performance of one component against another, care must be taken not to overlook the large number of unaffiliated records that could skew the data in favor of one component over another.

Performance was evaluated against different classes of weapons – guns, dumb bombs, precision guided munitions, missiles, and rockets. This was done to provide a large enough number of events to be statistically significant. There does not seem to be a noticeable failure by any component in the execution of strike missions. There are variations in performance, but assigning the component affiliation as the sole reason for these variations is beyond the capability of the data at hand. A full description of this methodology is located in Appendix E, while the full analysis of this data is located in the classified appendix.

c. Additional Comments from IDA-Conducted Interviews

One finding from the interviews of research participants who served in leadership positions during OIF was that there was no difference in performance between the components’ units or personnel, they were fully interchangeable. While several RegAF participants commented on the rapidly rotating ARC personnel, noting that there may have been an impact on readiness, wing commanders developed solutions and used the rapid

rotations to improve the combat experience for the ARC. An ARC research participant highlighted that the common refrain he heard from RegAF commanders in the field was that they “could not do it without you.” The conclusion senior leaders reached regarding ARC participation in OIF was that the ARC was essential for the USAF to provide air power (and ILO ground support) throughout the campaign.

The ARC was heavily involved in AF intelligence. Among the hallmarks of the ARC intelligence contributions were the high levels of experience and longevity in subject matter areas, in addition to the ease of providing “reach-back” intelligence support to deployed AEFs and operations from CONUS. Among IDA’s research participants were some of the top USAF intelligence commanders in Iraq, including the A2s at the Air Operations Center in Qatar who served through five AEF rotations. According to these intelligence participants, the best ARC personnel for Air Operations Center (AOC) work was an ANG unit from Louisiana that was trained, organized, and designed to augment an AOC. As a coordinated unit, the ANG personnel were well prepared, knew what to do, and did a great job.

Other ARC personnel were generally not AOC-trained and faced a steep learning curve, sometimes taking up to six weeks to become proficient out of a twelve week deployment. So ARC personnel (other than the specialized ANG unit) were generally not as productive in the AOC. With rapid changes going on, even 9th USAF (CENTCOM Air Component) personnel who had been at the AOC and came back six months later (with email updates in between) still took several weeks to become proficient in the performance of tasks. The complications of specialized AOC tools and programs led to many bypassing these tools and instead using PowerPoint and Spreadsheets. The lack of training on the specific AOC tools and systems was a problem. Many of the personnel came over with no training. Later in OIF, an “AOC course” training program was established at Nellis AFB. For more general intelligence support, such as intelligence staff dealing with flying units, ARC members could quickly fall in on “normal” intelligence tasks and be productive the first day or week doing fairly standard work

Research participants from all the Services and components valued the civilian skill set that the ARC brought in support of OIF/OND/OEF. It was in performing ILO missions, such as manning Provincial Reconstruction Teams (PRTs), Civil Engineering, and Security Police work, that the special and different civilian skills were used by RC members, who, in their civilian roles, served as mayors, town managers, water/sewage/utility experts. They brought these skills to the rebuilding and stabilization mission of OIF/OND. One interview participant described how the Civil Engineering squadron in his wing applied their civilian skills in theater. He stated:

“It was a bare base mission, they were modifying equipment to get the mission done. I had broken heavy equipment and no mechanics out in the middle of nowhere. But, in their civilian life, I had

mechanics from Caterpillar, John Deere heavy equipment engine mechanics, building and fixing my broken gear. I could not have done it without them. I had to build a temporary SCIF but had no electrical distribution system to power the printers and computers. I had electrical cooperative workers who took the parts I had, built a design, and then took the unit credit card to an electrical parts distributors in downtown Oman to buy other things we needed. I had that SCIF up and running in two days. How long would that have taken if I didn't have those guys? What would have been the mission impact if that SCIF couldn't function? I've got lots of similar stories where civilian skills were often used.”

As cited in the 2005 U.S. Central AF Lessons Learned Report, an Expeditionary Air Wing Commander cited the civilian medical experience of ARC personnel as especially valuable. With the military outsourcing more hospital care to the private sector, the AC medical personnel often do not have either the comprehensive range of medical skills found in RC medics or the length of experience.⁷⁵

Research participants representing all Services and components commented on the strong relationships that had been built over the long campaigns. USAF participants described how the ARC would work with RegAF wing leaders to “cherry pick” areas where the ARC could deliver maximum value with experienced personnel in positions where expertise and longevity are especially valuable. The biggest cited challenge to USAF integration efforts were cultural, based on outdated organizational practices and attitudes.

D. Conclusion

In this chapter, IDA looked at ARC contributions in support of OIF/OND, considered readiness, personnel and force management, and performance. Based on interview participants and analysis of mobility data and MISREP strike data, there appears to be no discernable differences between the ARC and the RegAF. The ARC was resourced and equipped to a level that made it interchangeable throughout the USAF. In the next chapter IDA considers Navy and Coast Guard contributions to OIF.

⁷⁵ U.S. Central AF Lessons Learned Report, summer 2005.

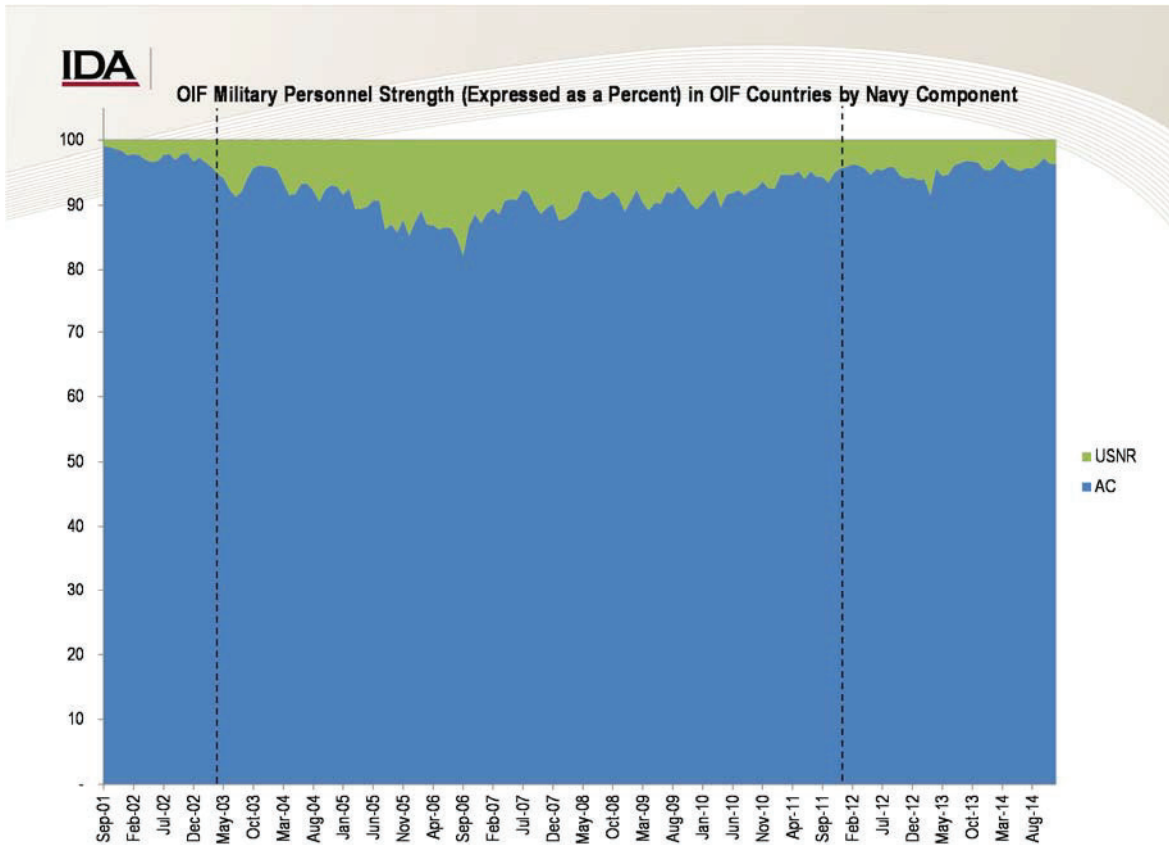
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4. Navy and Coast Guard

In this chapter, IDA will consider and attempt to assess Navy and Coast Guard contributions to OIF/OND. The Navy and its reserve conducted many missions in support of OIF/OND; oftentimes, assuming missions traditionally accomplished by or assigned to ground forces. As a member of the joint and combined team in OIF, the Navy provided capabilities on land, sea, and in the air from both conventional and special warfare forces. Additionally, Coast Guard capabilities, normally viewed via the lens of domestic missions and homeland security, deployed and provided critical capabilities in what was routinely considered only a ground campaign. This chapter commences with a brief discussion of data sources used for this assessment, followed by OIF contributions, personnel and force management, and training and readiness. The assessment concludes with a discussion of the analysis of aviation strike data and synthesized material from reports, articles, and research participants, to include a Coast Guard discussion.

A. Data Sources

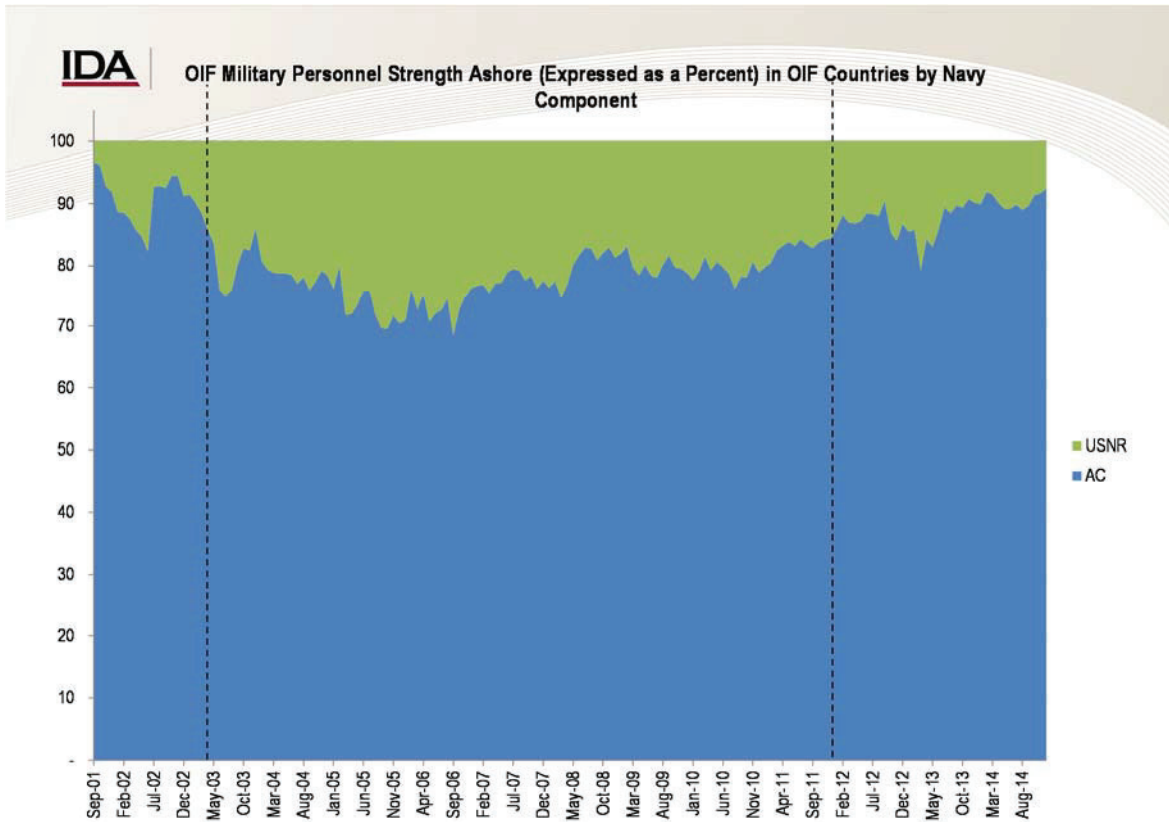
As in previous chapters, in order to consider operational assessments of Navy and Coast Guard RC forces, IDA first captured the DMDC data extracts, by component, to determine a baseline of deployed forces throughout the OIF campaign. Figure 10 depicts over time the strength as a percentage of the Navy contribution to OIF. It is important to note that IDA considered total OIF personnel strength by Navy component, which includes the Navy afloat; then, in Figure 11, considered Navy strength ashore. Coast Guard strength, by component percentage, is depicted in Figure 12.



Source: DMDC Data Extract.

Figure 10. Navy OIF Military Personnel Strength by Percentage of Component

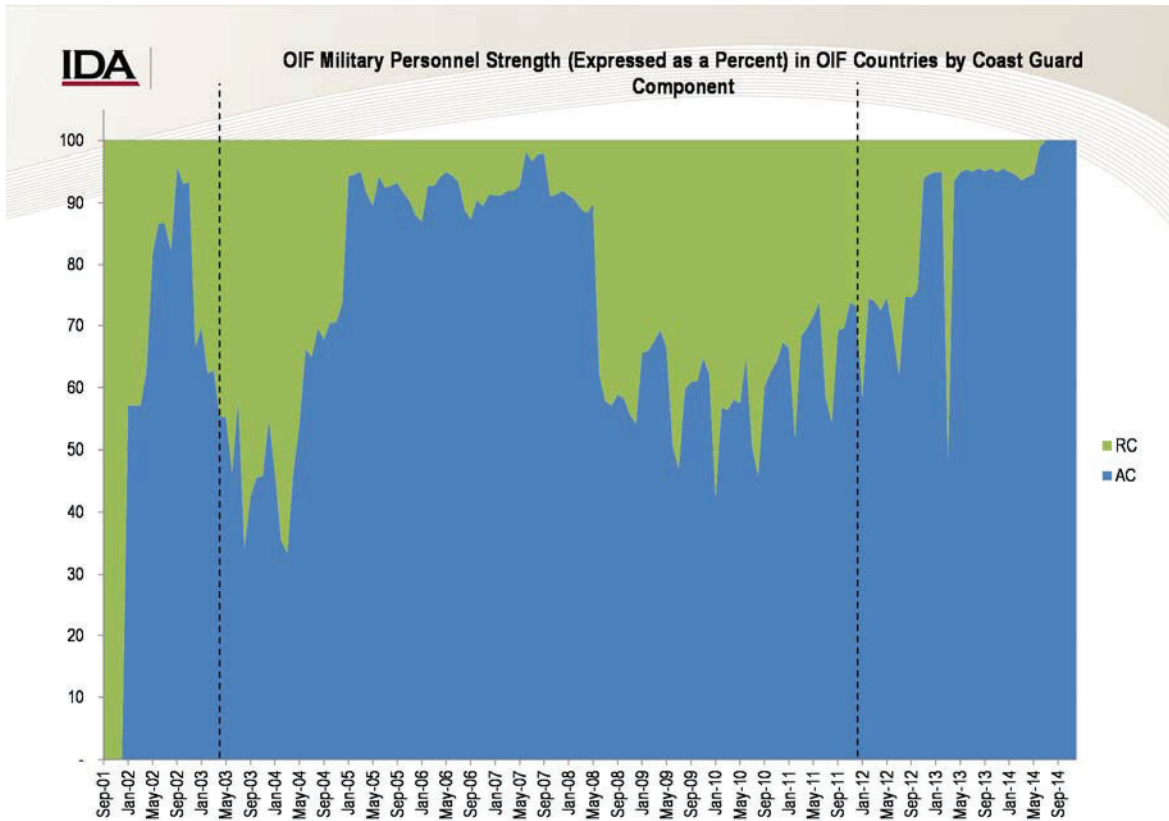
Comparing the afloat and ashore figures, one can see a very different use of the Navy Reserve (USNR) in OIF, as the percentage of the ashore force almost doubles that of the afloat percentages at times.



Source: DMDC Data Extract.

Figure 11. Navy Ashore OIF Military Personnel Strength by Percentage of Component

With the demand for Coast Guard assets domestically, one can see the extensive use of the Coast Guard Reserve (USCGR) as a percentage of the total USCG effort in OIF in Figure 12. According to the DMDC data, USCGR use in OIF/OND exceeded AC USCG numbers at various points in time over the campaign.

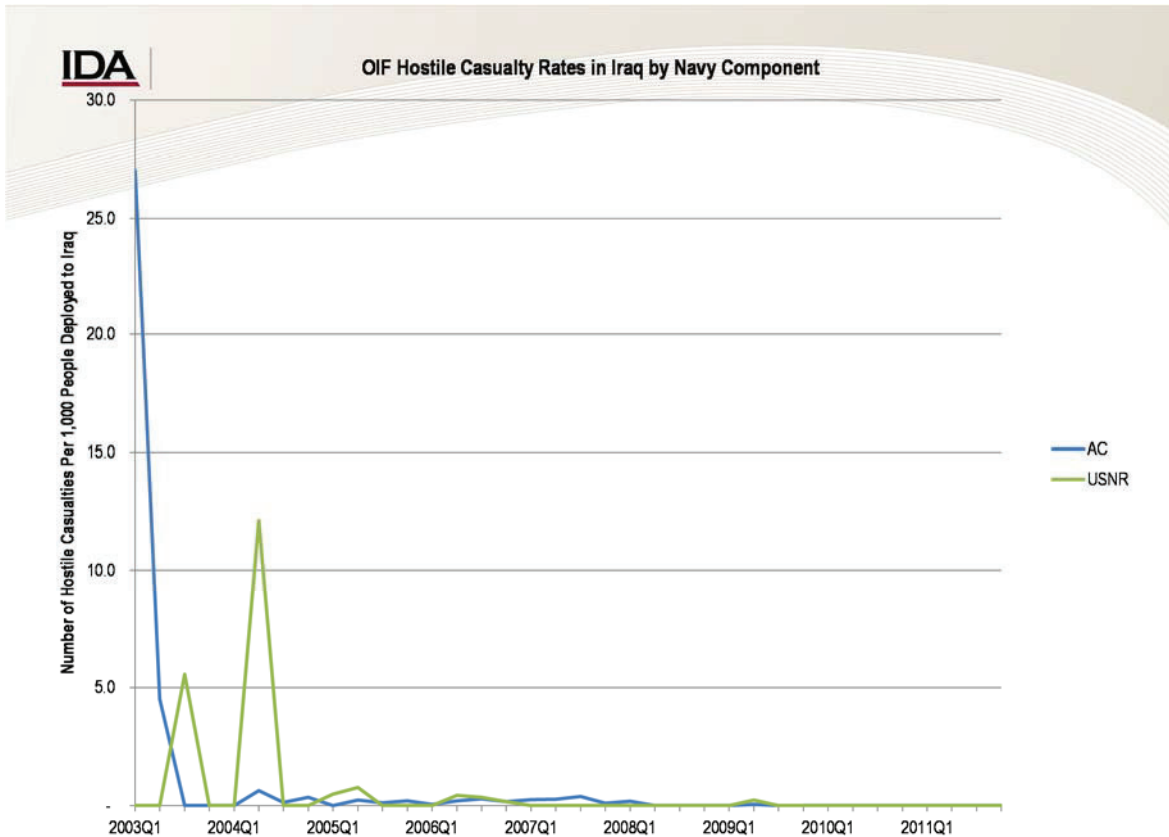


Source: DMDC Data Extract.

Figure 12. Coast Guard OIF Military Personnel Strength by Percentage of Component

1. Casualty Data

IDA considered the data extract from DMDC on Service member casualties in Iraq from the Defense Casualty Analysis System. Casualty rates are computed by dividing the raw numbers by 1,000 in order to determine casualties per 1,000 deployed. The results of plotting the data by Navy component are depicted in Figure 13. The data does not indicate performance per se but, like deployment data, depicts levels of effort, burdens of deployment, and shared risks.



Source: DMDC's Defense Casualty Analysis System.

Figure 13. Navy Casualty Rates by Component

2. Other Studies, Reports, Lessons Learned, Histories, Testimonies, Almanacs

IDA considered published reports, press releases, and other materials in order to understand the contributions made by USNR and USCGR members and to highlight performance assessments whenever possible.

3. IDA-Conducted Interviews

IDA was able to obtain contextual insights related to performance and into decision making processes associated with mobilization, personnel management, operational readiness, force management, and the conduct of the OIF by conducting "not for attribution," semi-structured interviews with senior officials representing the Navy, Coast Guard, other Military Services, U.S. Central Command, the Joint Staff, OSD Personnel and Readiness, and other organizations. For this analysis, research participants included Service Chiefs, Chairmen of the Joint Chiefs of Staff, Combatant Commanders, Defense Agency Directors, Reserve Chiefs, Intelligence Chiefs, and those in key positions and

commands where they could comment on processes of interest and performance. A list of these participants is located in Appendix A.

4. Aviation Data Including Strike Data

IDA used the THOR/MISREP Analysis Tool in order to assess the performance of Navy RC aviation units. The methodology is explained in Appendix D and the full assessment of this data is located in the classified appendix to this paper. IDA also considered data provided by the Navy Air Logistics Office (NALO), representing the scheduling of Navy Unique Fleet Essential Airlift (NUFEA) aircraft from March 19, 2003, and December 31, 2011.

B. Navy Reserve OIF Mission Support

Prior to the commencement of OIF, Navy reservists were already mobilized in support of operations domestically and abroad, supporting Navy forces afloat and ashore at headquarters and elsewhere. Research participants described how there were requirements for five thousand reservists to man security gates and perform force protection functions, which were, oftentimes, not matched with their ratings. As operations in Afghanistan commenced and preparations were being made for OIF, there were additional requirements for Navy reservists. In several cases, reservists were needed to provide ILO units to cover shortfalls in Army and Air Force structure. As an example, by the end of FY2002, approximately 30 percent of Navy's intelligence reservists had been mobilized.⁷⁶

While the Navy made great use of the reserve to meet individual requirements, to include JIA requirements, Navy Reserve units also deployed to provide capabilities in support of OIF. These included units and elements from air logistics, a strike fighter squadron, helicopter combat support special squadrons, special warfare, coastal warfare, mobile inshore undersea warfare, security, expeditionary logistics, surface warfare, cargo handling, engineers/construction battalions, maritime patrol and electronic attack squadrons, helicopter mine countermeasures squadrons, expeditionary medical, and explosive ordnance to others supporting missions such as customs, detention operations, public affairs, legal operations, contracting, intelligence, and much more. A separate discussion regarding global support provided by the Navy Intelligence Reserve Component is provided in Appendix C.

