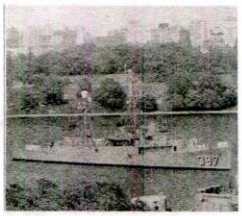
USS WILHOITE

DE-DER 397



MAY JUNE JULY AUGUST - 2025

Hi Guy's and Gals or Friends:

I've been trying to this newsletter out for a month. It is getting hard because I'm running out of what to print so you wiill enjoy getting it.

if you have any stories that you remember either about your family or navy days, please send to me!

I had asked for recipes to make cook book but only got one, but I had planned to put in several. If you are interested at all in getting a cookbook please send me recipes. I'll make up the book and these are not to sell. They are strictly for our families.

Our reunion is coming up in October and some of the things that Steve has lined up is the following: The Ft Worth Mint, Ft Worth Cattle Drive, The Flight Museum, Dallas Tour. There is a form for you to fill out if you plan attending our reunioin in Dallas.

I hope we have a good turn out!

We will attempt to decide on whether to have another one.

"Smooth Sailing"

Liz

THANK YOU FOR YOUR DONATIONS! IT GOES A LONG WAY TO HELP ON EXPENSIVES

Alcorn Michael (2025)
Berry David (2024)
Caldwell Brenda (2024)
Caldwell John (2024)
Compton Ed (2025)
Cusato Paul (2025)
Dutchuk John (2024)
Frederiksen Geri (2025)
Gennetti Fred (2024)
Gergens Steve (2025)
Horch Linda (2025)
Huff Roland (2024)
Hydro John (2025)
Johnson Mary (2025)
Knight James (2025)
Long Leroy (2025)
Marcotte Donald (2024)
Markley Ray (2025)
Mauldin Connie
McMurdo James (2025)
Morrissey Tom (2025)
Mullin James (2024)
Murphy Obie (2024)
Owens William (2024)
Parker David (2025)
Payson David (2025)
Pohl Art (2025)
Rider Elisabeth (2025)
Robinson Lee (2024)
Rott Donna (2025)
Shanahan, Jr John (2025)
Silhan Peter (2024)
Thompson Ross (2026)
Throm Larry (2024)
Torriglia Paul (2027)
Valiant Martha (2025)
West Helen (2024)
Wickizer Larry (2026)
Yonkofski Ben (2024)

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NAVY NEWS

AND

STORIES

ANCHORS AWAY FOR THE MUG CRUISE

The end of classes at Fort Schuyler marked the beginning of another big adventure and another significant life changing experience. We would soon board the Training Ship Empire State and sail for the Mediterranean and Europe for 3 months of intensive at sea training in the operation of a ship and to learn about life aboard a ship.

During the MUG year we had very little chance to board the training ship and explore. The ship had been unloaded and cleaned after the last cruise. Some maintenance was done by hired workers and watches were maintained by upper class cadets. After our examinations were complete and the results were in, the survivors began to be assigned tasks to reactivate the ship. Stores were loaded, compartments were cleaned, some
painting was performed. These grunt tasks fell on the Mug class directed by the upperclassmen. Then came moving day. We packed up our lockers in the fort and moved our gear to lockers on the ship.

Our time of living within the fort was over. On our return we would be assigned to the Dormitories (old WWII barracks) in 2 man rooms. On the ship we strung our racks. There were rectangular metal pipe frames 3 or 4 high that were our bunks. The top bunk was chained to the overhead and each lower bunk was suspended by chains from the one above. During the day you lifted up the upper bunk and all the lower bunks were also raised. This permitted access to the deck for cleaning. You were provided some line and a canvas tarp with grommets all around the edge. The idea was to run the lines through the grommets and then around the rectangular metal frame until the canvas was taut within the frame. On top of this were your mattress (in its
fart sack), a sheet and a pillow and blanket. The lockers were arranged in banks along one of the bulkheads. You were intermixed with upperclassmen. You were not permitted in your bunk during the work day nor were you permitted to sit on deck or lean on the ship railings. We now mustered in an assigned area on the ship for our morning formations. At first we would march
first we would march to the fort mess hall for meals. This was necessary until the ships galley and mess hall was functional. We were working so hard during that time that no one thought about how much we were already learning about readying a ship for sea. Soon the preparation work was nearing completion and it was time to start operating the ships machinery. We were reorganized into the divisions necessary for the operation of the ship. We all looked forward to getting assigned our engine and fire room jobs. We had seen the ship at the pier for a year and now we were living aboard. The boilers were being fired and the engines turned for test. This was all being done under the watchful eyes of licensed Merchant Mariners hired to train us during the cruise. Some of our Professors were licensed and were now to be our watch officers. Only a few Mugs were involved in engine room operation at this time. They were considered the lucky ones. The rest of us waited anxiously for our operational assignments.

