Statement of Dr. Jerry Hendrix, PhD Senior Fellow and Director Defense Strategies and Assessments Program Center for a New American Security 25 July 2017

Chairman Wicker, Senator Hirono, and distinguished members of the Seapower Subcommittee, thank you for extending the honor of addressing the topic of how the Navy might reach its stated requirement of 355 ships as quickly, economically and efficiently as possible.

Today I will present a series of options that many people, to include my friend and frequent coauthor Robert O'Brien, have suggested as providing ready paths to 355 ships. It is important to note that none of the ideas that follow are radical and that each of them has been used in the past, to include most recently during the Reagan administration's campaign to bring the Cold War to a successful conclusion.

First it is important to note that the numbers three hundred and fifty, first proposed by President Trump in Philadelphia on 7 September 2016, and three hundred and fifty five, as enunciated by the Navy on 14 December of last year, are not arbitrary, but rather represent the minimum number of ships required to provide persistent presence in the eighteen maritime regions of the world (North Atlantic, Caribbean, South Atlantic, Gulf of Guinea, Arctic, Baltic Sea, Western Mediterranean, Eastern Mediterranean, Black Sea, Red Sea, Gulf of Oman, Arabian Gulf, Indian Ocean, South China Sea, East China Sea, Northern Pacific Basin, South West Pacific, South East Pacific), as identified by Combatant Commanders, where the United States has strong national interests. I must add that increasingly we must consider the Arctic as a region where we have increasing interests and plan additions to our fleet architecture accordingly. We must remember that in March of 2014, former Chief of Naval Operations, Admiral Jonathan Greenert stated before the House Armed Services Committee that to fully meet CoCom requirements would take a Navy comprised of 450 ships. Based upon current maintenance-training-deployment rotational models as well as the distances associated with these regions, the number of 355 ships has been determined to be the minimum number required to meet Combatant Commander demands with no room to spare.

Second, it is just as important to note that the time frame associated with the build-up to 355 ships is equal in consequence as the raw number itself. Both China and Russia have taken advantage of the United States' recent strategic focus on counter-terrorism campaigns in Afghanistan and Iraq to take challenging profiles on the high seas. Russia has invested in a new generation of highly capable platforms, such as the new Yasen class fast attack submarine, and China is pursuing a maritime strategy that combines outright territorial acquisition with a rapid expansion and modernization of its fleet.

China also faces a series of economic and demographic challenges which are forcing the Communist Party's leadership to rush achieve its re-emergence as a great power quickly before it becomes consumed with internal issues deriving from its one-child policy and rapidly aging population. It also has a near total dependence on imported national resources to include energy and vital ores. These factors incentivize the People's Liberation Army-Navy to achieve dominance and a destabilizing sphere of influence in the Western Pacific within a 2025-2030 timeframe. To head a future crisis off, the U.S. Navy must expand rapidly enough to effectively deter China from thinking that eventual military victory at sea is even remotely possible. To accomplish this goal, the Navy must reach 350 to 355 ships as swiftly as possible.

Many tend to focus on new ship construction as the primary path to battle force growth at sea. For instance, in January the Navy developed an accelerated ship building plan that effectively took "warm" Virginia, Burke, LX(R), and oiler class ships and turned them "hot", adding 29 additional ships over and above the current 30-year plan. However, this approach, limited as it is by the capacity of current programs, only achieves a ship count in the mid-330s. Additionally, these ships, with the exception of the new oilers, are expensive platforms, ranging from \$1.6B to \$2.7B each. A build-up plan centered on these units will be, of necessity, very expensive. However, there are, in fact, other paths to 355 ships within the timeframe discussed.

It is to the nation's advantage that the Navy is scheduled to take delivery of 80 new ships of varying classes between now and the end of fiscal year 2024. Given the current battle force count of 276 ships, these new ships alone would allow the fleet to reach 355 ships. Unfortunately, during that same period the Navy plans to decommission 49 ships, many of whom were built during the Reagan administration build up during the 1980s, from service. These factors combined result in a net 31 ship increase in the size of the fleet to 307 ships, but still 48 ships short of the Navy's goal. However, if a portion of the ships scheduled for decommissioning, for instance the five Ticonderoga class cruisers or the nine Mine Counter Measure ships, could be kept in service for another five or ten years through a Service Life Extension Program that could cost as much as \$300 million per cruiser and \$50 million per mine countermeasure ship, then the fleet could be expanded commensurately. Such actions are not inexpensive, but they would be much cheaper than funding entirely new platforms and in the end could result in a battle force of 321 ships by the end of FY-24.

