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Strategic Mobilization of Reserve Forces

December 2024

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Prepared for the Naval Postgraduate School, Monterey, CA 93943.

ACQUISITION RESEARCH PROGRAM
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ABSTRACT

The readiness and efficiency of the Navy Reserve are critical to the strategic capabilities of the United States Navy, particularly in scenarios requiring large-scale mobilization. This thesis examines the systemic challenges and limitations of the current Navy Reserve mobilization framework, focusing on its inability to meet the Chief of Navy Reserve's mandate to mobilize 100% of reserve forces within 30 days. Through a comprehensive analysis, we identified significant challenges in the Navy Reserve's infrastructure, processes, and coordination, which limit its readiness for large-scale mobilizations. Our findings reveal gaps in scalability, logistical support, and joint integration, emphasizing the need for sustainable, adaptive processes to meet modern combat requirements. Key recommendations presented include expanding integration with Mobilization Force Generation Installations (MFGIs), enhancing the Navy Mobilization Processing Sites (NMPS), and adopting a comprehensive, joint-centric approach to mass mobilization planning. By addressing these inefficiencies and incorporating scalable infrastructure improvements that align with Department of Defense objectives, the Navy Reserve can ensure readiness for multi-domain combat operations and the sustainment of large-scale mobilization efforts.

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LIST OF ACRONYMS AND ABBREVIATIONS

AC	Active Component
AOR	Area of Responsibility
AM	Adaptive Mobilization
ARG	Amphibious Ready Group
BOS-I	Base Operations Support Integration
BRAC	Base Realignment and Closure
CNR	Chief of Naval Reserves
COA	Course of Action
CONOP	Concept of Operation
CSG	Carrier Strike Group
DESRON	Destroyer Squadron
DoD	Department of Defense
ECRC	Expeditionary Combat Readiness Center
FCI	Facility Condition Index
FTS	Full-Time Support
FYDP	Future Years Defense Program
GAO	Government Accountability Office
GWOT	Global War on Terrorism
HMMWV	High Mobility Multi-Purpose Wheeled Vehicle
IA	Individual Augmentee
IRR	Individual Ready Reserve
JIA	Joint Individual Augmentee Positions
JLTV	Joint Light Tactical Vehicle
LCS	Littoral Combat Ship
LSMO	Large-Scale Mobilization Operation
MDSC	Military Deployment Support Command
MFGI	Mobilization Force Generation Installation
MM	Mass Mobilization
MSTC	Medical Simulation Training Centers
NAVFAC	Naval Facilities Engineering Systems Command

NMPS	Navy Mobilization Processing Sites
NPS	Naval Postgraduate School
NRC	Navy Reserve Centers
NRFI	Navy Reserve Fighting Instruction
NSW	Navy Special Warfare
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
RAND	Research and Development
RBV	Resource-Based View
RC	Reserve Component
REDCOM	Navy Reserve Region Readiness and Mobilization Command
RSO&I	Reception, Staging, Onward Movement, and Integration
SELRES	Selected Reserve
SWOS	Surface Warfare Officer School
USMC	United States Marine Corp
USNR	United States Navy Reserve
USTRANSCOM	United States Transportation Command

I. INTRODUCTION

Mobilization of reserve forces in a timely, efficient, and effective manner is critical for our national security. The mobilization of reserve forces varies by branch, largely due to differences in available assets and infrastructure. Significant improvements could be achieved by integrating and modernizing joint reserve assets and methods for acquiring readiness, transportation, and infrastructure resources to support national military objectives during wars and emergencies. This thesis explores and highlights the strategic mobilization of the Navy Reserve Component (RC) and Navy Reserve Centers (NRCs) through consolidation and relocation efforts, emphasizing the principles of efficient resource utilization and enhanced operational readiness. Through examining case studies and policies, this thesis aims to provide a detailed understanding of the processes involved and the benefits of these initiatives. Though the authors are all naval officers with a naval background, we are focusing this thesis on the benefits and perspectives at the joint force level to open ideas for strategic improvements for effective and efficient force activation.

As the Department of Defense (DoD) pivots to great power competition and the possibility of major conflict with a near-peer adversary, assessing the ability to mobilize the reserve force has become increasingly critical. In the Navy Reserve Fighting Instructions of 2022, the Chief of the Naval Reserve underscores the requirement to mobilize 100% of the reserve force within 30 days (Department of the Navy, 2022). Recent strategic shifts in Navy Reserve mobilization, as outlined in the "2022 ALNAVRESFOR 020" and "2023 ALNAVRESFOR 007" documents, highlight the need for more adaptive and responsive strategies to meet the Chief of Naval Reserve's mandates (DON, 2022, 2023a). These changes underscore the necessity for a modernized adaptive mobilization system that can address both steady-state and mass activation requirements efficiently.

However, the current mobilization system continues to face significant challenges that hinder the readiness and efficiency of the Navy Reserve force. Critical issues include outdated infrastructure, poor coordination and communication among stakeholders, insufficient training and equipment, transportation bottlenecks, complications with administrative activation and pay, and unpredictable mobilization timelines. These issues

undermine the Navy Reserves current Adaptive Mobilization (AM) framework and the ability to effectively and efficiently mobilize the entire force during large scale combat.

A. BACKGROUND

The importance of an efficient mobilization system is not a new challenge for the Navy. Historical precedents, such as World War II, provide valuable insights into the critical role of the Navy Reserve. During World War II, the Navy relied heavily on its reserve forces to expand its operational capacity. By the end of the war, about 84% of the U.S. Navy's personnel were reservists who had been mobilized to active duty, demonstrating the essential role that reserve forces played in the Navy's wartime efforts (US Naval Institute, 2015). This reliance on reservists was a key factor in the Navy's ability to project power globally during the conflict. The lessons from World War II underscore the necessity of a robust and responsive reserve mobilization system, particularly in large-scale conflict.

As the U.S. faced a global conflict against powerful adversaries in the 1940s, the possibility of a major war with a near-peer competitor today would likely demand a full-scale mobilization of the nation's military resources. The scale and scope of such a conflict could mirror the total war conditions of World War II, where the rapid expansion and deployment of reserve forces were essential to sustaining prolonged military operations across multiple theaters. The strategic environment, characterized by the need for global reach and sustained combat operations, would once again place immense pressure on the Navy and all force branches to mobilize its reserve forces efficiently and effectively.

The Navy Reserve mobilization process today, however, relies on a disaggregated administrative, training, and deployment model that cannot achieve the throughput required to activate 50,000 personnel. According to a report by the U.S. Government Accountability Office (GAO, 2018), the Navy lacks reliable data to measure and monitor the mobilization process, and the roles and responsibilities of the different entities involved are not clearly defined or understood. The GAO recommended data collection and analysis improvements, more explicit guidance and expectations, and enhanced collaboration and oversight (GAO, 2018). The Navy has recognized and acknowledged the Reserve

mobilization problem; however, current efforts primarily focus on decentralized administrative processing and do not adequately address the issues related to infrastructure, training, and strategic movement of the forces to operational areas.

This historical context and the Navy's current mobilization challenges highlight the urgent need for reform. Without significant improvements in the Navy Reserve's mobilization system, the Navy may struggle to meet its operational requirements in a timely and effective manner during future conflicts. The lessons from World War II emphasize that the Navy's ability to leverage its reserve forces effectively is crucial not only for achieving military objectives but also for maintaining overall national security. As the prospect of another large-scale, global conflict looms, the Navy must ensure that it is prepared to mobilize its reserve forces with the same urgency and efficiency that proved decisive during World War II.

B. IMPORTANCE OF MOBILIZATION IN A TWO-FRONT WAR

In the event of a two-front war, where the United States is required to engage in simultaneous conflicts across multiple theaters, the efficiency and effectiveness of naval mobilization become paramount. Rapidly mobilizing naval reserve forces within 30 days, as mandated by the Chief of Naval Reserve, ensures that the Navy can augment its active-duty components and provide the necessary manpower to sustain operations on both fronts (DON, 2022). The strategic challenge of a two-front war would place immense pressure on logistics, transportation, and personnel movement, making it imperative that the Navy's mobilization infrastructure is capable of handling large-scale deployments without delays.

Efficient mobilization would not only bolster force readiness but also provide a critical advantage in maintaining operational tempo and strategic flexibility. The ability to quickly deploy reserve forces into key operational areas allows the Navy to respond to crises in a timely manner, ensuring that both fronts receive the necessary resources and personnel. Joint mobilization and transportation efforts with other branches of the military would be essential in this context, leveraging shared assets to maximize efficiency and reduce bottlenecks (Joint Chiefs of Staff, 2018). By investing in modernized infrastructure, aligning with joint mobilization policies, and enhancing logistical planning, the Navy can

better prepare for the demands of a two-front war, ensuring that its forces are positioned to achieve mission success on all fronts.

C. PROBLEM STATEMENT AND IMPACT OF THE STUDY

The primary problem addressed in this study is the inefficiency and ineffectiveness of the current Navy Reserve mobilization process. This inefficiency is characterized by excessive delays, unclear roles and responsibilities, and inadequate data collection and analysis. These issues compromise the Navy's ability to meet the Chief of the Naval Reserve's mandate to mobilize 100% of the force within 30 days, thereby affecting the overall readiness and capability of the Navy to respond to major conflicts (DON, 2022). Our examination of various historical case studies, government funded reports, and Joint doctrine indicate that the scope of the Navy Reserves current mass mobilization objective is too narrow to adequately address the full spectrum of possible conflict scenarios. We find that Navy Reserve Centers (NRCs) should be located on or near Mobilization Force Generation Installations (MFGIs) to leverage existing mobilization infrastructure and align with joint mobilization processes and policies. This integration is essential for achieving effective and efficient total force mobilization when required.

This study, rather than offering a definitive solution, presents an alternative for the Navy and its future researchers to explore based on our analysis of current Navy Reserve Center (NRC) consolidation efforts, joint mobilization doctrine, and best practices revealed through the analysis of other military branches. These alternatives act as a starting point for a deeper analysis of the costs and benefits of the possible solution and whether that option should be attempted or tested. We also examine possible impactors which could further delay the mobilization timeframe. Historical examples show that during a major conflict, all services depend on the Reserve component to augment active-duty forces, relieve forward-deployed units, and establish newly formed task forces (Martin et al., 2023). Without a comprehensive plan to address the limitations of activating the entire Reserve force, which considers the full spectrum of mobilization scenarios and the possibility of multi-domain conflict or confrontation with a peer adversary, the Navy

Reserve will be left incapable of meeting combatant commanders' requirements for large scale and sustained mobilization operations. SCOPE AND LIMITATIONS

This study focuses on the mobilization process of the U.S. Navy Reserve, specifically examining the training and deployment aspects and analysis of potential alternative mobilization strategies and their associated cost, benefits, and added military value. While comparisons will be made with other military branches, the primary scope remains within the Navy's context. This study has been limited to specific data to provide contextual examples; however, it does not address the entirety of the Naval Reserve Forces in terms of mobilization and reserve center cost. Further studies should seek to gather data from the force and determine if suggested adaptations from this study are feasible in the future.

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II. METHODOLOGY

Our research builds upon findings from a 2023 capstone simulation, *Adaptive Mobilization: Mass Mobilization Feasibility Study*, conducted at the Naval Postgraduate School (NPS), which identified significant limitations in the current United States Navy Reserve (USNR) mass mobilization framework (Richards et al., email to authors, 2023). Specifically, the simulation found that the framework is incapable of meeting the Chief of Naval Reserve's mandate to mobilize the entire force within 30 days. Additional critical findings included the absence of a comprehensive mass mobilization plan or guiding documents, insufficient berthing and logistical support at Navy Mobilization Processing Sites (NMPS) for Selected Reserve (SELRES) personnel awaiting processing, and a pervasive lack of understanding of the Mass Mobilization (MM) process across all echelons (Richards et al., email to authors, 2023).

The recommendations from the simulation emphasized the need for a higher-level assessment of the USNR mass mobilization framework, extending beyond NMPS administrative processing, to evaluate the Navy's capability to support a surge mobilization in a major conflict or two-front war scenario (Richards et al., email to authors, 2023). With these objectives in mind, our research concentrated on several key areas to provide a comprehensive assessment of the USNR mobilization process: a review of foundational mobilization literature, historical case studies and lessons learned, current Navy Reserve initiatives under the Adaptive Mobilization (AM) framework, and joint or interservice approaches to reserve mass mobilization.