1. Personnel and Force Management

Research participants representing both the AC and the RC described challenges with mobilizations during the early post-9/11 and OIF time periods. The personnel information

⁷⁶ Naval Reserve Intelligence Command, *FY-02 Reserve Intelligence Force Contribution Report*, unnumbered p.14.

systems between the Navy AC and the RC were described as being separate and, oftentimes, Navy reservists would find out about impending mobilizations via a third party or by email message. The time from alert to mobilization was also described as being initially very short, even for senior leaders, and then the mobilization might be cancelled. Navy reservists being mobilized would not even show up in AC information systems and there was confusion regarding who actually owned the mobilization process. Research participants described how there was little knowledge outside of the RC regarding the process of mobilizing individuals and organizations. The existing system was described as being ad hoc in terms of determining actual requirements for billets and then filling them with the correct personnel.

Participants described how some Navy reservists were given Active Duty for Training (ADT) or Active Duty for Special Work (ADSW) orders (which may or may not include per diem) and then sent to OIF on ADT orders because those orders were funded. In some locations, there were housing challenges including a lack of available military barracks for mobilized reservists who sometimes had to sleep in hallways or offices.⁷⁷ Additionally, the Active Duty Personnel Service Detachments (PSDs) did not know how to process travel claims from Navy reservists, so these claims were not processed and piled up by the thousands. When providing long term support to Navy Special Warfare units for over eight years, reserve helicopter combat support special squadrons 4 and 5, needed to rotate pilots every month or two, mobilizing and demobilizing at various points in time; however, the Navy personnel system could not administer this type of tailored support to the units as the process was considered non-standard and cumbersome.⁷⁸ Eventually, intervention between the Navy Reserve, Navy (OPNAV) Staff, and Fleet Forces Command helped alleviate some of these problems. Systems and processes evolved. For example, in order to develop a sustainable mobilization plan, the Navy created the Reserve Mobilization Pool and placed all reservists on a mobilization cycle of one year in every five years to ensure that Navy force contributions had continuous replacement without "breaking" the volunteer nature of the force. Creation of this pool provided an opportunity for Navy reservists on the list to plan for a mobilization during the year assigned to them or to volunteer for a different time and place of their choosing, providing some predictability and some control over their mobilization time. Research participants personally described how their families and their civilian employers benefited from this evolution.

With any requirement to provide IAs, there was tension from organizations manned, trained, and equipped potentially to deploy as units, when IA officer and non-commissioned officer requirements were levied on these units to fill "nonstandard"

⁷⁷ Comments by two senior USNR research participants.

⁷⁸ Ibid.

requirements in support of OIF. Leaders would be taken from their units in order to fill these requirements and, potentially, not be available when the entire unit was mobilized for deployment. The GAO attempted to highlight these challenges when they stated that, "these efforts have also caused challenges across the force, . . . , for certain Navy occupational specialties, these nonstandard force deployments have challenged the Services' abilities to (1) balance the amount of time their forces are deployed with the amount of time they spend at home, and (2) meet other standard mission requirements."⁷⁹ Some of the communities most affected by these nonstandard "force deployments included the engineering, security force, and explosive ordnance disposal."⁸⁰ The Navy was forced to create the Reserve Mobilization Pool because of the uncertainty that came from the Navy filling shortfalls in other service formations such as creating a customs inspection unit to fill an Air Force mission shortfall or creating a mortuary affairs unit for an Army shortfall.⁸¹ Once the Navy volunteered for the sourcing of these missions, the Navy owned the requirement for subsequent mission sourcing.

By 2010, the Navy was still mobilizing over 6,000 Navy reservists to meet global requirements.⁸² As the OIF/OND campaign continued, recruiting and retention became a concern for parts of the Navy Reserve, especially from those occupational communities that had been repeatedly mobilized such as special warfare, construction, supply, engineers, and intelligence. Efforts were made to "stay Navy" with a focus on reducing force attrition.⁸³ Research participants also described struggles with officer conversions from active duty into the Navy Reserve. AC members who had been repeatedly deployed due to the demands on their occupational community could see that the same thing would continue if they joined the Navy Reserve. The Navy responded with several recruiting initiatives for the intelligence and other specialties, including accession bonuses and training programs and a one-year mobilization deferral period for select Navy veterans coming off of active duty.⁸⁴

⁷⁹ United States Government Accountability Office (GAO)-08-670 Report to the Committee on Armed Services, U.S. Senate and the Committee on Armed Services, House of Representatives, *Joint Policy Needed to Better Manage the Training and Use of Certain Forces to Meet Operational Demands*, May 2008.

⁸⁰ Ibid.

⁸¹ Comments by USNR research participant.

⁸² Dirk J. Debbink. "The Navy Reservist: Ready Now, Anytime, Anywhere," *2010 Almanac*.

⁸³ John G. Cotton, "The Navy Reservist," *2006 Almanac*.

⁸⁴ Commander, Navy Reserve Intelligence Command, *Fiscal Year 2006 Annual Report*, p.29; and Commander, Navy Reserve Intelligence Command, *Fiscal Year 2007 Annual Report*, pp.3 and 23.

2. Training and Readiness

Experiences varied significantly regarding both individual and collective training experiences in preparation for OIF support. Individuals who were mobilized and deployed during the early phases of the conflict with little notice prior to their mobilizations, had almost no training at all and none that was theater-specific. Research participants described how they had not been read into operational plans, had no knowledge of systems being used by their AC and joint counterparts, and had to catch up to the performance level of others. Interview participants stated that since they were not prepared, the AC would be disappointed in them and not value their contributions, causing a cycle of frustration. IDA was told that over time, these training deficiencies were corrected to the extent possible and opportunities for training existed if individuals wanted to pursue them.

This experience contrasts with the collective training received by aviation and engineer reserve units, as described by research participants. These organizations had deliberate training tasks and a regimen to move the unit to higher levels of readiness and certification for deployment. When they deployed, these units would be at the same readiness levels at their active counterparts. The NGRER for FY2002 depicted the Navy Reserve as having 90 percent of the equipment available to meet mobilization requirements and a 2.5 percent shortage in terms of the dollar value of the equipment.⁸⁵ By the publication of the FY2004 NGRER, the Navy Reserve reported having 100 percent of the equipment available to meet mobilization requirements.⁸⁶

During this period, the Navy prioritized active-reserve integration, attempting to address cultural issues, organizational lines of authority, and structures which did not promote a total Navy approach. Part of this integration involved the creation of Navy Operational Support Centers where reservists would train and work, and even a name change from the Naval Reserve to Navy Reserve. Navy reservists would report to some portion of the active Navy, thereby providing ownership of the Navy Reserve by the active Navy. Operational Support Officers from the Navy Reserve would play critical roles as liaisons in active Navy organizations, assisting with RC understanding and integration.

Since the Navy was filling joint requirements or those normally assigned to ground forces, coordination was made for specific training to be conducted by organizations outside of the Navy. For example, Navy Reservists were trained for human intelligence (HUMINT) missions at both Navy and Army locations. For Army-specific missions, such as interrogation and debriefing analytic requirements, as well as Weapons Intelligence Team requirements, several research participants described how the Navy sent reservists to various Army or joint training facilities. For ground combat skills, Navy personnel went

⁸⁵ David S. C. Chu, *National Guard and Reserve Equipment Report for Fiscal Year 2002*.

⁸⁶ *National Guard and Reserve Equipment Report for Fiscal Year 2005*, p.1-2.

to Army bases like Fort Dix and Fort Jackson for training prior to deployment to OIF, based on agreements with the Army.⁸⁷ These Navy personnel were even referred to as the “N-Army.”

One area of concern was with regard to Navy personnel training for one mission only to deploy individually and then be employed for a completely different mission. One senior research participant perceived that this happened to 40-to-50 percent of those deploying as individuals. According to a 2008 GAO report, Navy officials stated that it was not unusual for their nonstandard forces to receive a change of mission or mission location.⁸⁸ Accordingly, “DOD cannot currently ensure that all of its nonstandard forces are being used consistent with the tasks, conditions, and standards for which they have been trained.”⁸⁹

C. Assessment

In this section, IDA synthesizes reports, histories, archived comments, as well as responses from interview participants regarding the performance of Navy reservists in support of OIF. IDA also discusses the results of strike data analysis using the THOR/MISREP Analysis Tool.

1. Comments on Navy Reserve Performance

From research participants representing all Services and components, and from tactical to strategic levels, there seems to be a common thread that the Navy Reserve performed as asked in support of OIF. As highlighted earlier this chapter, only when reservists found themselves in situations where they had not been exposed to the systems, plans, equipment, and perhaps missions of their AC counterparts did performance initially lag. Some communities seemed to integrate easily across components such as special warfare, aviation, engineers, medical, supply, and later intelligence. This is not to say that other communities of individuals and organizations did not do so as well. Interview participants identified these particular groups.

As an example, roughly 90 percent of the AC research participants interviewed as part of the intelligence vignette regarded the performance of Navy Intelligence Reservists

⁸⁷ Hearing before the Readiness Subcommittee of the Committee on Armed Services, House of Representatives, 110th Congress 1st Session, HASC No. 110-81, *The Use of In Lieu Of, Ad Hoc and Augmentee Forces in Operations Enduring Freedom and Iraqi Freedom*, 31 July 2007.

⁸⁸ United States Government Accountability Office (GAO) -08-670 Report to the Committee on Armed Services, U.S. Senate and the Committee on Armed Services, House of Representatives, *Joint Policy Needed to Better Manage the Training and Use of Certain Forces to Meet Operational Demands*, May 2008.

⁸⁹ Ibid.

during OIF as positive.⁹⁰ These senior leaders stated that they could not have accomplished their missions without the Navy Intelligence Reservists, regarded the performance as superior, and viewed contributions as being critical to the war effort. The full vignette can be read in Appendix C.

a. Aviation

Research participants highlighted Navy Reserve aviation contributions in support of OIF. The long term support to the special operations communities by the helicopter combat support special squadrons is an example of Navy Reserve performance that was greatly valued for the OIF effort, and not only by just the Navy. Using the THOR/“STRIKE” MISREP Analysis Tool, IDA considered the contributions of strike fighter squadron VFA-201, since they were the first reserve squadron of its type to be called to active duty since the Korean War. VFA-201 deployed to OIF on the USS Theodore Roosevelt, flew more than 3,500 hours, including 270 combat sorties, during which the squadron dropped more than 250,000 pounds of precision-guided weapons. The squadron also was awarded the reserve aviation battle "E." The commander of the carrier wing (CCW-8) stated that "their performance merits their selection (for the award), . . . , they got the call and fully activated the squadron two weeks before joining the wing . . . this award just goes to show how hard 201 was working." A description of this MISREP analysis is included in Appendix D with the full MISREP analysis located in the classified appendix. The MISREPs analyzed represented “STRIKE” MISREPs, in which ordnance was delivered or attempted to be delivered. According to this data, VFA-201 achieved an 84 percent success rate of targets found/damaged/destroyed, the same rate as the entire wing. What stands out is that VFA-201 alone delivered 48 percent of all CVW-8 F-18-delivered ordnance in OIF on this cruise.

b. Value of Civilian Skill Sets

AC participants from all of the Services repeatedly spoke of the value of civilian skills unknown to the AC that were resources to be found in the RC, if one could only identify the skill sets and talents. Comments by the Commander, Navy Reserve Force, highlighted this point by stating that "while military experience is important, our Reservists also have over 800 important and critical civilian skill sets that need to be measured and qualified." From the intelligence vignette, participants listed specific areas where intelligence reservists made valuable contributions by applying their civilian expertise to emerging intelligence challenges. Experts from the petroleum industry provided insight on oil platforms and rigs. Maritime industry and business managers provided expertise on

⁹⁰ The performance comments reflected in this section are derived solely from the research study interviews with Active Component senior leaders who commanded or directly supervised mobilized Navy Intelligence reservists during OIF.

shipping patterns and records. Scientists and engineers from national laboratories provided information on state-of-the-art technologies. Port security experts assisted in ascertaining vulnerabilities. Police and investigations professionals brought insight to counter-terrorism and debriefing missions. Linguists enabled a wide variety of missions in theater and in the United States.

c. Relationships

Repeatedly, research participants representing both components of the Navy and the other Services spoke of the value that they attributed to relationships developed with members of the other component and how important these were to OIF and other missions. Individuals and organizations would be purposefully selected for duties, where existing relationships were the key to the assignments. Participants described their own experiences being "by name requested" for assignments. In addition to relationships built through mobilization experiences, deployments, and exercises, interview participants identified PME and joint PME as critical venues where they felt relationship building was enabled and bonds of trust formed between the components. A frequently heard statement from RC participants was that AC leader familiarity with the Navy Reserve, its capabilities, and how to access the RC was vital and might, unfortunately, not have taken place until the leader was in a joint assignment or later in their careers.

D. Coast Guard OIF Support

1. Capabilities

The USCG provided some unique forces in support of OIF, and from the DMDC data depicted in Figure 12, the USCGR contributed significantly to these efforts. A Center for Naval Analyses (CNA) paper entitled, "Coast Guard Operations During Operation Iraqi Freedom" described the overseas deployment of the Coast Guard as the largest since the Vietnam War.⁹¹ The paper goes on to describe how the USCG "sent two major cutters, a buoy tender, eight patrol boats, numerous port security units, and supporting units."⁹² These assets represented USCG capabilities in the mission specialties of port security, coastal and environmental security, and maritime interdiction operations.⁹³

⁹¹ Basil Tripsas, et al., *Coast Guard Operations During Operation Iraqi Freedom*, Center for Naval Analyses, CRM D0010862.2/Final, October 2004, retrieved at http://www.uscg.mil/history/Iraqi_Freedom_Index.asp.

⁹² Ibid.

⁹³ William H. Thiesen, *Guardians of the Gulf: A History of Coast Guard Combat Operations in Support of Operation Iraqi Freedom, 2002-2004*, Atlantic Area Historian's Office, 11 June 2009, retrieved at http://www.uscg.mil/history/Iraqi_Freedom_Index.asp.

Like their AC counterparts, the USCGR was already mobilized and supporting post-September 11, 2001, operations domestically when the commencement of OIF approached. USCGR personnel "provided security for military out-load operations in the continental United States, as well as general security for ports across the country."⁹⁴ For the OIF mission, the USCGR also provided Port Security Units (PSUs) that would work with and for the other Services to protect shipping as it enters and leaves harbors, during times when ships are in port. PSUs would attempt to prevent former members of the Iraqi regime from escaping by boat.⁹⁵ During the course of OIF, PSUs would also end up providing security on Iraqi gas and oil platforms, once coalition forces seized them. Another capability provided by members of the USCGR in support of OIF entailed shipping container inspection. The Redeployment Assistance Inspection Detachment (RAID) teams would inspect containers and large platforms such as trucks and tanks, in order to ensure safe loading for return transit to the United States.⁹⁶ According to a 2013 article, RAID inspected nearly 20 percent of all of the Army's containers which held 2.2 million pieces of equipment being moved out of Iraq.⁹⁷

a. Preparations

In terms of readiness, according to the FY2002 NGRER, the USCGR had 99 percent of its equipment to meet mobilization requirements, with substitutions, but value of the equipment shortages equated to almost 50 percent of the total value of the equipment requirements when excluding substitutions.⁹⁸ This would change to a two percent shortage of the total value of the equipment requirements by FY2005.⁹⁹ For USCG OIF preparations, the lack of an existing operational plan to provide guidance regarding the sorts of missions that might be asked of the USCG, and having only military commands in the theater of operations knowing the time frame for commencement of hostilities, proved to be a

⁹⁴ Basil Tripsas, et al., *Coast Guard Operations During Operation Iraqi Freedom*, Center for Naval Analyses. CRM D0010862.2/Final, October 2004, retrieved at http://www.uscg.mil/history/Iraqi_Freedom_Index.asp.

⁹⁵ Ibid.

⁹⁶ William H. Thiesen, *Guardians of the Gulf: A History of Coast Guard Combat Operations in Support of Operation Iraqi Freedom, 2002-2004*, Atlantic Area Historian's Office, 11 June 2009, retrieved at http://www.uscg.mil/history/Iraqi_Freedom_Index.asp.

⁹⁷ Kent G. Sieg, *Tip of the spear: The U.S. Coast Guard's RAID in Afghanistan*, 2 May 2013, retrieved at <https://www.army.mil/article/101430>.

⁹⁸ David S.C. Chu, *National Guard and Reserve Equipment Report for Fiscal Year 2002*, Department of Defense, Office Assistant Secretary of Defense for Reserve Affairs, February 2001.

⁹⁹ Thomas F. Hall, *National Guard and Reserve Equipment Report for Fiscal Year 2005*, Department of Defense, Office Assistant Secretary of Defense for Reserve Affairs, February 2004.

challenge.¹⁰⁰ According to CNA, the actual mobilization of the USCGR for OIF became problematic when the decision was made to disaggregate the TPFDD. This meant that the USCGR could not be activated, trained, and deployed, in accordance with doctrine, where reservists would need the lead time to conduct the domestic security of the loading of the OIF force. The ad hoc nature of the mobilizations created uncertainty in the USCGR.¹⁰¹

Participants described how deploying members of the USCG received training specific to the mission that they would perform in OIF. As an example, members received training in chemical and biological protection, law enforcement, emergency response, damage control, and a variety of weapons training for force protection.¹⁰² Not only was this training conducted by the USCG, but also by the other Services and contractors, and at other Services' facilities. When the USCG deployed to support OIF, it did so as an integrated member of the joint and coalition forces.

E. Conclusion

In this chapter IDA considered Navy and Coast Guard contributions to OIF/OND. The higher levels of readiness that the USN and USCG maintained their reserve forces enabled easier integration with AC and joint partners in support of OIF. In instances where reserve forces did not have the same equipment and systems to train on as their AC counterparts, IDA again heard of frustration and expectation mismatch between components. The large mobilizations required to support the OIF campaign proved somewhat problematic at first, when systems were not in place and exercised to conduct such mobilizations. Then, disaggregation of the TPFDD created uncertainty with ad hoc mobilizations. Research participants highlighted the value of the civilian skill sets that the reserves brought to a mission. IDA also heard how important relationships and understanding between the components was vital. In the next chapter, IDA considers the Marine Corps contributions to OIF.

¹⁰⁰ William H. Thiesen, *Guardians of the Gulf: A History of Coast Guard Combat Operations in Support of Operation Iraqi Freedom, 2002-2004*, Atlantic Area Historian's Office, 11 June 2009, retrieved at http://www.uscg.mil/history/Iraqi_Freedom_Index.asp.

¹⁰¹ Basil Tripsas, et al., *Coast Guard Operations During Operation Iraqi Freedom*, Center for Naval Analyses, CRM D0010862.2/Final, October 2004, retrieved at http://www.uscg.mil/history/Iraqi_Freedom_Index.asp.

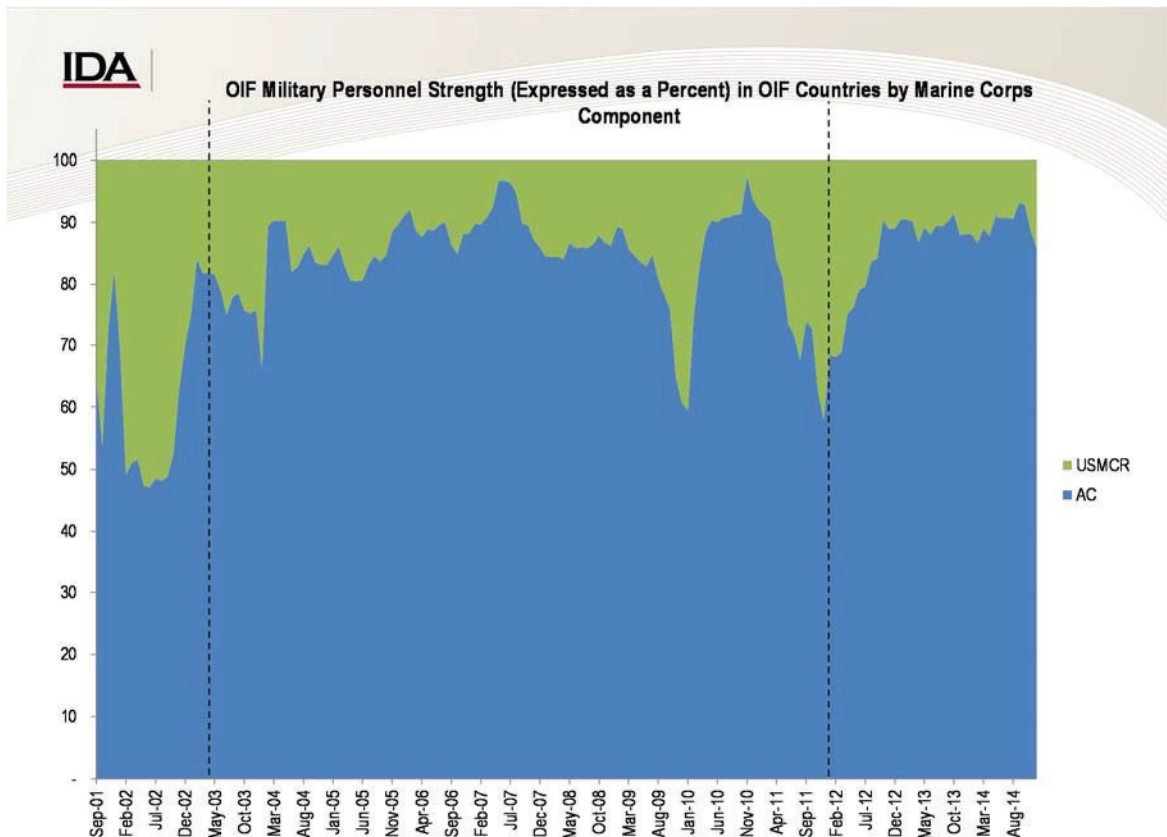
¹⁰² Ibid.

5. Marine Corps

In this chapter, IDA will look at the Marine Corps Reserve (USMCR) contributions to OIF/OND. The chapter commences with a description of the data sources considered, then describes USMCR mission support to OIF, and concludes with an assessment of that support.

A. Data Sources

As in previous chapters, in order to consider operational assessments of USMC forces, IDA first captured the DMDC data extracts, by component, to determine a baseline of deployed forces throughout the OIF campaign. Figure 14 depicts over time the strength as a percentage of the force in the operational theater. This data is a bit misleading for the USMC, as IDA was told that Marines would be deployed into Kuwait and data would not necessarily be updated to reflect that they had moved into Iraq.