Another option for rapid growth can be found in the ready reserve or "ghost fleet." Famously, during the administration of Ronald Reagan, four Iowa class battleships were moved from the reserve fleet to the active fleet as Reagan built towards a "600-ship Navy." Currently there are ten "retention assets" in the reserve fleet, to include a conventionally powered super carrier, three light amphibious carriers, and five amphibious platform docks. There are also eleven Perry class frigates currently designated for foreign military sales. These frigates will be transferred to partner navies that will refurbish them and get another 10 to 20 years of service from them. There are also three of the first flight of Ticonderoga class cruisers, built with dual Mk-26 launchers fore and aft rather than the vertical launch system tubes that later ships came with, that are scheduled for scrapping. These ships were retired early and have ten fewer years at sea that the Ticonderoga's that remain in the fleet. Investments required to return ships like these to the fleet would be much more expensive than Service Life Extension Programs,

perhaps \$120 million for the Perrys and \$550 million for the Ticonderogas, to return them to service. While costly, these investments are significantly less than new construction of ships with similar warfare characteristics. If only half of these ships, say 12 of the 23 ships described, could be returned to the active fleet within five years of initiating re-activation, leaving a gap of 23 additional ships to achieve the goal of 355.

This brings us back to the original discussion of new ship construction. Of course, new construction will have to be part of the Navy's build-up. However, the choices in this regard need to be both efficient and effective. While the idea of taking current "warm" production lines and turning them "hot" is a responsible approach, policy makers should recognize that there are many "warm" production lines and should make wise choices as to which lines should receive additional investments and which ones represent capabilities the Navy has in sufficient numbers. For instance, the average number of large surface combatants, air and ballistic missile defense Ticonderoga class cruisers and Burke class destroyers, has hovered around 82 ships over the last two decades, but is projected to rise to 100 under the most recent 30-year shipbuilding plan and then hold at that level until 2028. The current two-per-year production schedule should be sufficient to maintain American overmatch in the large surface combatant category for the foreseeable future.

The places in the inventory where the Navy does need additional investment are fast attack submarines, which will fall to a population of 41 boats from its Cold War high of 102 by 2029 and multi-mission frigates, which have declined from 115 ships in 1987 to zero today. Submarines are the silent sentinels of the deep and are in constant demand around the world. The forthcoming Virginia class fast attack boats, which will come with the addition of payload modules, bring additional long range striking power that will be critical in taking on new antiaccess/area denial systems presently emerging. Multi-mission frigates, as described by the recent requirements document from the Navy and are not be confused with the present singlemission Littoral Combat Ships, will be critical to the Navy maintaining its persistent presence across the global maritime commons as well as restoring a capacity to conduct anti-surface, anti-submarine and convoy escort missions in support of military operations across the globe. I am somewhat concerned about certain aspects of the requirements document issued by the Navy, specifically its mention of a 3,000 mile range at 16 knots, which seems too short, and its recommendation that the ship have a 3-D air search radar, which seemed expensive and not necessary given the number or large Aegis equipped surface combatant. Some care should be given to an ice-hardened design or variant that would allow for operations in the Arctic ocean.

The Navy needs a robust new multi-mission frigate design, perhaps based upon a proven foreign design such as the European FREMM or an ongoing stable domestic program such as the National Security Cutter currently being built for the Coast Guard. To be clear, there is neither the time nor the need to consider a new "clean sheet" design for a frigate, which the Navy needs a fair number of. Selecting a mature design could allow the Navy to take delivery of a new frigate within a five-to-six-year period, depending on which design is selected. Standard fleet mixes would suggest a requirement for as many as 70 multi-mission frigates but certainly no less than 50. The multi-mission frigate will be a critical enabling element of the 355 ship Navy.