Throughout our research, we identified a limited number of studies specifically addressing Navy Reserve mobilization challenges, including Mobilization: The State of the Field (Gilliam & Parker, 2017), A Throughput-Based Analysis of Army Active Component/Reserve Component Mix for Major Contingency Surge Operations (Linick et al., 2019), and Adaptive Mobilization: Mass Mobilization Feasibility Study (Richards et al., email to authors, 2023). However, substantial historical information and studies were available that detailed issues experienced by the Army Reserve and how the service is working to overcome its mass mobilization issues. An examination of the Army's efforts

to enable MM through their Mobilization Force Generation Installations (MFGI), informed our research and led us to take a comparative analysis approach. Our exploration of the Army's mobilization framework identified several ways that the service was enhancing its processing of reservists, including substantial organic infrastructure, processing facilities, training areas, and personnel and assets to support all aspects of the reception, staging, onward movement, and integration (RSO&I) of its Reserve Forces (Department of the Army, 2020). These resources stand in contrast to the comparatively limited support available at NMPS and Readiness and Mobilization Command (REDCOM) sites.

To examine potential methods to which the USNR could adapt the current mobilization model and infrastructure, we assessed recent proposed or enacted changes to the reserve structure, including closing and consolidating reserve center locations as a means to fund an expansion of NMPS throughput capacity. A cost-benefit analysis, previously funded studies, and reserve center operating cost data were provided from the Navy Reserve to inform a simple analysis and the potential feasibility of infrastructure realignment to support enhanced mass mobilization. Though limited, these data sets allowed us to make preliminary estimates of the potential savings and operational advantages of consolidating reserve centers near NMPS locations.

To frame our analysis of the Navy Reserve's approach to mass mobilization, we drew on two foundational resources. First, the journal article, *Mobilization: The State of the Field,* by Gilliam and Parker (2017), presents six attributes essential for large-scale mobilization in modern conflicts, offering critical context for our analysis in scenarios without historical precedent. Second, the five tenets of mobilization from Joint Mobilization Planning Document 4–05 (Joint Chiefs of Staff, 2018) provided a structured framework for evaluating the Navy Reserve's readiness for large-scale or total mobilization, with our recommendations aligned to this framework.

Our research approach integrates qualitative analysis, supplemented by quantitative methods and data when possible. Financial data and infrastructure studies provided the basis to evaluate the feasibility of our proposed changes, while case studies from the Army Reserve's mass mobilization efforts offered comparative insights and potential best practices for Navy Adaptation. This methodology combines literature review, comparative

analysis, and cost assessment—informed our development of practical recommendations to enhance the Navy Reserve's mobilization process.

This research presents feasible solutions to improve the Navy Reserve's mass mobilization capabilities and ability to respond to a major conflict by leveraging interservice and joint best practices and aligning reserve infrastructure plans with operational requirements. By highlighting these issues and addressing the identified gaps, our research provides a foundation for a more efficient and effective mobilization process.

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III. FOUNDATIONAL CONCEPTS AND LITERATURE REVIEW

Understanding the strategic mobilization of Navy Reserve forces requires a deep dive into both historical precedents and contemporary theoretical frameworks. This chapter provides an in-depth exploration of the foundational concepts that shape mobilization practices, drawing from literature on large-scale mobilization, manpower planning, adaptive mobilization, and joint mobilization tenets. By examining key attributes and challenges identified in historical analyses and recent studies, this chapter highlights the complexities of mobilization in modern warfare scenarios, particularly in addressing infrastructure limitations, procedural bottlenecks, and readiness timelines. This review also emphasizes the significance of adaptive and decentralized approaches, such as MFGIs, in enhancing efficiency and responsiveness. Ultimately, this chapter sets the stage for identifying opportunities for reform and aligning Navy Reserve mobilization processes with the demands of contemporary conflict scenarios.

A. LARGE SCALE MOBILIZATION

Mobilization in the context of the United States DoD has several different variations, including full, partial, and presidential call-up mobilizations. Gilliam and Parker (2017) outline this foundational understanding to set a base for the analysis of large-scale contingency mobilization, using Title 10 of the U.S. Code to define these concepts. They state the broad definition as

> The process by which the military services or part of them are brought to a heightened state of readiness for war or another national emergency. This includes activating all or part of the Reserve Component as well as assembling and organizing personnel, supplies, and materiel. (p. 1)

Partial mobilization can occur with a presidential order. However, total mobilization requires a congressional declaration. Within the context of this thesis research, either of these scenarios would apply because they both would require large-scale mobilization of U.S. Navy Reserve forces in excess of any modern-day requirements.

Gilliam and Parker (2017) identify several key attributes that will encompass the problem set of large-scale mobilization that characterizes a near-peer adversary conflict,

which is the context for the Chief of the Naval Reserves' requirement to mobilize 100% of the Reserve Component Force (DON, 2022). These six key attributes are outlined below;

1. "Mobilization is an enduring first-order problem"; the United States last mobilized for large-scale war in 1942. The U.S. victory in that conflict was characterized by three key variables: industrial might developed over an extended period, a relatively isolated and protected homeland, and power projected over great distances (Gilliam & Parker, 2017).
2. "Training timelines will increase"; previous large-scale mobilizations decreased readiness requirements for reserve component personnel; however, a modern-day mobilization will likely require reservists to be highly trained and ready to integrate with the active component. Emerging challenges and complexity will exacerbate the issue (Gilliam & Parker, 2017).
3. "Mobilization is the first step for more than half the total force"- Army planning for mobilization of over a half million Reserve and Guard forces needs to increase comprehension of the associated impact of statutory notifications and training delays (Gilliam & Parker, 2017).
4. "Capabilities and capacities in the reserve components are critical for major war"- Protracted conflict in various regions will strain the capacity of the U.S. Army Reserve forces given the competition for expeditious deployment of all unit types, rather than the ad-hoc deployment of special units (Gilliam & Parker, 2017).
5. "Diversity and dispersion drive complexity"- Due to the inherent nature of Reserve Component personnel and support commands, each is diverse and distributed across the United States. This will generate timeline delays due to the inherent complexity of the system, including logistics, training, travel, and personnel distribution (Gilliam & Parker, 2017).
6. "The United States will be a contested homeland"- Near peer adversaries are more likely than in the past to attempt to disrupt our mobilization efforts,

particularly through cyber-attacks on logistics information systems or cellular networks used to notify and communicate with Reserve Component personnel (Gilliam & Parker, 2017).

Key to the subject of our research is their assertion that the lack of strategic lift assets will greatly impact the United States' ability to project land power over great distances (Gilliam & Parker, 2017). This lack of strategic lift represents the continuing mobilization struggle for resources; while the Army seeks to forward-deploy its massive land-based forces, how will the Navy Reserve fall into that construct to move their activated Reserve Component forces when the current composition of strategic lift assets is insufficient for even the Army? Gilliam and Parker's (2017) third key attribute, "mobilization is the first step for more than half the force" highlights that struggle further when they cite the requirements for the Army to mobilize 343,000 National Guard and 199,000 Army Reserve forces (Gilliam & Parker 2017). The Navy Reserve will need to find a way to get access to joint strategic lift assets simultaneously to forward deploy their 50,000 plus selective reservists.

Two of their key attributes align to describe another critical concept of large-scale mobilization and a critical weakness for the Navy Reserve: that training timelines will continue to increase and that diversity and dispersion will drive complexity. Gilliam and Parker (2017) state that increased requirements and emerging challenges during a near-peer conflict will likely increase the training timelines of reserve components. They indicate that these increased timelines will only be exacerbated by the geographically dispersed reserve component units and the complex nature of mobilizing civilians to active duty in a time of crisis. The Navy Reserve continues to de-centralize its reserve activation model, pushing more responsibilities to the parent commands of reservists, but Gilliam and Parker (2017) suggest that this will have a negative effect on the ability to move those activated reservists.

B. STRATEGIC WARFIGHTING READINESS

Strategic warfighting readiness is central to the mobilization of naval reservists. This state of surge readiness involves the near-immediate availability and deployment of

reservists to support active-duty missions at home and abroad. The strategic warfighting framework is based on the integration of reserve forces into active-duty operations to achieve optimal readiness and cost efficiency. Key concepts include adaptive mobilization, throughput capacity, and strategic lift. The Research and Development (RAND) report *A Throughput-Based Analysis of Army Active Component/Reserve Component Mix for Major Contingency Surge Operations* (Linick et al., 2019) provides a comprehensive analysis of the mobilization process and capacity, mainly focusing on the Army. It highlights the critical role of mobilization capacity and the speed with which it can be expanded to meet the demands of a major conflict. The report discusses limitations of mobilization throughput and physical capacity constraints that limit the number of units and personnel that can be processed at one time. Linick et al. (2019) identify two key components in surge mobilization throughput:

> The major constraints on deploying RC units for a major time-sensitive contingency involve the mobilization process: (1) the time required for these units to complete their training after they are mobilized, which varies by unit and mission complexity, and (2) the physical capacity of the mobilization pipeline, which limits the number of units and personnel that can move through the mobilization process at one time. (p. xii)

The physical movement of personnel is an area that the Naval Reserve has yet to address, and the throughput capacity after the activation of personnel will directly impact its ability to get personnel into their designated Area of Responsibility (AOR). Both constraints identified in the report need to be adequately addressed to ensure the effectiveness of augmenting active-duty regular forces with RC personnel. This interplay between transportation feasibility and mobilization readiness are critical pillars of adaptive mobilization that need to work effectively in tandem to achieve the desired throughput. As stated in the report by Linick et al. (2019), the ability to deploy forces quickly depends on both the availability of strategic lift and the readiness of units to move and it is critical to align mobilization readiness with available transportation resources. Lastly, Linick et al. (2019) make several recommendations for improving mobilization throughput, but two are clearly applicable to the Navy Reserves problem set:

1. Increased state of readiness levels at deployment processing sites to quickly ramp up throughput capacity

2. Invest in infrastructure to increase training capacity following activation.

C. MANPOWER PLANNING

The evolving global security landscape, particularly the shift toward great power competition, underscores the need for the Navy to reassess its manpower requirements in preparation for a potential conventional war. As the Navy prepares for these larger-scale conflicts, it will likely require increased manning to ensure it can sustain operations across multiple fronts. However, this increase in personnel comes with significant financial implications, necessitating a strategic approach to both manpower planning and infrastructure management.

The GAO highlights the importance of evaluating personnel needs in relation to costs to ensure that the Navy's manpower expansions are both operationally sound and fiscally responsible (GAO, 2005, 2006). A key aspect of this planning involves considering the cost of maintaining the current infrastructure, particularly the network of NRCs. While adding personnel is expensive, consolidating or closing underutilized NRCs and integrating their functions into MFGIs presents a viable solution to manage these costs.

By consolidating NRCs into MFGIs, the Navy can reduce infrastructure expenses while still maintaining mobilization readiness. MFGIs are already equipped to handle large-scale mobilizations, making them an ideal centralized hub for reserve force management. This would allow the Navy to enhance operational efficiency without the need for duplicative infrastructure, thereby addressing the financial challenges associated with both increasing manning and maintaining a widespread network of NRCs.

Additionally, accurate manpower planning depends on up-to-date mission documents and stakeholder engagement to ensure that resources are allocated in alignment with strategic priorities. Flexibility in planning is also essential, as shifting geopolitical threats may require rapid adjustments in manpower levels and infrastructure needs. By strategically balancing the costs of increased manning with the savings from consolidating

infrastructure, the Navy can better prepare for the demands of a conventional war without overextending its financial resources. This approach ensures that the Navy remains operationally ready while maintaining fiscal responsibility in the face of growing global challenges.

D. ADAPTIVE MOBILIZATION: MASS MOBILIZATION FEASIBILITY STUDY

The Navy Reserve's mobilize the force line of effort focuses on a shift to Adaptive Mobilization (AM) pathways, which align activation processes with each specific billet assigned to an individual SELRES and are customized to the position they will fill once they are activated (DON, 2022). This initiative is commonly referred to as Mob-to-billet. AM encompasses all mobilization requirements, from steady state operations through Mass Mobilization (MM) scenarios (DON, 2022). To decentralize the mobilization process and to support agile and adaptive processes, the Navy Reserve has replaced the Expeditionary Combat Readiness Center (ECRC) with the Military Deployment Support Command (MDSC). This new command oversees all SELRES mobilizations, as well as Active Component (AC) Individual Augmentee (IA) mobilizations, supported by the six REDCOMs that facilitate these processes (CNRFC Public Affairs, 2023). The REDCOMs will be responsible for AM:MM execution as the designated NMPS.

In order to stress test the throughput capacity of the REDCOM's current AM:MM process, in line with the Chief of Naval Reserve mandate to mobilize 100% of the SELRES force in 30 days, OPNAV N0959 sponsored a full-system simulation and modeling through the Naval Postgraduate School (Richards et al., email to authors, 2023). The study, Adaptive Mobilization: Mass Mobilization Feasibility Study, was confined to the processing of SELRES from the time of their arrival at an NMPS to their completed activation, excluding any analysis of travel or follow on requirements. Their modeled process focused primarily on the administrative processing of SELRES, broken into four key areas: member briefs, medical screening, pay/personnel, and uniform issue. Despite the narrow scope of the modeling, the study provided several valuable insights supporting the necessity for follow on research in omitted areas and concluding for assorted reasons that current AM:MM processes are insufficient (Richards et al., 2023). The following

sections summarize the findings of the study and its implications, as well as the gaps in knowledge and critical considerations that were not covered.