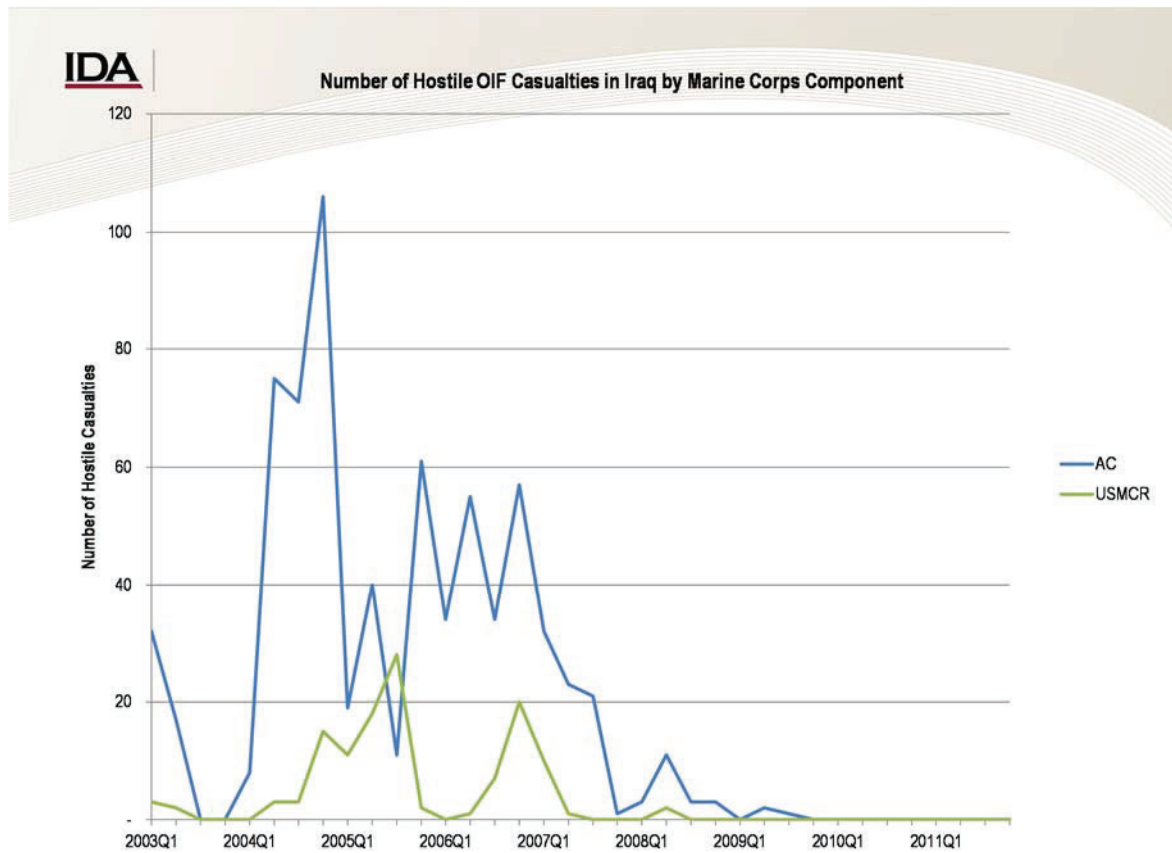
Source: DMDC Data Extract.

Figure 14. Marine Corps Personnel Strength in OIF by Percent of Component

Accordingly, IDA consulted USMC documents in order to capture which units and individuals from the USMCR deployed in support of OIF/OND.

1. Casualty Data

IDA considered the data extract from DMDC on Service member casualties in Iraq from the Defense Casualty Analysis System. Figure 15 depicts the USMC fatalities in OIF due to hostile fire. While casualties are not necessarily a performance metric, they do provide insights into burden sharing and risk.



Source: DMDC's Defense Casualty Analysis System.

Figure 15. USMC Fatalities Due to Hostile Fire

2. Other Studies, Reports, Lessons Learned, Histories, Testimonies, Almanacs

IDA consulted with the History Division of the USMC, Marine Corps Lessons Learned (MCLL), Center for the Advanced Operational Cultural Learning (CAOCL), USMC Forces Reserve, and other offices. IDA considered after action reviews and other

published reports and investigations in order to understand the contributions made by the USMCR and highlight performance assessments whenever possible.

3. IDA-Conducted Interviews

IDA conducted semi-structured, "not for attribution" interviews of senior USMC and USMCR leaders, and leaders from all of the Services, who could provide contextual, qualitative insights related to performance and into decision making processes associated with mobilization, personnel management, operational readiness, force management, and the conduct of the OIF. A list of research participants is located in Appendix A.

4. SIGACTs

Analysis of SIGACTs was previously conducted on behalf of OSD Cost Assessment and Program Evaluation (CAPE), and primarily focused on data associated with enemy initiated events (EIAs). For this research, analysis of SIGACTs was extended to consider the time periods of 2003-2011, and included an assessment of non-EIAs. For the USMC, analysis entailed 37,000 data points, with 33,000 associated with the AC and 4,000 from the USMCR.

5. Reserve Combat Assessment Team

IDA obtained the lessons learned report regarding USMCR forces in OIF. After reviewing the document, IDA contacted the combat assessment chief in order to discuss the lessons learned.

B. Mission Support to OIF

USMC participation in OIF occurred in two phases. The first phase was the invasion of Iraq that started on March 19, 2003, and ended on May 1, 2003, after the capture of Baghdad and the fall of the Saddam Hussein regime. I Marine Expeditionary Force (MEF) and 2nd Marine Expeditionary Brigade (MEB) attacked on the right axis and moved swiftly to Baghdad and the eastern part of Iraq. This battle of the campaign was perceived as a victory, and the numbers of U.S. and coalition forces in Iraq were significantly reduced. USMC forces redeployed from Iraq. By the end of 2003, there were fewer than 250 USMC personnel in Iraq.

Phase two started with the return of I MEF in March 2004 and ended in August 2010. After a yearlong lull in combat operations, the pace picked up in 2004 after sectarian violence increased. I MEF deployed again and was assigned responsibility for operations in al-Anbar Province. Subsequently, II MEF alternated with I MEF as the campaign in al-Anbar Province progressed. Starting in 2009, the USMC presence was gradually reduced. By March 2010, USMC presence in Iraq was about 500 personnel.

The mission statement of the USMC Forces Reserve calls for the USMCR to augment and reinforce the AC.¹⁰³ Augment means that the USMCR provides individuals and small units to fill AC units. Reinforce means that the USMCR provides units to be included in AC organizations. For the first phase of OIF, the USMCR provided some of the following capabilities in both augmentation and reinforcing roles: infantry battalions, light armor reconnaissance, artillery, intelligence sections, assault amphibian units, force reconnaissance, tank companies, air-naval gunfire liaison, reconnaissance, and civil affairs.¹⁰⁴

In terms of aviation assets, 4th Marine Aircraft Wing (MAW) units were activated and deployed to OIF with the three flying squadrons operating as units.¹⁰⁵ These units included aerial refueling squadrons and a heavy helicopter squadron. Other 4th MAW units augmented 3rd MAW headquarters and counterpart units. Some of the USMCR capabilities included: air combat liaison, Marine air control, Marine air support, and communications. This task organization provided a theater-wide air operations capability by fitting together small elements and individuals into an overall architecture that provided for centralized control of air operations.

USMCR combat service support units and personnel also contributed to this first phase of OIF. Capabilities included: communications, military police, mortuary affairs, engineer support, bulk fuel, motor transport, landing support, and medical.¹⁰⁶ By the end of this phase of OIF, the USMC had mobilized 48 percent of its RC.¹⁰⁷

In March of 2004, during the second phase, I MEF returned to Iraq and was assigned responsibility for operations in al-Anbar Province, relieving the 82nd Airborne Division of that mission.¹⁰⁸ For this mission, the Marine Corps changed the way it conducted operations from attack to stability operations and from a short war to a long war. This mission change meant that many USMCR units would have to be used to maintain force levels in Iraq and help meet other USMC global and domestic requirements. Moreover, the change in the kind of operations and the additional tasks to be performed in al-Anbar meant that some units would have to be transformed to accomplish tasks other than those for

¹⁰³ Mission Statement of USMC Forces Reserve located at <http://www.marforres.marines.mil/About/Mission-Statement/>.

¹⁰⁴ Thomas W. Crecca, USMCR, *United States Marine Corps Reserve Operations: 11 September 2001 to November 2003* (New Orleans, LA: U.S. Marine Forces Reserve, 2005).

¹⁰⁵ Ibid.

¹⁰⁶ Ibid.

¹⁰⁷ Reserve Combat Assessment Team, *Marine Corps Reserve Forces in Operation Iraqi Freedom: Lessons Learned*, January 2004, p.1.

¹⁰⁸ Kenneth W. Estes, *U.S. Marine Corps Operations in Iraq: 2003-2006*, History Division of the USMC, 2009, p.15.

which they had been organized. The USMC met this challenge by using USMCR units to perform difficult missions and by reorganizing AC and USMCR units to accomplish new missions. During this phase of OIF, the USMCR provided both units and individuals to I MEF and II MEF in support of OIF. Each element of the Marine Air Ground Task Force (MAGTF) was treated somewhat differently. The USMCR provided individual augmentees for the headquarters elements, infantry battalions and combat support companies to reinforce the ground combat elements, and aviation combat elements to augment AC command and support units and flying squadrons.¹⁰⁹ The 4th Marine Air Wing deployed seven combat aviation squadrons to Iraq during this period including attack helicopters, medium cargo helicopters, tanker aircraft, and fighter aircraft.

The USMCR also provided individuals and units to augment the AC combat service support elements. During the OIF campaign, the Marine Corps changed the name from combat service support to combat logistics support. This new name emphasized the task of organizing several different logistics functions in order to provide multi-functional units, which would provide a broad range of support. A MEF had a Marine Logistics Group (MLG) and the 4th MLG provided augmentation for overseas contingency operations on a rotational basis from 2005 to 2007. A large number of 4th MLG personnel had deployed for phase one operations, and this limited the availability of reservists for the Anbar mission or second phase.¹¹⁰ In the next section, IDA looks at personnel and force management of the USMCR, as it related to OIF. Subsequently, training and readiness of the USMCR is highlighted.

1. Personnel and Force Management

As highlighted in the previous section, the USMC had mobilized 48 percent of the USMCR by the end of the first phase of OIF, the highest proportion of any Service RC.¹¹¹ Additionally, in order to maintain force levels and provide a measure of unit stability, the USMC instituted a unit-based Stop Loss in early 2002, affecting some 10,000 Marines.¹¹² According to a Congressional Research Service report for Congress, the USMC "rescinded its Stop Loss program in May 2003."¹¹³ Eventually, the Secretary of Defense, in 2007, approved plans to increase the size of the Army and the USMC due to ongoing global contingency operations. This initiative, referred to as Grow the Force, was to increase the

¹⁰⁹ David T. Watters, *Marine Forces Reserve Operational History: Global War on Terror (2004-2007)*, 2009.

¹¹⁰ Ibid.

¹¹¹ Reserve Combat Assessment Team, *Marine Corps Reserve Forces in Operation Iraqi Freedom: Lessons Learned*, January 2004, p.1.

¹¹² Congressional Research Service Report for Congress (7-5700), *U.S. Military Stop Loss Program: Key Questions and Answers*, 10 July 2009, p.6.

¹¹³ Ibid.

end strength in the Army by more than 74,000 by 2013 and the Marine Corps by 27,000 personnel by 2011 to enhance U.S. forces, reduce stress on deployable personnel, and provide necessary forces for success in the Global War on Terrorism.¹¹⁴ Grow the Force helped ease the burden of ongoing global operations, but the USMC had already decided on a force management approach that could enable it to sustain a longer conflict.

The rotational scheme employed by the USMC entailed higher level headquarters rotating on an annual basis and battalions and below rotating every seven months.¹¹⁵ This rotational system meant that most AC units would be deployed at some point. It also meant that many USMCR units and personnel would have to be used to maintain the force level in OIF and elsewhere. The Commandant of the Marine Corps envisioned a seven-month deployment that would permit "much more flexibility in meeting global requirements, while maintaining unit cohesion."¹¹⁶ Research participants representing all components commented on how this force management decision was most appropriate, enabling the USMC to meet global requirements, while also providing necessary time to reset and retrain prior to subsequent deployment. USMC interview participants stated that they saw the degraded operational and emotional impacts of Army personnel deployed for 12 and even 15 months in support of OIF requirements. These observations reinforced the seven-month rotational force management decision by senior USMC officials.

The initial, large scale mobilization of the USMCR in support of OIF did pose challenges and there was "difficulty in the initial call-ups."¹¹⁷ As highlighted in previous chapters, some of the challenges stemmed from the decision not to use the TPFDD during the commencement of OIF. The decision to change from a doctrinal TPFDD-driven process "negated much prior planning" and the USMCR requests for forces were "often identified late and the ground force commander could not be sure that requests would be approved."¹¹⁸

2. Training and Readiness

By deploying combat assessment teams alongside USMC forces, lessons observed were rapidly conveyed to those AC and RC forces that would be deploying in the future so that they became lessons learned. The USMC incorporated these lessons into their

¹¹⁴ Government Accountability Office (GAO) Report to Congressional Committees, GAO-08-375, *Army and Marine Corps Grow the Force Construction Projects Generally Support the Initiative*, March 2008.

¹¹⁵ Kenneth W. Estes, *U.S. Marine Corps Operations in Iraq, 2003 -2006*, History Division USMC, 2009, p.10.

¹¹⁶ Ibid.

¹¹⁷ Comment by General James Conway, *U.S. Marines in Iraq, 2003: Anthology and Annotated Bibliography*, History Division of the United States Marine Corps, 2006, p.48.

¹¹⁸ Reserve Combat Assessment Team, *Marine Corps Reserve Forces in Operation Iraqi Freedom: Lessons Learned*, January 2004, p.68.

"Mohave Viper" pre-deployment training regimen at Marine Corps Air Ground Combat Center at Twentynine Palms so that Marines would be exposed to as much of the operational environment of OIF as could be replicated.

Inspector-Instructors (I&I) consisted of AC personnel who "instruct and assist USMCR units to maintain a continuous state of readiness for mobilization; inspect and render technical advice in command functions including administration, logistical support, and public affairs; and execute such collateral functions as may be directed by higher authority."¹¹⁹ The USMC I&I process seemed to be validated during the long OIF/OND campaign, yet readiness challenges surfaced, oftentimes equipment focused. According to the FY2002 NGRER, the USMCR possessed 99 percent of the equipment available to meet mobilization requirements, including substitutions and the total value of equipment shortages, minus substitutions, was less than one percent.¹²⁰ By the FY2008 NGRER, the USMCR was reported as having approximately a three percent equipment shortage.¹²¹ These numbers do not seem in concert with a 2005 Marine Corps Inspector General report which highlighted that Marines in OIF did not have enough weapons, communications gear, or properly outfitted vehicles, and that equipment readiness outside of the war zone was much worse; 10 percent less than in OIF.¹²² A Reserve Combat Assessment Team posed a question to survey participants in Iraq regarding whether or not USMCR units had the equipment that they needed and the response was "no," with lack of communication equipment and late arrival of sealifted equipment among the highlighted reasons.¹²³

C. Assessment

When considering the operational effectiveness of the USMCR compared to that of the active duty Marine units and individuals with similar missions, assessments depend on two things: (1) views of those involved in the campaign as determined directly by interviews and indirectly by assignment of missions; and (2) the ways that USMCR units and individuals were utilized. IDA first looked at the report of the Marine Corps Assessment Team and survey results within the lessons learned. Then, IDA considered analysis of SIGACTs data, comments on casualty rates, and concluded with additional remarks by research participants.

¹¹⁹ Ibid.

¹²⁰ National Guard and Reserve Equipment Report for Fiscal Year 2002, February 2001, pp.1-3, 1-4.

¹²¹ National Guard and Reserve Equipment Report for Fiscal Year 2008, February 2007, p.1-3.

¹²² Lawrence J. Korb, et al., *Marine Corps Equipment After Iraq*, Center for American Progress, August 2006, p.6 - 10.

¹²³ Reserve Combat Assessment Team, *Marine Corps Reserve Forces in Operation Iraqi Freedom: Lessons Learned*. January 2004, p.8.

1. Reserve Combat Assessment Team

The 2004 report by a Reserve Combat Assessment Team provides a thorough assessment of both opinions and assignments for Phase I of the operation in 2003.¹²⁴ In that attack phase, the evidence supports a finding that USMCR units performed on a par with active duty units and that Marine IAs and other individuals augmenting active duty staffs and units also performed on a par with active duty counterparts. Some of the findings of the assessment team are as follows:¹²⁵

- “Marine Corps Reserve forces are one of the great success stories of the war. They showed that they are skilled fighters who could perform as advertised—muster, train, deploy, and fight—and do it, not as second-stringers who might suffice in an emergency but as highly motivated, highly competent Marines.”¹²⁶
- The Marine Corps relies heavily on the MCR because it is heavily committed and stretched thin even in peacetime and, particularly, in major combat operations.
- All MCR units are all designed for warfighting and expeditionary warfare.
- The MCR provides a “prudent economy-of-force” element. Peacetime training and rapid mobilization times allowed MCR units to meet wartime standards.
- By maintaining and using MCR units, “the Marine Corps could stretch its constrained resources without increasing risk.”
- Active duty commanders described Reserve Marines in glowing terms. As many noted, “You could not tell the difference between Active and Reserve Marines.” Reservists attend the same schools, participate in the same exercises, and are held to the same standards as active duty Marines.
- All reserve officers and many enlisted personnel have extensive active duty experience. The inspector-instructor (I&I) staffs come from the active duty force, set high standards, and are integrated with their reserve units.
- The demanding mobilization operational readiness deployment test ensures a high state of peacetime readiness.

Despite the rave reviews by senior commanders, there is considerable evidence that AC-RC relationships at the individual level were not satisfactory from the viewpoint of the reservists. Most reservists felt that active duty Marines did not accept them initially, but

¹²⁴ Reserve Combat Assessment Team, *Marine Corps Reserve Forces in Operation Iraqi Freedom: Lessons Learned*, January 2004.

¹²⁵ Ibid.

¹²⁶ Ibid.

eventually did. Reserve units had to prove themselves. Tensions sometimes went deeper, and reservists recount many stories of put downs and condescension by active duty Marines. The problem improved over time with 66 percent of reservists interviewed on this issue reporting that eventually they were accepted as a member of the team. It is important to note, however, that one-third of reservists believed that the active duty never accepted them as equal partners.¹²⁷

According to a Reserve Combat Assessment Team, performance of USMCR units and individuals was not entirely perfect. There were some problems and lessons that were learned.¹²⁸

- Battalion level training in peacetime is necessary to assure battalion commanders and staff can perform properly in combat operations. MCR companies were well trained. MCR battalions and battalion headquarters needed some post-mobilization training to become fully effective.
- MCR officers need to be trained to perform staff functions at battalion and higher level headquarters. Many reserve officers did not know how to operate as staff officers at the battalion and higher level headquarters. This was noted in the use of IAs to augment high level staffs and ad hoc organizations. Some reserve officers were relieved and others were assigned to less demanding duties because they did not perform well. The reservists were attuned to the operational tempo of peacetime training and found it hard to adjust to the fast moving and automatic responses needed in combat operations. More opportunities should be provided for Marine captains and majors to learn staff work.

2. SIGACTs

Analysis of the 37,000 USMC SIGACTs depicted the USMCR performing missions (mission profile) similar to that of the AC, which was quite different than the Army AC and RC. Aggregated data depicted minimal differences between Marine Corps AC and RC in both enemy-initiated and non-enemy-initiated activities. Complete analysis of this data is presented in the classified appendix.

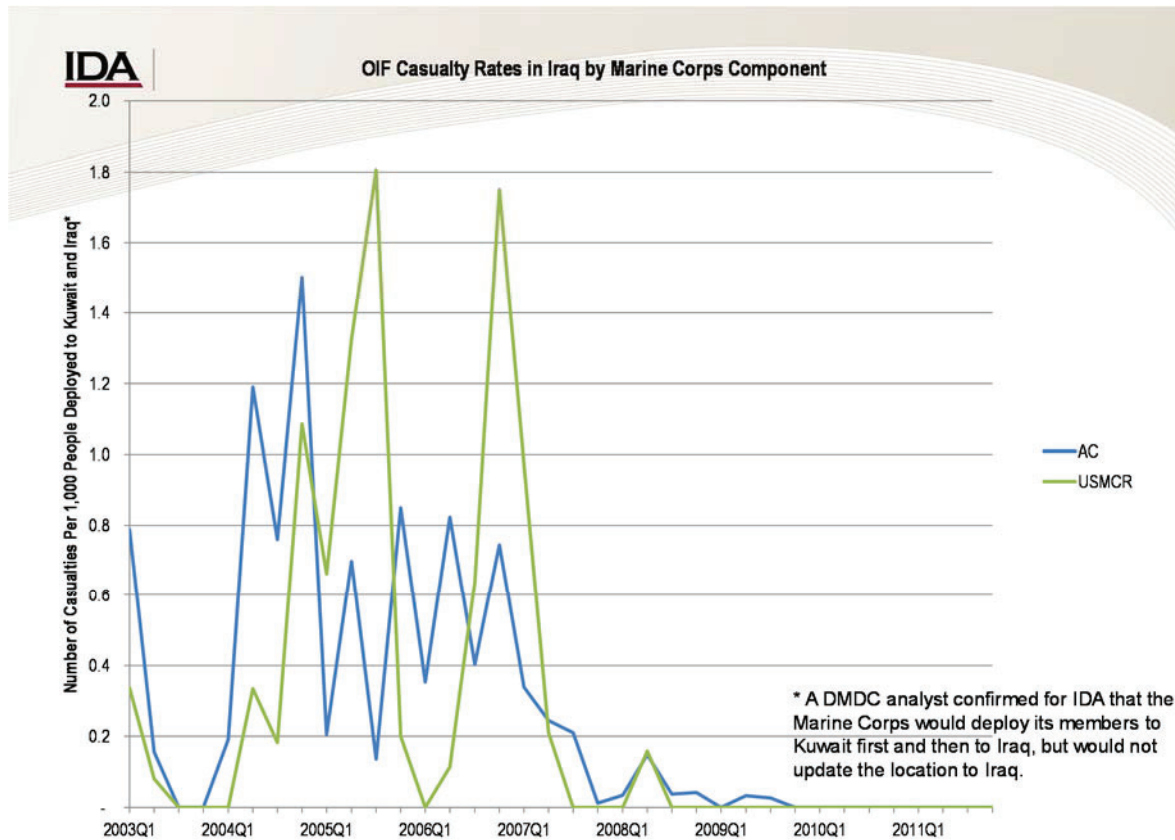
3. Casualty Data

Casualty data does not depict performance, but it can provide insights regarding exposure to risk and burden sharing. In Figure 15, IDA observed the casualty figures broken out by component, as provided by the DMDC Defense Casualty Analysis System.