The Navy should also consider commissioning a class of smaller combatants, either a 200 foot, offshore patrol vessels similar to the Ambassador class ships built in the United States for Egypt or extending production of the Joint High Speed Vessel and then equipping them with batteries of missiles. The Navy should also consider, from a strategic standpoint, whether it has a vested interest in possessing an icebreaking capability within its force in order to assure access to the arctic region, where the nation has vested interests. Such ships would provide naval presence in those areas of the world that are on the fringes of our interests, but also where law and order are most likely to be challenged and fray. While perceived as strong, the global system of self-governance is actually quite fragile and is in need of constant attention that only a Navy of 355 ships can provide.

Efficiencies can be found in the production of these ships by pursuing authorization for multiyear block-buys of vessels. Such actions would provide stability to shipbuilders and downstream parts suppliers, stabilizing or expanding good paying jobs and strengthening the Defense Industrial Base. In fact, this entire plan as described would strengthen the Defense Industrial Base. As a historian I can tell you that it has been since Eisenhower, and before that the administrations of the two Roosevelts, that the Defense Industrial Base has been properly viewed as a national security asset and managed properly.

Current ships in the Navy's inventory should have their service life extensions performed at the four Navy shipyards at Norfolk, Bremerton, Pearl Harbor and Portsmouth-Kittery. Ghost fleet ships being returned to the active inventory could be brought aboard in large civilian yards in Philadelphia, San Diego, Portland, OR and numerous yards along the Gulf Coast. New frigates and offshore patrol vessels could be constructed in Wisconsin, Alabama, Louisiana and Oregon through partnerships and licensing agreements. All would recreate well-paying jobs in the manufacturing and industrial sectors.

Expeditious decisions to increase submarine production and to select a frigate design would allow the Navy to move swiftly into procurement and subsequent delivery. Frigates procured before the close of the present decade would enter the fleet in the early years of the next. Smaller platforms, to include offshore patrol vessels or Joint High Speed Vessels could come quicker. While I am not sure we can make up the additional 23 ships required in the plan I have outlined prior to the end of Fiscal Year 2024, we could get close, and that would send a strong message to those nations who would make themselves our enemies that they should not risk war with the United States today, tomorrow of for the foreseeable future.

While shipbuilding is the focus of this hearing, I would be remiss if I did not take a moment to bring to your attention the importance of getting the right capabilities balance back into the air wings of our aircraft carriers. The super carrier is the centerpiece of American naval power, but the average unrefueled striking range of that air wing has fallen from just over 900 miles in the

early 1990s to just under 500 miles today. While the addition of the longer ranged stealth Joint Strike Fighter helps, there is a requirement for a mission tanker capable of extending the range of the current mix of F-35C and FA-18 Super Hornets that will be the critical enabler of the air wing in anti-access/area denial environments. Ensuring that the mission tanker, an unmanned aircraft designated as a MQ-25 Stingray, is designed to meet certain key mission enabling requirements such as being able to fully tank two F-35C's at 500 to 600 nautical miles from the carrier, will be one of the major decisions of the next year. A bad decision could lessen the relevance of the carrier and hence American sea power.

Congress has an oversight and authorizing role in all of these decisions. The Constitution made it clear that while the Congress has the authority to raise an Army, it must maintain the nation's Navy. There is a need for a Navy comprised of at least 355 ships and the nation has discovered that we are late in servicing that need. The current fleet of 276 ships is insufficient to uphold the nation's interests around the world and rising challenges from China and Russia will not allow us to take our time in reaching our goal. I have presented some options with regard to service life extensions for current ships in the fleet and returning ships to active service from the ready reserve fleet. I would ask the question with regard to the ready reserve that if we do not plan to use them now under the present circumstances, when would we use them? With regard to new construction, I recommend increased production of submarines and small combatants in order to grow capacities in anti-surface, anti-submarine and convoy escort capabilities in which we are woefully short. Such an approach would fully engage and expand the nation's naval Defense Industrial Base and strengthen our economy.

In closing, let me once again thank you for the honor of addressing you today. As a dairy farmer from Indiana who had the privilege of serving 26 years in our Navy, it is profoundly humbling to address this body and contribute to your deliberations. John Adams described the Navy as the Shield of the Republic. May it always be large enough to remain so.