Richards et al. (email to authors, 2023) conducted systems process modeling and simulations based on subject matter expert input to test the throughput capacity of an NMPS. Based on the current structure of the AM:MM model, the simulation found it unfeasible to activate the required 50,000 SELRES in 30 days, with the average time to reach the target activation being 215 days (Richards et al., email to authors, 2023). Subsequent simulations adjusted staffing levels of medical personnel and pay auditors and made changes to the uniform issue and mobilization briefing processes. Maximum SELRES activation throughput was only achieved through a combination of changes to all areas of manpower and policy, as no single change resulted in significant increases due to chokepoints in the system. Ultimately, even with all suggested process changes, the AM:MM model was only able to simulate the mobilization of 45,770 SELRES within the 30-day limit (Richards et al., email to authors, 2023).

Richards et al. (email to authors, 2023) highlighted that the changes required to achieve this throughput capacity nearly eliminated the policy briefing and uniform issue processes while increasing pay auditors by nine per NMPS and medical personnel by 12 per NMPS. In the case of pay auditors, whose steady state manning level is around eight personnel, this increase represented a requirement to more than double the number of available auditors to maximize throughput capacity (Richards et al., email to authors, 2023). Additional medical personnel were allocated based on a Navy Reserve Course of Action (COA) that suggested surging reserve personnel to each NMPS to increase capacity (Richards et al., email to authors, 2023). Additionally, the study pointed out in their batched arrival sensitivity analysis that to achieve this throughput capacity, all 50,000 SELRES were required to be available at the NMPS when the simulation began, rather than a phased arrival model. Table 1 details the sensitivity analysis performed for various batched SELRES arrivals.

Table 1. SELRES Batch Sensitivity Analysis. Source: Richards et al. (email to authors, 2023).

Number of Batches	SELRES/Batch	Overall Throughput in 30 Days	Average SELRES Wait Time in System (hrs)	Average SELRES Wait Time in System (days)
1	50000	45,770	267	11
2	25000	32,870	184	8
5	10000	42,060	168	7
10	5000	9,080	129	5

Richards et al. (email to authors, 2023) noted that their research did not consider the travel, staging, or berthing of SELRES at the NMPS site, and the wait time for each individual was the highest when no phased arrival was simulated. Significantly, Richards et al. (email to authors, 2023) acknowledged the "lack of berthing facilities near many of the NMPS sites, posing additional considerations for the Reserve Force as policies and procedures are defined." (p. 25) Considering that the highest throughput of the simulated MM was achieved under the assumption that all SELRES would be pre-staged and available as required at the NMPS, it is critical that the processing site chosen to execute MM have the necessary transportation and berthing infrastructure to support it, either organically or sourced from the local economy. An additional constraint in the simulations included a lack of any formal policy guidance that outlined the dimensions of NMPS facilities or expected capacities and limitations (Richards et al., email to authors, 2023). The study notes that simulations relied heavily on inputs received during interviews due to the lack of any AM:MM specific Concept of Operations (CONOPS) or other formal policy that could provide schedule timelines, manpower, capacities, or other detailed MM information. Remarkably, Richards et al. (email to authors, 2023) noted that "little is known at any Echelon level about how the force would actually execute MM" (p. 4).

The Richards et al. (email to authors, 2023) simulation of the current steady state mobilization process clearly establishes that the NMPS are not prepared to execute AM:MM and that the probability of achieving the CNR's goal of 50,000 SELRES mobilized in under 30 days is 0%. The various assumptions and limitations described by

Richards et al. (email to authors, 2023) indicate that the problems faced by the Navy Reserve are not limited to process improvements but also include a lack of detailed coordination and logistics planning. Their conclusions and recommendations highlight the necessity for further research into strategic-level execution and logistics planning to ensure efficient force activation in the event of a major conflict (Richards et al., email to authors, 2023).

E. JOINT MOBILIZATION TENETS

The tenets of joint mobilization are presented in Chapter 2 of the Joint Mobilization Planning document (JCS, 2018). From the joint mobilization perspective, the five tenets describe the conditions to determine successful mobilization.

- **Objective**: Mobilization planning should prioritize allocating resources necessary to meet specified joint objectives. To support these objectives, operational planners must accurately forecast requirements, ensuring that resources are both identified and employed effectively. Each phase of the reserve component mobilization process warrants thorough analysis to meet the stated objectives, including any required activation time and the potential need to expand resource capability or capacity. Additionally, commanders and operational mobilization planners must consider the impact and limitations of mobilization plans, coordinating closely with the joint force to clearly define timelines for required mobilization (JCS, 2018).
- **Timeliness**: Mobilization of the reserve component in a timely manner is critical to seizing the initiative in a conflict and producing overwhelming force on the battlefield. To ensure an advantage over our enemies, it is essential that efficient mobilization procedures are promulgated and exercised frequently and that the reserve component forces have the resources required to sustain readiness levels. Planning must include considerations for stockpiling critical material, equipment, and other resources to support mobilization in the event that the industrial base cannot immediately support DoD requirements. To maximize the timely activation

of personnel, planners should prepare to expand mobilization infrastructure to include reserve facilities, training bases, health services, and others required to support all phases of the RSO&I process, as well as demobilization. The joint mobilization process includes all efforts necessary to deploy, employ, sustain, redeploy, and demobilize reserve component forces (JCS, 2018).

- **Unity-of-Effort**: Complete and effective synchronization of mobilization planning is required at all levels and throughout all components of the DoD and government and local agencies. Historical examples illustrate that ineffective coordination in reserve mobilization resulted in delayed troop movements, compromising our ability to position forces in the right place at the right time. The joint planning guidance specifically indicates that a failure to synchronize efforts among the various resource areas will lead to delays in the deployment of reserve forces and impair units' operational capability (JCS, 2018).
- **Flexibility**: In the context of mobilization, flexibility is characterized by the ability of the services to adapt to a changing environment and the potential for escalation of a conflict. The President is given a wide range of authorities to mobilize reserve forces, including a short-term involuntary call-up of Ready Reserve forces for up to 120 days to respond to a national crisis. The President has significant authority to scale the nation's response to various situations, while Congressional approval would be required to initiate a full or total mobilization of the reserve, up to and including expansion of the force. The joint guidance indicates that to be flexible demands adequate monitoring systems to track the status and progress of mobilization plans, as well as an ability to replan, reprogram, and redirect efforts to sidestep bottlenecks and shortfalls that would otherwise delay deployment of forces (JCS, 2018).

- **Sustainability**: Sustainability is a core requirement for Combatant Commanders, defining the joint force's capacity to provide continuous logistics and personnel services essential to maintaining operations until mission completion. Mobilization planning must prioritize rapid, efficient execution to ensure logistics and personnel sustainment. In protracted conflicts, the Reserve Component must have the capacity to provide sufficient personnel for backfilling billets, establishing new units, and augmenting capabilities through the Joint Individual Augmentee process (JCS, 2018).

The mobilization tenets outlined in the Joint Mobilization Planning document provide a foundational framework for evaluating the success or failure of mobilization efforts (JCS, 2018). At their core, these five tenets emphasize the critical importance of speed, agility, and resilience, all focused on fulfilling Department of Defense objectives. The persistent emphasis on timeliness and sustained endurance in supporting long-term conflicts directly connects these tenets to operational success—or failure. These principles are not merely best practices for process improvement; they are grounded in historical lessons shared throughout the document, reinforcing their credibility and robustness.

One such example from World War II highlights the challenges in synchronizing force mobilization with operational requirements, leading to a cyclical "boom or bust" pattern in the availability of replacement enlisted personnel and junior officers (JCS, 2018). Additionally, the rapid demobilization of U.S. forces following World War II left the nation without the capacity to respond to an unforeseen crisis and woefully incapable of an effective response to the 1950 attack on South Korea (JCS, 2018). The five mobilization tenets offer a valuable framework for analyzing current Navy Reserve initiatives to meet the Chief of Navy Reserve goal of mobilizing the entire force within thirty days. Furthermore, they guide the identification of areas for improvement to support the demands of a large-scale mass mobilization scenario.

F. INTRODUCTION TO KEY MOBILIZATION TERMS

Understanding key mobilization concepts and terminology is essential for analyzing and enhancing the Navy Reserve's mobilization framework. This section defines the foundational terms and frameworks that support mobilization processes, highlighting their interconnections and significance to the broader goals of readiness and operational efficiency. By defining these terms, we are able to establish a clear and consistent basis for comprehending the mobilization strategies discussed in this thesis.

- Mob-to-Billet: Mobilization to billet is critical to the Chief of Navy Reserves "Train the Force" line of effort concept, which focuses training on warfighting and readiness for SELRES to deploy to their authorized and funded billet when mobilized. The intent is to maximize the 38 days of annual training to ensure Sailors are certified, qualified, and credentialed for the operational job they will perform in the fleet (DON, 2022).
- IA-to-Zero: Navy Reserve concept and effort to reduce the number of Individual Augmentee mobilizations outside of their authorized and funded billet. IA-to-Zero supports the Train the Force line of effort by focusing training on authorized billets for each Sailor while reducing uncertainty in the mobilization process. The effort intends to drive down the requirement to zero individual augmentees for SELRES, thereby increasing the efficiency of mobilization and effectiveness of Sailors by ensuring training is aligned with assigned duties (Marquez, 2021; DON, 2022).
- Adaptive Mobilization: The Adaptive Mobilization concept supports the Navy Reserves' "Mobilize the Force" line of effort by decentralizing the process to various Navy Mobilization Processing Sites. Adaptive Mobilization works in conjunction with the Mob-to-Billet framework by leveraging adaptive mobilization pathways, which are tailored to each funded SELRES billet. The concept acknowledges the varied and unique requirements of each mobilization and creates individual processes and capacity for each SELRES to follow (DON, 2023a).

- Mass Mobilization: The effort of the Navy Reserve to mobilize the entire force during a large-scale conflict, in contrast to a response for contingency operations or other ad-hoc requirements. In the context of the USNR, Mass Mobilization includes the activation of the total force, approximately 50,000 Selected Reservists. However, additional levels of force mobilization exist, which would activate the Ready Reserve and eventually lead to force expansion (DON, 2023a). Figure 1 shows the joint force framework and authorities for mobilization from involuntary call-up to total mobilization (JCS, 2018).

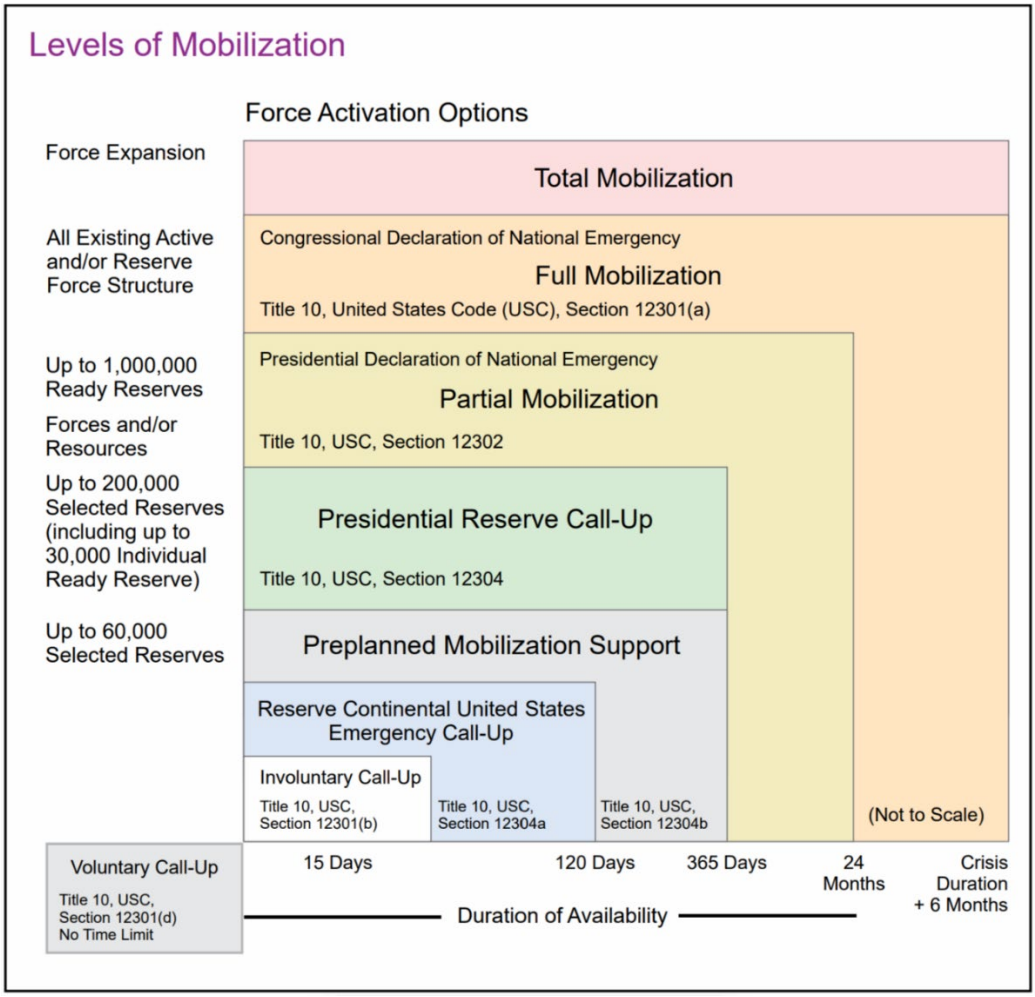

Figure 1. Joint Mobilization Levels. Source: Joint Chiefs of Staff. (2018).

