



**NAVAL
POSTGRADUATE
SCHOOL**

MONTEREY, CALIFORNIA

MBA PROFESSIONAL PROJECT

**REVIEW AND REALIGNMENT OF THE NAVY'S
IN-SERVICE, CONVENTIONAL ORDNANCE LOGISTICS
SUPPLY CHAIN (NAVSUP AMMUNITION LOGISTICS
CENTER)**

December 2021

**By: Jason L. Potvin
Patrick C. Shane
Sean P. Mercier**

**Advisor: Eddine Dahel
Co-Advisor: Geraldo Ferrer**

Approved for public release. Distribution is unlimited.

THIS PAGE INTENTIONALLY LEFT BLANK

REPORT DOCUMENTATION PAGE			<i>Form Approved OMB No. 0704-0188</i>
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington, DC, 20503.			
1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE December 2021	3. REPORT TYPE AND DATES COVERED MBA Professional Project	
4. TITLE AND SUBTITLE REVIEW AND REALIGNMENT OF THE NAVY'S IN-SERVICE, CONVENTIONAL ORDNANCE LOGISTICS SUPPLY CHAIN (NAVSUP AMMUNITION LOGISTICS CENTER)			5. FUNDING NUMBERS
6. AUTHOR(S) Jason L. Potvin, Patrick C. Shane, and Sean P. Mercier			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000			8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A			10. SPONSORING / MONITORING AGENCY REPORT NUMBER
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.			
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release. Distribution is unlimited.			12b. DISTRIBUTION CODE A
13. ABSTRACT (maximum 200 words) The purpose of the research conducted was to identify the main contributing factor for inaccurate inventory validity within the ordnance community. Our research question addresses the current organizational structure of the ordnance supply chain and its overall effectiveness by evaluating the leading cause for discrepancies of inventory validity throughout the fleet. Our methods included gathering data from 12 months of overaged intransit messages, researching current organizational structures for ordnance stakeholders, and examining instructions governing supply chain processes. Our results produced data which illustrated that on average \$34.2M of ordnance was overaged and not accounted for each month. It was determined that the unaccounted ordnance is the number one cause of unfavorable inventory validity. We recommend that by reorganizing the ordnance supply chain under one overarching command, inventory validity can be increased by creating positional authority from a singular source, eliminating competing interests and decreasing ambiguity from separate authorities. Additionally, realigning the command structure enables oversight for standardization of business practices within one streamlined organization.			
14. SUBJECT TERMS naval ordnance, NALC, NAVSUP			15. NUMBER OF PAGES 55
			16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UU

THIS PAGE INTENTIONALLY LEFT BLANK

Approved for public release. Distribution is unlimited.

**REVIEW AND REALIGNMENT OF THE NAVY'S IN-SERVICE,
CONVENTIONAL ORDNANCE LOGISTICS SUPPLY CHAIN (NAVSUP
AMMUNITION LOGISTICS CENTER)**

Jason L. Potvin, Lieutenant Commander, United States Navy
Patrick C. Shane, Lieutenant Commander, United States Navy
Sean P. Mercier, Lieutenant Commander, United States Navy

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF BUSINESS ADMINISTRATION

from the

**NAVAL POSTGRADUATE SCHOOL
December 2021**

Approved by: Eddine Dahel
Advisor

Geraldo Ferrer
Co-Advisor

Bryan J. Hudgens
Academic Associate, Department of Defense Management

Glenn R. Cook
Academic Associate, Department of Information Sciences

THIS PAGE INTENTIONALLY LEFT BLANK

REVIEW AND REALIGNMENT OF THE NAVY'S IN-SERVICE, CONVENTIONAL ORDNANCE LOGISTICS SUPPLY CHAIN (NAVSUP AMMUNITION LOGISTICS CENTER)

ABSTRACT

The purpose of the research conducted was to identify the main contributing factor for inaccurate inventory validity within the ordnance community. Our research question addresses the current organizational structure of the ordnance supply chain and its overall effectiveness by evaluating the leading cause for discrepancies of inventory validity throughout the fleet. Our methods included gathering data from 12 months of overaged intransit messages, researching current organizational structures for ordnance stakeholders, and examining instructions governing supply chain processes.

Our results produced data which illustrated that on average \$34.2M of ordnance was overaged and not accounted for each month. It was determined that the unaccounted ordnance is the number one cause of unfavorable inventory validity.

We recommend that by reorganizing the ordnance supply chain under one overarching command, inventory validity can be increased by creating positional authority from a singular source, eliminating competing interests and decreasing ambiguity from separate authorities. Additionally, realigning the command structure enables oversight for standardization of business practices within one streamlined organization.

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

I.	INTRODUCTION.....	1
A.	BACKGROUND	1
B.	PURPOSE AND EXPECTED BENEFITS FROM RESEARCH	7
C.	RESEARCH QUESTIONS	7
	1. Primary Question.....	7
	2. Secondary Question	7
D.	SCOPE AND LIMITATION	8
E.	ORGANIZATION	8
II.	LITERATURE REVIEW	9
A.	NAVAL SUPPLY SYSTEM COMMAND	9
B.	NAVAL SEA SYSTEM COMMAND.....	10
C.	NAVAL MUNITIONS COMMAND.....	11
D.	NAVAL ORDNANCE SAFETY AND SECURITY ACTIVITY	13
E.	OFFICE OF THE CHIEF OF NAVAL OPERATIONS (OPNAV).....	13
III.	METHODOLOGY	15
A.	OVERAGED INTRANSIT MESSAGES	15
B.	CURRENT ORGANIZATIONAL STRUCTURE	16
IV.	ANALYSIS	25
A.	PROPOSED ORGANIZATIONAL REALIGNMENT STRUCTURES.....	25
B.	OVERAGED INTRANSIT REQUISITION BREAKDOWN	30
V.	CONCLUSION	33
A.	RECOMMENDATIONS.....	33
B.	CLOSING THOUGHTS	34
	LIST OF REFERENCES.....	37
	INITIAL DISTRIBUTION LIST	39

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF FIGURES

Figure 1.	Ordnance Requisition Process Flow Chart	5
Figure 2.	OCT 2020 Overaged Ordnance Intransit Report, Source: (NAVSUP Ammunition Logistics Center, Oct 2020).....	16
Figure 3.	Navy Conventional Ordnance Management Structure (Naval Supply Systems Command, 2020)	18
Figure 4.	Ordnance Information Flow and COCOM C2 Structure	20
Figure 5.	First Proposed Organizational Realignment Structure	26
Figure 6.	Second Proposed Organizational Realignment Structure	29

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF ACRONYMS AND ABBREVIATIONS

AMMOLANT	Ammunition Mid-Atlantic Region
AMMOPAC	Ammunition Pacific Region
AOR	Area of Responsibility
ATR	Ammunition Transaction Reporters
CNO	Chief of Naval Operations
COCOM	Combatant Command
CONUS	Continental United States
CPF	Commander-in-Chief, U.S. Pacific Fleet
CWD	CONUS West Division
DOLI	Date of Last Inventory
DON	Department of the Navy
EAD	East Asia Division
FLC	Fleet Logistics Center, Norfolk (N), Jacksonville (J), San Diego (S.D.), Puget Sound (P.S.), Pearl Harbor (P.H.), Yokosuka (Y), Bahrain (B), Sigonella (S)
FOS	Fleet Ordnance Support
JMC	Joint Munitions Command
MARFOR	Marine Forces
MFST	Mobile Fleet Support Team
MIWS	Mine Warfare Support
NALC	NAVSUP Ammunition Logistics Center
NAR	Notice of Ammunition Reclassification
NAVSEA	Naval Sea Systems Command
NAVSUP	Naval Supply Systems Command
NCEA	Non-Combat Expenditure Allocation
NMCLANT	Navy Munitions Command Atlantic
NMCPAC	Navy Munitions Command Pacific
NOSSA	Naval Ordnance Safety and Security Activity, Atlantic (LANT), Pacific (PAC)
NSW	Naval Special Warfare

OCONUS	Outside Continental United States
OIS	Ordnance Information System
OIS-MC	Ordnance Information System MARCOR SYSCOM
OIS-R	Ordnance Information System Retail
OIS-W	Ordnance Information System Retail
OPNAV	Office of the Chief of Naval Operations
ROLMS	Retail Ordnance Logistics Management System
SPECWAR	Special Warfare
SRC	Security Risk Categories
TIR	Transaction Item Reporters
UIC	Unit Identification Code
USA	United States Army
USFF	United States Fleet Forces
USMC	United States Marine Corps
USN	United States Navy

ACKNOWLEDGMENTS

We would like to begin by thanking our professors and advisors, Dr. Eddine Dahel and Dr. Geraldo Ferrer. Thank you for your outstanding instruction, which provided us with the knowledge and tools required for this project. Thank you for taking on this project and providing the freedom you gave us to navigate this project during the challenging environment we are all experiencing. Both of you were extremely helpful throughout the project, and we could not have done it without your guidance and expertise.

Second, we would like to thank the NAVSUP Ammunition Logistics Center team and all stakeholders involved during the process. CDR Brent Summers, Ketzy Trevizo, and CDR Blake Dremann played a pivotal role in assisting our team with data, recommendations, and overall knowledge of the organization and requirements. We would also like to thank all other individuals outside the NALC organization for assisting us throughout our research and project.

Finally, we would like to thank our families for their support during this process. They were by our side throughout this process while operating in a less-than-ideal environment, welcoming new members to the family, and balancing everyday life like you always do; it does not go unnoticed. Our late nights in the garage, closet offices, and endless nights of schoolwork have finally come to an end.