¹²⁷ Reserve Combat Assessment Team, *Marine Corps Reserve Forces in Operation Iraqi Freedom: Lessons Learned*, January 2004, p.56.

¹²⁸ Ibid.

In Figure 16, casualty rates were calculated based on the DMDC deployment data presented in Figure 14, which suggests that at times the USMCR sustained higher casualty rates per 1,000 members deployed. Again, this is not performance data, it depicts exposure to hostile fire in the OIF campaign.



Source: DMDC's Defense Casualty Analysis System.

Figure 16. USMC Fatality Rates Due to Hostile Fire by Component

4. Additional Comments by Research Participants

Research participants reiterated many of the subjects already presented in this chapter. Several of these subjects will be highlighted and elaborated on in this section. Participants were generally pleased with USMCR contributions and performance in support of OIF. Staff proficiency at the battalion level and above seemed to be a topic brought up by both AC and RC participants. Where USMCR battalions did not have trained staffs, the ability of these organizations to integrate not only with other USMC organizations, but joint and coalition organizations became challenging. This was one area for improvement highlighted by several of the research participants, along with the skills of individuals (AC or RC) augmenting division and higher staffs. If the Marine, regardless of component, did

not have prior experience working at these staff levels, they would not easily step in and seamlessly perform. They would require some time to become proficient.

Research participants lauded USMCR aviation skills and contributions to the OIF effort. There seemed to be little friction between these organizations and their AC counterparts. Participants highlighted other areas where USMCR members were able to utilize their civilian skill sets successfully towards the accomplishment of military tasks. An example of valued civilian skills included backgrounds in police and firefighting.¹²⁹ Friction, as described by the research participants, took place at the combat maneuver battalion level of the USMCR with respect to other USMC units, and was primarily focused on staff proficiency. Finally, participants described how relationships between the AC and RC matured over time. USMCR units and personnel were purposefully selected and assigned missions and tasks. If an AC USMC commander did not know the supporting USMCR unit (or a unit from another Service), especially ground combat units, the AC commander would limit mission risk by assigning these units less demanding roles. Years of mobilizing in support of OIF mitigated some of this as AC and RC leaders developed relationships and bonds of trust.

D. Conclusion

In this chapter, IDA considered USMCR contributions to OIF/OND. The USMC extensively utilized the USMCR in support of OIF and other global commitments, validating many of the force structure constructs and strategies developed so that the USMC could provide integrated MAGTFs for combatant command requirements. Initial mobilization challenges were described as were assessments of USMCR performance. Aggregated SIGACTs data depicted little difference between AC and RC performance and showed similar mission profiles. In the next chapter, IDA highlights research findings and offers recommendations.

¹²⁹ David. T. Watters, *Marine Forces Reserve Operational History: Global War on Terror (2004-2007)*, 2009, p.8.

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6. Research Findings and Recommendations

In this chapter, IDA presents findings from the research and offers recommendations for DOD consideration.

A. Findings

The following is a list of research findings with explanations.

1. Analysis of Aggregated Tactical Level Data Depicted No Sizeable Differences Between AC and RC Forces in Measurable Metrics

Analysis of data from SIGACTs, THOR/MISREP (aviation strike), and mobility depict RC forces doing exactly what they are being tasked to do, without sizeable differences in performance from that of their AC counterparts. Combined with analysis of deployment data, casualty data, and mishap data, findings depict a shared burden and shared risk between AC and RC forces.

2. Strategic and Operational Leaders Were Generally Pleased with RC Contributions and Performance in Support of OIF

Both RC contributions and performance met the intent of leaders at the strategic and operational levels. This is not to say that incidents involving some RC personnel did not have negative strategic implications. Other such incidents involved AC personnel. When called to duty, RC forces and individuals served the nation during a period of conflict and ensured public support of those in uniform.¹³⁰ The nation could not have conducted the long OIF/OND campaign and other global commitments, while still preserving the AVF.

3. DOD Was Not Well Prepared for Large Scale Mobilizations

According to research participants and archived material, general knowledge regarding the use of RC forces, including mobilization authorities and duty status, was initially lacking. There was also confusion whether the administrative chain of command or the operational chain of command would be responsible for personnel and legal actions associated with RC forces. For the Army, investments had not been made in the infrastructure required for large, sustained mobilizations; therefore when these mobilizations took place many AC installations were initially unprepared. Over time, investments and institutional experience mitigated some of these impacts.

¹³⁰ Daniel P. Bolger, *Why We Lost: A General's Inside Account of the Iraq and Afghanistan Wars*, Houghton Mifflin Harcourt. New York, 2014, and comments by research participants from both the AC and the RC.

4. Disaggregation of the TPFDD and List had Major Implications to Service RC Utilization

During preparations for the commencement of OIF, the decision was made not to flow forces, both AC and RC, into the theater of operations via the doctrinal use of Time-Phased Force and Deployment Data and list.¹³¹ According to research participants, a decision to use the TPFDD would entail the early alert of RC members of an impending mobilization. Secretary of Defense Donald Rumsfeld also highlighted that "from a diplomatic standpoint, the timing was not good."¹³² According to joint doctrine, the TPFDD is a critical component of the Joint Operation Planning Process, enabling commanders to assess risks to their plans and then sequence "personnel, logistics, and other support necessary to provide mission support, distribution, maintenance, civil engineering, medical support, personnel service support, and sustainment for the joint force." This disaggregation of the TPFDD from the operational plan would ultimately dictate how the Military Services would be able to source their RC forces in support of OIF. Less ready forces were moved ahead of other forces, alert-to-mobilization times were often extremely short, and RC individuals and organizations had limited predictability. Furthermore, some individuals and units prepared to mobilize to perform one mission, and then were trained to conduct entirely new missions. TPFDD sourcing for these skills and missions, in many instances, did not exist. The global force management system of today, with supporting infrastructure and systems, did not exist but would evolve to meet the demands of sustaining forces in OIF.

5. Relationships Between the AC and the RC Mattered

According to research participants and archived materials, individuals and organizations from the RC were purposefully selected and employed. The greater the familiarity between AC and RC counterparts (from previous deployments, professional military education, and experiences), the smoother the transition of RC mobilization, pre-deployment training, employment once in the OIF theater of operations, and demobilization. These relationships, developed over the course of the OIF/OND campaign, also built a foundation of trust that, in many cases, did not previously exist.

6. Readiness Levels Mattered; Individual and Collective

Challenges with individual readiness for deployment added to the burden of cross-leveling personnel in organizations prior to deployment. In terms of equipment, RC limited exposure to the same equipment and systems of AC counterparts created a cycle of frustration and expectation mismatch between the AC and RC. When RC forces had the

¹³¹ Donald H. Rumsfeld, Transcript of Interview with *The Washington Post*, 20 September 2003.

¹³² Donald H. Rumsfeld, *Known and Unknown: A Memoir*, Penguin Group, New York, 2011, p.439.

same equipment and were trained on the same systems as their AC counterparts, they were more easily interchangeable. Equipment purchases, fielding, and training mitigated this cycle over time. Operational communities and organizational staffs that had periodic training center experience, operational deployments, and warfighter experiences with their AC counterparts and with joint entities seemed to integrate much easier once mobilized.

7. Friction Between AC and RC Formations Varied

From transcripts and interviews, in functions and missions where RC organizations and individuals brought to bear their vast experiences (both military and civilian), minimal performance friction with the AC seemed to exist. These capabilities included, but were certainly not limited to, medical, aviation, engineering, customs, port operations, transportation, communications, logistics, specific civil affairs functions, etc. Greatest performance friction appeared in ground combat discussions at division level and below. In the Army, this friction manifested with some Army National Guard brigades and below. In the Marine Corps, this friction manifested at the Marine Corps Reserve Infantry battalion level and below.

8. Performance Data Was Not Systematically Collected and Archived DOD-Wide

IDA had to use a variety of data, from disparate sources, in order to approach the question of RC operational effectiveness. It was apparent that some of this data was collected at various times. Joint doctrine describes how this data should be defined and captured, but there was no enterprise-wide archiving of this data from OIF. Accordingly, IDA's approach rested much more on "kinetically" focused operational data and a reliance on analysis of transcripts, surveys, histories, IDA-conducted interviews, and proxy data in order to address non-kinetic operational activities.

B. Recommendations

1. Use of RC Forces Should be a Major Topic of Service and Joint Professional Military Education (JPME)

The DOD conducts operations as a Joint, Combined, Total Force; therefore, all military leaders should have more than just a basic knowledge of mobilization authorities and duty statuses for the RC of all Services, and the benefits and limitations associated with each. As documented in this paper, leaders from all of the Services and the Joint Staff did not have the expertise regarding RC mobilization at the onset of OIF. Leaders could not articulate the implications of RC utilization policy to their civilian leadership. The current Officer Professional Military Education Policy (OPMEP) does not highlight these subjects. Such knowledge should not be the domain of just those working with or part of the RC. DOD should consider developing this knowledge earlier in leader careers.

2. DOD Mobilization Policies Should be Revised to Establish Decision Criteria for When Mobilizations Should Favor Individual Volunteers Vice Full Unit Mobilizations

Reliance on individual volunteers may come at the expense of having the option of mobilizing units for operations and sustainment of those operations, and may add to the burden of personnel turnover and cross-leveling. DOD should establish decision criteria, publish these criteria in DOD issuances, and, subsequently, enforce these criteria.

3. Infrastructure Readiness for Mobilizations Should be Reported to the Extent Possible

DOD was not well prepared for the large scale mobilizations required to commence and sustain OIF. The DOD should have informed knowledge regarding its ability to conduct large scale mobilizations and the risks associated with doing so at all times; therefore, the DOD should establish policy and incorporate it into readiness reporting systems.

4. DOD Should Prioritize All Opportunities for AC and RC Engagement and Exercise Mobilizations to Promote Greater Trust and Confidence Across All Components

While relations and the foundation of trust were developed following years of large scale mobilizations and deployments. In many RC communities, this is no longer the case and future generations of AC and RC leaders should not wait until a mobilization requirement in order to build relationships. JPME, PME, exercises, training center rotations, and current operations should all involve a heavy mix of AC and RC leader representation to the extent possible. In the absence of mobilizations and deployments, DOD should institutionalize exercise mobilizations in order to educate, train, and assess regularly mobilization procedures and policy.

5. DOD Should Permanently Establish "Individual Accounts" for All RCs Just as it Does for the AC

AC forces have "individual" accounts that provide allowances for those Service members that are in a trainee status, are transient, and are separating from the force. To the extent that they do not exist, those same types of accounts should be established for all of the RC so that there can be better manning of RC formations and, potentially, less cross-leveling of personnel during mobilization, and so that readiness can be consistently documented throughout the continuum of conflict and peace.

6. To the Extent Possible, RC Forces Should Have the Same Systems and Equipment as Their AC Counterparts.

Greater, more effective, and more efficient use could be made of the RC by the AC if RC forces had the same systems and equipment to train on and deploy with as the AC.

7. DOD Should Ensure that Operational Performance Assessments for All Operations are Captured and Maintained by the Joint Staff

Capturing this data during operations, as stated in joint doctrine, will permit objective, quantitative assessments of performance and, perhaps, provide additional information useful for Joint Operational Planning. Lessons learned are already being captured and are in various levels of synthesis by the Joint and Coalition Operational Analysis division of the Joint Staff J7. IDA recommends that the J7 establish a repository of operational performance data and provide guidance for implementation and collection of such data. The J7 should also establish, inspect, and enforce DOD-wide standards for data storage. Examples of data that should be included in the repository are the SIGACTs, mobility, and aviation strike data used in this research, and other operational performance data that is captured by the Services and combatant commands.

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Appendix A. Research Participants

The following represents a partial list of research participants interviewed in support of this project.

Table A-1. Partial List of Research Participants Interviewed

Affiliation	Name	Organization
Navy	Admiral William Fallon	Vice Chief of Naval Operations; Commander, United States Pacific Command, United States Central Command
Navy	Admiral Michael Mullen	Chairman of the Joint Chiefs of Staff; Chief of Naval Operations
Navy	Vice Admiral Robin Braun	Chief, Navy Reserve
Navy	Vice Admiral John Cotton	Chief, Navy Reserve
Navy	Vice Admiral Dirk Debbink	Chief, Navy Reserve
Navy	Vice Admiral Lowell "Jake" Jacoby	Director, Intelligence, (J2) Joint Staff; Director, Defense Intelligence Agency
Navy	Rear Admiral Sandy Adams	Deputy Commander, Navy Expeditionary Combat Command
Navy	Rear Admiral Paul Becker	Vice Director of Intelligence, Joint Staff
Navy	Rear Admiral Michael Broadway	Commander, Navy Intelligence Reserve Command
Navy	Rear Admiral Tony Cothron	Commander, United States European Command Joint Analysis Center; Director of Naval Intelligence
Navy	Rear Admiral Samuel Cox	Commander, Office of Naval Intelligence & Director, National Maritime Intelligence Integration Office
Navy	Rear Admiral Kelvin Dixon	Deputy Commander, Navy Surface Force Atlantic
Navy	Rear Admiral Albert Garcia	Commander, Task Force Charlie, Marine Expeditionary Force Engineering Group
Navy	Rear Admiral Ann Gilbride	Director, National Maritime Intelligence Center
Navy	Rear Admiral Daniel MacDonnell	Commander, Information Dominance Corps Reserve Command

Navy	Rear Admiral James Manzelmann	Commander, Naval Reserve Intelligence Command
Navy	Rear Admiral Thomas Marotta	Deputy Commander, Naval Forces, Central Command
Navy	Rear Admiral Gene Price	Deputy Commander, United States Fleet Cyber Command/10th Fleet
Navy	Rear Admiral Rick Porterfield	Director, Naval Intelligence
Navy	Rear Admiral David "Gordon" Russell	Commander, Information Dominance Corps Reserve Command
Navy	Rear Admiral Robert Sharp	J2, United States Special Operational Command
Navy	Rear Admiral Elizabeth Train	Director, National Maritime Intelligence Integration Office
Navy	Rear Admiral Eric Young	Commander, Naval Reserve Forces Command
Navy	Rear Admiral Matthew Zirkle	Commander, Submarines North Atlantic Treaty Organization (NATO); Deputy Chief of Staff, Submarines, NATO Allied Maritime Command
Navy	Captain James "Buddy" Iannone	Commander, Helicopter Wing Reserve
Marine Corps	General James Conway	Commandant of the Marine Corps; Commander, I Marine Expeditionary Force
Marine Corps	General Michael Hagee	Commandant of the Marine Corps
Marine Corps	General James Mattis	Commander, United States Central Command; Commander, United States Joint Forces Command; Commander, 1 st Marine Division
Marine Corps	General Peter Pace	Chairman of the Joint Chiefs of Staff; Vice Chairman of the Joint Chiefs of Staff
Marine Corps	Lieutenant General Jan Huly	Deputy Commandant, Plans, Policies and Operations
Marine Corps	Lieutenant General Dennis McCarthy	Assistant Secretary of Defense for Reserve Affairs; Commander, Marine Forces Reserve

Marine Corps	Lieutenant General Rex McMillian	Commander, Marine Forces Reserve
Marine Corps	Lieutenant General Richard Natonski	Commander, Marine Forces Command; Deputy Commandant, Plans, Policies, and Operations; Commander, 1 st Marine Division;
Marine Corps	Major General Vincent Coglianesse	Assistant Deputy Commandant, Installations and Logistics (Plans)
Marine Corps	Major General Richard Huck	Commander, 2 nd Marine Division
Marine Corps	Major General Thomas Jones	Commander, Training and Education Command
Marine Corps	Major General Douglas Stone	Commander, Operation Iraqi Freedom Detention Task Force
Marine Corps	Brigadier General Julian Alford	Commander, 3d Battalion, 6th Marine Regiment
Marine Corps	Colonel Mark Cancian	Chief, Reserve Combat Assessment Team
Air Force	General Mike Hostage	Commander, Air Combat Command; Commander, U.S. Air Forces Central Command
Air Force	General John Jumper	Air Force Chief of Staff
Air Force	General Richard Myers	Chairman of the Joint Chiefs of Staff
Air Force	General Craig Mckinley	Chief of the National Guard Bureau; Director, Air National Guard
Air Force	General Norton Schwartz	Air Force Chief of Staff; Commander, United States Transportation Command ; Director, Joint Staff
Air Force	Lieutenant General Stanley Clarke	Director, Air National Guard
Air Force	Lieutenant General James Jackson	Chief, Air Force Reserve

Air Force	Lieutenant General Glenn Spears	Commander, 12th U.S. Air Force; Deputy Commander, United States Southern Command
Air Force	Lieutenant General Charles Stenner Jr.	Chief, Air Force Reserve
Air Force	Major General H. Michael Edwards	The Adjutant General, Colorado
Air Force	Major General Vincent Mancuso	Mobilization Assistant to the Chief of Staff
Air Force	Major General Maryanne Miller	Deputy to the Chief, Air Force Reserve
Air Force	Major General Brian Neal	Deputy Director, Air National Guard
Army	General George Casey	Army Chief of Staff; Commander, Multi-National Force-Iraq
Army	General Pete Chiarelli	Vice Chief of Staff of the Army; Commander, Multi-National Corps-Iraq; Commander, 1st Cavalry Division
Army	General Frank Grass	Chief of the National Guard Bureau
Army	General David Petraeus	Commander, United States Central Command; Commander, Multi-National Force-Iraq; Commander, Multi-National Security Transition Command-Iraq; Commander, 101 st Division
Army	General Peter Schoomaker	Army Chief of Staff; Commander, United States Special Operations Command
Army	Lieutenant General Steven Blum	Chief of the National Guard Bureau
Army	Lieutenant General Dan Bolger	Deputy Chief of Staff, Army Operations; Commander, 1st Cavalry Division
Army	Lieutenant General Joseph Inge	Deputy Commander, United States Northern Command; Commander, 1 st U.S. Army
Army	Lieutenant General Timothy Kadavy	Director, Army National Guard; The Adjutant General, Nebraska

Army	Lieutenant General James Lovelace	Commander, 3 rd U.S. Army/Army Central; Deputy Chief of Staff, Army Operations
Army	Lieutenant General Jack Stultz	Chief, Army Reserve; Commander, 143d Transportation Command
Army	Lieutenant General Jeffrey Talley	Chief, Army Reserve; Commander, 926th Engineer Brigade
Army	Lieutenant General William Webster	Commander, 3 rd U.S. Army/Army Central; Deputy Commanding General, United States Northern Command; Commander, 3 rd Infantry Division
Army	Major General Corey Carr	The Adjutant General, Indiana; Commander, 76th Infantry Brigade Combat Team
Army	Major General John Gronski	Commander, 28th Infantry Division; Deputy Commander, U.S. Army Europe; Commander, 2 nd Brigade, 28 th Infantry Division
Army	Major General Jeffrey Hammond	Commander, 4th Infantry Division; Director, Operations, Readiness, and Mobilization, Department of the Army
Army	Major General Gus Hargett	The Adjutant General, Tennessee
Army	Major General Chip Long	The Adjutant General, Virginia
Army	Major General Fred Reese	Deputy Assistant Secretary, Army Training, Readiness, and Mobilization; The Adjutant General, Oregon
Army	Major General Rick Sherlock	Assistant Division Commander, 98th Division
Army	Major General Michael Smith	Deputy Chief, Army Reserve
Army	Major General Joseph Taluto	The Adjutant General, New York; Commander, 42nd Division
Army	Brigadier General Ivan Denton	Director, National Guard Bureau Manpower and Personnel;; Commander, 219th Battlefield Surveillance Brigade, Commander, 1st Battalion, 293d Infantry Regiment
Army	Colonel Craig Ono	Surgeon, Army Reserve

Coast Guard	Rear Admiral John Acton	Deputy Commander, Mobilization and Reserve Affairs
OSD	Honorable Dr. David Chu	Under Secretary of Defense, Personnel and Readiness
OSD	Honorable Michael Dominguez	Principal Deputy Under Secretary of Defense, Personnel and Readiness; Assistant Secretary of the Air Force, Manpower and Reserve Affairs
OSD	Mister Daniel Feehan	Principal Deputy Assistant Secretary of Defense, Readiness
OSD	Honorable Thomas Hall	Assistant Secretary of Defense, Reserve Affairs
Navy	Honorable Hansford Johnson	Acting Secretary, Navy; Commander, United States Transportation Command
OSD	Miss Elizabeth Wilson	Executive Director, Department of Defense – Department of Veterans Affairs Collaboration Office
Navy	Mister Alfred Gonzalez, Jr.	Director, Personnel Allocation and Development, United States Fleet Forces Command

Appendix B.

Interrogation of CSI-Archived Interviews

A. The Sample

The Combat Studies Institute maintains the Operational Leadership Experiences archive (OLE) which consists of interviews with military personnel documenting their experiences during recent operations. The transcripts of OLE interviews are not specific to the subject matter of this study and, therefore, references to Reserve Component performance were not solicited in the interview process. As a result, the references that do exist within these interviews are both free from interview bias and represent instances of the Reserve Component experience that were salient enough that the interview participants thought them important to document. As a consequence, their analysis makes valuable contributions to this research effort. The interviews provide a source for the much-needed context of the experiences that are not captured within the SIGACTS data analysis. Additionally, they provide a personal perspective that is distinct from the interviews conducted by IDA staff that was specifically directed at Reserve Component performance issues.

The OLE archive was queried for personnel that had served in Operation Iraqi Freedom. From that set of interviews, 110 interviews were selected in four rank categories. The following table shows the numbers of interviews utilized from each rank category, with O referring to officer grade.

Table B-1. Interviews Utilized from Each Rank* Category

Rank	Number	Notes
O7 and above	12	All identifiable O7 and above interviews
O6	48	All identified O6 interviews
O5	46	A random sample approximately half of the size of the total identified O5 interviews
O4 and below	4	All were O2s and were used initially to test the coding schema

* rank refers to the rank at the time of the interview.

The archive is overwhelmingly comprised of interviews with Army personnel but the sample did include one member of the Marine Corps and two members of the Air Force. In aggregate, 60 interviews were with individuals from the active component, 28 from the National Guard, and 22 from the Reserves. The O7 category was evenly split between

Active and Reserve Components. The O6 category had 31 Active and 17 Reserve. The O5s were sampled separately in order to achieve an even split of 23 for each component. The O2 sample had just one Active and three Reserve Component personnel. Overall, the interviews represent a broad cross section of military personnel grouped into 18 distinct occupational specialty categories and serving in a wide variety of roles and diverse set of echelon levels.