- Mobilization Force Generation Installation (MFGI): The U.S. Army's certified, disaggregated, full-service mobilization sites, known as MFGIs, are designed to support all phases of the RSO&I (Reception, Staging, Onward Movement, and Integration) process for the Army Reserve. These installations are equipped to handle reception, berthing, and both unit and individual training. They facilitate the activation and onward movement of personnel using both Army transportation assets and United States Transportation Command (USTRANSCOM) resources. Upon the return of reservists from deployment, MFGIs also manage the demobilization process, ensuring a seamless reintegration into reserve status (DOA, 2020).
- Navy Mobilization Processing Sites: Installations that have been certified by the Navy to process Individual Augmentees as well as the mobilization of Selected Reservists. The Navy has expanded from a single NMPS in Norfolk, Virginia, to a disaggregated structure where all REDCOMs act as processing sites. These locations provide administrative processing services similar to the Army's MFGI structure, with far less capacity in both logistics and training support (DON, 2023a).
- REDCOM: The Navy Reserve regional readiness commands provide mobilization training, readiness, and operational support for Selected Reservists and Active Component members as part of the Adaptive Mobilization process. The Navy has six REDCOMs located throughout the country that support the Navy Reserve Centers in their region. See Figure 3 to reference current REDCOM locations on the 2022 Navy Reserve Force Map (Marquez, 2022; DON, 2022).

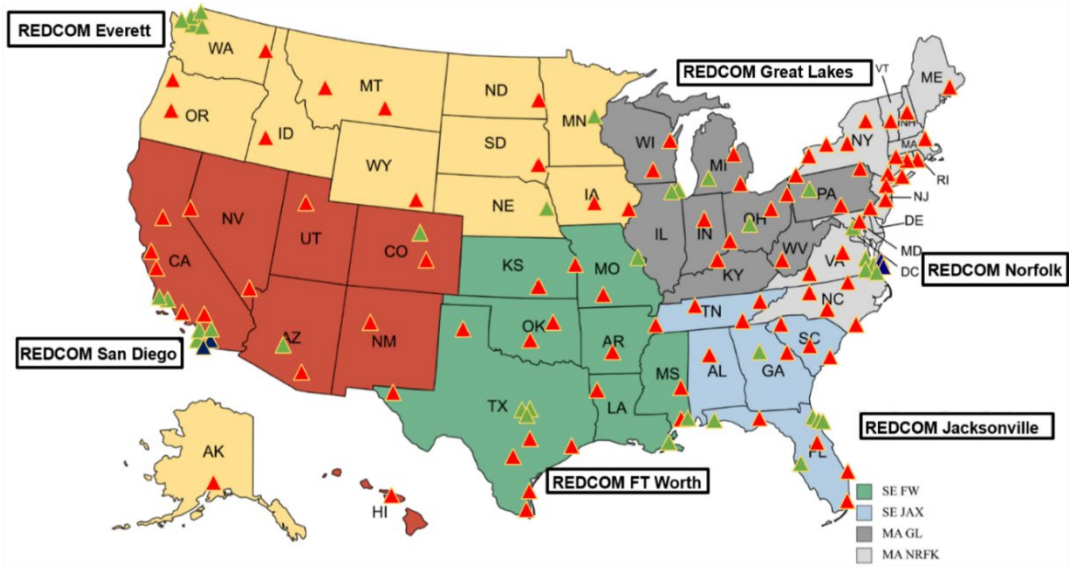

Figure 2. REDCOM Locations. Source: U.S. Navy Reserve (2024; edited for clarity).

- SELRES: Selected Reservists are the portion of sailors in the ready reserve that are assigned to funded billets and represent the first reservists to mobilize in the event of a conflict. The Ready Reserve is composed of the Selected Reserve (SELRES), Training and Administration of the Reserve (TAR), and the Individual Ready Reserve (IRR) (US Navy Reserve, 2024). The composition of the Ready Reserve force is computed as

$$\text{Ready Reserve} = \text{SELRES}+\text{TAR}+\text{IRR}$$

Table 2 represents the total force composition alongside the individual strength figures for each component of the Ready Reserve.

Table 2. Ready Reserve Composition Numbers. Source: U.S. Navy Reserve (2024).

Ready Reserve Composition	
SELRES	46,146
TAR	9,921
IRR	37,080
Total	93,147
**Total IA*	*1,273*

In the event of a full or total mobilization, the Navy Reserve will begin to mobilize the Individual Ready Reserve or look to expand the force. Current efforts by the Navy Reserve and previous throughput studies of the steady state mobilization process focus specifically on the Selected Reserve, which does not address the potential for additional personnel processing and force expansion.

IV. COMPARATIVE ANALYSIS

Mobilization is a critical component of military readiness, serving as the foundation for success in large-scale conflicts. As noted by Gilliam and Parker (2017), mobilization represents the initial step for more than half of the Army's total force. Given the potential need to mobilize approximately 500,000 Guard and Reserve forces, the Army has aggressively developed a decentralized, flexible, and high-capacity mobilization structure (DOA, 2022). This chapter introduces the Army's MFGIs, highlighting the successes of recent efforts to stress test the service's nine geographically dispersed mobilization sites. It also explores the potential benefits of adopting elements of the Army's approach to improve Navy Reserve mobilization planning. The discussion includes an examination of the Navy's proposed consolidation of NRCs, a review of findings from a Navy-funded study on this effort, and an analysis of how these consolidations could realign resources to enhance infrastructure at mobilization sites. By leveraging insights from the Army's MFGI model, the Navy could significantly improve its mobilization readiness and capacity.

A. OVERVIEW OF ARMY MOBILIZATION FORCE GENERATION INSTALLATIONS (MFGI)

The Army's shift toward MFGIs reflects a strategic move toward regional hubs that streamline the mobilization process by centralizing key services and logistics, thereby reducing the strain on smaller, dispersed facilities. Currently, the Army has certified two active mobilization sites at Fort Hood and Fort Bliss, Texas, and maintains seven inactive MFGIs: Fort Lewis, WA; Fort McCoy, WI; Joint Base McGuire-Dix-Lakehurst, NJ; Camp Atterbury, IN; Fort Stewart, GA; Camp Shelby, MS; and Fort Riley, KS (McCollum, 2021).

MFGIs offer a range of critical services designed to expedite the mobilization process. They handle all aspects of personnel processing, including administrative tasks, medical screenings, and readiness checks. Beyond essential medical readiness, MFGIs provide additional medical services such as vaccinations, health screenings, and mental health evaluations to ensure that personnel meet the medical standards required for

deployment (DOA, 2022). This comprehensive approach helps minimize unnecessary delays and ensures soldiers are fully prepared for mobilization. At MFGIs, soldiers also participate in refresher training, tactical drills, weapons qualifications, mission-specific rehearsals, and theater-mandated training (DOA, 2020). These activities ensure that personnel are mission-ready and equipped with any last-minute skills updates required for deployment.

MFGIs are designed to support MM by maintaining significant logistics capacity. They manage and distribute essential equipment and supplies, including weapons, protective gear, and transportation resources, while also coordinating the movement of heavy equipment and transportation logistics to deployment zones (DOA, 2020). A critical feature of MFGIs is their role in joint force integration. At Fort Riley and Joint Base McGuire-Dix-Lakehurst (Fort Dix), MFGIs facilitate coordination between personnel from various branches of the military, enabling seamless cooperation between the Army, Navy, Air Force, and Marine Corps. This integrated approach enhances mission readiness and fosters inter-branch cohesion (Porter, 2023).

Additionally, the geographic distribution of the nine MFGIs also supports a decentralized command structure, allowing for greater flexibility and adaptability during the mobilization process. By empowering regional hubs like Fort Riley and Fort Dix to take the lead on mobilization, the Army can rapidly adjust to changing mission demands, reducing bottlenecks and improving the speed of force deployment. In 2023, Large-Scale Mobilization Operation (LSMO) exercises, known as MOBEX, conducted at Fort Riley and Fort Dix tested MFGI throughput capacity and processes by simulating the mobilization of over 4,000 Army National Guard soldiers (Porter, 2023; Reust, 2023). The success of these exercises underscores the importance of regional hubs and centralized resources in enhancing the speed and efficiency of mobilization. By leveraging the capabilities of MFGIs, the Army bolsters its operational readiness, ensuring that soldiers can be deployed quickly and effectively in response to emerging global threats.

B. NAVAL RESERVE STUDY ON RESERVE CENTER CONSOLIDATION

The 2015 terrorist attack on military recruiting and the reserve center in Chattanooga, Tennessee, raised significant concerns about the security of off-installation NRCs. This incident served as the impetus for a funded study examining potential options for consolidating or relocating reserve centers to enhance physical security. The study, Evaluating the Potential to Relocate or Consolidate Navy Operational Support Centers, conducted by Leaver, Marcus, and Macdonell (2017), explored various consolidation scenarios based on key military priorities such as personnel travel distances, proximity to other NRC or DoD installations, infrastructure conditions of the reserve centers, and the Base Realignment and Closure (BRAC) military value rating.

Using operating cost data provided by the Navy, the study identified several consolidation priorities and estimated the associated cost savings. On average, Leaver et al. (2017) found that consolidating or closing an NRC could save the Navy approximately $1.64 million annually, accounting for expenses related to facility maintenance, operations, sustainment, and Full-Time Support (FTS) personnel. Full-Time Support personnel are now referred to as Training and Administration of the Reserve (TAR); however, when referencing the study by Leaver et al. (2017), our analysis will maintain the use of FTS for consistency with their findings. Figure 3 illustrates the estimated cost savings identified by Leaver et al. (2017).

Madison to Milwaukee

Metric	Madison	Milwaukee	Total	Savings ($K)
# of Reservists	109	130	239	
Full Time Staff	8	14	22	
OMN Cost ($K)	52.1	155.5	207.6	
PRV (SM)	7.1	15.9	23	
Sustainment ($K)	142	176	318	
FTS Cost ($K)	1,200	1,650	2,847	
Total ($K)	1,401	2,139	3,624	**1,007**

Saginaw to Detroit

Metric	Saginaw	Detroit	Total	Savings ($K)
# of Reservists	79	525	604	
Full Time Staff	4	9	13	
OMN Cost ($K)	202.6	167.5	370.1	
PRV (SM)	14.4	31.2	45.6	
Sustainment ($K)	288	312	600	
FTS Cost ($K)	1,650	3,150	4,800	
Total ($K)	2,155	3,645	5,770	**1,834**

Rochester to Buffalo

Metric	Rochester	Buffalo	Total	Savings ($K)
# of Reservists	136	153	289	
Full Time Staff	10	14	24	
OMN Cost ($K)	348	567	915	
PRV (SM)	14.7	15.1	29.8	
Sustainment ($K)	294	378	672	
FTS Cost ($K)	1,500	2,100	3,600	
Total ($K)	2,157	3,064	5,221	**1,596**

Plainville to New London

Metric	Plainville	New London	Total	Savings ($K)
# of Reservists	101	339	440	
Full Time Staff	11	7	18	
OMN Cost ($K)	447	224	671	
PRV (SM)	9.8	9.2	19	
Sustainment ($K)	196	184	380	
FTS Cost ($K)	1,650	1,800	3,450	
Total ($K)	2,303	2,218	4,500	**1,989**

Avoca to Lehigh Valley

Metric	Avoca	Lehigh Valley	Total	Savings ($K)
# of Reservists	69	145	214	
Full Time Staff	9	11	20	
OMN Cost ($K)	155.3	382.2	537.5	
PRV (SM)	9.3	20	29.3	
Sustainment ($K)	186	200	386	
FTS Cost ($K)	2,100	1,350	3,450	
Total ($K)	2,451	1,942	4,393	**2,172**

Peoria to Decatur

Metric	Peoria	Decatur	Total	Savings ($K)
# of Reservists	75	95	170	
Full Time Staff	10	8	18	
OMN Cost ($K)	113.3	91.05	204.35	
PRV (SM)	6.5	5.5	12	
Sustainment ($K)	133	111.2	244	
FTS Cost ($K)	1,500	1,200	2,700	
Total ($K)	1,753	1,408	3,148	**1,395**

Figure 3. Cost Savings from Six Comparison Scenarios. Source: Leaver et al. (2017).