ANCHORS AWAY FOR THE MUG CRUISE - Page 2

Then I was met with my first disappointment. I learned that there were Divisions identified as L1 and L2. As I recall L1 was to clean the ships heads, wash rooms and other spaces as designated. L2 was assigned to Mess Deck duty and cleaned the mess hall tables and the galley. Both Divisions wee working under the direction of the same Philippine cooks and cleaners who ran the mess hall and head cleaning operations at the Fort. While at the Fort the Philippine staff did all the cooking and cleaning except for our berthing spaces. One or two of my classmates that had smart mouthed with the Philippine cooks and cleaners were now subject to some well deserved retaliation. I was not one of the above. I learned that I would spend 2 weeks in L1 and then a second 2 weeks in L2. I was depressed. That all my classmates would later cycle through L1 and L2 on the same 2 week schedule was not consolation. I was an engineer and wanted to do whatever it was that engineers did. Those assignments would eat up the cruise time I should spend in the engineering spaces.

A second big problem hit. I was aware that each cadet would need a minimum of $50 for the cruise. I was not aware it was a lump sum that was required before you could board the ship for the cruise. Not having the $50 basically would cause me to drop out of school and loose my opportunity for a college degree. More than likely I would be picked up by the Draft in a short time. I already had the $10 my folks had scraped together for me for t he cruise. The plan was they would mail me more money as they could get it. They and I were panic stricken when I explained the requirement and consequence. I continued with my assigned duties but my mind was not in my work. I also had to arrange for my mail to be forwarded-another thing a "sailor" has to manage was being learned. Some even had to figure out how to manage Bank accounts at a long distance. I would not need to learn how to do that for a few years.

Finally departure day had arrived. The friend's, girl friends, relatives, and parents were permitted onto the pier to say their goodbyes. Everyone was mingling. I had no girlfriend –not possible with $2 per week total cash. I spotted my parents and could tell from the expressions on their faces that they could not get the money. My mother was teary eyed and said my Aunt was trying to get the money and get to the pier before the ship left.

Some had completed their goodbyes and were in process of final boarding. Just about that time I spotted my aunt coming toward us and pushing her way through he crowd---- her hand held high with some bills. There was a sharp turn in everyone's mood. Finally the ships speakers directed us to board and we went to our stations. Within minutes I was aboard ship. I cannot remember who I had to show the $50 or how it happened--it just happened. She saved my education and career with that one act on that one day. I have never forgotten that action and the impact it had on the rest of my life.

Some of my classmates were comfortable financially but I know there were others in same situation as I was--or equally close to financial drop off while trying to get an education.

Sometime later the ships whistle blew, the ship started to vibrate and we moved away from the pier.

The enormous number of hours being worked during the cruise preparation left everyone too tired to harass the Mugs. Now there was time. I can remember but cannot describe the overwhelming mix of feelings that I experienced at that moment. The situation was to change rapidly as it had after we were deposited into the hands of the Indoctrinators on our arrival at Fort Schuyler.

The schedule for everyone except L1 and L2 Divisions was Reveille, Breakfast, Quarters and a work day until 1600. After that it were dinner and sometimes a movie on deck--weather permitting-- until Taps. On top of this schedule was your Watch schedule. You would stand one or two 4 hour watches per day and then if off watch during the work day –you worked. The 2 engine rooms 2 fire room configuration of the Training ship provided ample watch stations for training the Mug class. Later single screw Training ships afforded fewer watch stations for training. Some make work watch stations resulted.