B. Qualitative Coding

Each interview was coded according to a coding schema that was developed initially in consultation across the qualitative analysis team with input from other research team members. The initial schema was modified over time to ensure the ability to adequately capture and differentiate information being found in the interviews. Where the interviews provided an estimation of unit or individual performance, this was coded with a type of contribution. Reserve Component contributions were assigned to one of seven categories presented below. These were differentiated from estimations of Active Component contributions.

Table B-2. Contribution and Description

Type of Contribution	Description
AC Replacement (full-spectrum operations)	Units taking the place of an active unit as a battlespace owner. Example: an ARNG brigade taking the place of an AC brigade in seizing and holding terrain.
AC Replacement (non-full-spectrum operations)	Units replacing an active unit in the conduct of other forms of operations. Example: Reserve Component units conducting training of Iraqi military units.
Augmentation Domestic OIF	An individual or unit augmenting an existing AC unit. An individual or unit conducting operations that support OIF but are deployed CONUS. Example: Airlift units based outside of the theater but supplying the theater.
Domestic AC Replacement	A unit performing a mission domestically in order to free up AC units that would normally perform that mission. Example: AFNG units performing CONUS airspace protection.
Guard/Reserve Specific	Any capabilities that are entirely or primarily assigned to the Reserve Component. Example: Civil Affairs units are almost entirely an RC mission space.
Undefined	Unable to differentiate amongst the above types of contributions.

Also coded were passages discussing readiness issues. These were divided between equipment, personnel, and training readiness issues as well as an additional category for mission readiness for situations where units would have met all of their personnel, equipment, and training readiness standards but still faced readiness challenges with respect to their specific mission. An example of this case might be an armor unit being assigned to a battlespace that required the personnel and equipment of an infantry unit. Where possible, RC subjects were assigned to a category dependent upon the point in the mobilization and deployment process to which they pertained. There were six of these categories.

- Alert to Mobilization
- Mobilization to Latest Arrival Date (LAD)
- LAD to Demobilization
- Demobilization to Post-Mobilization
- Post-Mobilization to Alert (to include issues of redeployment frequency)
- Conduct of training (this final category was added for issues pertaining to the conduct of training (as opposed to training readiness issues) and was further divided into in-theater and pre-mobilization training comments)

These main categories (contribution type, readiness, mobilization period, and training) were supported with a series of response characteristics to facilitate analysis within the categories. These response characteristics included the sentiment expressed (positive, negative, mixed, or neutral), the scope of the comment (was it intended to apply to a single instance or the entirety of the subject under discussion), and, where possible, what rationales or themes were identified. Some examples of identified themes included: references to civilian skills possessed by RC members, familiarity of differences between the components, individual cross-leveling for unit readiness, and discipline or professionalism issues.

C. Analysis

The analysis software used (NVivo v10) makes a variety of inquiries possible and allows for the selection of coded text blocks across interviews that meet whatever combination of criteria desired. For example, it was possible to isolate all of the text related to a given type of contribution (such as AC replacement for full-spectrum operations) and perform subsequent queries against just those text elements. Additional functionality, such as text searches for specific words or word patterns, were also available and were performed on subsets of the coded texts. The size and richness of the interview texts and the nature of the analytic software make it possible to conduct very detailed queries; however, reporting the results of each such detailed query would rapidly approach

prodigious levels. As a consequence, the categorical analysis is presented at an aggregate level in order to provide the reader with a broad overview of how the OLE participants viewed RC contributions to the Iraq conflict. This is followed by a very brief overarching observation based on extensive familiarity with the interview set.

1. Contribution Type:

Starting with the nature of the contributions, the initial presumption was that differing forms of contributions would be viewed very differently in their efficacy and this was partially borne out in the analysis. In all, there were just over 1000 text elements coded with a contribution; 425 of those related to AC contributions. Of the remaining RC contributions, 322 were associated with contributions of the augmentation type. The next largest contribution types were non-full spectrum operations (FSO) contributions of 81 and undefinable RC contributions of 87.¹³³

AC Replacement (FSO): There were 29 references to FSO contributions made by the RC. While largely split between positive and negative sentiments, the character of the negative comments is important to note. Most negative comments originated from RC members and referenced issues that were not specific to the RC nature of the unit under discussion. For example, one respondent suggested that their unit had difficulty in providing the kind of security cordon that was needed, but simply were unable to do so because of the size of the territory. Nothing in the commentary suggested that this negative evaluation of performance was attributable to their Reserve Component status. There was only one instance where there was a suggestion that an RC unit was inadequate to perform as an AC replacement. The balanced nature of the comments and the lack of attribution of negative performance to RC-specific traits suggest that the OLE interviews do not support a contention that RC units were disadvantaged when in the role of independent full-spectrum operations.

AC Replacement (non-full-spectrum operations): Positive references to this form of contribution are heavily skewed toward reporting on RC units conducting training of the Iraqi military. Only one comment references a negative contribution to this mission noting that as the Iraqi military became more proficient, the institutional training conducted by the RC units became less valuable. Negative references to non-full-spectrum operations were significantly in the minority (14 out of 81 total references) and were scattered across multiple issues indicating no systematic issues with RC performance in these mission types.

¹³³ The reader is cautioned against placing too much stock in the number of sources or references within a given category as this is partially dependent on the questions asked within any given interview and the sometimes subjective nature of the coding process.

Augmentation: This category of contribution was the single largest contribution type with the number of positive comments substantially outweighing negative. Positive comments ranged in strength from “couldn’t tell the difference” to being “more proficient than the AC they augmented.” Negative comments did display a couple of systematic concerns. The first was an issue of startup time, indicating that it generally took RC augmentees somewhat longer to come up to speed on issues of day-to-day operations. To a degree, these comments look to be related to component familiarity themes. As RC personnel were more exposed to AC functioning, they became just as capable. As a related note, RC comments display the belief that they were treated differently from the AC personnel they served with; when performance issues arose, their status as RC personnel was seen as the cause whether or not that explanation fit the situation. There were also scattered concerns expressed regarding the lack of physical readiness of RC personnel.

RC-Specific Contributions: Comments with respect to augmentation contributions suggest that both AC and RC personnel saw RC-specific contributions as a form of augmentation to AC-specific capabilities. Roughly a quarter of the responses in this category were negative. These were scattered in subject matter including several comments that were specific to the lack of appropriate support received by National Guard units in the field with respect to domestic management. This is balanced by several positive comments regarding the support received from these same sources. One source did single out an RC unit with command and resulting discipline problems that were directly attributable to it being part of the RC.

Domestic OIF & Domestic Replacement: These two forms of contributions had few coded references so drawing systematic conclusions from these categories would be inappropriate.

As a final note regarding the nature of contribution evaluations, the wording used by AC and RC differed in tone when evaluating their own contributions. As an example, AC personnel, when indicating a negative contribution, tended to attribute the failure to outside conditions such as “We just weren’t given the resources to accomplish the mission.” This bespeaks an implied confidence that they could have performed the mission except for the circumstances at hand. In contrast, RC commentaries display a tentativeness even in their own positive evaluations with fairly typical comments such as “I think we made a difference, we tried our best.”

2. Readiness Issues:

Recall that issues relating to readiness were coded into several distinct groups: equipment readiness (including number, type, and condition), personnel readiness, and training readiness. An additional category was denoted as mission readiness for units meeting formal readiness standards but facing circumstantial issues in mission completion due to the assignment of missions that they were unprepared for. This last category was the

single largest of the readiness issues and reflects substantial concerns with respect to units and personnel performing missions in lieu of the standard mission set. Given significant overlap in these categories, reporting on relative numbers of references across them would provide little, if any, added insight.

Mission Readiness: This category was intended to capture unit/mission mismatches. As a consequence, there were relatively few positive references to mission readiness. Most of those positive references were also coded as positive with respect to contribution and subsumed in the above discussion of contribution categories. Positive AC commentaries tended to be more focused on a given tactical mission, such as comments about having the appropriate intelligence so that the unit was well prepared or “ready for that mission.” RC commentaries, in contrast, tended to focus on the overall mission with comments about personnel ably fulfilling missions for which they were not trained or, in the case of institutional training, instances of “a perfect set of skill matches.” Negative comments were almost entirely focused on performance of missions outside of unit or personnel skill sets. AC negatives were more often associated with not having the appropriate attached assets for a given tactical mission while RC negatives tended not to have this tactical focus. However, there were exceptions, such as an AC Colonel commenting that his unit tasking was “not something we had trained to do. It is not something that we had planned to do.” Even in this instance, though, the performance evaluation was positive noting that the unit “adapted to it very well.” For both components, mission readiness negatives included comments pertaining to inappropriate or insufficient equipment within their organic structure. Similarly, the lack of trained individuals in specific occupational specialties was common across both, with the most often mentioned specialties being linguists and correctional/detention officers. Several negative comments were specific to the RC tasking of advising or training. But, these comments could largely be characterized as indicating that these skill sets were not found within either component and the RC’s institutional training units were given the call as they were considered to be the closest to the appropriate asset. Again, while there was extensive negative commentary on mission readiness issues, these did not present themselves as specific to either the AC or the RC.

Equipment Readiness: Interpretation of these forms of readiness concerns was difficult because of the overlap in coding with the equipment issues related to mission readiness concerns (above). However, there were some identifiable concerns specific to the RC. The largest of these were issues of inconsistency between an RC unit’s stocks and their in theater equipment. This was exacerbated by deployment issues of whether the RC units were supposed to bring equipment with them or whether they were supposed to marry up with equipment already in theater. These were compounded by operational control issues where an RC unit was attached to an active unit but the AC unit did not have the authority to requisition equipment for the attached RC unit. Even some positive comments could be interpreted in a negative light. For example, an individual’s commentary about his RC unit

being lucky that they had the appropriate model of rotary wing air platform suggests that this was an unusual circumstance and that other units were not so lucky. While these kinds of issues were also present within the AC, the coded texts indicate that it was less of an endemic problem for them.

Personnel Readiness: Similar to equipment readiness, a number of these issues were also coded with mission readiness, making interpretation somewhat less tractable. Most issues were non-specific to a particular component although there was mention that RC units occasionally faced a shortage of medical resources to resolve medical readiness issues. RC units were also disproportionately the subject of concerns with respect to personnel cross-leveling necessary to achieve required deployable strength levels particularly within specific needed communities. Whether coded as negative personnel readiness or not, the interviews are replete with commentary regarding the need to pull RC personnel from multiple units, across multiple states in order to meet personnel requirements. IDA-conducted interviews suggest that doing so caused further issues when the units borrowed from found themselves on the deployment schedule. When combined with comments regarding physical conditioning concerns, this suggests that personnel readiness may well have been an exacerbating factor in the use of RC units in either standalone or augmentation roles.

Training Readiness: Positive commentaries are significantly skewed toward AC soldiers discussing their training. The limited RC commentary tended to focus on basic combat or MOS skills. Overall, there was little commentary on meeting training standards for readiness; instead, comments focused on whether the training was appropriate to their tasking. Negative appraisals of RC training readiness focused on the requirement for individual training that cuts into collective training opportunities, especially for units at the lower end of the readiness levels. This was exacerbated in a couple of instances by the need for individual augmentees that were trained on different skills or to different standards. There were very few AC complaints about the inadequacy of RC training. What complaints were present were more than equaled by complaints about other units, services, and coalition partners. One cross component training issue does stand out. Both the AC and RC were vocal about the inadequacy of counterinsurgency operations training and/or culture training (specific or general).

D. Mobilization Processes

Unlike the previous categories of analysis, the mobilization process coding was constrained to be specific to only RC experiences. As a consequence, discussion of these processes will focus more upon recurring themes than on comparison between components.

Alert: This category dealt with issues with the alert to deploy process and activities that occurred between alert and the individual or unit's actual mobilization order. Several issues stand out. The time period between notification and actual mobilization varied

significantly with reported instances ranging from 48 hours to upwards of a year. There is some indication that longer times are correlated with National Guard experiences and shorter with individual reservist augmentees. Notification processes also varied greatly with a number of individuals stating that they learned of their pending mobilization through third parties prior to receiving any formal notice. There is clearly indication of significant volunteerism among the RC, with individuals, in effect, waiting for the first opportunity to be mobilized. There was consensus that this period was marked by significant confusion, with a high priority placed upon learning just what needed to occur in order to be mobilized. Only one comment suggested that there was adequate time between alert and mobilization. Several comments reflected a change in either mission or unit assignment (sometime multiple times) occurring within this time period. The necessity for cross-leveling to meet personnel requirements for mobilization was noted as an issue but not one that unduly presented problems.

Mobilization: This category dealt with issues during the mobilization period and comments were primarily focused on training issues and certification for deployment. It covers the period between formal mobilization date and deployment into theater. The mobilization period generally extended from three to six months in length and was linked explicitly to the fixed total length of activation. The period between the formal mobilization date and start of training varied somewhat but generally ranged from as little as a couple of days to as much as a month. Several sources suggested that this was significantly shortened over multiple deployments. Regarding the mobilization training, the majority of comments were not complimentary and identified a number of issues. Resource and facility issues were noted as detriments to training efficacy as were the limited amount of time available for training, although several did comment on having significant unnecessary downtime during training. Multiple sources indicated frustration with having to redo training that had already been done prior to mobilization and the mobilization training focusing too heavily on individual soldier skills and not enough on collective functioning. This was exacerbated in units that had high levels of cross-leveling in which the mobilization training period was often the first opportunity for building a unit identity. Several comments suggested that the training was effective (what needed to be trained, got trained) but it was not efficient (time was wasted or was not allocated appropriately across training needs). There was near universal agreement that exercises were the most important and most valuable portions of training in this period. Those that had exposure to multiple mobilizations were largely in agreement that training dramatically improved over time. Aside from training issues, the only other factor within this time period that was addressed were issues related to preparing for the relief in place/transfer of authority (RIP/TOA) process from the perspective of the incoming unit. While some comments indicated having limited time for this process, by and large, the commentaries were positive and denoted a marked commitment on the part of the units being relieved to provide adequate pre-handover experiences.

LAD: The Latest Arrival Date (LAD) category consisted of the processes involved in moving into theater, the incoming RIP/TOA, and discussions of what was done while on deployment. This period ended with initiation of the outgoing RIP/TOA process. Most of the commentary on what occurred during deployment has already been covered in the above section devoted to contributions and the section on mission readiness and, therefore, will not be reiterated here. However, because of this same overlap, it is possible to make more RC to AC comparisons than with the other mobilization process codings. Across both, there was only limited discussion of training issues, being confined to final in-theater training periods which were generally complimentary even while expressing limited resources available for this training. Several comments indicated that even a brief in-country training period would have been helpful for cultural and physical acclimatization. Deployment duration, when indicated, centered on the six month mark; this differs from AC comments that indicated significantly longer deployed periods. In most instances, the RIP/TOA process was considered successful and this included both AC-to-RC and RC-to-AC transitions. Exceptions were caveated by specific circumstances such as replacing a unit that had only been in its area of operations for a few months.

Numerous comments suggested that mission changes were difficult to navigate, especially when units were mobilized to function as a whole but, once deployed, were broken up to perform different taskings under different operational control. However, the interviews did not indicate whether this disproportionately affected RC units. RC comments did indicate considerable issues with respect to equipment. The most prominent issues had to deal with discrepancies with whether units were supposed to fall in on equipment already in theater or were to have brought their own equipment. Several suggested that there was a delay between arriving in theater and becoming operational because of lags in equipment arrival. Mismatches between equipment trained on and equipment in theater were substantially more prominent amongst the RC interviews, while comments regarding inappropriate equipment (such as not having up-armored wheeled vehicles) were more evenly distributed.

Additionally, there was commentary concerning the presence of friction between AC and RC personnel. RC personnel reported being made to feel as if they were “second-class” soldiers even if their performance was considered on par with AC soldiers. The most often repeated compliment about RC personnel was that they were indistinguishable from the AC personnel. However, there were a couple of senior rank (O6 and above) comments that suggested that RC personnel were not as wedded to processes as their AC counterparts. While these could have been indicators of a lack of professionalism; instead, their context suggested that the comments responded to the RC’s useful “just get it done” approach. This sentiment was echoed in a couple of the IDA-conducted interviews as well.

Demobilization: This category focused on the transition out of country back to home station and the processing associated with demobilization and transition to non-activated

status. With respect to outgoing RIP/TOAs, the comments generally echoed those found for the incoming RIP/TOAs. The only negative raised was the generic difficulty in transitioning in a counterinsurgency environment where relationships had been built up over time and there was no easy way to transition those relationships to the incoming unit. Comments on the processing once out of theater displayed a similar pattern to the mobilization process. Early deployments were characterized by a degree of confusion about the processes involved and a lack of resources devoted to them. These issues were largely absent in the comments from those with later deployments. Notable were a couple of interviews that suggested that while soldiers were in a rush to return to their families and civilian existence, the presence of a devoted time period to reacclimatize was highly valuable.

Post-Mobilization: This category focused on activities associated with the period after activated status and included issues of dwell time (the period between activations). Very few interviews touched on these subjects but those that did indicated very few issues with civilian employers and resuming employment. With regard to dwell time, commentary was mixed. Several suggested that substantial numbers of soldiers were willing to volunteer to return to active status far more frequently than remain in service-recommended dwell periods. There was some concern expressed that compensation issues for those that did return to active service (either voluntarily or because of being in a redlined specialty) was not adequately addressed.

1. Training:

The majority of issues coded as training have been previously discussed either in the above sections on training readiness or in the mobilization process categories of alert, mobilization, and LAD. Some general themes are presented here for clarity.

- *RC training readiness*
AC concerns in this area were largely indistinguishable from these same concerns expressed toward other AC units, other service personnel, and coalition partners.
- *Collective vs. individual skill training*
The balance of RC training between individual skills and collective skills was never quite correct and probably resulted in RC units taking slightly longer to “come up to speed” once in country, especially with regard to integrating with other AC formations.
- *Counterinsurgency/Culture training*
Nearly all of the comments regarding these forms of training indicated a lack of sufficiency. The one outlier suggested that about as much was done as could have been accommodated due to the limited training times.

- *Mission appropriateness*
AC and RC commentaries suggested that both pre-deployment and in-theater training were ill matched to the mission and task sets faced once operational. This was likely exacerbated by the large amount of in-lieu-of assignments that took place and may partially be related to the sequestration of certain specialties within the Guard and reserve.
- *Specific facility shortfalls*
Complaints were leveled against specific training facilities but there was also commentary that suggested that many of the early issues with training sites were remedied by later deployments.

2. Other Issues of Note:

Civilian Skills and Employment: This covers the civilian nature of the RC, both the generally positive response with respect to the use of their civilian skill sets as well as issues with dealing with employers. In the latter case, it should be noted that there were several comments indicating that soldiers took actions to prevent potential employer issues (such as indicating that their call up was mandatory rather than voluntary). This suggested that there were concerns with employer reaction to activations; however, there was no commentary indicating actual adverse treatment. Comments associated with re-integration to the civilian workforce were uniformly positive. With respect to the value of civilian skill sets, several senior officers (O6 and above) indicated circumstances in which these skills were highly valuable, such as use of IT professionals in facilitating the setup of SCIF facilities. Outside of circumstantially specific cases, the value of civilian work expertise largely depended upon either units that required specific expertise (engineers and medical staff) or missions outside of normal unit skill sets. An example of the latter is several comments indicating that RC units that had civilian police and correctional officers were particularly well equipped to handle detention missions.

Cross-Component Familiarity: A number of comments from both AC and RC personnel indicated that differences in how the respective components functioned as well as differences in processes complicated cross-component operations. Instances where individuals or units had increased levels of familiarity either through personal experiences, shared exercises, or previous deployments were associated with more seamless integration and higher evaluations of RC performance. These issues were substantially corroborated in the IDA-conducted interviews.

Individual Cross-Leveling: While there was adequate commentary to conclude that personnel readiness was enough of an issue to require high levels of cross-leveling, there were surprisingly few sources that indicated that this posed systemic issues. There was an isolated suggestion that cross-leveling for any given unit increased the need for cross-leveling for the units from which the cross-levelers were taken. Although not directly stated

in any of the interviews, it could be inferred that high levels of cross-leveling may have contributed to training concerns regarding the lack of time to train on collective skills.

Discipline or Professionalism Issues: Statements of concern with respect to professionalism and discipline were of three types. The first was discussed previously: the difference in attitude toward processes with the RC being less constrained by those processes. Commentary suggested that this attitude had both positive and negative connotations. A certain frustration with a lack of process concern and difficulty integrating into existing processes was matched by a willingness not to be constrained by processes. Second, isolated commentary suggested that sustaining high levels of good order and discipline was more of a challenge for RC personnel simply because they were not steeped in that environment in the same way that AC personnel were. Additionally, there was occasional commentary about individual RC soldiers having a “nine-to-five” attitude toward their mission. Tellingly, these comments were not correlated with poor performance evaluations. The final issue related to specific instances of unit leader relief or reassignment. While these comments were directed at instances of RC leadership, it should be noted that no source indicated that there were systematic issues but rather that these were unusual circumstances and isolated cases. However, it should also be noted that there was concern that removal of problematic leaders was considered difficult to achieve.

E. Overarching Observation

While there were clearly some RC specific issues, most derogatory comments, even when directed at RC personnel or units, were not solely attributable to characteristics of the RC. They were, instead, substantially attributable to the circumstances of deployment and employment of the force. The evaluations of contributions are particularly telling with little to suggest that RC performance was in any way fundamentally flawed. The presence of comments indicating differences in readiness standards and mobilization processes, as well as a lack of cross-component familiarity, suggests that issues that might have been more rightly attributed as universal were instead differentially attributed to the reserve components. Taken as a whole, the OLE interview texts support the contention that issues with the prosecution of Operation Iraqi Freedom owe more to the nature of the conflict and how the department conducted the use of the RC than to any deficiencies on the part of the RC itself without whom successful prosecution would have been impossible.

Appendix C.

Navy Intelligence Reserve Component

From the period immediately following September 11, 2001, through Operation Iraqi Freedom (2003-2011), to the present, the demands on the Navy Intelligence Reserve Component (NIRC)—a low-population density community of approximately 3,800 personnel—remained high.¹³⁴ Reservists in Navy Intelligence were called up for mobilization in large numbers; they were among those “first in.”¹³⁵ They have sustained high levels of mobilization for over 15 years,¹³⁶ and are expected to be among those “last out” of the conflict.

A. Methodology

The information presented in this chapter was drawn from command histories, annual reports, other reference documents, and interviews conducted by IDA with a total of 28 currently serving or retired AC, RC, and civilian leaders. Interviews were conducted on a not-for-attribution basis. The military members interviewed served, or were currently serving, in the ranks of O-6 through O-9. They led joint or Navy Intelligence forces in theater, commanded joint or Navy Intelligence forces supporting theater operations, and managed the man/train/equip mission of the NIRC from 2001 - 2011.