These savings estimate's also account for the transfer of unavoidable costs due to personnel relocations to new drilling sites. The six consolidation scenarios in Figure 3 indicate an average savings of 81% in annual NRC operating costs, with the majority of the savings stemming from reductions in FTS personnel. These reductions ranged from $1.2 to $2.1 million annually per reserve center. Leaver et al. (2017) estimated these savings using an average FTS staffing model of seven active personnel and 2.5 personnel per 100 SELRES members. However, outliers exist, with some NRCs maintaining significantly higher FTS staffing levels.

Leaver et al. (2017) conducted three distinct weighted analyses to evaluate joint value, facility condition, and personnel numbers. Joint value was heavily influenced by the 2005 BRAC recommendations, emphasizing proximity to active military bases and avoiding the consolidation of NRCs located on joint bases. Facility condition was assessed using data from the Naval Facilities Engineering Systems Command (NAVFAC) Facility Condition Index (FCI), as well as the age of NRCs and their maintenance costs per

SELRES member (Leaver et al. 2017). Personnel numbers in the study considered both active SELRES members and trends of declining SELRES recruitment. These analyses produced three prioritized lists of 22 NRCs for consolidation, which were merged to create a final recommendation of 16 NRCs for consideration (Leaver et al. 2017). Figure 4 highlights the top 22 reserve centers and their frequency of appearance in the individual weighted lists, with White River Junction, VT and Fargo, ND representing the only NRC in its respective state.

NOSC	# in Top 20
Plainville, CT	3
Avoca, PA	3
Lehigh Valley, PA	1
Erie PA	3
Milwaukee, WI	3
Madison WI	1
Saginaw, MI	3
White River Jct, VT	3
Manchester, NH	2
Ebensburg, PA	3
Peoria, IL	2
Rochester, NY	3
Buffalo, NY	2
Fargo, ND	2
Roanoke, VA	2
Long Island, NY	2
Harrisburg, PA	2
Los Angeles, CA	2
Billings, MT	1
Sioux Falls, SD	1
Miami, FL	1
West Palm Beach, FL	1

Figure 4. Top 22 Consolidation Recommendations. Source: Leaver et al. (2017).

This final list provides a starting point for the Navy to evaluate consolidation opportunities, as recommended by Leaver et al. (2017). Additionally, the study identified five standalone NRCs, West Palm Beach, Syracuse, Augusta, Charlotte, and Baltimore, as high-priority candidates for relocation. While the initial focus of the analysis was on force protection, the findings also present a compelling case for consolidation to optimize resources. By reallocating infrastructure and personnel, the Navy could strengthen mobilization sites, aligning with broader recommendations from Richards et al. (email to

authors, 2023). Leaver et al. (2017) suggest that significant NRC consolidation is not only feasible but strategically advantageous for locations with declining personnel numbers or substandard facilities. Although facility maintenance cost savings may be limited, reallocating these resources, along with FTS personnel, to bolster NMPS or MFGIs could enhance readiness and operational efficiency.

C. ANALYSIS OF NAVY RESERVE REGION SOUTHEAST OPERATING COSTS AND CONSOLIDATION

In the course of our research, we requested operational cost data on NRCs and were provided information for standalone locations in Naval Reserve Region Southeast, headquartered in Jacksonville, Florida, and co-located with REDCOM Southeast. The data set included operational costs for fiscal year 2023 (FY23), covering expenses such as utilities, facilities maintenance, and support services. However, updated data on costs or numbers of FTS personnel per NRC were unavailable. Consequently, our analysis focused on Reserve Region Southeast, where we conducted a basic examination of NRC distribution and density. We also factored in the location of the nearest Army MFGI in the Southeast region, Fort Stewart, Georgia. Although commute times vary by NRC location, we established a baseline operating radius of 100 miles around reserve centers. This radius aligns with or slightly exceeds the 90-minute commute basis used by Leaver et al. (2017). Figure 5 illustrates the locations of all current Southeast NRCs, with 100-mile circles in blue and MFGI Fort Stewart in green.

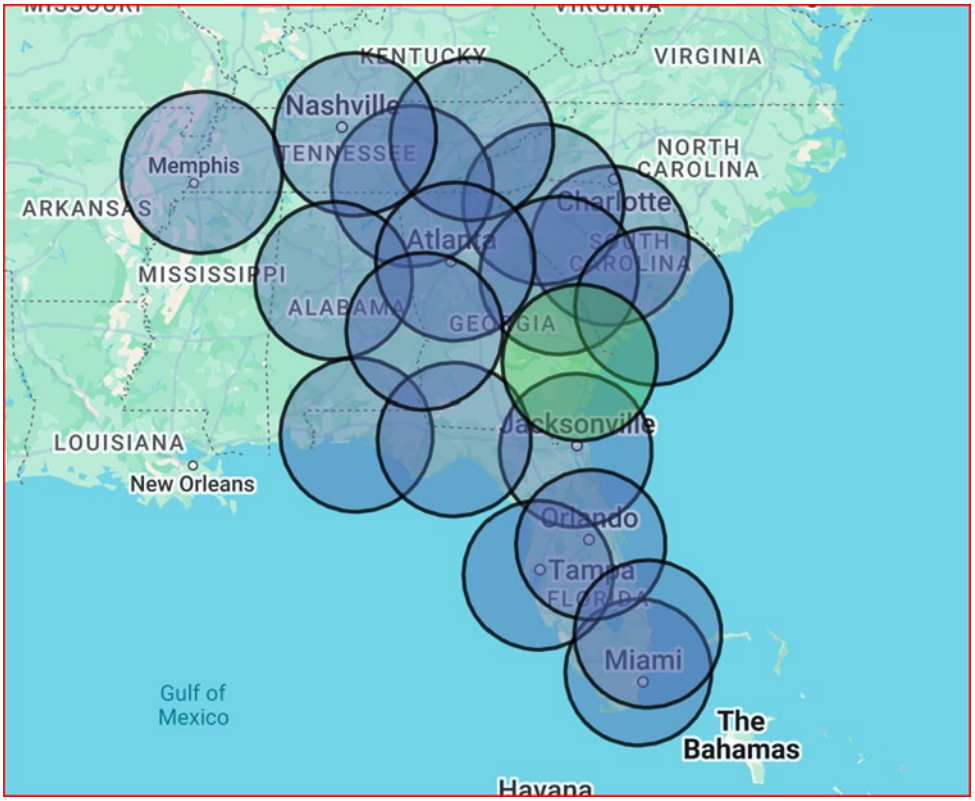

Figure 5. Geographic Distribution of NRCs in Southeast Region. Source: The Reserve Force (2024).

Figure 5 highlights significant overlap among Southeast NRCs, including three in close proximity to the MFGI at Fort Stewart, Georgia. To illustrate a consolidation scenario, we evaluated NRCs based on their proximity to other centers, as well as the recommendations by Leaver et al. (2017), which weighted joint value, facility condition, and personnel density. Additionally, we incorporated the heat map of SELRES home ZIP codes provided by Leaver et al. (2017) (see Figure 6) to identify locations where consolidation might impose undue hardship on personnel traveling to new NRCs or Fort Stewart.

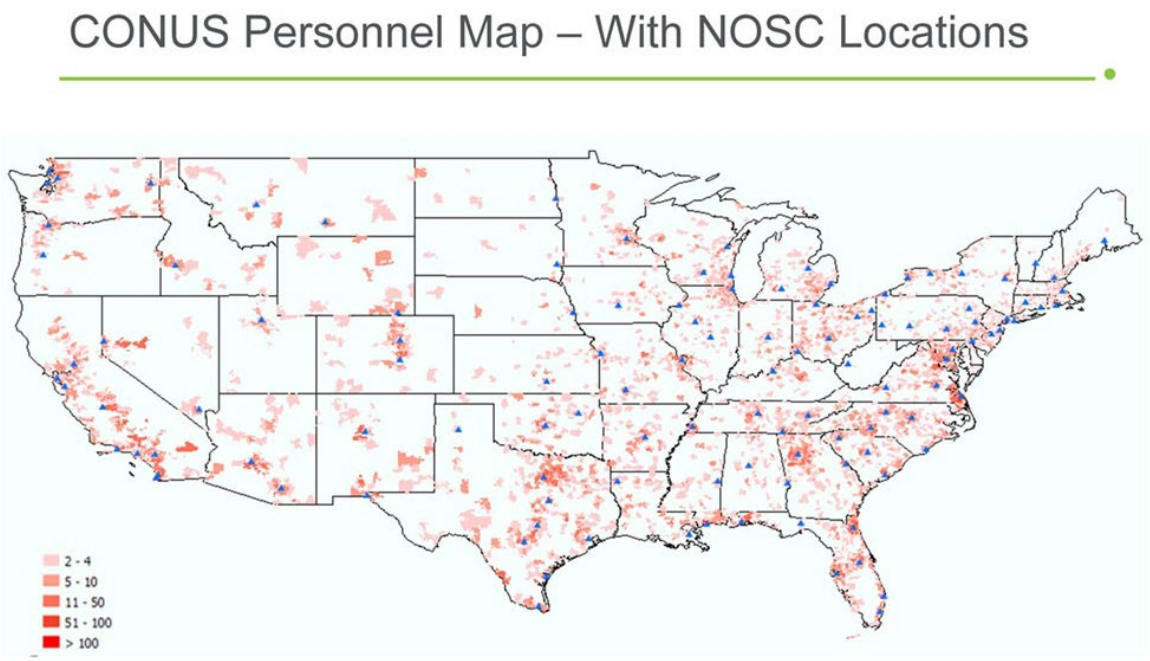

Figure 6. SELRES Heat Map. Source: Leaver et al. (2017).

Using these criteria, we identified six NRCs for consolidation: Augusta, GA; West Palm Beach, FL; Tampa, FL; Chattanooga, TN; Greenville, SC; and Orlando, FL. NRCs in Augusta, Greenville, and Chattanooga exhibited substantial overlap with at least four alternative drilling locations and relatively low SELRES density. Additionally, NRCs in North Carolina, outside of the Southeast region, demonstrated overlap with Southeast NRCs. For example, Greenville could consolidate with NRC Charlotte.

Tampa and Orlando represent high-density locations with notable overlap; however, we selected Orlando for consolidation due to its proximity to NRC Jacksonville and Tampa, providing multiple alternative drilling locations for Orlando Reservists. NRC Tallahassee was included due to its extremely low SELRES density and relative proximity to Jacksonville and Pensacola. West Palm Beach and Miami, consistently recommended for consolidation or closure by Leaver et al. (2017), were also evaluated. West Palm Beach, the top recommendation nationwide based on facility age and condition, was recommended for consolidation in our example. Although NRC Charleston is near Fort Stewart, its

location on a Navy installation with high SELRES density excluded it from consideration. Table 3 depicts the FY23 operating costs for the NRCs included in our example consolidation.

Table 3. NRC Locations and Associated Costs. Source: Commander Navy Reserve Force Southeast (2024).

LOCATION	BEA	Sum of OBL AMT
NMCRC AUGUSTA GA	FX	$52,814.72
	ST	$1,500.00
	UT	$68,856.57
NMCRC AUGUSTA GA Total		**$123,171.29**
NMCRC WEST PALM BEACH FL	FX	$47,703.31
	ST	$1,055,234.89
NMCRC WEST PALM BEACH FL Total		**$1,102,938.20**
NMCRC CHATTANOOGA TN	FX	$41,648.08
	ST	$63,600.19
NMCRC CHATTANOOGA TN Total		**$105,248.27**
NMCRC GREENVILLE SC	FX	$68,810.62
	ST	$90,685.35
NMCRC GREENVILLE SC Total		**$159,495.97**
NMCRC TALLAHASSEE FL	FX	$45,106.26
	ST	$68,992.56
NMCRC TALLAHASSEE FL Total		**$114,098.82**
NMCRC ORLANDO FL	FX	$45,197.81
	UT	$102,253.58
NMCRC ORLANDO FL Total		**$147,451.39**
Total Facility Costs		**$1,752,403.94**
Average net savings (81%)		**$1,419,447.19**

*FX – Services
*ST – Maintenance
*UT – Utility Costs

The table demonstrates potential savings of $1.75 million annually based on FY23 data. Using an average 81% cost savings factor derived from data from Leaver et al. (2017), we estimate net savings of $1.41 million per year after accounting for costs redistributed

to remaining NRCs to support SELRES that will drill at a new location. Figure 7 illustrates the adjusted NRC distribution after removing the six consolidated centers.