The Mugs had additional duties. In addition to carrying knives, matches and a 10" crescent wrench (Engineers) we had other duties. There were classes and homework. The classes had to do with the ship operation, the cultures we were to visit, our behavior ashore and the consequences for misbehavior. Watch standing and work days were the full day for upperclassmen.. The homework for engineers was to pick one engine room and fire room and make line drawings of every piping system in those spaces. Passing grades were required to get credit for the cruise toward your Coast Guard License and Graduation.

1 and L2 started their workdays earlier than everyone else and finished later but did not stand watches.

Then there was also the need to do your laundry in the wash tubs. This took more time away from any thought of sleep. Work clothes and underwear and socks were cleaned free on a regular schedule in the ships laundry. You kept your dirty laundry in a mesh laundry bag appropriately stamped with your name. Dress uniforms were another story.

The more financially comfortable could pay to have the uniforms (i.e. Dress Whites which were our Liberty Uniform) run through the ships laundry which helped to support the laundry operators pay their expenses. Others tried to wash them themselves. They required starch and really needed a Laundry press to complete. Washing the uniforms by hand was difficult. In order to get a uniform in a condition where the Officer of the Deckwould permit you off the ship it had to be clean, unwrinkled and have proper creases. The worst problem was trying to get the creases in the jacket and trousers so it did not look like you had slept in the uniform.

ANCHORS AWAY FOR THE MUG CRUISE - Page 4

I mentioned upper class now had time to spend "training" Mugs. After dinner that first night the word was passed for all Mugs to report to the Flammable storage space. This was a compartment in one of the ships holds where paint, solvent and any other flammable substance was stored. The space had ventilation but was warm and the fumes were still overwhelming. When I arrived I saw that all my classmates were already at a Brace. Here they were in formation, swaying side to side and forward and backward to maintain their bodies perpendicular to Mother Earth. I was directed to join them.

Remember that this was our first time at sea and not everyone was found to have a cast iron stomach. Some, including me, were already borderline sick even thought the sea was very calm. In this Brace we were given the new rules for our conduct and the new restriction on our movement and activities during the cruise. This included all the old rules but some new twists about how we were to make sure we removed ourselves from the path of any upper-classmen passing our location. Soon the warmth and fumes caused my queasiness to rise and I began to sweat as did several others. This immediately caught the attention of our captors and we began to get much undesired special attention. Then the first of my classmates got sick and let fly on the deck. The upper-class was on him like bees to honey. It was explained to him, and by example to us, that Mugs did not get sick on deck. They used their round hats to catch whatever corruption they were trying to use to contaminate the upper class men. Now it was warm, overwhelming with fumes and the smell of vomit. I and several others quickly removed our round hats and wretched until we doubled over. Of course we did not have permission to double over so we had to vomit while erect. Try to figure out how you do that and catch it in your hat. The answer is you don't. Whatever you bring up goes down your chest. A little goes into your hat and the rest onto the deck. Exactly the place you were told NOT to let you problem wind up was on the deck. The session continued for a while and apparently all of us seas sick prone types had now been identified. I seem to remember that the session ended when one of my classmates passed out and slumped to the deck. Sleep was a long way off after that session. It took a long time to clean up including washing the clothes and hats that had served as vomit receptacles.

One of the special punishments that resulted from this session was unique. Certain individuals (engineers) were given huge open end wrenches weighing in excess of 50 pounds. They were to have these with them at all times and were to sleep with them. I do not know how the individuals were selected for this task. I was just glad I was not one of them. I cannot remember the special punishment directed at the "deckies". My recollection is that the punishment ended when we reached our first port. The next morning was my first full day in L2. I was awakened early to clean the wash room sinks, deck, mirrors and the "sanitary troughs". The space had to be cleaned from the use it had overnight. After reville the Head had to be cleaned continuously maintained through the day. I do not remember when the shift ended.

I just know it was long.

The Head which was my station was in the very bow of the ship just under the main deck.

The acceleration from the ships pitching was bringing back memoeries of my session in the Flammable storage locker the previous night. I had to make sure there was toilet paper available for each of the stations on the troughs. Now the "sanitary troughs" replaced, what on land, is called a toilet bowl. It was a stainless steel trough just like what you use to feed cattle.