B. Definition of the NIRC

The NIRC comprises the community of intelligence officers and enlisted reserve personnel in the following military occupational fields, which, in the Navy, are called officer designators and enlisted ratings.

- Intelligence Officers: designator 1635 (now 1835)
- Intelligence Limited Duty Officers: designator 6455
- Intelligence Chief Warrant Officers: designator 7458
- Intelligence Specialists (IS): an enlisted rating

¹³⁴ Commander Navy Reserve Intelligence Command, *Fiscal Year 2007 Annual Report*, p.8.

¹³⁵ Naval Reserve Intelligence Command, *FY02 Reserve Intelligence Force Contribution Report*, unnumbered pp.12 and 14.

¹³⁶ Information Dominance Corps Reserve Command, *FY 15 Annual Report*, pp.6 and 25.

From 2001-2011, this community of reserve intelligence professionals was structured under a reserve command led by a Navy Reserve Rear Admiral.¹³⁷ During OIF, the Commander, Naval Reserve Intelligence Command (CNRIC), managed the Navy Reserve Intelligence Program, which consisted, on average, of this personnel distribution:

- 3,400 Selected Reservists (SelRes)¹³⁸ assigned to over 80 Reserve Intelligence units which supported Navy Commands, Combatant Commands, and other joint agencies.¹³⁹ Of these 3,400 reservists, approximately 3,000 were Intelligence Reservists and 400 were other reservists (other officer designators, other enlisted rates).¹⁴⁰
- 400 SelRes Intelligence Reservists assigned individually to operational entities, such as fleet/staff augmentation units and reserve aviation squadrons.¹⁴¹

The Naval Reserve Security Group (as it was called in 2001, later renamed the Navy Net-Centric Warfare Group),¹⁴² also experienced high mobilization levels.¹⁴³ This community consisted of Cryptology Officers (now Cryptologic Warfare Officers)¹⁴⁴ and enlisted Cryptologic Technicians and other specialties. The Naval Reserve Security Group—and its successor commands—has operated closely with the Naval Intelligence Community throughout its history.

Since 2005, there have been several key organizational changes within the Navy's AC and RC relating to the intelligence and cryptologic communities, as well as the information professional and meteorological/oceanographic specialties. The name of the NRIC changed in 2005, and again in 2008. Throughout those years, the command responsibility covered only intelligence officers, enlisted reservists, and about 400 other personnel. In 2011, the Deputy Chief of Naval Operations, Information Dominance,

¹³⁷ The name of the Naval Reserve Intelligence Command changed in 2005, 2008, and again in 2012, as detailed in Figure 1.

¹³⁸ A Selected Reservist in the Navy is a reservist who is required to perform two days of drill per month and two weeks of annual training per year.

¹³⁹ Navy Intelligence Reserve Command, *Ready Support to the Warfighter, Fiscal Year 2009 Annual Report*, p.4.

¹⁴⁰ Commander, Navy Reserve Intelligence Command, *Fiscal Year 2006 Annual Report*, p.23.

¹⁴¹ Commander Naval Reserve Intelligence Command, *Annual Report Fiscal Year 2003*, p.5.

¹⁴² Commander, Navy Net-Centric Warfare Group, *Fiscal Year 2008 Annual Report*, p.1.

¹⁴³ Commander, Navy Net-Centric Warfare Group, *Fiscal Year 2008 Annual Report*, p.17, and Navy Net-Centric Warfare Group, *Fiscal Year 2009-2010 Annual Report*, p.16.

¹⁴⁴ Navy Cryptologic Officers were renamed Information Warfare Officers on 15 September 2005. In March 2016, they received the new name of Cryptologic Warfare Officers as referenced in Fleet Cyber Command/Commander 10th Fleet email of 11 March 2016, 8:15am.

directed the alignment of the reserve intelligence, information warfare, information professional, and space communities under one command of 6,400 reservists.¹⁴⁵

There was a short transition period in FY2012 before the resulting command, the Information Dominance Corps Reserve Command (IDCRC), was stood up in June 2012 with the mission of manning/training/equipping all of these forces.¹⁴⁶ Then, in 2015, the meteorology/oceanographic community was added to the IDCRC.¹⁴⁷ Most recently, in February 2016, the name of the overarching Information Dominance Corps was changed within the Navy to the Information Warfare Community; at that time, the IDCRC became known as the Naval Information Force Reserve Command.¹⁴⁸

C. Impact of this High Demand/Low Population Density Intelligence Specialty

The significant impact of Navy Intelligence Reservists as a High Demand-Low population Density (HDLD)¹⁴⁹ specialty during OIF can be best understood in three contexts: 1) within the entire Navy Reserve; 2) within Naval Intelligence as a Total Force (Active and Reserve Components); and 3) within the annual contribution level per Intelligence Reservist over the course of OIF.

D. Impact within the context of the entire Navy Reserve

The manpower strength of the Navy Reserve in FY2004 was 68,440 Selected Reservists.¹⁵⁰ At that time, the NRIC of 3,808 Selected Reserve personnel comprised only 5.5 percent of the 68,440 Selected Reservists within the Navy Reserve Force, yet filled nearly 10 percent of the mobilization requirements levied on the Navy Reserve as a whole.¹⁵¹

¹⁴⁵ Navy Intelligence Reserve Command/Information Dominance Corps Reserve, *Annual Report FY-11*, p.1.

¹⁴⁶ NAVADMIN 215/12, 16 July 2012.

¹⁴⁷ Information Dominance Corps Reserve Command, *FY15 Annual Report*, p.10.

¹⁴⁸ Institute for Defense Analyses interview.

¹⁴⁹ The term “High Demand, Low Density” or its abbreviation HDLD, means a specialty in high demand, but with a relatively low number of personnel to fulfill the demand. Another way of explaining it is this: high demand, low supply.

¹⁵⁰ Defense Manpower Data Center (DMDC) historical data of Navy Reserve Force end strength, provided by the Office of the Chief of Navy Reserve.

¹⁵¹ Commander, Naval Reserve Intelligence Command, *Annual Report Fiscal Year 2004*, pp.13, 19.

E. Impact within the context of the Naval Intelligence Total Force (Active and Reserve Components)

During OIF, the Naval Intelligence Community mobilized as Individual Augmentees. The Navy Intelligence Reserve Component filled—and sustained the filling—of the overwhelming majority of IA requirements levied on the Naval Intelligence Total Force. The percentage of IA requirements filled by each component (Active and Reserve) from FY2005-2010 is provided in Figure 2.¹⁵²

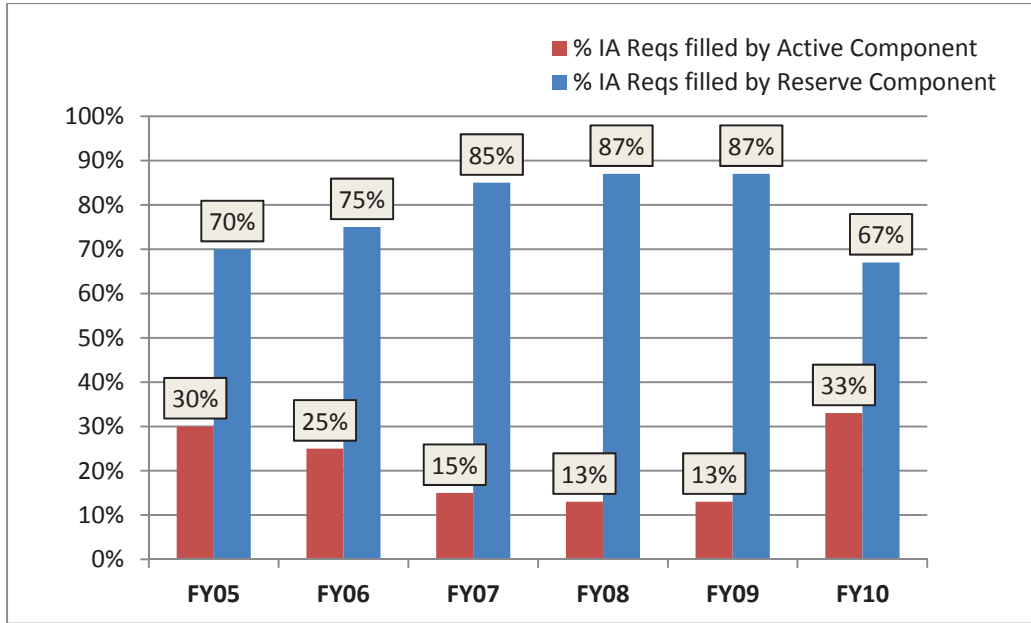


Figure C-1. Percentage of OEF and OIF Navy Intelligence Individual Augmentation Requirements, as Filled by Active and Reserve Components¹⁵³

The metrics in Figure 2 underscore the critical role of the Navy Intelligence Reserve Component in providing sustained surge capacity, by filling 67–87 percent of the Navy’s total force intelligence IA requirements for OEF and OIF, while the Navy Intelligence Active Component filled the remaining 13–33 percent.

F. Impact within Annual Navy Intelligence Reservist contribution levels over the course of OIF

To sustain the demands on the Navy Intelligence Reserve Component over the course of OIF, intelligence reservists performed a high number of days of duty per year. Figure 3

¹⁵² Data from Commander, Naval Reserve Intelligence Command and Commander, Navy Intelligence Reserve Command Annual Reports from FY2005-2010.

¹⁵³ Data from Commander, Naval Reserve Intelligence Command and Commander, Navy Intelligence Reserve Command Annual Reports from FY2005-2010. Information is incomplete prior to FY2005.

displays the average number of days of duty performed by Navy Intelligence Reservists each year, as compared to the annual reserve requirement of 36 days per year.

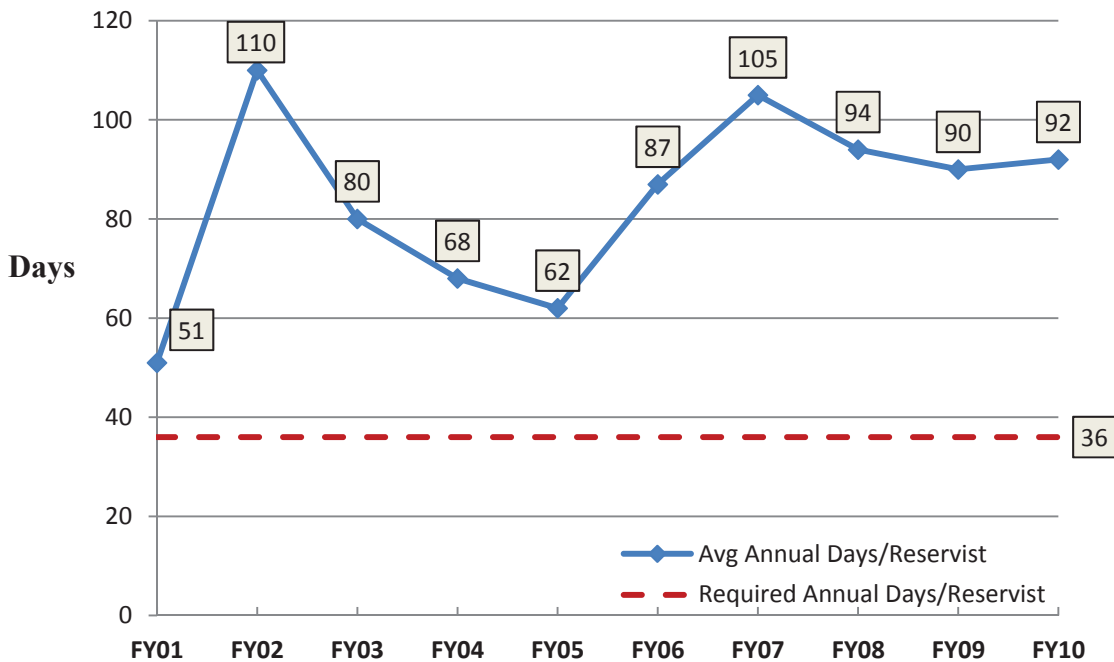


Figure C-2. Average Annual Days Per Intelligence Reservist¹⁵⁴

As depicted in Figure 3, during OEF and OIF, the average annual contributions of Navy Intelligence Reservists was more than double and, at times, nearly triple the reserve requirement.

Research participants (RPs) stressed the importance of depicting the full picture of intelligence reserve work—on drills, on annual training (AT) periods, and on mobilization—as key to understanding the impact of Intelligence Reservists during OIF. The way that individuals in the Intelligence Community are utilized in wartime is different from much of the rest of the military. Intelligence Reservists both deploy as mobilized reservists in theater, and also in a non-mobilized capacity at their drill sites in the U.S. Their intelligence missions, conducted through intelligence architectures in the U.S., directly link and contribute to their AC commands whether the reservists are mobilized or not. The national intelligence architectures throughout the U.S. provide robust mission capability, a factor which makes it possible for some amount of work—which in the past needed to be done in theater—to be done in the U.S. This makes it possible for smaller numbers of intelligence personnel to deploy overseas during conflict.

¹⁵⁴ Data from the Commander, Naval Reserve Intelligence Command and Commander, Navy Intelligence Reserve Command Annual Reports, FY2001-2010.

G. Readiness Posture: the 1990s—a decade of preparation

Three strategic initiatives in the 1990s enabled the Navy Intelligence Reserve Component’s ability to succeed and sustain high wartime mobilization levels for over 15 years, namely: 1) the Active-Reserve integration focus within the Naval Intelligence Community; 2) the fielding of Joint Reserve Intelligence Centers (JRICs) across the country; and 3) the provision of Funded Reimbursable Authority for reserve intelligence support.

H. Active-Reserve Integration Focus within the Naval Intelligence Community

The history of the U.S. Naval Intelligence Community and its commitment to true integration of the Active and Reserve Components began in the 1990s. As one senior RP explained, during that decade, there was a mindset change among senior AC leaders in Naval Intelligence. They no longer saw the reserves as separate but viewed them as an integral part of the Navy Intelligence team. This represented a true philosophical change and, as a result, senior leaders began to integrate the Total Force of Naval Intelligence professionals: AC, RC, and government civilians.

During that decade, as recounted by RPs, there was commitment to bringing the Intelligence Reserve Component into full compliance with intelligence training, production, and real mission work, through: a) providing reservists access to the Joint Worldwide Intelligence Communications System (JWICS); and b) enhancing opportunity for reservists to work alongside the AC. Reserve units located near AC sites were encouraged to drill—not in Reserve Centers—in AC intelligence commands and agencies, such as the Office of Naval Intelligence, DIA, U.S. Pacific Command, etc. Concurrently, to integrate intelligence reservists (of all Services) who did not reside near AC intelligence sites, DIA stood up 28 JRICs across the country.¹⁵⁵

I. Fielding the Joint Reserve Intelligence Centers

In 1993, the RFPB developed a vision for the RC in a post-cold-war environment.¹⁵⁶ The following year, the RFPB provided an Implementation Plan to the Secretary of Defense proposing that RC Intelligence Elements shift their focus from training to “wartime readiness achieved through operational engagement,” especially during drills and AT.¹⁵⁷ This Implementation Plan for improving the utilization of the Military Reserve

¹⁵⁵ Assistant Secretary of Defense for Command, Control, Communications, and Intelligence and Assistant Secretary for Reserve Affairs, *The Joint Reserve Intelligence Program Strategic Plan*, p.13.

¹⁵⁶ *Ibid.*, 4.

¹⁵⁷ *Ibid.*

Intelligence Force was approved by the Deputy Secretary of Defense in 1995.¹⁵⁸ The plan emphasized readiness; enhancing the capabilities of the Reserve Military Intelligence Force; and increased visibility, accessibility, and utility of the Reserve Military Intelligence Force.¹⁵⁹ A key component of the Implementation Plan included establishing JRICs with interoperable electronic connectivity between the RC and DOD organizations with intelligence requirements.¹⁶⁰ JRICs offer collateral and secure compartmented information facilities for the full range of intelligence operations as well as linkage with operational organizations.¹⁶¹ The JRICs were designed to bring the mission to the reservist and afford the opportunity to employ the reservist without necessarily deploying the reservist.¹⁶²

J. Navy Intelligence Reserve Component Mobilization Process

The Navy Intelligence Reserve Component's contributions to OIF predated the start of operations. In fact, by the end of FY2002, approximately 30 percent of the Navy's intelligence reservists had been mobilized.¹⁶³

K. Mobilization Background: Inadequate Planning for Intelligence Resources

According to RPs, the operational plans did not adequately address the demand for intelligence resources. In accordance with these plans, the Chief of Naval Operations Manpower Office sought to reduce the number of Navy intelligence requirements being requested by AC Commands. RPs indicated that the issue was elevated by the Navy Intelligence leadership, together with the Navy Reserve Force leadership, and it was resolved quickly: Navy Intelligence Reserve forces could, and would, be mobilized in accordance with theater demands. In fact, nearly all individuals in reserve intelligence units supporting CENTCOM and U.S. Naval Forces Central Command (NAVCENT) were mobilized soon after September 11, 2001. Moreover, during this time period, the other Combatant Commands and agencies outside of that theater of operations also had high requirements for Intelligence Reserve personnel.

¹⁵⁸ Deputy Secretary of Defense Memorandum, *Peacetime Use of Reserve Component Intelligence Elements*, 5 Jan 1995, cover page.

¹⁵⁹ *Ibid.*, 3.

¹⁶⁰ *Ibid.*, 10-13.

¹⁶¹ Assistant Secretary of Defense for Command, Control, Communications, and Intelligence and Assistant Secretary for Reserve Affairs, *The Joint Reserve Intelligence Program Strategic Plan*, p.14.

¹⁶² *Ibid.*, 13.

¹⁶³ Naval Reserve Intelligence Command, *FY-02 Reserve Intelligence Force Contribution Report*, unnumbered p.14.

L. Administrative Mobilization Processing Challenges

RPs emphasized the responsiveness of Navy Intelligence Reservists. Many individuals volunteered immediately to mobilize; however, the administrative part of the mobilization process posed some challenges, especially during the first year. RPs involved in man/train/equip missions recounted in detail the mobilization process for Navy Intelligence Reservists. Initially, on September 11, 2001, the Mobilization Cell at the Commander, Navy Reserve Force in New Orleans was understaffed. In those first months, when the Navy mobilization requirements reached the Mobilization Cell, Intelligence Reservists were placed into many kinds of missions, including security and force-protection missions, without regard to the low density population of the intelligence community. In addition, in the early days of mobilization, it was not readily apparent to those in the Mobilization Cell, whether an Intelligence Reservist had, for example, an adjudicated security clearance. As a result, in the beginning, some reservists were mobilized into intelligence locations where they were not yet qualified to work. Those mobilizations had to be cancelled. RPs stated that senior leadership from the Intelligence Reserve Component responded rapidly and arranged for the CNRIC to provide specific reservists to fill intelligence requirements.

As detailed by several RPs, within approximately six months, a new, improvised mobilization process evolved. This new process involved the vetting of requirements by the Office of the Chief of Navy Reserve staff, who would then communicate (via email, fax, or phone call) the requirements to the CNRIC Manpower Division. The CNRIC Manpower Division then identified available and qualified reservists to meet the requirements. Those individuals would then be sent to the Navy Reserve Force Command and Mobilization Cell in New Orleans. A few years later, the Navy force-wide mobilization process was enhanced, when U.S. Fleet Forces Command (FFC) began to manage all of the IA requirements. Under FFC, the process became automated such that an individual reservist could be tracked as he/she progressed within the entire mobilization process. FFC also validated the requirements, decided whether a requirement would be filled by the AC or RC, and then tasked it to be filled. The Navy Reserve Force Command sub-claimed the intelligence requirements to CNRIC/IDCRC. CNRIC/IDCRC first filled requirements from its “volunteer” list and, if none were available, it looked for fills from the command’s non-volunteer “regional short lists.” CNRIC/IDCRC sent the names directly to the FFC database, FFC reviewed and approved the names, and then FFC separately processed every nomination through OPNAV and the Secretary of Defense (SECDEF) order book. After SECDEF approved the names, the Chief of Naval Personnel (PERS 46) generated a mobilization order. The Navy Operational Support Center formally contacted the reservist to notify her/him of mobilization. When the mobilization orders were issued, the reservist could log into the system and download his/her mobilization orders.

1. From Reservist Notification to Day One on Mobilization Orders

A few weeks after September 11, 2001, there was some normalization in the requirements filling process, but other nationwide administrative and logistical challenges remained. Several RPs recounted these challenges. From 2001 through nearly 2007, there was no formal policy on the amount of “lead-time” that would be provided to reservists selected for mobilization. There might be as little as one day’s notice. Eventually, during OIF, a 60-day lead-time notification policy was formally adopted. As one study participant described, there was an initial reserve force-wide lack of medical personnel available to process reservists onto active duty that caused delays from 2001-2003.

2. From Day One on Mobilization Orders to Employment at Ultimate Duty Location

The Army sponsored pre-deployment training at locations such as Fort Jackson, South Carolina. According to RPs, this training was initially two weeks long. Later, it was extended to four weeks and, eventually, reduced to three weeks. This training focused on uniform, gear, weapons issue, and related training. This training was adjusted in length and content based on feedback. The timeframe for reservists arriving at their duty locations improved over time. Initially, especially with overseas duty stations, RPs indicated that the process could be slow and laborious. In some locations, there were housing challenges, such as lack of available military barracks for mobilized reservists. In many instances, reservists just rented (and shared) apartments for the duration of their mobilization.

All of the AC RPs highlighted the important role of the Reserve Liaison Officers (RLOs) embedded in their commands. They reported that RLOs performed the necessary administrative and other ad hoc tasks to address any problems associated with mobilized reservists at those duty stations.

M. Performance of Navy Intelligence Reservists Mobilized during OIF

Overall, 90 percent of the AC RPs regarded the performance of Navy Intelligence Reservists during OIF as positive.¹⁶⁴ These senior leaders stated that they could not have accomplished their missions without their Navy Intelligence Reservists. They regarded the reservists’ performance as superior and the reservist contributions critical to the war effort. All of those interviewed reported that reservists performed every intelligence function within their commands. Their performance was strong in forward-deployed environments as well as in joint, Navy, and Army commands and in U.S.-based JRICs. These leaders indicated repeatedly that they could not tell the difference between the AC and the RC. As

¹⁶⁴ The performance comments reflected in this section are derived solely from the research study interviews with Active Component senior leaders who commanded or directly supervised mobilized Navy Intelligence reservists during OIF.

stated by Rear Admiral Richard Porterfield, Director of Naval Intelligence from 2000-2005: “In the current war on terrorism, intelligence is playing a big role. Our intelligence reservists are embedded into the day-to-day intelligence operations of our force...and they continue to meet our surge requirements. We could not fight this war without them.”¹⁶⁵

Augmentation of mobilized Navy Intelligence Reservists and AC members, together with the intelligence work performed by reservists during their drills and active duty periods, met the AC need for increased intelligence capacity during OIF. AC RPs needed, and they received, increased intelligence capacity in the months prior to OIF and throughout OIF. They obtained this increased capacity both through IAs and through mobilized and non-mobilized intelligence reservists who performed intelligence missions at their U.S. drill sites and in JRICs.