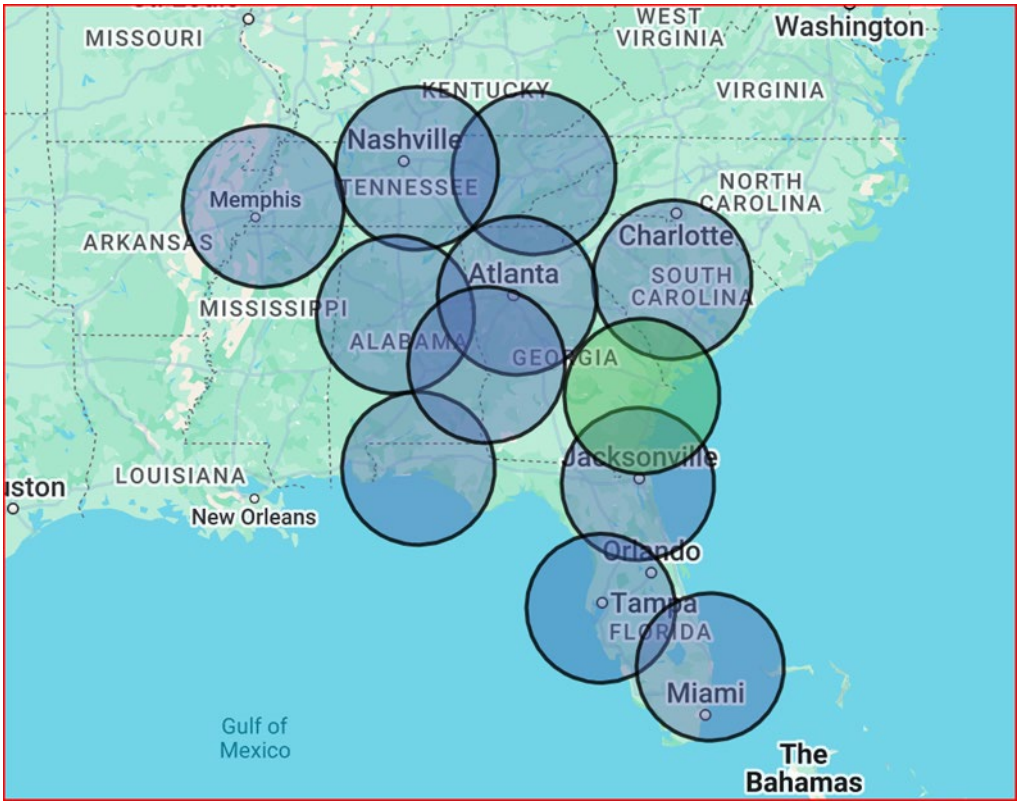

Figure 7. Adjusted NRC Distribution. Source: The Reserve Force (2024)

Building on the data provided by the Navy Reserve, we also evaluated the potential reassignment of FTS personnel from the six consolidated NRCs. Based on the baseline estimate from Leaver et al. (2017) of seven FTS personnel per NRC and excluding the additional 2 1/2 FTS personnel allocated per 100 SELRES for reassignment to other NRCs, we estimated a total of 42 support personnel available for reassignment to NMPS or MFGI locations. This reassignment, combined with the operating cost savings, offers a significant opportunity to enhance infrastructure and expand capacity at NMPS or MFGI facilities.

As indicated in the MM feasibility study, Richards et al. (email to authors, 2023) demonstrated that the highest throughput in all simulations occurred when an NMPS increased medical personnel by 12 and pay auditors by nine. Future Years Defense

Program (FYDP) planning estimates for civilian pay auditors projected an additional cost of $2.91 million for nine pay auditors, while medical personnel were assumed to be sourced from the Navy Reserve during a MM surge effort (Richards et al., email to authors, 2023).

Although Table 3 indicates the potential savings of $1.41 million, which is less than the projected increased FYDP request for additional personnel, the Navy would gain significant flexibility by realigning the billets of the 42 support personnel. These billets could be repurposed to fill positions as pay auditors in lieu of civilian employees or to increase permanent medical staff at the NMPS. Furthermore, Richards et al. (email to authors, 2023) identified a point of diminishing returns after adding seven additional pay auditors at the NMPS, providing additional flexibility in optimizing billet realignment. Ultimately, using the findings from Richards et al. (email to authors, 2023), the total personnel requirement for achieving maximum throughput in an MM scenario is estimated at 21 additional support personnel. Notably, the results provided by Richards et al. (email to authors, 2023) indicate that this increase in personnel at REDCOM Jacksonville led to a greater number of SELRES mobilized within 30 days than the Southeast region's total assigned reservists as of August 2023. As a result, the Navy could choose to consolidate only three of the six NRCs identified in our example and still achieve the required throughput for full SELRES activation. Alternatively, the remaining 21 personnel could be eliminated or reassigned for additional cost savings.

Leaver et al. (2017) utilized the DoD composite standard pay rate for an O-3 billet as the average cost per billet of support personnel. According to the fiscal year 2025 DoD comptrollers' guidance, the current composite rate for an O-3 billet is $179,144 (McAndrew, 2024), resulting in the potential savings of $3.76 million if the Navy implemented the closure of all six NRCs identified in our example while providing only the personnel increases recommended by Richards et al. (email to authors, 2023) and reallocating the remaining billets. Alternatively, reassigning all 42 billets from the consolidated NRCs could significantly enhance both the capability and throughput capacity of the designated mobilization sites.

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V. CURRENT NAVY EFFORTS TO IMPROVE MOBILIZATION

In this chapter we evaluated the current efforts within the Navy Reserves and ways to enhance mobilization not only in the Navy but all reserve branches. LCDR Trimble also drew upon his experience as a Commanding Officer of a Navy Reserve Center from 2020 to 2023. We also examine initiatives led by former CNR Admiral Mustin under the "Mobilization to Billet" strategy, articulated in the Navy Reserve Fighting Instructions (NRFI) (DON, 2022). The Navy's current focus is on "Warfighter Readiness," a concept central to Admiral Mustin's directives. This initiative aims to eliminate IA assignments that fall outside the scope of reservists' core training and funded billets.

While these efforts have made progress, significant challenges remain, particularly in the areas of outdated mobilization infrastructure and insufficient funding for transportation logistics. One promising approach to addressing these issues is the potential Joint branch investment in MFGIs, similar to those used successfully by the Army, to enhance the Navy's ability to rapidly and efficiently mobilize its reserve forces. By aligning the Navy Reserve's mobilization infrastructure with joint force capabilities, integrating MFGIs across branches, and adopting a joint mobilization infrastructure, the Navy Reserve could leverage shared resources and expertise, improving both the effectiveness and efficiency of the overall mobilization process. This chapter concludes by exploring these alternatives, focusing on how joint mobilization efforts could provide a more unified and scalable approach to meeting modern military demands.

A. WARFIGHTER READINESS AND MOB-TO-BILLET INITIATIVES

The Navy Reserves have made significant strides in addressing the issue of reservists being mobilized into roles that do not align with their training or funded billets. This misalignment often led to inefficiencies and readiness gaps, particularly during urgent mobilizations. Admiral Mustin's introduction of the "Mobilization to Billet" initiative aimed to rectify this by ensuring that reservists are mobilized into roles that match their specific training and funded billets, thereby enhancing operational effectiveness and readiness (DON, 2020, 2022).

As articulated in the 2022 NRFI (DON, 2022), Admiral Mustin emphasized "Warfighter Readiness" as the top priority, with a clear directive to eliminate IA assignments that did not align with reservists' core skills, a campaign he termed "IA-to-zero." This initiative sought to streamline the mobilization process, ensuring that sailors were deployed in roles where they could immediately contribute to the mission without additional training or adjustments (DON, 2022). However, while progress has been made, challenges still need to be addressed in fully implementing this initiative across the force, particularly in ensuring that all reserve billets are adequately funded and aligned with operational requirements.

B. LESSONS FROM THE USE OF NON-STANDARD FORCES AND IA-TO-ZERO CHALLENGES

A large-scale mobilization of the Joint Force will inevitably require the training of non-standard forces to fill gaps in theater, extending the mobilization process. A study by the RAND Corporation, Impact of Individual Augmentation Policy on Navy Reserve Force Readiness (Martin et al., 2023), found that during Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF), Navy and Air Force personnel were frequently tasked with duties outside of their primary billet descriptions. The study highlights that at the height of the conflict in Iraq, the Navy had a greater percentage of Reserve Forces mobilized ashore than afloat. To prepare Navy personnel for non-standard roles such as JIA positions, the Army conducted various types of combat and ground support training at facilities such as Fort Dix, one of nine certified MFGIs. According to the U.S. Government Accountability Office (GAO) report, Military Readiness: Joint Policy Needed to Better Manage the Training and Use of Certain Forces to Meet Operational Demands (GAO, 2008), JIA personnel were trained in land warfare, first aid, High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) egress procedures, weapons qualification, marksmanship, and other essential skills. The report described that training requirements for JIA roles were established by three primary sources: the theater combatant commander, the land force component commander, and service-specific directives. However, the GAO noted that these overlapping requirements often resulted in repetitive, unnecessary, or misaligned

training, leaving augmentee personnel unprepared for their actual responsibilities in the theater.

Since OIF, the Navy Reserve has shifted its mobilization strategy to emphasize targeted readiness, through the IA-to-Zero and Mob-to-Billet initiatives (Marquez, 2021). This approach streamlines training requirements and provides a clearer picture of readiness for individual sailors, their assigned reserve centers, and the Navy as a whole, but despite these efforts, the Navy's SELRES mobilization strategy continues to rely on the assumption that sailors will mobilize to their assigned billets (DON, 2022). However, historical trends and recent data challenge this assumption. According to Martin et al. (2023), the Navy Reserve has consistently struggled to forecast demand accurately for IA and other non-standard mobilization billets. The report highlights that, despite a reduction in Global War on Terrorism (GWOT) operations, the majority of SELRES mobilizations were concentrated in the 5th Fleet AOR, with significantly fewer billets assigned to the Pacific region. This discrepancy underscores the misalignment between current mobilization practices and strategic priorities.

Moreover, this misalignment conflicts with the National Defense Strategy and Department of Defense rhetoric, emphasizing a pivot to the Pacific to counter China (Martin et al., 2023). Instead, significant and recurring mobilization billets remain in other AORs critical for great power competition. Data from Martin et al. (2023) highlights that between 2012 and 2021, 58% of reservists were mobilized to IA billets, split between joint and maritime positions. Maritime billets were typically not afloat but instead supported Naval Special Warfare operations, Base Operating Support-Integrator, and U.S. Marine Corps deployments. While classified as IA positions, these billets primarily reflected Navy-specific requirements, many of which continue to be filled today. This data demonstrates a persistent misalignment between the USNR's Mob-to-Billet strategy and the operational demands of a large-scale conflict (Martin et al., 2023). Although the Navy has expressed its commitment to reducing IA mobilizations and prioritizing billet alignment, the findings suggest that SELRES will still be required to support both joint and Navy-specific billets in significant numbers.

The Mob-to-Billet initiative was designed to enhance mobilization throughput and training efficiency in preparation for a potential conflict in the Pacific. However, structuring the force entirely around a single future conflict scenario introduces considerable risk to the Navy's ability to respond to large-scale or multi-domain combat. In such scenarios, where the Navy may be unable to avoid filling IA and non-standard billets, training would need to occur prior to deployment, exposing a critical gap in the current Navy Reserve AM framework.

While the Mob-to-Billet initiative improves SELRES readiness for their assigned billets, historical precedent suggests that the Navy Reserve will still need to provide IA support in large-scale conflicts or two-front wars. As Gilliam and Parker (2017) outline in their considerations for mass mobilization, training timelines are expected to increase in modern conflicts. When combined with the need to train SELRES for IA billets not aligned with their Mob-to-Billet assignments, the Navy is likely to face significant throughput issues at NMPS facilities, which are currently optimized for limited and specific mobilization scenarios.

C. LOGISTICS AND TRANSPORTATION SHORTFALLS

Logistics and transportation are underfunded components of Navy Reserve mobilization, a critical shortfall repeatedly identified through LCDR Trimble's experience as a Commanding Officer of a Navy Reserve Center and Admiral Mustin's directives (DON, 2022). The chronic underfunding in these areas presents significant challenges to the Navy Reserve's ability to swiftly and efficiently mobilize personnel and equipment, which are key elements required for mission success.

Effective mobilization hinges on the ability to move sailors and essential equipment quickly and securely to their designated locations, often within a 30-day window, to meet operational demands (JCS, 2018). However, inadequate funding allocated to logistics and transportation has historically led to delays and inefficiencies. These delays can severely impact the Navy's readiness and ability to respond to crises, particularly during large-scale mobilization scenarios when every hour counts (DON, 2022).

Admiral Mustin's 2022 NRFI and the 2023 ALNAVRESFOR guidance both underscore the importance of addressing logistical shortfalls to ensure that reserve forces can be mobilized and deployed within the critical 30-day window (DON, 2022, 2023a). Failure to do so not only hamper mission execution but also places undue strain on active-duty components, who rely on the timely integration of reservists into operational units.

During LCDR Trimble's tenure as Commanding Officer, he observed firsthand how transportation bottlenecks were often the primary cause of deployment delays, resulting in readiness challenges across Navy Reserve units. In large-scale mobilizations, where thousands of sailors need to be processed and deployed simultaneously, these logistical inefficiencies become even more pronounced, amplifying the risk of missed operational deadlines and weakened combat effectiveness (DON, 2022).