THIS PAGE INTENTIONALLY LEFT BLANK

I. INTRODUCTION

This research focused on the overall organizational structure and ordnance processes of United States Naval Supply Systems Command (NAVSUP) Ammunition Logistics Center (NALC). In addition, it examined organizational supply chain processes spanning multiple organizations under the naval ordnance umbrella. Finally, the study included NAVSUP Ammunition Logistic Center, major stakeholders, and applicable activities involved in naval munitions operations.

A. BACKGROUND

NAVSUP Ammunition Logistics Center serves as the Fleet's ammunition support unit. NALC coordinates fleet requirements and assists in resolving issues. Additionally, they manage distribution, conduct inspections, and perform "other technical functions within the Navy Ordnance Enterprise" (Naval Supply Systems Command, 2021). NALC also assists the Chief of Naval Operations (CNO) in providing "Navy conventional ordnance stockpile management" (Naval Supply Systems Command, 2021) policies, standing operating procedures, and guidance supporting "worldwide distribution and deployment of naval ammunition" (Naval Supply Systems Command, 2021).

As the mission statement on the command's site notes "NALC performs all technical functions that support the Navy's ordnance management mission, including resource assessment initiative, ordnance sales from stock, ordnance transfers between services, and Non-Combat Expenditure Allocation (NCEA) Program" (Naval Supply Systems Command, 2021). The mission statement also expresses that "NALC administers the Navy Ammunition inventory accuracy program, demilitarization and disposal program, and Navy Ammunition policy department." NALC assists in monitoring message traffic management, transportation, safety, and "security procedures for the movement of Navy ordnance through the Crisis Response Cell" (Naval Supply Systems Command, 2021). They also provide fleet requisition processing, interface, and coordinate scheduling for ordnance movements through NAVSUP AMMOLANT and AMMOPAC located in Norfolk and San Diego, respectively (Naval Supply Systems Command, 2021). Their

mission statement also notes that “NALC provides Mobile Fleet Support Teams and Logistics Assistance Officers” worldwide “to conduct training and inventory management support to shipboard and shore facilities.” Finally, their official site states that they “assist COCOM/Fleet staff with theater mission operations, movement of ordnance, ammunition load plans, and rollback operations.”

Although NALC may serve several purposes, there is no end-to-end process owner for the procurement, management, receipt, storage, and issue of naval ordnance. “Multiple audits have shown the Navy must improve its organizational alignment and demonstrate better control and accountability of its \$42B of conventional ordnance” (Smith & Stannard, 2018). The various Echelon activities within the Naval Supply chain of command include Chief of Naval Operations (Echelon 1), NAVSUP (Echelon 2), Naval Supply Systems Command (NAVSUP) Weapons Systems Support, and other various NAVSUP activities (Echelon 3). Currently, procurement within service management, explosive safety and receipt, stowage, and issue functions fall under various Echelon II activities, and at times under multiple Echelon II commands. This creates a lack of efficiency in aligning ordnance policy and business. Higher echelon activities simply means a level of command and responsibility.

NALC currently has a supply and procurement process developed over the years to include input from various stakeholders and activities throughout the ordnance community. These processes are defined in the NAVSUP P-724, Conventional Ordnance Stockpile Management Policies, and Procedures. The NAVSUP P-724 is a Naval publication that was developed to provide direction for conventional ordnance stockpile management policies and procedures. Inventory accuracy has proved to be a vital aspect of ensuring that NALC can positively maintain ordnance positioning, fleet support, readiness assessment, requirements documentation, and ordnance acquisition programs (Naval Supply Systems Command, 2020, pp. 13-1). A main contributing factor to inventory accuracy is receipt and disposition reporting. NALC has viewed effective ordnance inventory management as a piece to ensure mission success and personnel safety. Policies and processes are in place to ensure accurate and timely requisitioning of ordnance and are conducted through the

Ordnance Information System Wholesale (OIS-W) and Ordnance Information System Retail (OIS-R).

The supply and procurement process starts with the requisition procedure by the applicable activity. The “standard method for requisitioning ordnance is the ammunition military standard requisitioning and issue procedures (MILSTRIP)” (Naval Supply Systems Command, 2020, pp. 10-1). All requisitions are required to be submitted via an appropriately classified “Ordnance Information System Retail/Retail Ordnance Logistics Management System (OIS-R/ROLMS)” generated message to OIS-W (Naval Supply Systems Command, 2020, pp. 12-1). Prior to requisitioning ordnance, the following preparation requirements must be met:

- Verify the current on-hand assets
- Verify the activity cited to receive material is an authorized receiver
- Verify the requisitioner’s allowance, NCEA, or Load plan quantity for the item(s) being ordered
- Determine the delivery destination location or load-out point
- Determine the requisitioner’s authorized Force/Activity Designator and Urgency of Need Designator in order to determine the appropriate priority
- Determine the Required Delivery Date (RDD) (Naval Supply Systems Command, 2020, pp. 10-6)

The requisition process utilizes a combination of personnel, IT systems and applications, activities, and governing processes. During the review processes, we wanted to identify a bottleneck or part of the process that is preventing NALC from having 100% asset visibility throughout the fleet. Figure 1 shown below displays the cradle to grave process of ordnance requisitioning.

The ordnance requisition process contains the following steps:

1.) It begins with the original need to requisition ordnance by the customer. 2.) This is accomplished by the customer submitting the requisition through the Navy OIS-R program, which will produce an OIS-R message. 3.) This message will be forwarded to the OIS-W system for review. 4.) During this review, the analyst will “perform a preliminary requisition preparation verification” (Department of the Navy, 2021). This verification is completed to ensure the requisition is free from errors and includes all correct and

appropriate supporting information. This step is also conducted to ensure the correct type of ordnance, amount requisitioned, authorized requisitioner, and all other pertinent information is correct. 5.) Once the requisition is verified to be valid, it is released to the applicable stock point for processing, also known as a Material Release Order (MRO). Both the Navy and Army work together to fill requisitions at the wholesale level. Next, the analyst will determine if the Army is a supplier of this material. If they are, Army inventory procedures will take place to ensure the material is on hand. Once that is accomplished, logistics modernization program (LMP) transactions are sent to Defense Logistics Agency Transaction Services (DLAT) and converted into OIS documents. 6.) The governing document states that if the Navy is the supplier, “the stock control personnel prepare a shipment preparation document” and annotate the requisition and material on a shipping log. 7.) The storage personnel pull the material and prepare it for shipment. Prior to the shipment of the material, personnel will perform issues inspections and screen the material for any outstanding Notice of Ammunition Reclassification (NAR). 8.) The governing document also states “next, the personnel will prepare shipping documentation, post transactions, and issue material.” 9a.) Shipment will be initiated. 9b.) The ordnance shipment is received. The shipping documentation, posted transactions, and issuing of the material will generate in OIS-W for visibility purposes. The issuing of the material is captured on an Issue Release and Receipt Document DD Form 1348–1A. 10a.) OIS will create an In-Transit record due for unmatched issues and receipt transactions. 10b.) Next, the analysts will monitor all unmatched issue and receipt transactions and correct any deficiencies. 10c.) A monthly In-transit scorecard is prepared to enable commands to monitor age of unmatched issues and receipts. The In-transit scorecard is a Naval message that is transmitted monthly by NALC that captures delinquent ordnance that has not been reported as received and on hand by the applicable activity. Finally, these transactions are sent to the financial managers to keep accountability for both monetary and inventory purposes. Reviewing the cradle to grave process of the requisitioning process was important to our research because it allowed us to identify the part the of the process which has prevented NALC from obtaining 100% ordnance asset visibility throughout the fleet. In this process, we were able to focus on the In-transit due for unmatched receipt

transactions. This part of the process is what directly feeds into the scorecard that NALC transmits monthly based on governing timeframe requirements. The In-transit requisitions become overaged if not resolved according to the following criteria below (Naval Supply Systems Command, 2020, pp. 13-83):

- In-transits due-in CONUS activities: 10-Days
- In-transits due-in OCONUS activities: 90-Days
- In-transits due-in to Afloat activities: 30-Days