RPs described a number of ways in which the presence and performance of intelligence reservists in their organizations positively affected their operations. Examples provided included reduced operational risk, expanded ability to support critical OIF missions outside of the original area of responsibility, and greater flexibility to operate intelligence directorates on a nonstop basis. Ultimately, the presence and performance of intelligence reservists, with their demonstrated leadership and maturity, enabled organizations to perform without seeking augmentation from AC military or government civilians. RPs stated that these Reservists were key to mission success and a force-multiplier for the entire command into which they mobilized.¹⁶⁶

Also, RPs reported that, during OIF, their combatant commands shifted entire intelligence production responsibilities to the RC in JRICs. Thus, intelligence reservists in JRICs, serving on mobilization and non-mobilization (drill and active duty orders), provided sustained wartime support to combatant commands. Moreover, several senior RPs emphasized the benefit of gaining increased “seat space and intelligence systems capacity” through the JRICs. In addition, they mentioned the benefit of time-sequencing their intelligence production (facilitated through JRIC locations in multiple time-zones) in order to optimize the OIF intelligence flow within their combatant commands.

Over 90 percent of the RPs were pleased with the level of training that the Navy Intelligence Reservists possessed when they arrived at their mobilization site. About 50 percent of interviewees said the reservists were able immediately to contribute. About 40 percent said the reservists needed about two weeks to learn specific tasks and then their

¹⁶⁵ “Total Force Intelligence: Right Skills, Right Place, Right Time,” *Naval Reserve Association News*, March 2005, p.12.

¹⁶⁶ Similar themes were articulated by then Captain Tony Cothron, Commander of the Office of Naval Intelligence from 2004-2006, who later became the Director of Naval Intelligence “Total Force Intelligence: Right Skills, Right Place, Right Time,” *Naval Reserve Association News*, March 2005, p.14.

contribution matched that of the AC. One senior RP elaborated on this point by noting that Navy Intelligence Reservists may not have been trained for each specific job, but they were generally well trained with the right foundation; therefore, within a very short timeframe, they came up to speed. Of note, 90 percent of the RPs underscored the fact that reservists arrived on mobilization duty with strong experience on intelligence systems and communications technology; they did not need much, if any, systems training. The remaining 10 percent of RPs described some training challenges among Intelligence Reservists during the early stage of OIF, and the need for about two months of on-the-job experience before they had sufficiently learned the skills for their particular mobilization job.

Several research participants credited the NRIC structure with optimizing the readiness of Navy Intelligence Reservists. The command structure was recognized for providing both the leadership and the professional skills that reservists needed to succeed in supporting combat operations when deployed as IAs. The majority of AC RPs noted a difference in performance between the Navy Intelligence Reservists who had come from unit backgrounds and the Army and Air Force Intelligence Reservists who had not been trained and mentored within reserve units.

1. Employment of Navy Intelligence Reservists during OIF

All of the AC RPs mentioned the critical need for targeting and imagery skills during the preparation for and execution of OIF. RPs universally praised the reserve targeting officers as a top-performing group. Strategic debriefing and interrogation skills were also in high demand and interviewees noted the positive impact made by reservists serving in these missions.

According to many senior RPs, during OIF, specialty skills were requested from experts in the Navy Intelligence Reserve Component in order to deal with new threats and missions. Senior RPs listed the following specific areas where intelligence reservists made valuable contributions by applying their civilian expertise to emerging intelligence challenges: 1) Experts from the petroleum industry provided insight on oil platforms and rigs; 2) Maritime industry and business managers provided expertise on shipping patterns and records; 3) Scientists and engineers from national laboratories provided information on state-of-the-art technologies; 4) Port security experts assisted in ascertaining vulnerabilities; 5) Police and investigations professionals brought insight to counter-terrorism and debriefing missions; and 6) Linguists enabled a wide variety of missions in theater and in the United States.

As recounted above, AC RPs reported that mobilized Navy Intelligence Reservists served in the full range of job functions within Navy and Joint Intelligence; they also stepped in to fill Army requirements. Additionally, they were deployed to all geographic

locations where naval and joint intelligence forces were present, whether in theater or in the United States. Table 2 summarizes the jobs they performed during OIF.

Table C-1. Jobs Performed by Navy Intelligence Reservists during OIF

Analysis	Watchstanding
Targeting	Briefing, Writing, Intelligence Production
Imagery Analysis	Collection Management
Strategic Debriefing	Document Exploitation
Interrogation	Foreign Materiel Acquisition
Maritime Intercept Operations	Foreign Materiel Exploitation
Improvised Explosive Device Threat	Intelligence Programs
Analysis	Information Management
Foreign Disclosure	SCIF Communications

Several senior RPs reported that at the outset of OIF, the skills “most needed” by CENTCOM and United States European Command (EUCOM) were targeting and imagery analysis. According to several RPs, in 2001, the Navy Reserve Intelligence Component had some personnel with those skills, but not enough to meet the demand that continued throughout OIF. To mitigate the immediate shortfalls, reservists were sent to “training en route to mobilization.” In addition, the Director of Naval Intelligence and the CNRIC invested in increased training capacity for more reservists to complete these certifications.¹⁶⁷

Human intelligence (HUMINT) skills, both strategic and tactical, were in a fast-growing demand, as mentioned by the several research participants. This resulted from increased intelligence requirements to support Special Forces and Navy Expeditionary Forces.¹⁶⁸ According to several senior RPs, these HUMINT requirements were dramatically increased as the Navy began to fill Army requirements for strategic debriefers and interrogators. To meet this need, Navy reservists were trained for HUMINT missions at both Navy and Army locations. For Army-specific missions, such as interrogation and debriefing analytic requirements, as well as Weapons Intelligence Team requirements, several RPs stated that the Navy sent reservists to various Army or joint training facilities.

2. JRIC site usage by Navy Intelligence Reservists during OIF

During OIF, Navy reservists performed their drills either onsite with their Active Commands or in Joint Reserve Intelligence Centers (JRICs). By 2005, approximately 50

¹⁶⁷ Commander, Naval Reserve Intelligence Command, *Annual Report Fiscal Year 2003*, p.1, and Commander, Navy Reserve Intelligence Command, *Fiscal Year 2006 Annual Report*, p.4, and Commander, Navy Reserve Intelligence Command, *Fiscal Year 2007 Annual Report*, p.3.

¹⁶⁸ Commander, Navy Reserve Intelligence Command, *Fiscal Year 2006 Annual Report*, p.4.

percent of the Navy Intelligence Reserve Component drilled at JRICs.¹⁶⁹ RPs highlighted the fact that intelligence reservists supported OIF from JRICs and from other drill sites whether mobilized or not. Immediately after the terrorist attacks of September 11, 2001, very few Navy Intelligence Reservists were sent on mobilization orders to JRIC sites. Several RPs mentioned that more reservists could have been sent to JRICs immediately after September 11, 2001, as opposed to the large numbers that were deployed to their AC commands for the initial mobilizations of 2001-2002. RPs acknowledged, however, that the JRIC concept was still relatively new and, at that time, there were many joint intelligence leaders who had neither supervised intelligence reservists in such a reach-back mode nor visited a JRIC site. By 2003, larger numbers of Navy Intelligence Reservists began to be mobilized to JRIC sites.¹⁷⁰

N. Sustaining the Navy Intelligence Reserve Component during OIF

Several RPs identified challenges in force sustainment during OIF. These challenges have been summarized into three areas: recruiting, training, and family support.

1. Recruiting Sustainment Initiatives

Many RPs stated that during OIF, the Navy Intelligence Reserve Component experienced a recruiting challenge. The Navy's AC Recruiting Command had recently merged with its Reserve Recruiting Command so that AC and RC recruiting would be done within one Navy Recruiting Command. At the same time, the Intelligence Reserve Component experienced a decline in manning rates between 2003 and 2005, in which reserve enlisted Intelligence Specialist (IS) "onboard" manning dropped from 96 percent to 83 percent.¹⁷¹ Re-enlistment rates were high during this time (70-85 percent),¹⁷² however, recruiting goals were not being met. For example in FY2005, only 44 percent of the enlisted IS recruiting goal was met.¹⁷³ As an HDLD specialty, the Navy Intelligence Reserve Component was particularly affected when recruiting goals were not met. Because this force was highly mobilized during OIF, the component needed personnel available for

¹⁶⁹ Commander, Navy Reserve Intelligence Command, *Fiscal Year 2005 Annual Report*, p.12.

¹⁷⁰ Commander, Naval Reserve Intelligence Command, *Annual Report Fiscal Year 2003*, p.15; and this reach-back capability was also highlighted by Vice Admiral Lowell Jacoby, Director, Defense Intelligence Agency, "Total Force Intelligence: Right Skills, Right Place, Right Time," *Naval Reserve Association News*, March 2005, p.18.

¹⁷¹ Data from Commander, Naval Reserve Intelligence, *Annual Reports FY2003*, p.5; *FY2004*, p.28; *FY2005*, p.37; *FY2006*, p.26.

¹⁷² Data from Commander, Naval Reserve Intelligence Command, *Annual Report Fiscal Year 2003*, p.17; Commander, Naval Reserve Intelligence Command, *Annual Report Fiscal Year 2004*, p.31; and Commander, Navy Reserve Intelligence Command, *Fiscal Year Annual Report 2005*, p.41.

¹⁷³ Commander, Navy Reserve Intelligence Command, *Fiscal Year 2005 Annual Report*, p.4.

continuous mobilization. By 2005, demands on the Navy Intelligence Reserve Component exceeded available personnel (in certain officer ranks and enlisted rates) who could mobilize without breaking the established 1:5 mobilization-to-dwell ratio.¹⁷⁴

One RP reported that the leaders from the Navy Intelligence Reserve Component and the Construction Battalion Reserve Component proposed new recruiting and retention ideas to the Navy Recruiting Command, U.S. Fleet Forces Command, and Navy Personnel Command. They urged the Navy to launch new initiatives to sustain their HDLD communities. The Navy responded with several recruiting initiatives for the Intelligence Reserve Component and other reserve specialties, which included accession bonuses and training programs.¹⁷⁵ Concurrently, other key recruiting policy and retention initiatives were enacted to sustain the intelligence reserve force, such as a “one-year mobilization deferral period” for intelligence officers and enlisted Navy Veterans,¹⁷⁶ and re-enlistment/extension bonuses for Intelligence Specialist enlisted reservists.¹⁷⁷ Over time, these initiatives enabled the Navy to sustain Intelligence Officer manning levels and restore enlisted Intelligence Specialist manning levels. By 2009, reserve enlisted Intelligence Specialist manning rose to 94 percent.¹⁷⁸

2. Training Sustainment Initiatives

According to several RPs, in FY2003, the Director of Naval Intelligence issued the following as a top goal: the Intelligence Total Force will “train to one standard.” Training had always been a priority, but significantly more training capacity was needed to provide the skills that intelligence reservists needed for a long war. From 2003 to 2011, as reported by the majority of RPs, there was a marked increase in training capacity for intelligence reservists.¹⁷⁹ Additional classrooms, equipment, instructors, curriculum development, and reserve training days were provided through increased wartime budgets. This enabled

¹⁷⁴ The mobilization-to-dwell ratio of 1:5 means that after a period of mobilization, a reservist could plan on five times that period at home before he/she would become eligible for another mobilization. To illustrate, if a mobilization period lasted one year, the dwell would be five years; if a mobilization period lasted six months, the dwell would be 30 months.

¹⁷⁵ Commander, Navy Reserve Intelligence Command, *Fiscal Year 2006 Annual Report*, 29; and Commander, Navy Reserve Intelligence Command, *Fiscal Year 2007 Annual Report*, pp.3, 23.

¹⁷⁶ This was designed to address the noticeable decrease (after 2003) in active duty Intelligence Officer and Intelligence Specialist enlisted veterans affiliating with the reserve. As relayed by a senior research participant, this pilot was immediately successful; Active Component intelligence members who were completing their active duty obligations began, once again, to affiliate as drilling reservists.

¹⁷⁷ Commander, Navy Reserve Intelligence Command, *Fiscal Year 2006 Annual Report*, p.29.

¹⁷⁸ Data from Commander, Navy Reserve Intelligence Command, *Annual Reports FY2007*, p.8; *FY2008*, p.3; *FY2009*, p.4.

¹⁷⁹ Captain Guy Holliday, Commander of the Center of Naval Intelligence and the Navy/Marine Corps Intelligence Training Center, described this expansion in “Total Force Intelligence: Right Skills, Right Place, Right Time,” *Naval Reserve Association News*, March 2005, p.17.

intelligence reservists to attend both in-residence courses at the Navy/Marine Corps Intelligence Training Center and modularized (Integrated Learning Environment) courses across the country.¹⁸⁰

RPs reported that training requirements for intelligence reservists more than tripled over the course of OIF. To accomplish these training requirements, reservists took months off from their civilian jobs to attend long courses on voluntary orders. The following metric shows the significant readiness impact of the “train to one standard” goal. In the seven-year period from 2004–2010, the percent of enlisted reserve Intelligence Specialists (E-6 and below) who held a Navy Enlisted Classification (imagery, strike, operational intelligence, or ground analyst) rose from 7 percent to 74 percent.¹⁸¹

3. Family Support Initiatives

According to several RPs, the CNRIC saw the need for increased family support in 2004, and established an Ombudsman¹⁸² Program across the command. Ombudsmen were located at the Flag Headquarters, the Regional Headquarters, and at each of the more than 80 Reserve Intelligence Commands. CNRIC also hosted periodic Ombudsmen training conferences. The focus on Ombudsmen as a key resource for family members has continued within the Naval Information Force Reserve Command to the present day.¹⁸³

In addition, family members were invited to attend events, such as the Returning Warrior Weekends and “Mobilization Stand-Down,” which were designed in 2010 by the IDCRC. These events were designed with the dual purpose of preparing reservists and their families for mobilization and re-integrating reservists after their mobilizations.

O. Reservist Resilience Initiative

In 2010, the IDCRC designed its own mandatory Mobilization Stand-Down Event, which is now called “One Navy, One Mission,” sponsored by the Naval Information Force Reserve Command.¹⁸⁴ RPs suggested that the purpose of the event was to build “mental toughness—the battle mind-set” among Information Warfare Community Reservists to help them get ready for the wartime environment and ensure they learned about tools that

¹⁸⁰ “Total Force Intelligence: Right Skills, Right Place, Right Time,” *Naval Reserve Association News*, March 2005, p.17.

¹⁸¹ Commander, Navy Reserve Intelligence Command, *Fiscal Year 2005 Annual Report*, p.36; and Navy Intelligence Reserve Command, *Fiscal Year 2010 Annual Report Ready to Support the Warfighter*, p.7.

¹⁸² An Ombudsman is a spouse of a sailor at the command who serves as a liaison between the command and its Navy families. The Ombudsman is also a point of contact for families, providing them with helpful resources and information.

¹⁸³ Information Dominance Corps Reserve Command, *FY15 Annual Report*, p.9.

¹⁸⁴ Naval Information Force Reserve, *One Navy, One Mission Agenda (2016)*.

could help them when deployed and when they returned. The attendees were reservists in the Naval Information Force Reserve Command (this includes intelligence reservists) who were expected to mobilize within six-to-eight months, as well as reservists who had recently returned from mobilization. It was a mandatory one-day event. The One Navy, One Mission event was conducted about ten times per year by Mobile Training Teams, with an average of 100-200 attendees at each session. The Flag Commander attended many of the sessions.

P. Demobilization

Many senior RPs underscored the challenges associated with managing the sustained stress on this HDLD force. The two sections that follow discuss policy and programs designed to address stress on the information warfare community as a whole, particularly after demobilization.

1. Security Clearance Policy Change regarding Post-Deployment counseling

Several senior RPs described revisions to the Naval Intelligence security clearance policy that took place in 2008. Under the new policy, counseling after deployment no longer needed to be reported as “counseling” for security clearance renewals. As soon as this policy change was enacted, the Intelligence Reserve Component conducted a force-wide training event with two goals: 1) to educate its 3,800 reservists about this new security clearance policy; and 2) to conduct personalized, individual meetings with each reservist who had deployed within the past two years. According to RPs, the results of this effort were immediate: several intelligence reservists self-reported their PTSD and were referred for medical treatment.

2. Post-Mobilization Programs

As mentioned in the family support section above, reservists and their guests were invited to attend Returning Warrior Weekends, sponsored by the Navy Reserve Forces Command. Also, as mentioned in the reservist resilience section above, all intelligence and other information warfare community reservists were required to attend the One Navy, One Mission events before and after their mobilizations.

Appendix D.

Navy Mission Report Methodology

To review the performance of the Naval Reserve squadron VF-201 during the initial phase of OIF, an analysis was performed using approximately 32,000 archived “STRIKE” mission reports (MISREPS). The MISREPs analyzed represent “STRIKE” MISREPs, in which ordnance was delivered or attempted to be delivered (hung ordnance, or ordnance that did not depart the airplane when commanded, were included in these MISREPs). Sorties flown that did not deliver their ordnance were not included in this data set; this data did not analyze numbers or reasons why ordnance was not employed. Center for Naval Analyses (CNA) produced an analysis of undelivered ordnance and, for carrier wing (CVW-8) over the first 24 air tasking order (ATO) cycles, 40 percent of all ordnance carried was undelivered. Over the thirty days of combat operations, 48 percent of ordnance carried by CVW-8 was undelivered.¹⁸⁵

Starting with all of the STRIKE MISREP reports for OIF, a series of filters were applied to narrow the results. First, reports were restricted to MISREPS accomplished by F-18s. This categorization for aircraft type included all variants of F-18 and F/A-18. The results were further filtered by Country=“USA” and Service=“Navy” to filter out Canadian CF-18s and Marine F/A-18s. At this point, the MISREPs were examined to determine the next level of filtering.

Navy MISREPS appear to have reported flying units by carrier air wing. For VFA-201, this was CVW-8. Filtering the results by CVW-8 resulted in all F/A-18 reports flown by all squadrons in the carrier air wing. The MISREPs were next searched for a VFA-201 unique identifier, namely missions flown by F/A-18A aircraft, as the other two squadrons were flying F/A-18C’s.¹⁸⁶ Sorting for this identifier string allowed a clear distinction between the mission reports. There were those missions flown with F/A-18A aircraft that were clearly VFA-201 missions and there were missions flown with F/A-18C aircraft that were clearly not VFA-201 missions. There was also a third category, which were MISREPs that only identified the aircraft as an F/A-18 with no model identifier.

¹⁸⁵ Ward, Robert W., et al., CNA Corporation, *Operation Iraqi Freedom: Naval Fixed-Wing Fire Support to Ground Operations* (U), September 2005, Appendix A, p.118. Document is classified SECRET. Excerpts referenced herein are Unclassified in the original document.

¹⁸⁶ There was a fourth squadron of CVW-8 flying F-14Ds that were already excluded from the search by the “F-18” filter term.

For the MISREPs with no aircraft model identifier, a comparison was made via lead call signs. If the call sign for the mission was in the family with VFA-201 known call signs, it was included for analysis. For example, if a MISREP had CHUCKxx as a call sign, where CHUCKyy was flown by VFA-201, it would be included. But, if an unknown sortie had MELONxx as a call sign and no known MELONyy call signs were flown by VFA-201, it was excluded from the VFA-201 known set.¹⁸⁷ The result was 212 weapons employment records selected as the VFA-201 dataset.

The VFA-201 dataset totaled 243,784 pounds of bombs dropped. Comparing this number to published figures¹⁸⁸ of over 220,000 pounds of ordnance delivered, placed it within 10 percent of the published number. Comparing the success rates, the published figure was 84.9 percent of targets found/damaged/destroyed. The MISREP-reported rate was 84 percent, which represented a difference of less than three successful 1,000 pound bombs from the published value.

The rest of CVW-8 had a similar 84 percent success rate on the 259,377 pounds delivered. It should be pointed out that VFA-201 alone delivered 48 percent of all CVW-8 F-18-delivered ordnance to OIF. CVW-8, at this time, was composed of four strike squadrons (in **bold**):

VF-213 (F-14D)VAQ-141 (EA-6B)
VFA-201 (F/A-18A+)VAW-124 (E-2C)
VFA-15 (F/A-18C)HS-3 (HH/SH-60F/H)
VFA-87 (F/A-18C)VS-24 (S-3B), VRC-40 Det 5 (C-2A)¹⁸⁹

Looking across the other air wings that were present during the MCO phase of OIF, the following table provides the total amount of ordnance only delivered by F/A-18s by each wing, and the percent of successful strikes of those weapons engagements. The successes were initial reports recorded in the MISREP by the pilot or Joint Terminal Air Controller (JTAC) or ground commander. These initial assessments may differ significantly from later assessments, once more evidence is evaluated.¹⁹⁰

¹⁸⁷ CHUCK and MELON are notional callsigns for illustration purposes only. Actual callsigns used by the squadron are part of the classified MISREP report. The “xx “ and “yy” suffixes on the callsigns are placeholders for a two digit number code

¹⁸⁸ VFA 201 mobilization timeline provided by RDML Tom Marotta.

¹⁸⁹ Ward, Robert W., et al., *Operation Iraqi Freedom: Naval Fixed-Wing Fire Support to Ground Operations (U)*, CNA Corporation, September 2005, p31. Document is classified SECRET. Excerpts referenced herein are Unclassified in the original document.

¹⁹⁰ To ensure that this table reflected an ‘apples-to-apples’ comparison, only carrier air wings that were present for all of the MCO phase of OIF are shown here.

Table D-1. Carrier Air Wing Pounds of Weapons Employed and Percentage of Successful Strikes

Carrier Air Wing	# of F/A-18 Squadrons	Pounds of weapons employed	% Successful strikes
CVW-2	3	605,618	70.47%
CVW-3	3	911,262	75.92%
CVW-5	3	674,589	77.46%
CVW-8	3	503,161	83.84%
CVW-14	3	942,489	64.35%

Source: Carrier Air Wings and Data from Mission Reports (MISREPs).