A large pipe flushed sea water in ar one end. The opposite end was lower with dowels. The person needing to use the facility simply sat his butt on the slats and did whatever he was going to do. Once in a while the trough drain would plug or ships motion would cause the trough to overflow onto the deck creating an unbelievable mess. This resulted in waste water rolling in waves back and forth across the terrazzo deck. You were expected to instantly and continuously re-sanitize the deck and the rest of the facilities affected by the overflow. If an upper class man ran out of toilet paper you would be subject to special punishment. The rolls of toilet paper were hung on pegs between each station. It was a congenial place like a neighborhood bar--unless you were a Mug. In that case you were subjected to all kinds of comments and jokes and had to respond to the request for school trivia while you tried to complete your necessary business. Every movement or action was subject to review by all the upper classmen who occupied the adjacent sets of slats. Then there were the jokers who would wait for what they considered an appropriate moment and drop some lighted toilet paper into the trough to flow under all the occupants. You either took the heat or got up. A quick decision was required and sometimes produced an undesirable result.

I had cleaned bathrooms regularly while living at home-no problem. I had worked regularly earning extra money with my father by cleaning out sewer drains for our neighbors in the city. This assignment to L2 was far worse than I could have imagined. My low level seasickness brought to fruition continuously for at least a couple of days, compounding the mess I had to clean up. I got to clean the troughs and get everything ready and clean to the satisfaction of first my Philippine supervisor and then for an inspecting officer. Toward the end of my 2 weeks I developed the required cast iron stomach and while still unpleasant duties-I felt they were tolerable and had become proud of the conditions I maintained in the Forward Head. I had received an excellent training and never appreciated or realiuzed it at the time. Further, IN ALL SERIOUSNESS,it was a valuable lesson in character building delivered in an unforgettable way. It was the type of training that could not have been delivered thoroughly under any other situation I can imagine. Then my 2 weeks was up and I was to move to L1 in the mess deck. I even got to brief my relief on the L1 duties in the forward head. I wanted to make sure he maintained it in the same saintary conditions that I had maintained during my tour. I had been the first on the duty station and was glad to pass the torch.

ANCHORS AWAY FOR THE MUG CRUISE - Page 6

The. Philippine Supervisor held a training session for all the new L1 members. As with the Heads, the Mess deck had to be cleaned before Breakfast from the uses of the previous night. Mid –Rats (midnight soup and sandwiches) had been served to the 0000 0400 watch. In addition there had been card games over night and the trash and dirty tables resulting from the general use of the Mess deck as a crews lounge area. The table had to be set with salt pepper and some standard list of condiments. There were garbage cans to be dumped over the fantail down the garbage chute. They had to be scrubbed clean. Food was served on steel trays and they had to be cleaned, stacked and readied for the next use. All of the food preparation area and machines (i.e. potato peelers, soup kettles, grills, steam tables, bread slicers, etc.) had to be cleaned and sanitized. Then there were any number of additional duties we were assigned. I seem to remember that at least one of us was assigned to assist with serving and cleaning up after Mid-rats. We did not get involved in food preparation except for cleaning the coffee urns and making sure there was ALWAYS a full supply of hot coffee. We worked very closely in support of those same men who had supported us (fed and cleaned after us) during our time at the Fort. If there had been any disrespect of the Philippine staff before an assignment to L1 or L2 it ended with completion of those duties. What might previously have been dismissed as grunt duties performed by the Philippine staff was appreciated for its true value. They were already critical members of the crew performing vital functions of running a ship. We were trying to learn to become contributing members of the ships crew and they were teaching us. The overall lesson was that there is no small or insignificant job on a ship.

Around this time we made our first port of call. It was a refueling stop, overnight, in Ceuta, North Africa. It was just inside the Strait of Gibraltar. There are many humorous stories about our port calls which I will cover separately. They provided a vital relief from the situation we were living at sea—as MUGS.

Then it came time for me to learn the engineer's trade. I was replaced in L1 and moved to an engineering Division and was assigned a watch in the Fire room. In the Fire room I was what is called a "wiper". I performed general clean up and kept a full supply of coffee. I was given a clipboard with a sheet containing a form that listed all the pressure, temperature and level reading that I had to record each hour. We were taught how to judge the correctness of air flow by the color of the flame in the boilers and the presence of smoke emanating from the stack, how to start and stop each different piece of machinery, how to adjust packing on the pumps, how to set up and run the purifiers.