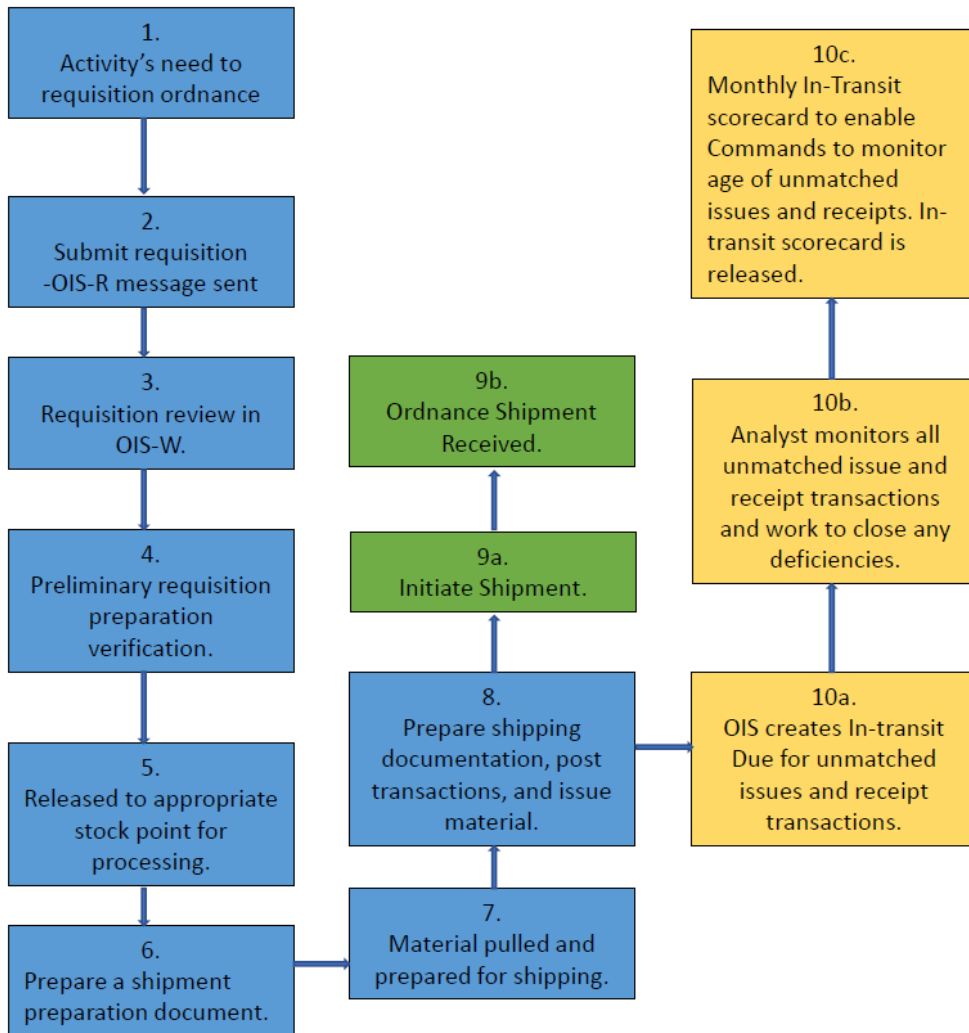


Figure 1. Ordnance Requisition Process Flow Chart

NALC monitors all intransit documents and disputed receipts and sends emails, naval messages, or other electronic notifications for unmatched issues to activities for further transfer, and disputed receipt transactions. These in-transit notifications are sent to the activity that appears to owe transaction reports with an information copy to other affected activities (Naval Supply Systems Command, 2020, pp. 13-84).

Ordnance requisitioning is a standardized process that is governed by NAVSUP. The ordnance requisitioning process is one of several processes that can positively or negatively affect asset visibility. NALC can assist with causative research and adjustments, but the overall responsibility falls with the responsible activity. All in-transit transactions must be resolved within 90 days of becoming overaged. Activities shall initiate efforts to determine the cause of the overaged in-transit to reach a resolution for the in-transit transaction. For all overaged in-transits that are unresolved after the 90 days, a record adjustment shall be made. Accountable OIS-R/ROLMS records must be adjusted based on the results of causative research by the issuing/receiving activities, with the issuing activity bearing ultimate responsibility for adjusting unresolved records and the receiving activity adjusting unresolved records (Naval Supply Systems Command, 2020, pp. 13-85). NALC provides a list of all in-transits monthly to U.S. Fleet Forces (USFF), Commander-in-Chief, U.S. Pacific Fleet (CPF), Marine Corps Forces (MARFORs), NMCLANT/PAC Continental United States West Division/East Asia Division (CWD/EAD), and Special Warfare (SPECWAR) counterparts in the form of a Report Card. This increases the visibility of unmatched issues/receipts, assists in timely transaction completion, and increases overall inventory accuracy. The Report Card data includes the total dollar value and the number of in-transits associated with each Type Command (TYCOM) (Naval Supply Systems Command, 2020, pp. 13-86).

The research conducted for this project is necessary because there needs to be a more efficient and well-defined end-to-end process of naval ordnance procurement, management, receipt, storage, and issue operations. Without a well-defined process, there will continue to be a lack of accountability and supply chain management throughout the ordnance community. The challenges have been identified by members of the NALC organization.

B. PURPOSE AND EXPECTED BENEFITS FROM RESEARCH

The purpose of this research is to:

1. Identify and explain major roles of the ordnance supply chain stakeholders, both explicitly and self-assigned.
2. Identify and discuss ongoing accountability weaknesses.
3. Recommend modifications in the conventional naval ordnance enterprise to improve the inventory accountability and asset visibility.

This research was requested by NALC. If our recommendations are adopted, it will immediately impact all NALC operations and supporting activities. The goal is to effectively align the organizational structure of the Navy's In-Service Conventional Logistics Supply Chain for all globally located munition commands. The effect of the realignment should increase process efficiencies for financial programs, inventory management, warehouse management, requirements generation, explosive safety, and audit processes.

C. RESEARCH QUESTIONS

1. Primary Question

What is the current organizational alignment structure from NALC to the warfighter, and what changes can be made to that structure to create greater efficiencies in inventory management and asset visibility?

2. Secondary Question

What steps must be taken to increase inventory accuracy and asset visibility between all echelons of the ordnance community leading to more efficient inventory management capabilities and favorable audit results, with the primary focus on overage status.

D. SCOPE AND LIMITATION

The research's scope is to increase the efficiency of asset visibility and inventory accuracy by proposing a streamlined organizational structure that is focused on treating ordnance and its associated supply chain as a specific product that will not be co-managed with other classes of supply. We are aware that there are multiple ways of accounting for ordnance as well as measures of inventory accuracy. However, for the purposes of our research we focused on overaged in-transit ordnance requisitions and their associated high dollar figure. The study will also focus on the current structure and procedures within the NAVSUP NALC pipeline.

E. ORGANIZATION

This research has been organized into five chapters. The next chapter will cover the literature review portion of this research discussing the organization of each stakeholder in the end-to-end process to include their missions, functions, and tasks and their overall relevance regarding the ordnance supply chain. Chapter III will discuss the methodology used for this research, how the data analysis was conducted, and discuss multiple courses of action to describe where efficiencies can be gained or lost depending on various organizational structures and their assigned roles. Chapter IV will cover our analysis. We will use this chapter to analyze all data that has been compiled regarding organizational structures, audit sources, and methods. Finally, Chapter V will cover the summary, conclusions, and recommendations. We will use this chapter to show a summary of our entire report. We will briefly review the different sections and end with broad conclusions that we feel our research supports. Additionally, we will provide recommendations on what other areas can be researched to increase efficiencies further.

II. LITERATURE REVIEW

This chapter presents a complete overview of the key organizations, concepts, processes, and past government reports understanding NALC's role within the ordnance community fully. The organizations and literature discussed in this chapter assist in providing a clear understanding of the processes of financial programs, inventory management, warehouse management, requirements generation, explosive safety, and audit processes. Additionally, this section includes a description of NAVSUP and subordinate commands, NAVSEA, various NMC commands, NOSSA, and OPNAV. The understanding of these organizations will help to assist the overall responsibility and purpose of the ordnance supply chain management stakeholders. The vast majority of the information compiled for each command that will be discussed was gathered either from each official military website or from missions, functions, and tasks outlined in official military publications. Because research on this particular topic is extremely limited, we are reliant on the command descriptions that are provided in these publications, directives, and instructions to provide clear direction on what each of their directed functions are. It is in these particular documents where specific policy and guidance are outlined and expected to be followed.

A. NAVAL SUPPLY SYSTEM COMMAND

“NAVSUP provides the mission to conduct and enable supply chain, acquisition, operational logistics to generate readiness and sustain naval forces worldwide to prevent and decisively win wars” (Naval Supply Systems Command, 2021). NAVSUP has worked extensively on executing its maritime strategy. In doing so, they employ a “diverse, worldwide workforce of more than 22,500 military and civilian personnel” (Naval Supply Systems Command, 2021). NAVSUP, “partnered with Navy Supply Corps and both share the primary mission: to conduct and enable supply chain, acquisition, and operational logistics” (Naval Supply Systems Command, 2021). NAVSUP headquarters activity is comprised of 11 commands located worldwide. Two main commands within NAVSUP

pertinent to our research are NAVSUP Fleet Logistics Centers (NAVSUP FLCs) and NALC (Naval Supply Systems Command, 2021).

NAVSUP operates eight FLCs worldwide located in Bahrain, Jacksonville, Norfolk, Pearl Harbor, Puget Sound, San Diego, Sigonella, and Yokosuka. The geographic locations of the FLC commands are essential because some are in the vicinity of various munition commands throughout the Fleet. As noted in the report, “Aligned to the Navy’s numbered fleets, they are globally located to deliver integrated logistics, contracting services, ordnance, and facilitate transportation to the Navy and joint operational units across all warfare enterprises and military operations.” The report also mentions “NAVSUP FLC commands provide logistics, business, and support services to the fleet, shore, and industrial commands of the Navy, Coast Guard, and Military Sealift Command (MSC) and other joint and allied forces.” As stated in the report, NAVSUP FLCs deliver “combat capability through logistics by teaming with regional partners and customers to provide supply chain management, procurement, contracting and transportation services, technical and customer support, defense fuel products, and worldwide movement of personal property.”

It is also noted that “NALC supports the Fleet as the Navy’s ammunition support agent. They coordinate fleet requirements, resolve issues, manage distribution, conduct inspections, and other technical functions within the Navy Ordnance Enterprise Office.”

B. NAVAL SEA SYSTEM COMMAND

NAVSEA is comprised of “command staff, headquarters directorates, affiliated Program Executive Offices (PEOs), and numerous field activities” (NAVSEA, 2021).. NAVSEA is the largest of the Navy’s five system commands. The guidance states that NAVSEA is comprised of “80,200 civilian and military personnel; NAVSEA engineers build, buy, and maintain the Navy’s ships, submarines, and combat systems.” The guidance also states that the NAVSEA organization has “40 activities, manages 150 acquisition programs, and manages foreign military sales that include billions of dollars in annual military sales to partner nations.” Our research will include NAVSEA because they have a field activity known as Naval Ordnance Safety and Security Activity (NOSSA). NOSSA

is important for our research because it is an activity within the Ordnance community. As stated in their mission statement, the overall mission of NAVSEA is “to design, build, deliver and maintain ships, submarines, and systems reliably, on time, and on-cost for the United States Navy.”