Table D-2. Carrier Air Wing 2 Composition

CVW-2 composition and dates.

CVW-2	November 2, 2002 – June 2, 2003 USS Constellation (CV 64)	VF-2 VMFA-323 VFA-151 VFA-137 VAQ-131 VAW-116 HS-2 VS-38 VRC-30 HSL-47	F-14D Tomcat F/A-18C F/A-18C Hornet F/A-18C Hornet EA-6B Prowler E-2C Hawkeye SH-60F & HH-60H Seahawk S-3B Viking C-2A Greyhound SH-60B Seahawk
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Source: Carrier Air Wings and Data from Mission Reports (MISREPs).

Table D-3. Carrier Air Wing 3 Composition

CVW-3 composition and dates.

CVW-3	December 5, 2002 – May 23, 2003 USS Harry S. Truman (CVN 75)	VF-32 VMFA-115 VFA-37 VFA-105 VAQ-130 VAW-126 HS-7 VS-22 VRC-40 HC-4	F-14B Tomcat F/A-18A+ F/A-18C Hornet F/A-18C Hornet EA-6B Prowler E-2C Hawkeye SH-60F & HH-60H Seahawk S-3B Viking C-2A Greyhound MH-53E Sea Dragon
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Source: Carrier Air Wings and Data from Mission Reports (MISREPs).

Table D-4. Carrier Air Wing 5 Composition

CVW-5 composition and dates.

CVW-5	January 23, 2003 – May 6, 2003 USS Kittyhawk (CV-63)	VF-154 CV-63 VFA-192 VFA-195 VAQ-136 VAW-115 HS-14 VS-21 VRC-30 DET.5	F-14A FA-18C(N) FA-18C(N) FA-18C(N) EA-6B E-2C SH-60F/HH-60H S-3B C-2A
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Source: Carrier Air Wings and Data from Mission Reports (MISREPs).

Table D-5. Carrier Air Wing 14 Composition

CVW-14 composition and dates.

CVW-14	July 2002 – May 2003	VF-31	F-14D
	USS Abraham Lincoln (CVN 72)	VFA-115	FA-18E
		VFA-113	FA-18C(N)
		VFA-25	FA-18C(N)
		VAQ-139	EA-6B
		VAW-113	E-2C
		HS-4	SH-60F/HH-60H
		VS-35	S-3B
		VRC-30 DET.1	C-2A

Source: Carrier Air Wings and Data from Mission Reports (MISREPs).

Appendix E.

Strike Data

A. Reason for evaluating strike data

When looking for performance metrics in combat by air forces that can be measured repeatedly and reliably, the most direct reporting of air strike success provides unambiguous criteria. Airstrike success is a culmination of the entire kill chain of events and is susceptible to perturbations from the airplane itself, the weapon's performance, the targeting accuracy, the pilot's skill, and the target's ability to maneuver away from or survive the attack. For these reasons, the mission report (MISREP) was used as the basis for data collection, as each of these areas of concern is capable of being captured in the standard MISREP report.

Theater requirements for CENTCOM specify that a MISREP be filed after every mission for all aircraft operating for the Combined Air Operations Center, which includes the U.S. Air Force, U.S. Navy, U.S. Marine Corps, and allied forces.¹⁹¹ The MISREP is a source of objective (altitude, speed, time over target, etc.) and subjective data ("good hit") that lends itself to aggregation and analysis. From 2007 onward, rotary wing aircraft from USAF, USN, USMC, and allies were also recorded in the MISREP Analysis Tool database.

1. Sources of data

Data was gathered from two databases, the Theater History of Operations Reports database and the MISREP Analysis Tool database. The THOR database collected MISREPS from October 2001 to February 2012. The MAT contains reliable data on MISREPS from March of 2007 to present day. The MISREP structure evolved over the course of the past 15 years, so the more recent reports have additional fields that are not present in the earlier reports, although there is a common core of information that is present in all MISREPS.

Since October 7, 2001, the start of hostilities in Operation Enduring Freedom, THOR and MAT have amassed a total of approximately 135,000 records from Operations Iraqi Freedom, New Dawn, Enduring Freedom, Freedoms Sentinel, and Inherent Resolve. There is a period of overlap between THOR and MAT in the 2007-to-2012 time period. By examining 21 unique fields in each corresponding record, approximately 6,500 records were identified as duplicates.

¹⁹¹ U.S. Army rotary wing aircraft are not doctrinally required to file MISREPS with the CAOC, their reporting is more often found in the SIGACTS database. The SIGACTS database is sufficiently different in structure and content that it was not evaluated as part of this look into aircraft MISREPS.

2. Data quality

MISREPS, being reports quickly filled out following a combat mission, have varying degrees of completeness and detailed richness. Depending on the intelligence officer debriefing the crew; the nature, length, and complexity of the mission; the latency between the mission flown and the report being generated; and other factors, there may be sparse commentary on the mission or paragraphs explaining events in rich detail. The varying quality of the reports can complicate the data standardization process.

Several procedures are in place to ensure the accuracy of the information in MISREPs. Data is pulled from multiple sources outside of the crews' control – automated data recorded by the aircraft, Airborne Warning and Control System logs, and forward Joint Terminal Attack Controllers, as well as first person narrative information from the crew. This information is then compiled in a MISREP and filed. Since 2007, the MAT has automatically added each filed MISREP from the CENTCOM AOR. MISREPS prior to 2007 were compiled manually in the THOR database.

3. Data conditioning process

IDA utilized a data conditioning process to enhance the utility of the combat MISREPS. This process focused on formatting errors that confused automated data ingestion algorithms. The combat expedient of listing weapons used during a strike separated by a slash (100/3/200 5.56/AGM-114/30mm) confuses current database software and requires human intervention to break out properly each pass over the target. Moreover, the MAT disaggregates target position details from mission flight details in the MISREP, so that information requires aggregation.

4. Strike success

The evaluation of an airstrike's success is a complex and multilayered process. The Joint Publication (JP) 1-02, *Department of Defense Dictionary of Military and Associated Terms*, defines Battle Damage Assessment (BDA) as "The timely and accurate estimate of damage resulting from the application of military force, either lethal or non-lethal, against a predetermined objective."¹⁹² For the purposes of this study, IDA evaluated strike success based on the comments contained in the MISREP. These comments ranged from the definitive "Good Strike" to the more nebulous "Weapon left rails with good GPS lock." Where possible, the data field "Ground Commander Intent met" was used as the primary success criterion, with pilot comments secondary. Likewise, failures of the weapon were well documented, "dud," "missed target by 10 meters," and "weapon struck but failed to go high order," and were simple to adjudicate, as were negative comments in the "Ground

¹⁹² *Commander's Handbook for Joint Battle Damage Assessment*, U.S. Joint Forces Command, Office of the Secretary of Defense, Joint Battle Damage Assessment, Joint Test and Evaluation, 1 June 2004.

Commander Intent Met” field. Fields left blank or comments such as “UNK” and “clouds obscured target” resulted in the use of the unknown category being considered as a proxy for a strike success assessment.

B. Error Management

There are several sources for error when dealing with MISREPS. The easiest to deal with are gross errors where the numbers are obviously wrong, such as weapon weight alone is greater than the maximum takeoff weight of the aircraft, latitude or longitude values that place the attack on an allied country, B-52 attacks against Iraq in 2017 (instead of 2003-2011), etc. These errors tend to be obvious, and closer inspection usually reveals the source of the error (numerical transposition, a missed +/- sign, mistyped character in a MISREP, character recognition error in the OCR process, etc.). Other errors are more subtle and require greater levels of effort to find and remove. One of the most common of these is duplicate entries, where the same data may be entered in multiple records. Sources for this include poor database ingest procedures, such that the data is accidentally loaded more than once; normally, this would affect a range of sorties that are all input at the same time, which tends to draw attention as an anomaly during review procedures. Alternatively, initial and follow-up reports of the same sortie may be input as more data becomes available over time. In that case, the solution is usually to choose the latest report on the grounds it should have the best data.

Additionally, when merging data from different databases, the same sortie may appear slightly different due to slightly different data structures. The key here is to analyze multiple data elements to determine if the sortie is actually a duplicate. If, for example, the date, take-off base, take-off time, aircraft type, unit, mission number, call sign, weapon load, and target struck are all simultaneously identical, then it can be flagged as a duplicate. Criteria used vary slightly depending on the quality and nature of the dataset; but, in general, no less than five independent data elements and up to 21 fields were compared to determine the likelihood of duplication. Another source of error and confusion is when dealing with aircraft that carry more than one weapon type and/or strike more than one target. It is possible that they can be counted as multiple sorties instead of multiple strikes by the same sortie.

The target coordinates are another potential source of error. As the science of geodesy has evolved over time, the underlying shape of the Earth and the resulting coordinate system in use has been refined multiple times. Moreover, different grid schemes with different reference points have been used, such as the Military Grid Reference System (MGRS) that requires conversion to latitude and longitude values. The database preserves the original coordinates as provided in the original data and also performs the conversions to the current WGS84 decimal latitude and longitude standard (DD.DDDDDD for example, where “DD” = degrees and “.DDD...” equals the decimal fractions of degrees

for the location). This is slightly different than a Degrees/Minutes/Seconds format which is still reported in some MISREPS. Depending on the accuracy and spatial resolution of the original measurement and the accuracy of the conversion process, any inherent location error may be magnified as part of the transformation.

C. Note on Database Design

There were many potential ways to organize the data. Depending on how it was organized, one could either get an accurate count of sorties flown, weapons dropped, or targets hit, but not all three. Therefore, efforts were taken in the design of the THOR database to be flexible enough to answer each of these questions, while not falsely inflating the other values. The challenge had been on how to account for multiple planes attacking multiple targets with multiple weapons per sortie flown. The solution was for each instance of a unique weapon type or engagement of a unique target to generate a new record. That is, if plane A drops six 500 pound bombs on target 1, that will generate one record. If the same plane A drops two 250 pound bombs on the same target 1, that generates a second record. If the same plane A then drops three 250 pound bombs on a different target 2, that generates a third record. So, the same sortie can generate multiple records. The “Sortie Dupe” field is a flag indicator that will be set to zero for the first weapons use, and will be a “one” when the same sortie employs multiple weapons or attacks multiple targets. A request for a sortie count/summary, etc., will ignore records with a “one” in the “Sortie Dupe” field. That way, the correct accounting can take place whatever the focus of the accrual count (sorties, weapons, targets).

D. Terminology

Terms sometimes casually used interchangeably have similar meanings but can lead to different numerical answers. For consistency, the following terms were used throughout the database and report:

Mission: One or several sorties that are grouped together to accomplish a specific purpose.
Munitions weight: For consistency, all tonnage terms use 1 ton = 2,000 pounds. All munitions weight values in THOR are converted to pounds and fractions of a pound (i.e., a value of 1.0625 pounds is used, not 1 pound and 1 ounce). All kilograms are converted to pounds using a factor of 2.2 pounds/kilogram. All bullet weights are in pounds. Only the warhead portion of a missile or bullet portion of a cartridge round is used in the database. For example, a notional 100 pound Hellfire missile has a 10 pound explosive head and approximately 90 pounds of booster fuel and structure. Only the 10 pounds of explosive that reaches the target is counted in the database. Likewise, a nominal 30mm HEI-T

cartridge weighs 1.48 pounds¹⁹³, of which, only the .79 pound bullet would be recorded in the database.

Record: One line of data in the database (*See Note on Database Design for more detail on how records are organized in the database*).

Sortie: One takeoff and landing of one aircraft.

Strike: Each attack on a separate target during the same sortie is counted as a separate strike. A separate target is defined as a unique set of latitude and longitude coordinates. Attacks on a target made by the same striking force within an arbitrary 90 minute window are considered as part of the same strike. The time window is used as a cutoff to account for when attacking sorties can make one or multiple passes over the target, break off, refuel, re-acquire, and re-attack the same target; thus, accounting for the potential situation of one aircraft having accomplished two strikes on one target during the same sortie.

1. Component affiliation assumptions

For this study, to the extent possible, IDA identified the performance of the individual components: Active, Reserve, and National Guard. To do so, it was necessary to synthesize the component affiliation from associated metadata, as it is not part of a regular MISREP data structure. The primary method by which this was done was by analyzing the unit data recorded in the MISREP. The most straightforward method was when the home unit would identify itself as an expeditionary version of its home squadron by placing an “E” in front of the squadron ID (i.e., 20 BS becomes 20 EBS). IDA had the database look for this and correct for home unit designation, establishing affiliation to one of the components. More challenging was when the squadron affiliated itself with its expeditionary wing (332 AEW, for example). In these cases, a look-up table of what units deployed and when was used to identify which Air Expeditionary Wing (AEW) was all reserve, all active, or a mix. Lastly, there were cases where there was not enough information to posit a unit or component affiliation. The largest group of these occurred during the first months of OIF, when operational tempo (ops tempo) was high and MISREP reporting was an all-manual entry affair.

In all cases, the underlying assumption, based on the best information obtained from the theater, was that the squadron affiliation identified in the MISREP represents the aircraft, and not necessarily the crew. This may be a false assumption, but it has been the working hypothesis for this analysis. The fact that the Air Force Total Force concept trains and evaluates all pilots to the same standards means that the CAOC does not track tail numbers or crew component affiliation at the operational level. Therefore, it is quite possible that an Active Duty pilot was flying in a Guard or Reserve aircraft, or any combination of those variables. This kind of substitution occurred with some frequency.

¹⁹³ http://www.navweaps.com/Weapons/WNUS_30mm_BushmasterII.htm, accessed 28 Nov 2012.

An untested assumption was that the majority of crews stayed within their component's airframes. In part, this assumption was based on rotational timing and basing, where dissimilar component but similar aircraft were often flying from different take-off locations. There were cases where more than one component in like aircraft were co-located. In those cases, unless the squadron was identified in the MISREP, the data is considered unknown.

MISREPS from the OIF Major Combat Operations (MCO) phase tended to have more records that lacked unit-level information. This was due to several reasons. Historically, data collection lags behind combat planning and execution. Recordkeeping systems eventually caught up given the frenetic pace of operations. Thus, details, such as unit affiliation may have become lost or confused as MISREPs were filled in well after the event occurred. When evaluating the performance of one component against another, care needed to be taken to not overlook the large number of unaffiliated records that could skew the data in favor of one component over another.

2. Initial evaluation of strike data

There does not seem to be a critical failure by any component in the execution of strike missions. There are variations in performance, but assigning the component affiliation as the sole reason for these variations is beyond the capability of the data at hand. Performance was evaluated against different classes of weapons – guns, dumb bombs, precision guided munitions, missiles, and rockets. This was done to provide a large enough number of events to be statistically significant.

There were other factors in play that complicated this analysis. Was the nature of the target fixed or moving? What specific kind of munition was being used? Were there collateral damage considerations that influenced employment? Was the target even described in the MISREP beyond a set of coordinates? Were these strikes early in the campaign or near the end? For a more detailed analysis of the database, see the classified annex which contains greater specifics on operational details.

E. Recommendations for the future

The most important recommendation for the future is one that was acknowledged and began to be addressed midway during the OIF and OEF campaigns—the MISREP process needs to become more automated and the friction involved with capturing the data needs to be reduced. The introduction of the MISREP Analysis Tool was a key step in quickly capturing transient operational details and preserving them in a comprehensive record system. MAT was only the first step, however. More work needs to be done on enabling analysis tools and a significant investment made in cleaning up the combat shorthand that frustrates computerized analysis. Smarter database ingest algorithms need to be developed

or manual data cleaning needs to be performed to improve the quality of overall records so that they can be used for analysis in a timely and accurate manner.

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Appendix H. Abbreviations

AC	Active Component
ADSW	Active Duty for Special Work
ADT	Active Duty for Training
AEF	Air and Space Expeditionary Force
AEW	Air Expeditionary Wing
AF	Air Force
AFB	Air Force Base
AFCENT	Air Forces Central Command
AFR	Air Force Reserve
AFSAS	Air Force Safety Automated System
AFSC	Air Force Specialty Code
AFSOAWC	Air Force Special Operations Air Warfare Center
AFSOC	Air Force Special Operations Command
AFSPC	Air Force Space Command
AMC	Air Mobility Command
ANG	Air National Guard
AO	Area of Operation
AOC	Air Operations Center
AOR	Area of Responsibility
ARC	Air Force Reserve Components
ARCENT	Army Central
ARFORGEN	Army Force Generation
ARNG	Army National Guard
AT	Annual Training
ATO	Air Tasking Order
AVF	All Volunteer Force
BCT	Brigade Combat Team
BDA	Battle Damage Assessment
BN	Battalion
BOLC	Basic Officer Leaders Course
CAOC	Combined Air Operations Center

CAOCL	Center for the Advanced Operational Cultural Learning
CAPE	Cost Assessment and Program Evaluation
CAR	Chief, Army Reserve
CBO	Congressional Budget Office
CCMD	Combatant Command
CENTAF	Central Air Forces
CENTCOM	United States Central Command
CIDCRC	Commander, Information Dominance Corps Reserve Command
CJCS	Chairman, Joint Chiefs of Staff
CJCSI	Chairman, Joint Chiefs of Staff Instruction
CLB	Combat Logistics Battalions
CLC	Combat Logistics Companies
CLG	Combat Logistics Group
CNA	Center for Naval Analyses
CNIRC	Commander, Navy Intelligence Reserve Command
CNRIC	Commander, Naval Reserve Intelligence Command
COCOM	Combatant Command
COIN	Counterinsurgency
CONUS	Continental United States
CRS	Congressional Research Service
CSI	Combat Studies Institute
DIA	Defense Intelligence Agency
DMDC	Defense Manpower Data Center
DOD	Department of Defense
EIA	Enemy Initiated Attacks
EUCOM	United States European Command
FFC	United States Fleet Forces Command
FR2	Force Risk Reduction
FSO	Full Spectrum Operations
GAO	Government Accountability Office
GDSS	Global Decision Support System
HASC	House Armed Services Committee
HDL	High Demand, Low Density
HELWINGRES	Helicopter Wing Reserve
HQDA	Headquarters Department of the Army
HUMINT	Human Intelligence
I&I	Inspector-Instructor

IA	Individual Augmentee
IDA	Institute for Defense Analyses
IDCRC	Information Dominance Corps Reserve Command
IED	Improvised Explosive Device
IET	Initial Entry Training
ILO	In Lieu Of
IMA	Individual Mobilization Augmentee
IRR	Individual Ready Reserve
IS	Intelligence Specialist, An Enlisted Rating in the Navy
ISR	Intelligence, Surveillance, and Reconnaissance
J2	Director of Intelligence in a Joint Organization
JMD	Joint Manning Document
JP	Joint Publication
JPME	Joint Professional Military Education
JRIC	Joint Reserve Intelligence Center
JTAC	Joint Terminal Attack Controller
JWICS	Joint Worldwide Intelligence Communications System
LAD	Latest Arrival Date
LIMS-EV	Logistics, Installations and Mission Support-Enterprise View
LREC	Language, Regional Expertise, and Culture
MAGTF	Marine Air Ground Task Force
MARFORCOM	Marine Forces Command
MARFORRES	Marine Forces Reserve
MAT	Mission Reports Analysis Tool
MAW	Marine Air Wing
MCLL	Marine Corps Lessons Learned
MCO	Major Combat Operations
MEB	Marine Expeditionary Brigade
MEF	Marine Expeditionary Force
MGRS	Military Grid Reference System
MISREP	Mission Reports
MLG	Marine Logistics Group
MOE	Measures of Effectiveness
MOP	Measures of Performance
MOS	Military Occupational Specialty
NALO	Navy Air Logistics Office

NAT	New Accession Training or New Accession Trainee in the Navy
NATO	North Atlantic Treaty Organization
NAVCENT	United States Naval Forces Central Command
NDAA	National Defense Authorization Act
NG	National Guard
NGB	National Guard Bureau
NGRER	National Guard and Reserve Equipment Report
NIRC	Navy Intelligence Reserve Component
NMS	National Military Strategy
NUFEA	Navy Unique Fleet Essential Airlift
OCONUS	Outside Continental United States
O&M	Operations and Maintenance
OEDFR	Office of the Executive Director for Force Resiliency
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OLE	Operational Leadership Experiences
OND	Operation New Dawn
ONE	Operation Noble Eagle
OPCON	Operational Control
OPMEP	Officer Professional Military Education Policy
OPNAV	Chief of Naval Operations staff
OPTEMPO	Operational Tempo
OSD	Office of the Secretary of Defense
OUSD(P&R)	Office of the Under Secretary for Personnel and Readiness
PME	Professional Military Education
PRR	Personnel Risk Reduction
PRT	Provincial Reconstruction Team
PSD	Personnel Service Detachment
PSU	Port Security Units
RAID	Redeployment Assistance Inspection Detachment
RC	Reserve Component
RED HORSE	Rapid Engineer Deployable Heavy Operational Repair Squadron Engineer
RegAF	Regular Air Force
RFPB	Reserve Forces Policy Board
RIP/TOA	Relief in Place/Transfer of Authority

RLO	Reserve Liaison Officers in the Navy
RP	Research Participant
SASC	Senate Armed Services Committee
SEAL	Navy Sea, Air, and Land forces
SECDEF	Secretary of Defense
SELRES	Selected Reservist
SIGACT	Significant Activity
SOF	Special Operations Force
SOW	Special Operations Wing
TAG	The Adjutant General
THOR	Theater History of Operations Reports
TPFDD	Time-Phased Force and Deployment Data
TRADOC	United States Army Training and Doctrine Command
TTHS	Trainees, Transients, Holdees, and Students
U.S.	United States
USAF	United States Air Force
USAR	United States Army Reserve
USCG	United States Coast Guard
USCGR	United States Coast Guard Reserve
USMC	United States Marine Corps
USMCR	United States Marine Corps Reserve
USN	United States Navy
USNR	United States Navy Reserve
WOBC	Warrant Officer Basic Course
9/11	11 September 2001

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14. ABSTRACT The Reserve Forces Policy Board (RFPB) tasked the Institute for Defense Analyses (IDA) to conduct an operational assessment of reserve component (RC) forces in support of Operation Iraqi Freedom (OIF), from the years 2003 to 2011. IDA was to identify data that could be used to quantify RC performance, and where comparative analyses could be conducted. Enterprise-wide performance data was not captured by the Department of Defense (DOD), yet IDA was able to analyze data associated with mobility, aviation strike, and significant activities reports (SIGACTs), in addition to individual deployment, casualty, and mishap data. Analysis of these data depict no sizeable differences between active and reserve component forces, and highlight the shared burden and risk of RC forces in the prosecution of OIF.					
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