Another key and continuous observation was the boiler water level and the color of smoke escaping up the ships stack. One thing we were not permitted to do was to work on the required line diagrams of the piping systems.

This had to be done on our time,which usually meant a Saturday afternoon or sometime Sunday when we were off watch. Once an hour the Burners had to be changed in the boiler and the old ones cleaned. The fireman would shut off the oil to a burner, shut off the air, pull the hot burner and pass it to you in exchange for the clean one (i.e. with the correct nozzle and tip size) you had been holding. The burners were at temperatures exceeding 200 degrees and were full of equally hot Bunker C fuel---which flowed like pancake syrup at room temperature. You would quickly set the burner in a section of pipe and fasten a steam hose to the inlet connection. You then passed steam through the nozzle to flush the oil. Then you would take the burner assembly apart and clean and inspect the burner plate and tip and install or reinstall the tips to provide a clean burner ready for use. It would be stacked in a rack that allowed the fireman to identify the size of the burner tip installed in each clean burner. This was all done at high speed because when the old burner was shut off steam pressure would IMMEDIATELY begin to drop. If it dropped too far the ships generators would trip off the line and the ship would be powerless. Now if this sounds like a risky evolution it does not compare with the situation existing when the ship begins to maneuver. It becomes necessary to continuously change burners at a very high speed to keep the generation of steam and steam pressure at the levels necessary to match the changes in ship speed including when the engines were stopped. In addition to handling the burners the wiper had to ready and light the rag torch used to light any new burnersinserted into the boiler.

There is what is called the Special Sea Detail. These people are the most capable in each of the jobs critical to the ships safety. The best Helmsman, Throttleman, Fireman, water ender, etc. They are assigned to man those critical stations during maneuvers. It may appear to be chaos in the firing aisle during this time with lots of shouting of orders and people running through their jobs at top speed. When newly assigned and witnessing, as well as participating in, these high speed evolutions you become mesmerized by TOTALLY LOST in your job and nothing else can be in your thoughts. Nothing is more important than keeping the pressure up, not lifting relief valves, and keeping the proper water level in the boiler as well as keeping the ships stack free of smoke. It is very exciting and offsets the boredom of steady steaming in the middle of the ocean.

I mentioned General cleanup duties. This included cleanup in out of the way area. Places like the hot humid spaces below the deck plates in the ships bilge. Water and oil were always present in some quantity and your job was to clean it up------to the point where the hull and frames could be chipped and painted. Chipping and painting was an extension of the cleanup duties. It was not a pleasant work environment and required higher than normal maintenance of your dungarees and shirts which readily became wet and stained with fuel oil. The most difficult problem was keeping your ORIGINALLY

White round hat in a condition that would pass morning inspection. Some of the Mugs spent many hours working the Bilges to work off demerits or just as a part of the work day assignments. The story was that some of those people began to believe that the light coming down to them through the holes in the deck plate were actually the "stars in the sky".

One lucky person would be selected to learn how to be "Oil King". The oil King was an upper classmen who kept track of the level of fuel oil in all the ships tanks and transferred it to the fire room tanks as needed. He also was in charge of moving oil around the ship when refueling. It was a plum job to learn. Sometime during the 2 weeks you were required to complete burner change operations by yourself with the upper classman watching and helping as required. There was good reason for this as will be explained later.

Before I knew it my 2 weeks in the fire room was up and I moved to the engine room. I had not gained the confidence I had hoped in the fire room and now I was in a new job. Here we did the standard cleaning-above and below the deck plates. On occasion we were able to assist in repair of some piece of machinery. We were taught the rounds for checking the pressure temperature and flow readings required every hour. We learned how to operate the ship evaporators to make fresh water. Routine adjustments of packing and steam control vales were part of the education. We learned about the procedure for operating the ships throttles in response to bells from the Bridge. Pumping and purifying fluids, transferring ballast and water to maintain trim were also ongoing operations we observed and participated in during this 2 weeks.