C. NAVAL MUNITIONS COMMAND

The Commanders of Navy Munitions Command East Asia Division (EAD), Continental United States West Division (CWD), and Atlantic Division (LANT) are responsible for organizing, man, train, equip, and maintaining assigned Fleet Ordnance Support (FOS) and Mine Warfare Support (MIWS) at subordinate shore activities to generate required levels of current and future FOS and MIWS readiness under the direction of Commander, U.S. Pacific Fleet and Commander, U.S. Fleet Forces (Navy Munitions Command Pacific East Asia Division, 2021). Each division’s primary mission is to provide ordnance management in support of Fleet units and shore activities; to exercise command and control responsibility over their respective unit and detachment operations for Forward-Deployed Naval Forces in the Atlantic, Pacific, and Indian Oceans; to provide support for expeditionary Quick Response Teams, Mine Assembly Teams, prepositioned war reserve stock, as well as maintenance and delivery. They are also tasked with ensuring “sustained stock points and providing quality and responsive logistics, technical, and material support to the warfighter in the areas of ordnance, equipment, components, and ammunition management” (Navy Munitions Command Pacific East Asia Division, 2021). Additionally, their mission includes operating ordnance loading and transshipment facilities, ensuring explosive safety policies are followed, and managing Unit and Detachment explosive safety programs (Navy Munitions Command Pacific East Asia Division, 2021). They are also responsible for coordinating and programming resource requirements for Units and Detachments and monitoring budget execution. They must also ensure that effective worldwide ordnance logistics support is provided to Combatant Commanders, Navy Component Commanders, and the Numbered Fleet Commanders (Navy Munitions Command Pacific East Asia Division, 2021).

NMCPAC CWD and EAD are Echelon III Commands that report to Commander, U.S. Pacific Fleet for administrative and service-related matters. The Commander of NMCPAC CWD is the Immediate Superior in Command for 12 units and detachments that are dispersed along the west coast of the United States. There are 9 units and detachments that are located throughout California in Seal Beach, Fallbrook, Point Loma, North Island, San Clemente Island, Lemoore, El Centro, Point Mugu, and China Lake (Naval Supply Systems Command, 2020). There is one detachment located in Fallon, Nevada (Naval Supply Systems Command, 2020). The remaining two detachments are located in Washington at Whidbey Island and Indian Island (Naval Supply Systems Command, 2020).

The Commander of NMCPAC EAD is the Immediate Superior in Command for 8 units and detachments that are dispersed throughout the Pacific Ocean area of operations. There are 5 units and detachments located throughout Japan in Yokosuka, Sasebo, Atsugi, Misawa, and Okinawa (Naval Supply Systems Command, 2020). There is one unit located in Pearl Harbor, Hawaii (Naval Supply Systems Command, 2020) There is one unit located on the island of Diego Garcia and another located on the island of Guam (Naval Supply Systems Command, 2020).

NMCLANT is also an Echelon III Command that reports to Commander, U.S. Fleet Forces Command for administrative and service-related matters such as ordnance positioning. The Commander of NMCLANT is the Immediate Superior in Command for 15 units and detachments dispersed across the continental U.S., Italy, and Bahrain (Naval Supply Systems Command, 2020). There are 1 unit and 2 detachments located in Virginia at Norfolk, Oceana, and Yorktown. There is 1 detachment located in Earle, New Jersey and 1 unit located in Charleston, South Carolina. Another detachment is located in Patuxent, Maryland. In Florida, there are 3 detachments located at Jacksonville, Key West, and Mayport. Texas has one detachment located at Fort Worth while Louisiana has one located in New Orleans. The remaining two detachments are located in Sigonella, Italy and the Kingdom of Bahrain (Naval Supply Systems Command, 2020).

D. NAVAL ORDNANCE SAFETY AND SECURITY ACTIVITY

NOSSA is responsible for managing the various elements of the Department of the Navy's explosive safety program (Naval Sea Systems Command, 2021). They also provide explosives safety and technical oversight ranging from concept to development as well as production and deployment (Naval Sea Systems Command, 2021). Additional programs managed by NOSSA include demilitarization, explosives security policy, ordnance environmental matters, insensitive munitions, and NAVSEA weapons and ordnance quality evaluation (Naval Sea Systems Command, 2021). NOSSA's main activity is in Indian Head, Maryland, and oversees two additional offices in San Diego and Norfolk, which "provide explosives safety technical support assessments and training services to all Navy and Marine Corps commands worldwide" (Naval Sea Systems Command, 2021). "NOSSA is also responsible for providing technical policies, procedures, and design criteria associated with weapons systems safety, including software safety across the warfare disciplines" (Naval Sea Systems Command, 2021). "NOSSA also manages all programmatic policy requirements for the five major Department of the Navy (DON) Explosives Safety Program component programs; Ordnance Safety and Security, Weapons and Combat System Safety, Ordnance Environmental Support Office, Insignificant Munitions Office, and Weapons and Ordnance Quality Evaluation" (Naval Sea Systems Command, 2021).

E. OFFICE OF THE CHIEF OF NAVAL OPERATIONS (OPNAV)

"The Chief of Naval Operations (CNO) is the senior military officer of the Department of the Navy. The CNO is a four-star admiral and is responsible to the Secretary of the Navy for the command, utilization of resources, and operating efficiency of the operating forces of the Navy and the Navy shore activities assigned by the Secretary" (U.S. Navy Office of Information, 2021). Assigned to OPNAV, the Deputy Chief of Naval Operations for Fleet Readiness and Logistics (N4), serves as the command source for operational logistics and supply chain support. The office of the N4 determines requirements and allocates resources to provide logistical support for ordnance, supply,

energy, distribution, and strategic mobility, combat logistics, rescue, and salvage platforms operated by Military Sealift Command (MSC) (Stiner, 2021).

We highlight these commands because they form the many separate, but related stakeholders with regard to ordnance management. They all have their own roles and responsibilities; however, they fall under different organizational structures. It is because of these factors that communication and coordination become fragmented and disjointed. For the purposes of this research, we will take a hard look at how these organizations and their responsibilities can be shifted under one over-arching command structure that will focus solely on ordnance supply chain management.

III. METHODOLOGY

A. OVERAGED INTRANSIT MESSAGES

By examining the Navy's ordnance structure and issues, we looked at outstanding intransit ordnance requisitions. We examined 12 months' worth of Overage Ordnance Intransit Report messages that were disseminated by NALC. The date range for the messages is October 2020 thru September 2021.

The monthly messages from NALC have four standard remarks at the beginning of the messages. The first remark describes the responsibilities for resolving or adjusting overaged intransits for those involved in the individual ordnance transactions per the NAVSUP P-724. It is also within this paragraph where the current dollar value is shown for all overaged intransit transactions for the Navy during that month. The second remark defines overage intransits by the number of days for CONUS, Afloat, and OCONUS. The end of remark two states that all intransits must be resolved within ninety days in accordance with the NAVSUP P-724. The third comment is used to show the impact that unreported receipts on inventory accuracy and overall readiness. Therefore, just like in any Supply function in the Navy, the timely and accurate processing of receipts is essential to the overall management of the Navy's ordnance stockpiles. The fourth and final remark lists the NMC's and Afloat units that have been identified as those activities with assets issued to them that are pending an ammunition transaction report and transaction item report of receipts. These need to be completed because they have aged transactions between six and eighteen months. It also states that the UICs listed are those carrying in excess of one million dollars of unreported receipts. Of note, in the May 2021 Overage Ordnance Intransit Report message, the threshold of unreported receipts was lowered from one million dollars to five hundred thousand dollars. This will result in capturing more data, and will expose more overaged transactions, with hopes to decrease the overall outstanding value in the future.

When we started examining the data, we searched any potential patterns concerning activities with overage intransit transactions within the ordnance community. Once the

affected activities are identified, it will allow us to make observations and or recommendations on how to solve future discrepancies. Figure 2, as shown below, is an example of one of the monthly overaged intransit messages that are sent out fleet-wide (NAVSUP Ammunition Logistics Center, Oct 2020).

```
RMKS/1. Ref A assigns responsibility for resolving or adjusting overaged
intransits to the activities involved with individual ordnance transactions.
As of 01 OCT 2020, the total value of all overaged intransits is $1,614,072,051.
2. Per Ref A, intransits become overaged at 10 days for CONUS, 30 days for
Afloat, and 90 days for OCONUS. All intransits are required to be resolved
within 90 days of becoming overaged.
3. Unreported receipts have an adverse impact on inventory accuracy and overall
readiness. Timely receipt processing is an essential component to ordnance
stockpile management.
4. The following Navy Munitions Command (NMC) locations and afloat units have
been identified as consignees with assets issued to them that are pending an
ATR/TIR reported receipt to complete the transaction aged between 6-18 months.
UICs with over $1M of intransits are listed by highest to lowest unreported
dollar value:

Navy Munitions Command:
N50202 NMCLANT DET SOUDA BAY - $29M
N30300 NMCLANT NORFOLK VA - $14M
N50203 NMCLANT UNIT BAHRAIN - $6M
N40409 NMCPAC CWD DET CHINA LAKE - $4M
N61063 NMCPAC CWD DET POINT MUGU - $4M
N50201 NMCLANT DET ROTA - $1M
N60478 NMCLANT DET EARLE - $1M

Afloat Units:
R23190 USS NORTH CAROLINA - $9M
R21945 USS ROSS - $5M
R21413 USS PASADENA - $2M
R20865 USS FRANK CABLE - $2M
V21932 USS HURRICANE - $1M
V21931 USS TEMPEST - $1M

5. Request Navy Fleet leadership assist NALC with policing the transactional
completion of these unmatched issues by the consignee listed in order to avoid
unnecessary ammunition losses.
```

Figure 2. OCT 2020 Overaged Ordnance Intransit Report, Source: (NAVSUP Ammunition Logistics Center, Oct 2020)

B. CURRENT ORGANIZATIONAL STRUCTURE

It is essential to take a deeper look at and understand the current Navy conventional ordnance management infrastructure to understand how it can be improved. Figure 3 is a depiction taken from the NAVSUP P-724 Conventional Ordnance Management Policies and Procedures manual showing the relationship between the various commands involved

in providing global stockpile management of ordnance. Part of the focus of our research will be the processes and relationships between the NAVSUP Ammunition Logistics Center (NALC), which is shown as NAVSUP Ammo in Figure 3, and the lower echelon commands that are subordinate to NALC. We will also focus on the lower echelon commands that have a subordinate relationship with U.S. Fleet Forces (East Coast) and U.S. Pacific Fleet (West Coast).