The need to invest in logistics and transportation infrastructure is not just a matter of convenience; it is a strategic imperative. Rapidly mobilizing reserve sailors within 30 days is essential to maintaining the Navy's operational tempo and ensuring that reserve forces can immediately contribute to the fight (DON, 2022). This requires both a long-term funding strategy and a commitment to modernizing transportation capabilities, ensuring that Navy Reserve mobilizations are no longer hindered by outdated systems and underfunded logistical pipelines (DON, 2022).

The 2023 ALNAVRESFOR guidance on Adaptive Mobilization also addresses this issue, highlighting the need for better funding and resources to support the Navy Reserve's logistics and transportation needs (DON, 2023a). This guidance outlines the steps being taken to streamline these processes, but significant challenges remain, particularly in securing the sustained funding necessary to support these initiatives over the long term (DON, 2023a).

D. APPLICATION AND ANALYSIS OF THE JOINT MOBILIZATION TENETS

The Joint Mobilization Tenets, outlined in Joint Publication 4-05, provide a comprehensive framework for evaluating the effectiveness of mobilization plans (JCS, 2018). These tenets, Objective, Timeliness, Unity of Effort, Flexibility, and Sustainability,

serve as critical benchmarks to ensure that Reserve Force mobilization aligns with the DoD's strategic objectives and operational capabilities. This section applies these tenets to the Navy Reserve mobilization plan, using findings from our research to assess current efforts and identify areas for improvement.

1. Objective

The Navy Reserve's stated objective to mobilize the entire force within 30 days is clear, and recent efforts have made notable progress toward achieving this goal (DON, 2022). However, the joint definition of Objective emphasizes a comprehensive analysis of each phase of the mobilization process, including the efficient use of resources and the ability to expand capacity as needed (JCS, 2018). This requirement is particularly relevant when considering the potential levels of conflict, the Reserve may be called upon to support, such as full or total mobilization scenarios.

While the Navy Reserve aims to mobilize 100% of the SELRES within 30 days—or a subset of the force based on mission requirements (DON, 2022)—this objective does not account for mobilizing the Individual Ready Reserve (IRR), which includes an additional 37,080 sailors as of October 2024 (US Navy Reserve, 2024). Addressing this gap is critical for ensuring readiness in large-scale conflicts. The 2022 NRFI provides a strategic framework for warfighting readiness, emphasizing the potential for multi-domain combat operations and acknowledging threats posed by adversaries like Russia and China (DON, 2022).

To align mobilization efforts with this strategic outlook, the Navy Reserve must consider all potential levels of mobilization, including scenarios that exceed SELRES activation. As highlighted by Richards et al. (email to authors, 2023), the Navy Reserve currently lacks formal guidance or a CONOPS for mass mobilization. This absence contributes to a widespread lack of understanding of mass mobilization execution across all echelons. Developing comprehensive plans and addressing this knowledge gap will be essential to fully realize the Navy Reserve's objective and meet the demands of future conflicts.

2. Timeliness

The Navy Reserve's shift to a decentralized mobilization structure, through the designation of REDCOMs as certified NMPS and the Adaptive Mobilization framework, has improved the speed and agility of SELRES activation. However, historical analysis by the GAO indicates substantial bottlenecks exist in the mobilization of reservists (GAO, 2006). Additionally, throughput simulations by Richards et al. (email to authors, 2023) reported a timeline of 215 days to activate 50,000 reservists under the current system. These timelines far exceed the mandated 30-day window and do not account for the complexities of total force activation, demobilization, or remobilization.

Joint guidance indicates that to adequately address the timeliness of mobilization, planning should include the expansion of reserve infrastructure, training facilities, health services, and all other considerations for the RSO&I of reserve forces (JCS, 2018). Furthermore, the mobilization planning guidance emphasizes that the services should frequently exercise mobilization plans. The Navy Reserve's execution of Large Scale Exercise 2023 simulated the mobilization of 3,000 SELRES over 18 days, while MOBEX 2024 tested the processing of 1,000 mobilization orders in just two days (DON, 2023b; DON, 2024). These exercises effectively simulated the Adaptive Mobilization (AM) process and provided valuable data to the Navy Reserve. However, no Large Scale Exercise was conducted in 2024. To ensure readiness for large-scale conflicts, the Navy Reserve should prioritize efforts to stress test mobilization throughput, particularly considering that a total activation of the SELRES force would require processing roughly ten times more personnel.

3. Unity of Effort

To achieve effective synchronization of mobilization efforts, the Navy Reserve must incorporate coordination with all components of the DoD, as well as relevant government and local agencies. Joint planning guidance emphasizes that historical examples demonstrate how a lack of synchronization at all levels has led to delayed deployments and compromised the readiness of reserve forces (JCS, 2018). The Navy Reserve Fighting Instructions, 2022 (DON, 2022) acknowledge the vital role of Navy

Reserve forces in supporting joint objectives; however, current mobilization efforts lack integration with the broader joint force. Initiatives such as the U.S. Army's MFGIs, including Joint Base McGuire-Dix-Lakehurst, present significant opportunities for joint cooperation (DOA, 2020). These facilities provide infrastructure for training, onward movement, and synchronization of efforts, particularly during mass mobilizations. To strengthen unity of effort, the Navy Reserve should enhance joint integration with the Army and Air Force to leverage existing assets, such as MFGIs, and develop shared mobilization strategies. Expanding these partnerships would ensure the long-term sustainment of mobilization efforts and bolster readiness for multi-domain combat scenarios.

4. Flexibility

The Navy Reserve's Adaptive Mobilization pathways and Mob-to-Billet initiative have significantly enhanced the flexibility of the SELRES force during mass mobilizations (DON, 2022). These concepts account for the diversity of billets and specialties within the SELRES population, tailoring training and mobilization processes to individual Sailors. This approach reduces bottlenecks and increases overall throughput. However, the system depends heavily on Sailors mobilizing exclusively to their assigned billets.

As highlighted by Martin et al. (2023), the Navy Reserve frequently misjudges the demand for IA and JIA billets, with 58% of these billets being filled by reservists mobilized to support Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) over a decade. In the event of a multi-domain conflict requiring mobilization of forces to joint billets, the current NMPS infrastructure is insufficient to meet theater and combatant commander training requirements. Additionally, Richards et al. (email to authors, 2023) report that NMPS infrastructure lacks the berthing and logistics capacity necessary to mobilize 100% of the Selected Reserve. While ongoing efforts aligned with the Chief of Naval Reserve's objectives aim to address these shortfalls, the Navy Reserve has yet to develop robust contingency plans for full or total reserve mobilization. Without addressing these limitations, the flexibility gained through Adaptive Mobilization and Mob-to-Billet may not be sufficient to support the scale and complexity of a future large-scale conflict.

5. Sustainability

The ability to sustain the mobilization of forces through mission completion is a core requirement for Combatant Commanders and a cornerstone of joint operations. The joint tenet of Sustainability encompasses elements of the other tenets, emphasizing the need to backfill billets, establish new units, and augment capabilities through JIAs during protracted conflicts (JCS, 2018). According to Richards et al. (email to authors, 2023), current Navy Reserve mobilization sites are insufficiently staffed to meet the objective of mobilizing 100% of SELRES personnel. Furthermore, personnel increases simulated by Richards et al. (email to authors, 2023) rely heavily on augmented medical forces during a MM scenario—resources that are not permanently assigned to NMPS. This reliance creates vulnerabilities in sustaining large-scale mobilization efforts over time.

The joint tenet of Sustainability requires a long-term approach to mobilization planning, ensuring that infrastructure, assets, and processes possess the necessary depth to support enduring, multi-domain conflicts. To achieve this, the Navy Reserve should pursue aggressive funding strategies to enhance NMPS capacity, realign billets, and consolidate underutilized resources, such as those identified in NRC consolidation efforts. Additionally, integrating efforts with the Army's MFGIs would provide a scalable and sustainable solution to meet the demands of prolonged operations.

E. CONCLUSION

The initiatives spearheaded by Admiral Mustin, as detailed in the 2022 and 2023 Navy Reserve Fighting Instructions, mark significant progress in improving the Navy Reserve's mobilization framework (DON, 2022, 2023a). However, persistent challenges, such as outdated infrastructure and insufficient logistics funding, continue to hinder the Navy Reserve's ability to fully accomplish these goals. By adopting the proposed improvements—refining the MOB to Billet framework, modernizing infrastructure, securing adequate logistical funding, and integrating lessons from joint mobilization and transportation policies—the Navy Reserve, alongside all branches of the DoD, can collectively build a more agile, efficient, and synchronized mobilization process.

This joint approach will not only improve the Navy's mobilization capabilities but also foster stronger inter-service coordination, ensuring that all branches of the military can rapidly and effectively deploy forces when needed. The result will be a unified, strategically aligned force capable of responding to emerging threats with the speed and efficiency required in modern military operations.

VI. FINDINGS, RECOMMENDATIONS, AND FUTURE RESEARCH

As the strategic environment continues to evolve, the United States Navy and the DoD must adapt to ensure that their Reserve Components remain critical assets in achieving national defense objectives. This chapter presents key findings, offers actionable recommendations, and outlines areas for future research to enhance the Navy and DoD Reserve's mobilization efforts. The focus is on improving joint force integration with MFGIs, optimizing the billet assignment process, and addressing long-term challenges in infrastructure and mobilization readiness. These efforts are designed to reduce costs, increase efficiency, and ensure that the Navy Reserve remains a ready and reliable force capable of supporting national security.

A. FINDINGS

Our analysis has identified several critical areas where the Navy Reserve's mobilization processes can be improved:

1. Integration with MFGIs is Underutilized

The Army's success with MFGIs presents an opportunity for the Navy Reserve to enhance its own mobilization processes. Currently, there is limited integration between Navy Reserve units and existing MFGIs, especially in Middle America, where strategic positioning could lower transportation costs and improve operational efficiency.

The Navy is in the process of decommissioning many of its Reserve Centers, which will free up funds (Leaver et al., 2017). These funds could be utilized to relocate Navy operations onto MFGIs such as Fort Hood, Fort Bliss, Camp Roberts, Camp Atterbury, and Fort McCoy. Establishing a presence at these MFGIs and bases with MFGI infrastructure would be cost-effective, as the Navy could function as a tenant within existing facilities and collaborate with the Army on mobilization processes. This infrastructure includes vital assets such as USTRANSCOM transportation resources, firing ranges, Joint Light Tactical Vehicle (JLTV) rollover trainers, and the Medical Simulation Training Center (MSTC) (DOA, 2020). The potential for enhanced integration could facilitate smoother, large-scale

mobilizations. Based on our findings we recommend the following actions to leverage joint service integration of mobilization efforts.

- Co-location of Reserve Units: Establish NRCs and units at or near existing MFGIs to leverage infrastructure, reduce transportation costs, and facilitate joint training.
- Enhanced Joint Training Programs: Reserve units integrated with MFGIs should participate in joint training exercises with Army units to improve interoperability and readiness. These exercises should simulate large-scale mobilization scenarios, ensuring Navy reserves are prepared for coordinated deployments with other DoD branch forces.
- Shared Resources and Infrastructure: Utilizing shared resources, such as training facilities, administrative support, and logistics networks, will reduce redundancies and create efficiencies. Agreements with the Army should formalize these arrangements to improve resource sharing. Billet Assignment Process Inefficiencies

The existing billet assignment process demonstrates inefficiencies, particularly in the management of cross-assignments. These inefficiencies lead to increased travel costs and reduce overall readiness, as personnel are often assigned to billets far from their geographic locations, limiting their effectiveness. Ideally, billets should be assigned within local or state units to maximize readiness and minimize travel. However, due to the limited infrastructure of current NRCs, reservists often lack the necessary local support and infrastructure to effectively fulfill the training for their operational duties.

To address these limitations and improve adaptive mobilization capabilities, the Navy could consider modifying the traditional reservist drilling schedule to better integrate reservists into the operational aspects of their assigned billets. Currently, a reservist may live and drill at an NRC in their home state, for example, Ohio, where they complete administrative tasks over two days each month. While this setup is suitable for administrative duties, it falls short in terms of operational readiness, efficiency, and mobilization flexibility.

A more effective approach would allow reservists to reschedule and consolidate their drill days to focus on the operational requirements of their billets, creating a more adaptable mobilization framework. For instance, rather than drilling two days a month at an NRC with limited resources, reservists could compile these days over several months and instead spend a block of time drilling with the active component at key operational commands. By traveling to major operational hubs—such as San Diego—reservists could work directly with Destroyer Squadrons (DESRON), Carrier Strike Groups (CSG), Amphibious Ready Groups (ARG), or Fleet support staff, potentially even gaining experience on an active ship.