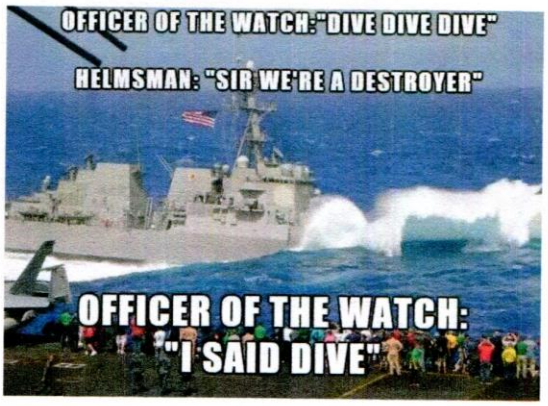
The upper class started to become somewhat more like our shipmates and less like our captors. I was suspicious and my classmates were observing the same change in our treatment. What we were to learn was that on the return trip to the USA the seniors would be freed of any watch duties. We were to take over the duties of the upper classmen and the soon to be senior class would take over the Supervisory roles in the engineering spaces. The catch was that that would only happen IF the MUGS had become sufficiently experienced to run the boilers and machinery. That was determined by the Licensed Watch Officers. It was necessary to assure that the ship had a competent crew when it next headed to sea. The new senior class would vacation on the trip back across the Atlantic. WE MUGS had proved competent to take over the jobs we had been taught. It felt good to be the ones operating the ships engineering plant including maneuvering the ship back to our home pier at Fort Schuyler.

I cannot express my personal feelings of satisfaction and success at the end of that Cruise. The family, friends, and girl friends on the pier at ship arrival were meeting very different people than they had said Goodbye to a couple months earlier.

The next year would see us not having to work off as many Demerits and thereby having more weekends away from the Fort. I found that visits home became less important and would stay at my roommate's home near the Fort

`ANCHORS AWAY FOR THE MUG CRUISE - Page 9

I preferred to spend the money to travel to Long Island to visit for just an evening and morning before having to head back to the Fort. The schedule at the Fort precluded much else. There were Saturday morning classes and Admirals Inspection after class in the morning. If lucky and free of Demerits you could leave the Fort by noon. Travel to Long Island was several hours but faster by illegally hitch hiking. Hitch hiking still would not get me home before supper. Then I had to head back by before 4 PM on Sunday to finish studies and assignments required for Monday. My family finances were to improve and even I was able to find a girl friend and take in a movie -once in a while. It provided another incentive to stay in the city and a place to spend my newly acquired wealth.



What is an icicle but a stiff upper drip?

A CHILD asked Santa Claus, "How did your reindeer get their names?"

Santa replied, "I name them after memories, like Prancer frolicking through the snow!"

"What about Donner?" the child asked.

A shadow settled on Santa's face, and after a moment he began: "The year was 1847, and snowfall had trapped us in the Sierra Nevada ...."

WHY DID SANTA visit his doctor before the holidays? He always gets a flue shot before he slides down chimneys.

TWO EGGS, a bagel and some sausage walk into a bar. "Bartender, my friends and I would like a cold one," says one of the eggs.

"Sorry," the bartender replies. "We don't serve breakfast."

A CHILD couldn't decide what to ask Santa for, so her mother gave her a pre-printed list of "presents for a good little girl."

She looked gravely at it for a minute, then asked, "Do you have a list for a bad little girl?"

DID YOU HEAR about the cheese that's been working out? Dude's shredded.

THERE ARE THREE WAYS to play hockey: rough, rougher, and "I'll help you find your teeth if you help me find mine."

ACCORDING TO unofficial sources, a new simplified income-tax form has only four lines:

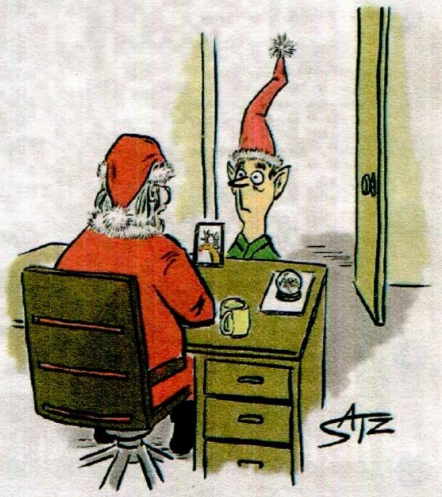
- What was your income for the year?
- What were your expenses?
- What did you have left?
- Send it in.