As delineated in the NAVSUP P-724, NAVSUP AMMO (NALC) is tasked with assisting the CNO N41 with providing policy and standard operational procedures and managing the ammunition inventory accuracy program (Naval Supply Systems Command, 2020). They are also responsible for performing technical functions that support overall ordnance management, such as continuous development and maintenance of the Ordnance Information System – Wholesale (OIS-W), sales of ordnance from current stock, and the transfer of ordnance between military services. Through AMMOLANT and AMMOPAC, NALC also provides Fleet requisitioning support and coordination of ordnance movement. In addition to the previously mentioned support along with providing ammunition management to their respective coast's customers, AMMOLANT and AMMOPAC also support Opportune Lift (OPLIFT) actions where the movement of ordnance is synchronized between units and services.

As illustrated in Figure 3 and described in the NAVSUP P-724, Naval Supply Systems Command, NALC, AMMOLANT, and AMMOPAC are tasked with many administrative responsibilities concerning the overall management of how ordnance is accounted for. However, none of these commands are given command and control authority over any of the commands responsible for accounting and providing issue and receipt services to the warfighters. For example, when NALC issues an overaged intransit message, it is disseminated to AMMOLANT and AMMOPAC who can assist U.S. Pacific Fleet and U.S. Fleet Forces in resolving their overaged intransit requisitions. These component commanders also receive the messages showing that the units under their command have assets that have been issued to them that they haven't yet accounted for.

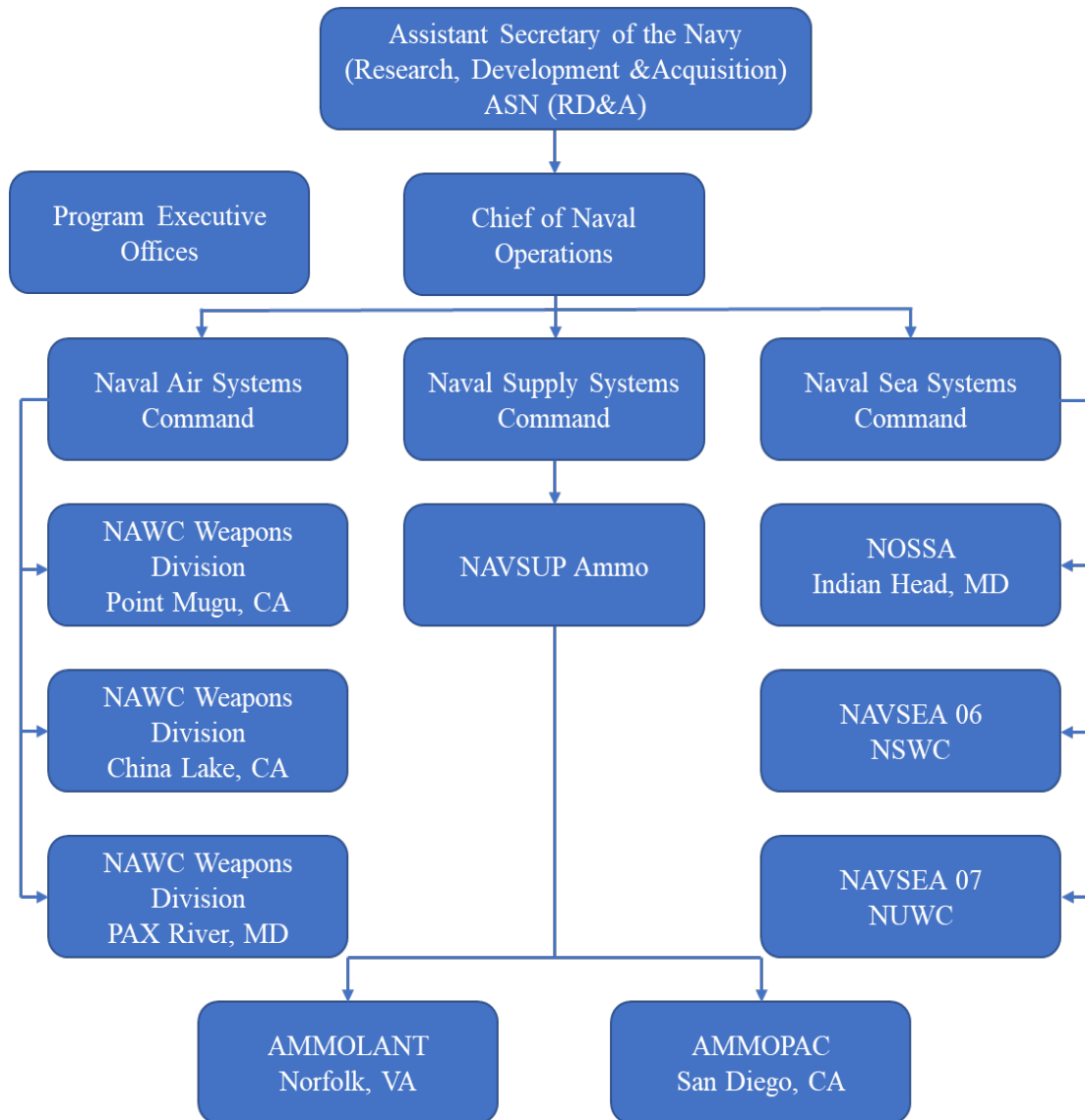


Figure 3. Navy Conventional Ordnance Management Structure (Naval Supply Systems Command, 2020)

The monthly messages show that NALC is requesting assistance from Navy Fleet Leadership to assist in policing their transactional completion, however, it is not directive in nature because NALC hasn't been given that authority. Furthermore, as shown by the Ordnance Management Structure in Figure 3, guidance is imposed from the Office of the Chief of Naval Operations down to multiple unrelated parallel networks. They are unrelated because these commands do not share the same missions, functions, and tasks. If the guidance is directed by the Chief of Naval Operations to Naval Air Systems Command, Naval Supply Systems Command, and Naval Sea Systems Command, there is an increased potential for ambiguity if these three commands do not closely coordinate with one another.

Figure 4 is a visual depiction of the command-and-control relationship described in the NAVSUP P-724. We expanded this organizational structure from what is shown in Figure 3 to show each of the Navy Munitions Command Units and Detachments. Figure 4 also shows that although AMMOLANT and AMMOPAC are responsible for providing ammunition management for their respective regions, they do not have a command-and-control relationship over any of the commands listed below them because they are serving in a supporting role. The extended organizational structure shown in Figure 4 addresses what commands are supported by NALC. It also demonstrates how information flows between commands within the ordnance management supply chain. However, the only commands that exercise a senior/subordinate relationship are between U.S. Pacific Fleet and the commands listed below. This also holds true for U.S. Fleet Forces Command and the commands listed below them. These two 4-Star commands also have senior/subordinate relationships between them and U.S. Indo-Pacific Command for U.S. Pacific Fleet and U.S. Northern Command for U.S. Fleet Forces Command. These Combatant Commands (COCOMs) answer directly to the Secretary of Defense. The point of explaining this is that NALC serves in a supporting role, and at no point in time are the COCOMs or their service components obligated by command relationship to make reports through NALC. For example, if NALC were to require one of the Navy Munitions Command detachments to perform an inventory of what ordnance they currently have on hand, it would have to be requested through the U.S. Pacific Fleet N4 Office or the U.S. Fleet Forces N411 depending on the location of the detachment in question.