This model would reduce the frequency of weekend drills away from home and better prepare reservists for rapid deployment in real-world scenarios. Aligning training with active components strengthens relationships and provides focused, immersive experiences that enhance readiness and adaptability. Such changes would improve the Navy Reserve's cost-effectiveness, efficiency, and flexibility in responding to evolving mission demands. Based on our findings we recommend the following actions to modernize the billet assignment process.

- Advanced Matching Algorithms: Implement algorithms that take into account factors like personnel qualifications, geographic location, and billet requirements to streamline the assignment process, thereby reducing travel-related expenses and maximizing readiness.
- Regular Reviews and Adjustments: Implement a system of regular billet reviews to ensure that billets reflect the Navy's evolving operational needs. This would involve periodic assessments of the relevance and effectiveness of existing billets, making adjustments as necessary to align with current and future mission demands.
- Use of Technology: A digital platform that integrates personnel records, billet requirements, and real-time operational needs will enhance transparency and efficiency, enabling decision-makers to make data-driven assignments that optimize readiness.

- Long-Term Funding Strategy: Advocate for a long-term funding strategy that aligns with the Navy Reserve's operational goals. This strategy should include a reserve fund specifically allocated for unexpected logistical needs during large-scale mobilizations.

2. Outdated Mobilization Infrastructure

The Navy's mobilization infrastructure, including the NMPS and associated facilities, has not evolved to meet the demands of modern mobilization requirements. Current infrastructure, technologies, resources, and logistical capabilities are inadequate to handle large-scale mobilizations efficiently (Richards et al., email to authors, 2023). These shortcomings result in significant delays during both mobilization and demobilization phases, negatively impacting mission readiness and the quality of life for deploying sailors.

At present, sailors must travel to their regional NMPS for pre-mobilization processing. This includes a series of administrative, medical, and pre-operational training steps that, with appropriate infrastructure, could be managed locally at NRCs. The proposed integration with MFGIs offers a joint solution, leveraging high-capacity regional hubs to process sailors directly from their assigned NRCs (DOA, 2020). This would increase the overall throughput of SELRES and alleviate bottlenecks at under-equipped NMPS during mass mobilizations.

Integration with MFGIs, or expansion of current NMPS, would enable sailors to complete essential requirements such as medical screenings, administrative tasks, and training (e.g., gun qualifications, JLTV rollover training) closer to their home of record. These additional training requirements are not limited to IAs or JIAs but can also be theatre-specific training mandated by the combatant commander for all forces (DOA, 2020). By spreading the processing load across multiple locations with substantially increased mobilization capability, this approach would enhance efficiency and reduce delays. In addition, by leveraging the organic training expertise at MFGI's, the Navy would not need to duplicate facilities and capabilities that the Army and the joint force already maintain, which would be complex for the Navy to replicate at existing NMPS. This decentralized model not only expedites the mobilization process but also significantly

improves sailors' quality of life by reducing the time spent away from their families and the inconvenience of prolonged stays in hotels.

The bottleneck issue extends to demobilization as well. Returning sailors often face delays in essential tasks like medical screenings, leaving them idle in hotels for days. These delays are not only costly for the Navy but also detrimental to sailors' morale as they eagerly await reunification with their families after deployment. By modernizing MFGI and NRC infrastructure, the Navy could enhance the demobilization process, allowing sailors to complete procedures efficiently at their home stations. In many cases, they could return home each night while completing necessary steps, significantly reducing financial, emotional, and logistical burdens.

The current reliance on undermanned and inadequate NMPS facilities to process all 50,000 reservists during a mass mobilization creates severe bottlenecks and limits the Navy's ability to respond swiftly to large-scale operational demands. An expanded approach, integrating with MFGIs, would disperse the workload across multiple locations, ensuring timely and effective mobilization. Furthermore, the Navy could leverage USTRANSCOM transportation assets collocated at MFGI's, facilitating the seamless movement of sailors for deployment directly from or near their local NRCs.

Despite some advancements, such as the MOB-to-Billet initiative, significant challenges remain due to outdated infrastructure. During LCDR Trimble's tenure as Commanding Officer, he observed firsthand the limitations of current facilities, especially at the NRC level. Many lack the modern technology and resources needed to handle both routine and large-scale mobilizations effectively. The 2022 NRFI specifically highlights the urgency of upgrading these facilities to meet modern warfare demands (DON, 2022). However, progress has been slow, with many facilities still relying on outdated systems that hinder the efficiency of the mobilization process. This inability to rapidly process and deploy reserve forces poses a critical risk to mission readiness, particularly during scenarios requiring swift, large-scale mobilizations (DON, 2022).

Adopting a modernized, decentralized mobilization framework through MFGIs represents a necessary evolution for the Navy. This approach would not only address

current inefficiencies but also create a stronger, faster, and more cost-effective mobilization process aligned with the Navy's strategic objectives, ensuring readiness and support for both the mission and the well-being of its reservists. Based on our analysis we propose the following actions to enhance strategic mobilization infrastructure.

- Expansion of MFGIs: Given their capacity in supporting large-scale mobilizations, expanding the role of MFGIs to include Navy Reserve units should be prioritized. Investments in infrastructure and training programs tailored to Navy Reserve needs are essential to improve mobilization readiness.
- Centralized Mobilization Hubs: Establish additional centralized mobilization hubs, modeled after successful Army MFGIs like Fort McCoy. These hubs would be equipped with modernized facilities, including advanced IT infrastructure and systems that integrate all aspects of the mobilization process, from personnel management to logistics and deployment coordination.
- Infrastructure Upgrades: Invest in significant upgrades to existing NMPS facilities, focusing on enhancing their physical and technological capabilities. This could include the adoption of modern data processing systems, improved communication networks, and enhanced physical infrastructure to support large-scale mobilization efforts.

3. Lack of Coordination Across Services

The Navy Reserve has faced persistent challenges resulting in missed opportunities for enhanced collaboration with other branches of the military, including the Army and Air Force, in joint training and mobilization efforts. This lack of coordination not only hinders interoperability but also limits the overall efficiency and scalability of large-scale deployments. While each branch has developed its mobilization strategies independently, there is significant potential to create synergies through integrated approaches that leverage the strengths of each service.

In times of large-scale conflict, the DoD must operate as a cohesive and integrated force, leveraging its full range of infrastructure and capabilities (JCS, 2018). This comprehensive approach ensures that all branches contribute optimally to joint operations, reinforcing strategic readiness. MFGIs provide an ideal platform for this integrated model, enabling shared access to resources and streamlined mobilization efforts (DOA, 2022). By adopting this unified approach, the DoD can distribute workloads, reduce bottlenecks, and facilitate timely, effective deployments when rapid response is critical. Such integration supports operational efficiency and cost-effectiveness, ultimately strengthening the collective defense posture.

Joint training programs are a vital component for building cohesive and unified responses during mobilization. By engaging in combined exercises that simulate real-world scenarios, the Navy Reserve can enhance its ability to work seamlessly alongside other branches. Such programs would improve communication, align operational procedures, and enable service members to familiarize themselves with multi-branch protocols and joint task operations.

Integration of shared resources can address logistical limitations and reduce redundancies. Drawing on the Army's MFGI experience could provide a roadmap for joint-use hubs that distribute processing loads, enhance readiness, and minimize bottlenecks. Additionally, implementing standardized communication protocols and digital platforms for real-time mobilization tracking would facilitate coordination, providing commanders with comprehensive oversight and enabling synchronized efforts during complex operations.

Standardized communication protocols and the use of shared digital platforms for mobilization and readiness tracking would be pivotal in improving cross-service collaboration. A unified system for real-time data sharing could enhance situational awareness and coordination, ensuring that each branch operates using the most up-to-date information and resources. This would also provide commanders with comprehensive oversight of joint mobilization efforts, promoting efficient decision-making during complex deployments.

Moreover, conducting joint planning and integrated exercises is essential for preparing for large-scale and multi-branch mobilizations (JCS, 2018). Such efforts would not only improve operational readiness but also foster relationships and trust between different branches, which are crucial for effective joint missions. These exercises should be designed to test all aspects of mobilization, from pre-deployment processing to in-theater support, aligning with the Navy Reserve's strategic goals and ensuring cohesive action during real-world engagements.

Formal agreements and collaborative initiatives should be pursued to institutionalize inter-service cooperation. These agreements could outline shared training schedules, joint logistical support, and integrated command structures, ensuring that the benefits of collaboration are maintained and expanded over time. By strengthening these partnerships, the Navy Reserve would gain access to a broader range of capabilities and resources, enhancing its ability to meet large-scale operational demands efficiently and effectively.

Increasing coordination with other military branches can transform the mobilization process for the Navy Reserve, creating a more responsive, adaptable, and unified force. This would not only optimize operational readiness but also build a robust framework capable of handling the complexities of modern military engagements. We recommend the following actions to increase joint collaboration efforts across the DoD.

- Joint Exercises and Training: Regular joint exercises with Army, Air Force, and Marine Corps reserves will improve interoperability and ensure seamless joint operations. These exercises should focus on real-world scenarios that test full mobilization capabilities.
- Inter-Service Agreements: Formal agreements between the Navy Reserve and other branches should be pursued to share training facilities, logistics support, and administrative resources, leading to more efficient use of existing resources.

B. FUTURE RESEARCH DIRECTIONS

The recommendations above present opportunities for future research to further enhance Navy Reserve mobilization efforts. The following areas are proposed for future exploration:

- Evaluation of MFGI Integration: Assess integration effectiveness and cost savings.
- Cost-Benefit Analysis of MFGIs: Study potential ROI for expanded MFGI roles.
- Billet Assignments and Readiness: Analyze the long-term impacts of billet practices.
- Digital Modernization: Explore new technology for mobilization processes.

C. CONCLUSION

Our research set out to examine the U.S. Navy Reserve's plan for mass mobilization, as mandated by the Chief of Navy Reserve, to activate the entire force within 30 days. While we found evidence of progress in increasing capacity and flexibility, current initiatives remain narrowly focused on achieving a limited objective. These efforts fall short of establishing the scalable and sustainable processes necessary to support multi-domain combat operations. Government-funded studies and joint doctrine consistently emphasize the importance of planning for all levels of mobilization, from crisis response to total war. Without a comprehensive plan that addresses rapid mobilization, demobilization, and remobilization, including the possibility of filling IA billets and supporting force expansion, the Navy Reserve remains unprepared to address the full scope of threats the nation may confront.

The Navy Reserve's ongoing efforts, such as the Mob-to-Billet initiative and Adaptive Mobilization framework, have significantly advanced Admiral Mustin's original objectives. However, these initiatives predominantly focus on improving administrative processes and rely on a narrow definition of future conflict, assuming that Sailors will

mobilize only to maritime billets for which they are trained and assigned. While these efforts align with the Chief of Naval Operations Project 33 effort, which prioritizes the People's Republic of China as our pacing challenge (Franchetti, 2024), the Navy and the joint force must remain agile enough to respond to all potential threats.

Our findings underscore the critical importance of transitioning to joint, strategic planning to enable the Navy Reserve to respond effectively to all potential levels of reserve force activation. Persistent challenges, including insufficient support personnel at mobilization sites, inadequate training facilities and infrastructure, and a lack of joint integration, represent urgent priorities for the Navy Reserve. If the Navy Reserve cannot sustain mobilization efforts beyond the 30-day objective, it risks falling short of combatant commanders' requirements, jeopardizing operational success in future conflicts.

Additionally, the Navy Reserve must explore innovative solutions to enhance both readiness and mobilization effectiveness. The Department of Defense (DoD) continues to face fiscal pressures as federal spending exceeds revenues (Keys & McGarry, 2024). The Navy's fiscal year 2025 budget request reflects a $6.5 million reduction in Reserve funding, reallocated to support critical fleet operational requirements (DON, 2024b). This reduction in Base Operating Support, which affects civilian contract employees and infrastructure sustainment, poses significant challenges. However, the Navy has committed to continuing projects that directly support warfighter readiness, even as facility sustainment is deferred (DON, 2024b). Considering the geopolitical challenges facing the DoD and the Navy, the Reserve should align its infrastructure modernization efforts with DoD priorities, classifying mobilization facilities as critical to warfighter readiness to secure or realign necessary funding. Consolidating reserve centers offers one viable pathway to repurpose existing resources for mobilization infrastructure enhancements, and we strongly recommend that the Navy Reserve pursue such innovative approaches.

Furthermore, we recommend that the Navy Reserve adopt a comprehensive, joint-centric planning process to address all facets of mass mobilization. This process should include technology-enhanced training and billet assignment, the expansion of NMPS, integration with MFGIs, and the development of a concept of operations that addresses the sustainment of long-term mobilization activities.

In summary, it is imperative that the Navy Reserve aggressively expands its efforts to enhance its mass mobilization capabilities and further develop the Adaptive Mobilization framework. By addressing these critical challenges now, the Navy Reserve will be positioned to meet and exceed future requirements, ensuring its role as a vital component of U.S. military strategic readiness. We hope that our research will inform the Navy Reserve's ongoing efforts and contribute positively to achieving the nation's most critical defense objectives.

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