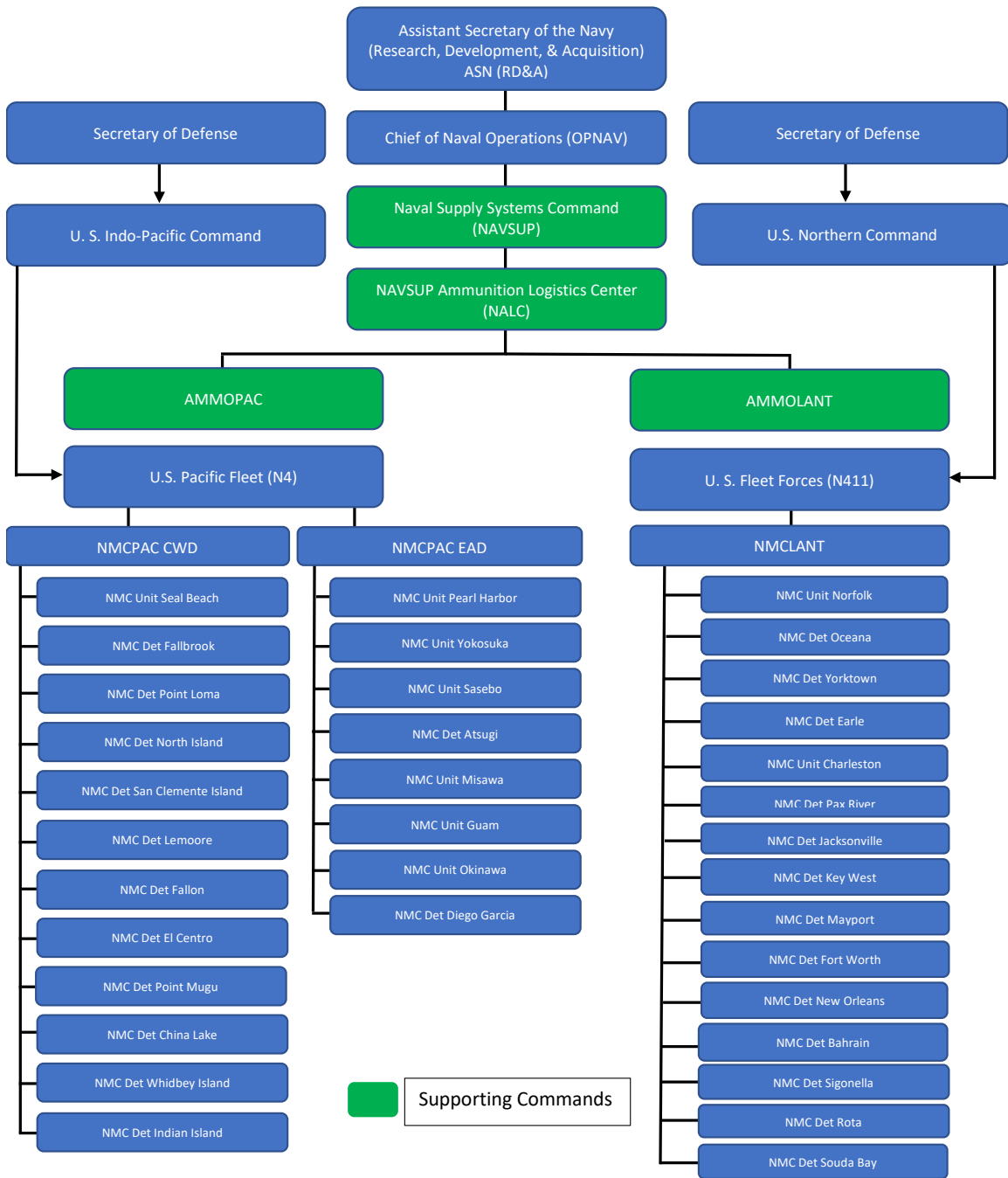


Figure 4. Ordnance Information Flow and COCOM C2 Structure

It would then be up to the discretion of the N4 or N411 to complete that inventory. Because each of those entities have competing requirements that are dictated by their respective commander, it is the commander's priorities that will take precedence over anything else.

Additionally, ordnance is not the only commodity managed by these directors. They are responsible to their subordinates in a man, train, and equip capacity utilizing all classes of supply. Ordnance management must compete with the component commander's operational priority of all other classes of supply when it comes to management and accountability. What Figure 4 shows is that guidance can be pushed down to the commands that ultimately are responsible for the management of ordnance. This guidance comes from the Secretary of Defense, through the COCOM's and component commanders, to the various Naval Munitions Commands. Also shown is that NAVSUP, NALC, AMMOPAC, and AMMOLANT are responsible for supporting U.S. Pacific Fleet and U.S. Fleet Forces, but they have no directive authority over them. Any ordnance guidance provided by these commands will always be superseded by the competing priorities of U.S. Pacific Fleet and U.S. Fleet Forces' immediate superior in command.

Under their respective COCOMs, U.S. Fleet Forces Command acts as the Immediate Superior in Command (ISIC) to Navy Munitions Command Atlantic (NMCLANT). U.S. Pacific Fleet serves in the same capacity over Navy Munitions Command Continental U.S. (NMC CONUS) West Division and Navy Munitions Command East Asia Division. As shown in Figure 4, NMC CONUS West Division possesses command and control authority over all ordnance operations at each of their ten detachments and two annexes geographically dispersed along the west coast of the continental United States. NMC East Asia Division performs the same functions for three units, four detachments, and one annex located throughout the Pacific Ocean operations. Likewise, NMCLANT performs the same functions for fifteen detachments dispersed on the east coast of the continental United States, the 5th Fleet area of operations (Persian Gulf), and the 6th Fleet area of operations (Europe and Africa). Unlike U.S. Pacific Fleet, U.S. Fleet Forces Command does not separate their NMCLANT command into two commands that are responsible for two separate geographical areas. Between the three units, 29 detachments, and three annexes assigned to NMCLANT, NMCPAC CONUS West Division, and NMCPAC East Asia Division, responsibility is shared for providing global ordnance support to the entire Fleet. These numerous organizations provide logistical, technical, and material support to deploying/deployed forces and other

commands in the Fleet. It is essential to highlight the functions these organizations provide because they are more closely aligned with the functions that NALC is tasked with. It is also within these various commands where the preponderance of ordnance is stored and maintained prior to being transferred to the warfighters. Additionally, the 12 months of overaged intransit messages gathered show these commands account for the vast majority of unreported receipts.

Our research also looked at the Naval Ordnance Safety and Security Activity (NOSSA) functions, as they play an integral role in the ordnance management process. NOSSA is unique in that they are a subordinate command to Naval Sea Systems Command. They are responsible for identifying and implementing weapons and explosive safety requirements throughout the ordnance life cycle (NAVSEA, 2021). Additionally, they are responsible for ensuring accountability and auditability of fleet resources (NAVSEA, 2021). This is demonstrated when they conduct explosive safety inspections (ESI). They are tasked with conducting ESI's of all Department of the Navy shore commands and all U.S. Navy ships where ammunition and explosives are handled or stored to validate the activities comply with applicable policies (Office of the Chief Of Naval Operations, 2014). Per instruction, an ESI must be conducted at least once per Fleet Response Plan (FRP) cycle, typically within a 36-month period. ESI's deal mainly with safety practices centered around handling, stowage, and use of ammunition and explosives, but a large part of the overall inspection also includes inventory accuracy, posting of receipts, and records management. This is where NALC comes into play. For each ESI, the inspection team from NOSSA is accompanied by representatives from NALC to conduct the inventory accuracy portion of the inspection. This large-scale effort of conducting an ESI requires close coordination between two separately controlled organizations.

In this chapter, we have discussed our data collection method regarding ordnance overages and their effect on inventory accuracy and how they reflect a loss in the visibility of high-value assets. In these factors, the Navy loses overall readiness because of its inability to have an accurate site picture of in-transit ordnance. Additionally, we have also discussed the many organizations that are responsible for Navy-wide ordnance management. However, we have shown that these many organizations are not aligned

under one organizational structure responsible for the overall governance of ordnance, which is the main contributor to their inability to maintain a clear sight picture. In the next chapter, we will discuss what steps can be taken by the NAVSUP enterprise to form a more cohesive organizational structure. We will propose courses of action that will illustrate how Navy Supply Systems Command, through establishing an Ordnance Command Organizational Structure will be able to impose guidance in a linear fashion that will facilitate increased response times by reducing the number of commands that control ordnance throughout the fleet. As a result, this will strengthen their ability to decrease overaged in-transit totals leading to greater inventory accuracy and overall mission readiness in ordnance stockpile management.

THIS PAGE INTENTIONALLY LEFT BLANK

IV. ANALYSIS

A. PROPOSED ORGANIZATIONAL REALIGNMENT STRUCTURES

Our research found that the organizational structure of a governing entity includes formally organizing all subordinate activities and clearly defining the linkage between these separate-but-related activities. In other words, establishing a set organizational structure enables the personnel working within it to better understand their roles and enable better coordination, control, and communication (Mijuskovic & Spasenic, 2019). Additionally, an established organizational structure gives leadership the ability to administer their authority through the appropriate channels (Ahmed, 2017). Because we view our problem as having many different stakeholders who all possess their own separate agendas driven by separate leadership entities, we found it especially important to narrow down the channels by which information is passed in order to increase ordnance management efficiencies. “Poor organizational design and structure results in a bewildering morass of contradictions: confusion within roles, a lack of coordination among functions, failure to share ideas, and slow decision-making bring managers unnecessary complexity, stress, and conflict” (Ahmed, 2017). For this exact reason, we decided to take a deeper look at how we could establish an organizational structure whose role centered around the management of the ammunition and explosives supply chain in order to gain efficiencies that are hindered by the current structure.

Of note, we did not complete a manpower analysis for our research but will include our recommendations for one in our next chapter. Figure 5 is one of two proposals that we suggest could be used to address issues related to inventory accuracy and asset visibility. Because an overarching command structure specifically tailored towards ordnance management does not exist, we recommend through both Figure 5 and Figure 6 that an Ordnance Command is established as a subordinate command to NAVSUP. Under this newly formed command, the duties and responsibilities that each subordinate command performed before will continue, but under the specific direction of ordnance-specific flag-level leadership. All Navy Munitions Commands would be reorganized under what we refer to as NAVSUP Ordnance to eliminate their previous separations under U.S. Pacific

Fleet and U.S. Fleet Forces Command. By structuring it in this manner, authority can be delegated from a single source while eliminating competing interests from each of the separate 4-Star commands.



Figure 5. First Proposed Organizational Realignment Structure

As shown in Figure 5, we also incorporated NOSSA into this proposed organizational structure. As previously discussed, NOSSA is responsible for managing all aspects of the Department of the Navy Explosives Safety Program (Naval Sea Systems

Command, 2021). Because they are the technical authority for explosives safety, NOSSA is tasked with “providing technical policies, procedures, and design criteria associated with weapons safety” (Naval Sea Systems Command, 2021). With NOSSA acting as a resident expert, coupled with previously mentioned capabilities, they must be incorporated into the over-arching ordnance management structure. Incorporating NOSSA into the realignment structure standardizes inspections and synchronizes efforts with regard to safety inspections (ESI/SESI’s) and the inventory accuracy sections contained within them.

With this proposed structure, we anticipate that NAVSUP headquarters would need to do a manpower analysis to determine staff estimates for the NAVSUP Ordnance Command supporting staff. We would not change leadership positions within the commands immediately reporting to NAVSUP Ordnance Command within this proposed structure. Leadership positions are currently being held by Navy Captains (O-6) at these levels from the Supply Corps Community (NALC), Aviation Community (NMC’s), and Explosive Ordnance Officer Community (NOSSA) for NALC, the regional NMC headquarters, and NOSSA, respectively. In order to maintain the wide range of knowledge and technical expertise required for the proper management of the many facets of ordnance management, it would be advantageous to retain these billets. This structure still allows for structuring and departmentalization for geographically dispersed regions where local customers (warfighters) are served by their local division or detachment, while plans and policies will be formulated at headquarters locations (Ahmed, 2017). Overall, this proposed course of action provides a structure that is departmentalized by function, region, products, services, and the customers that are being served. The main benefit of this proposed course of action is that it enables an ordnance-centric command structure that reduces the previously mentioned competing authorities provided by U.S. Pacific Fleet and U.S. Fleet Forces Command. By reallocating ordnance oversight responsibilities from U.S. Pacific Fleet and U.S. Fleet Forces to the newly established NAVSUP Ordnance command we estimate that approximately 68% of overaged intransit requisitions can be rectified. Our estimation comes from the 12-month average of the unreported receipts that the Navy Munitions Commands account for. By reconfiguring the NMC’s directly under NAVSUP

Ordnance Command, a linear line of communication will be created that is unimpeded by the COCOM's and Component Commanders.

Figure 6 is a second option concerning organizational realignment courses of action. With this realignment structure, we continued with a model that has a NAVSUP Ordnance headquarters element that is subordinate to NAVSUP, the CNO, and the Assistant SECNAV. In this organizational chart, we placed each of the current 8 NAVSUP major command Fleet Logistic Centers (FLC) as the subordinate commands to what would be the newly formed NAVSUP Ordnance Command. In this case, each geographically located FLC would form a new division that would deal directly with the Naval Munition Command detachments, units, and annexes. This division would serve as a headquarters element for each of the detachments, units, and annexes assigned to them and would funnel all reports concerning ordnance management up through the FLC Commanding Officer to NAVSUP Ordnance Command Headquarters. In this model, the headquarters elements of NMCLANT, NMC CONUS West Division, and NMC East Asia Division would be disestablished. Naval Munitions Command units, detachments, and annexes would be reorganized by their proximity to the closest FLC and report directly to the newly formed FLC Code Ordnance. Under this construct, the most subordinate units that any one FLC would be responsible for is 10. The current structure shows as many as 15 under one NMC headquarters command. Reorganizing NMC commands in this manner is advantageous because efficiencies would be gained by implementing a more dispersed workload between each of the 8 FLC's, as opposed to the three current NMC Headquarters elements. This is an assumption based on NAVSUP and each of the FLC's performing a manpower analysis. They would need to make a case for each of their new Ordnance divisions to be optimally manned to a level that would sufficiently meet their needs to act as a headquarters element for each lower echelon unit. Similar to the previously proposed realignment structure, this proposed course of action provides a structure that is departmentalized by function, region, products, and services, as well as the customers being served. Each of these elements provides the benefit of specialization through an ordnance-centric division that manages only one major commodity.

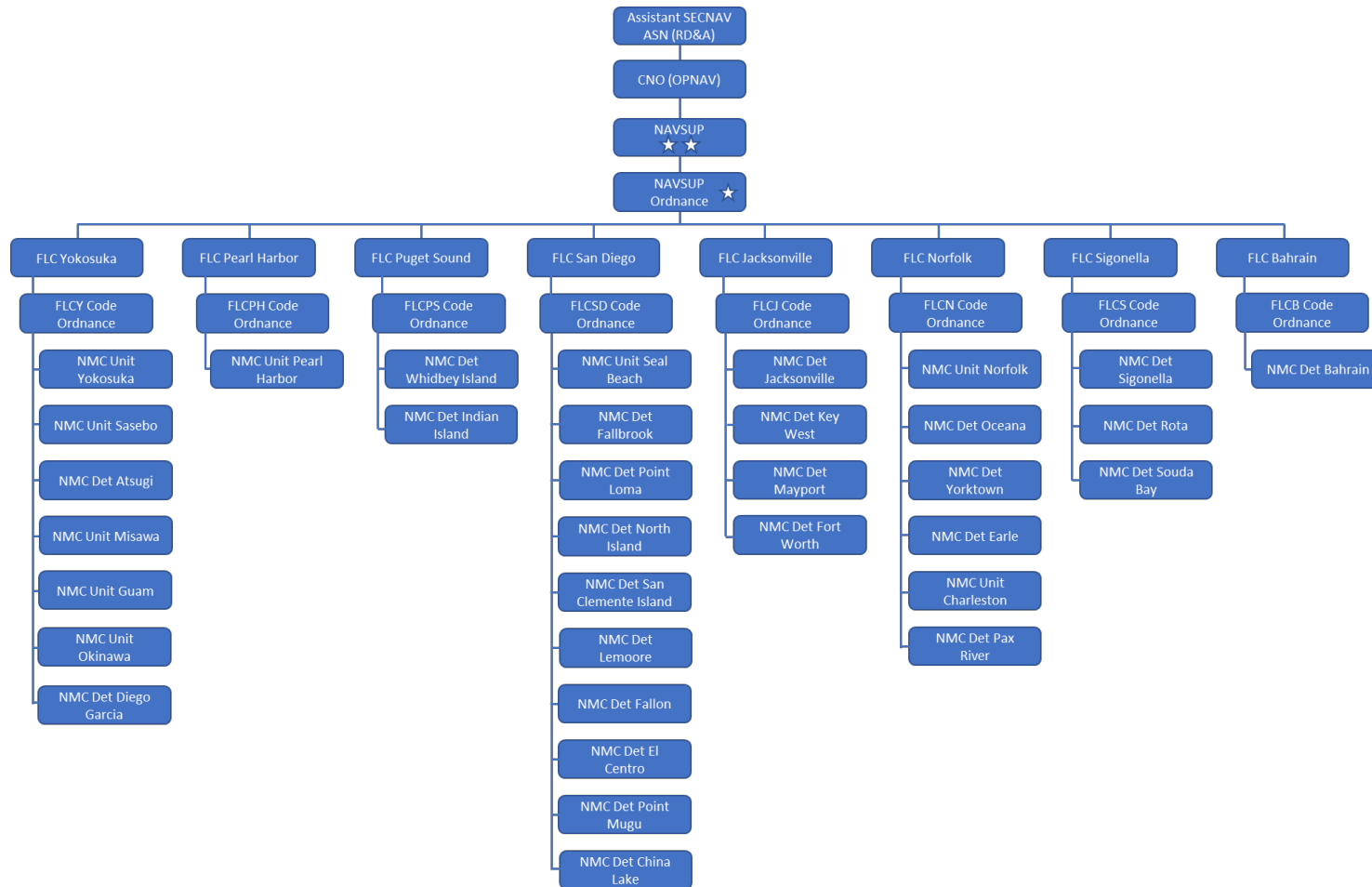


Figure 6. Second Proposed Organizational Realignment Structure

Additionally, this structure introduces the element of time. Figure 6 shows us that we eliminate decision lag times associated with large time zone gaps by reconfiguring each of the units, detachments, and annexes under their nearest geographically located ISIC. For example, if NMC Detachment Rota needed immediate guidance regarding an ordnance movement, they would normally have to coordinate through NMCLANT headquarters located in Yorktown, Virginia, which is a 5-hour time difference. Depending on the time of day, responses could be delayed longer than necessary. Under the newly proposed configuration, NMC Detachment Rota and FLC Sigonella would be located in the same time zone and would be able to provide timelier responses. Similar to Figure 5, this configuration provides an ordnance centric network by enabling linear communication regarding all ordnance related matters up the chain of command. Also similar to Figure 5, this configuration removes ordnance accountability responsibilities from U.S. Pacific Fleet and U.S. Fleet Forces. To reiterate, there are advantages to doing this because it will remove competing authorities between the Component Commanders and NAVSUP. NAVSUP Ordnance will then be able to affect the overaged intransit requisitions by communicating directly with their subordinate NMC commands. This greatly increases the potential for a reduction of the 68% of overaged transactions that the NMC's account for by removing the competing interests of the COCOM's and Component Commanders.

B. OVERAGED INTRANSIT REQUISITION BREAKDOWN

There is an average of four billion dollars of open and outstanding ordnance requisitions at any given time throughout the Fleet. Additionally, there is an average of 1.3 billion dollars of overaged intransit ordnance requisitions verified by NALC monthly overaged ordnance intransit reports. This monthly overaged average is very high and does not support the Navy's mission of inventory accuracy, audit readiness, and mission readiness which is mission-critical.

There are currently thirty-five different NMC commands globally. Of those thirty-five commands, thirteen commands consistently remained on the twelve monthly Overaged Ordnance Intransit Reports from October 2020 through September 2021. This accounted for thirty-four percent of the shore ordnance commands having overaged requisitions valued at over five-hundred thousand dollars. Eight of those thirteen shore commands are in the Pacific AOR,

which accounts for sixty-two percent of the shore command's overaged requisitions. Atlantic AOR accounts for thirty-eight percent. Multiple shore commands are consistently on the monthly overaged reports. For example, NMCLANT Det Earle is on all twelve months of reports. From the 12 months of messages, the ordnance shore commands accounted for 67.8% of overaged intransit requisitions. It is important to reiterate that in the monthly Overaged Ordnance Intransit Report in section five, NALC requests assistance in completing the overaged transactions versus enforcing.

When reviewing the twelve monthly messages of the Afloat units, eleven of the fifteen ships belonged to the Pacific AOR, accounting for seventy-three percent. Understanding that there are more ships in the Pacific, we still thought the distribution of Atlantic and Pacific ships would be closer together. However, multiple ships consistently remain on the monthly reports. Operational units must be deployable and mission-ready around the clock, day or night, and consistently being delinquent on the monthly records creates unfavorable conditions. The Afloat units account for 32.11% in the 12 months of messages. Again, section five of the monthly Overaged Ordnance Intransit Report requests assistance in completing the overaged transactions vice guiding direction. The command and control differ because the Afloat units do not fall under NALC governing authority, so they cannot enforce the consolidation of the overaged requisitions.

In conclusion, our research analysis identifies that the ordnance community's main governing activity requires an organizational realignment. The research has shown that without proper alignment, activities are not held accountable for basic inventory processes. It has been identified that ordnance is not missing or lost but not correctly accounted for and reported in accordance with governing processes set forth by NAVSUP. As it currently stands, NALC has no positional authority over the NMCs nor over the operational units. Lessons learned over time have identified that asset visibility will be inaccurate without accurate inventory processes being correctly carried out. Without proper reporting of ordnance assets, the ordnance community will not have a clear, concise, and accurate inventory picture of the assets available to the Fleet. With the ever-changing global environment, NAVSUP must clearly understand asset visibility to ensure the warfighter is supported if called upon during conflict or time of war.

THIS PAGE INTENTIONALLY LEFT BLANK

V. CONCLUSION

A. RECOMMENDATIONS

Further studies with a focus on manpower analysis would be extremely beneficial to support our argument. However, we are confident that the first proposed organizational realignment structure, Figure 5, is the favorable course of action. It is within this first structure where we believe that the most significant number of efficiencies can be gained while affecting the least number of stakeholders. This structure allows for an ordnance-centric structure that allows for direct linear communication that is not interrupted by competing interests or classes of supply. This structure focuses on the commodity of ordnance where inventory accountability is not impeded by having to focus on other classes of supply. This course of action shows that the technical experts located at each of the NMC Headquarters elements, will be retained in their current positions. This will eliminate the need to retrain Supply Corps leadership at the Fleet Logistics Center level in order to fill the gaps of those technical experts as is suggested in Figure 6. We have also assessed that the first course of action will prevent billets from being eliminated while also decreasing the need for additional billets to be created. The second proposal creates a streamlined structure but suggests eliminating the 3 billets held by a Navy Captain (O-6) at each of the Naval Munitions Command Headquarters element. We do not suggest this course of action as it is in their expertise where the first proposal will be most effective. It is also highly unlikely that the Aviation community would agree to giving up these billets as they serve as career milestone positions. We also assess that the second proposal would also require that at least one Navy Supply Corps Commander (O-5), as well as supporting staff, to be added to each of the 8 FLC's in order to adequately support each of their respective NMC detachments with the necessary leadership staff. Based on our research, we also recommend that NAVSUP and NALC solicit a new thesis topic through Naval Postgraduate School with a manpower analysis focus that would concentrate on supporting the establishment of NAVSUP Ordnance Command.

If or when an ordnance command is established, we recommend changing the verbiage in section five within the monthly overaged ordnance intransit reports. As it

currently stands, the message states, “Request Navy Fleet leadership assist NALC with policing the transactional completion of these unmatched issues by the consignee listed in order to avoid unnecessary ammunition losses.” The verbiage should read “shall” vice “request” to give more concise direction and ensure regular compliance. The message currently reads as an option and not necessarily direction. Establishing an ordnance command will give them the directing authority needed to ensure the responsible units will rectify their outstanding issues.

We also recommend that changes be made to the Battle Effectiveness and Command Excellence awards criteria. As it currently stands, there are no disqualification items listed for inaccurate inventory counting and reporting. Inventory accuracy inspections are a part of the ESI’s and SESI’s but there is not currently an accountability function that would motivate a unit commander to be more diligent. An example of this would be if a unit fails the inventory accuracy portion of the ESI or SESI, it will not result in an unsatisfactory grade for the entire inspection. Without a policy change being codified in an official governing publication, the ships will not be held accountable for ordnance inventory compliance and reporting. By adding an ordnance inventory accuracy requirement to Command Excellence Award criteria, it will assist in holding activities and units accountable by introducing adverse effects for not following standards set forth by governing instructions. Additionally, Commanding Officers that are subject to inspections do not want to be assessed as being below standards because it could adversely affect their career progression. By adding criteria that could prevent units from receiving excellence awards to current governing instructions, it will motivate Commanding Officers to bring more awareness to the area of ordnance accountability. It will also assist in rectifying the remaining 32% of overaged intransit requisitions that the afloat units account for.

B. CLOSING THOUGHTS

The main motivation of this study was to explore the most practical way to reorganize the current ordnance organizational structure in a manner that would be most beneficial to all of the current stakeholders. Two different options were presented that would require further exploration from NAVSUP regarding the cost and benefits of

creating a new organizational structure. We believe, through our research, that one of these options will provide a viable way for the ordnance management supply chain to become more efficient by empowering the NAVSUP enterprise with the tools needed to enforce the rules and regulations that they are currently tasked with. We are also confident that by organizing the ordnance management stakeholders under a single ordnance command, communication between commands will become more efficient while increasing inventory accuracy and asset visibility.

Another motivation of this study was to explore the overaged intransit messages. We fully understand the importance of all inventory accuracy inspections and asset visibility tools; however, it was our intent to highlight the extremely high dollar figure directly tied to the overaged requisitions within these messages to elicit the attention they deserve. Clearing these overaged requisitions will make naval leadership better equipped with a clearer picture that supports the “fight-tonight” mission.

After a thorough review of both literature and data obtained through NALC, it was determined that multiple factors were contributing to the ineffectiveness of the current organizational structure of NALC and applicable activities. These contributing factors support our recommendation to realign the organizational structure of NALC and all supporting activities under one over-arching ordnance command. For a portion of our research, we focused our efforts on the Supply Chain Management process of ordnance requisitioning from the cradle to the grave. The cradle to the grave process identified several areas that negatively impact inventory accuracy across the Fleet. During the analysis of the ordnance requisition process, it was identified that the main contributing factor of poor inventory validity is over-aged status among activities. Our study looked into what determining criteria has been used to define requisitions with an over-aged status as well as what commands with overaged requisitions can do to rectify them.

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF REFERENCES

- Ahmed, M. A. (2017). The Importance of the Organizational Structuring and Departmentalization in Workplace. *The Journal of Middle East and North Africa Sciences*, 3, 30–38. <http://oaji.net/articles/2017/2705-1487359601.pdf>
- Department of the Navy. (2021, July 22). *Ordnance Process Cycle Memorandum*. Department of Defense.
- Mijuskovic, V. M., & Spasenic, A. T. (2019, December 20). Organizational Structure as a Predictor of the Supply Chain Management Efficiency. *Ekonomika Preduzeća*, 68(5), 427–441. doi:<https://doi.org/10.5937/EKOPRE2006427M>
- Naval Sea Systems Command. (2021, June 13). *Naval Ordnance Safety and Security Activity*. <https://www.navsea.navy.mil/Home/NOSSA.aspx>
- Naval Supply Systems Command. (2020, June 26). *Conventional Ordnance Stockpile Management Policies and Procedures*. (NAVSUP P-724), Department of the Navy.
- Naval Supply Systems Command. (2021, July 21). *NAVSUP*. Naval Supply Systems Command. https://www.navsup.navy.mil/public/navsup/products_services/ascm/
- NAVSEA. (2021, June 13). *Naval Sea Systems Command*. The Force Behind The Fleet. <https://www.navsea.navy.mil/Who-We-Are/>
- NAVSUP Ammunition Logistics Center. (Oct 2020). *October Overaged Ordnance Intransit Report*. Naval Message DTG 022000Z OCT 20
- Navy Munitions Command Pacific East Asia Division. (2021, May 21). *Mission, Functions, and Tasks of Navy Munitions Command*. (NMCPACEADINST 5450.5A), Department of the Navy.
- Office of the Chief Of Naval Operations. (2014, Aug 15). *Department of the Navy Explosives Safety Management Policy Manual*. (OPNAVINST 8020.14A), Department of the Navy. <https://www.secnav.navy.mil/doni/Directives/08000%20Ordnance%20Material%20Management%20and%20Support/0800%20General%20Ordnance%20Material%20Support/8020.14A%20W%20CH-1.PDF>
- Smith, E. L., & Stannard, D. (2018). *Navy Accountability of Issued Ammunition*. (N2018-0045). Naval Audit Service
- Stiner, K. (2021, August 31). *OPNAV Resources Sponsors*. OPNAV N4. <https://mrr.dawnbreaker.com/portals/phase3/opnav-resource-sponsors/opnav-n4/>

U.S. Navy Office of Information. (2021, June 21). *Navy.mil Leadership*. U.S. Navy.
<https://www.navy.mil/Leadership/Chief-of-Naval-Operations/Chief-of-Naval-Operations/>

INITIAL DISTRIBUTION LIST

1. Defense Technical Information Center
Ft. Belvoir, Virginia
2. Dudley Knox Library
Naval Postgraduate School
Monterey, California