MY WIFE AND I let astrology come between us. It Taurus apart.

"I WORRY about ridiculous things – you know, how does a guy who drives a snowplow get to work in the morning? That can keep me awake for days." – *Billy Connolly*

"Cheer up, Mr. Claus. At least someone believes you're real."

"And here's one I wrote about my wife complaining about my playing and singing while she's trying to get to sleep."



"I should consider keeping an exercise bike for myself? Just what are you trying to say?"

At A Glance 2024- 2025

Each year, as directed by the Congress, the Department of Defense submits a report with the President's budget describing the Navy's plan for its future fleet for the next 30 years. In this report, the Congressional Budget Office analyzes the Navy's 2025 plan and estimates its costs. Overall, the Navy wants to build a larger fleet whose firepower is distributed among more ships than it is today.

Cost. The Navy's 2025 plan would cost 46 percent more annually in real terms (that is, adjusted to remove the effects of inflation) than the average amount appropriated over the past 5 years. CBO estimates that total shipbuilding costs would average $40 billion (in 2024 dollars) over the next 30 years, which is about 17 percent more than the Navy estimates. CBO's estimates for the 2025 plan range from 8 percent to 16 percent higher in real terms than its estimates for the three alternatives in the Navy's 2024 plan. Including the costs of operating and maintaining those ships, buying new aircraft and weapons, and funding the Marine Corps, the Navy's total budge would need to increase from $255 billion today to $340 billion (in 2024 dollars) in 2054 to implement the 2025 plan.

Fleet Size. The number of battle force ships would increase from 295 today to 390 in 2054. Before increasing, however, the fleet would become smaller in the near term, falling to 283 ships in 2027.

Purchasing Plan. The Navy would purchase a total of 364 new combat ships and combat logistics and support ships. Overall, under the 2025 plan, the Navy would buy more current generation ships and more smaller ships than it would have purchased under any of the 2024 plan's three alternatives.

Fleet Capabilities. The fleet's firepower would be reduced over the next decade, but thereafter, as the fleet grew, its firepower would increase and become distributed among more ships.

Industrial Base. Over the next 30 years, the nation's shipyards would need to produce substantially more naval tonnage than they have produced over the past 10 years. The rate of production of nuclear-powered submarines, in particular, would need to increase significally.

Summary

..The Department of Defense (DoD) submitted the Navy's shipbuilding lan for fiscal year 2025 to the Congress on March 18, 2024. The Congressional Budget Office is required by law to analyze that plan and assess its costs.

The Navy's 2025 plan comprises a single official plan and one alternative that could be implemented if budgetary resources were not available to pay for the 2025 plan. (The 2023 and 2024 plans each comprised three alternatives, none of which was favored over the others.) CBO focused its analysis on the official 2025 plan. Like the past two years' plans, the 2025 plan aims at building a larger fleet whose firepower is greater and distributed among more ships than it is today.

The average annual cost of carrying out the 2025 plan, which covers fiscal years 2025 to 2054, is $40.1 billion (in 2024 dollars), including $35.8 billion for new-ship construction, CBO estimates (see Table 1). The Navy's 2025 plan differs from the alternatives in the 2024 plan in several ways. Most notably, it would have the Navy buy fewer next-generation attack submarines and large surface combatants and more current-generation ships. Nevertheless, in real terms (that is, adjusted to remove the effects of nflation), the costs of the 2025 plan are substantially higher than those of the alternatives in the 2024 plan because unit costs would be higher for almost all major shipbuilding programs and because the current plan calls for purchasing more ships.

Over the next 30 years, the nation's shipyards would need to produce substantially more naval tonnage than they have produced over the past 10 years. The rate of production of nuclear-powered submarines, in particular, would need to increase significantly," reads the repor"Over the past decade, the amount of tonnage under con-struction at the nation's shipyards increased by 80 per-cent," it adds. "Under the 2025 plan, the amount of naval tonnage that the Navy wants to buy would increase further, although demand would be greater for some types of ships than for others. Aircraft carrier construction would remain fairly steady, but the tonnage of submarines, surface combatants, and amphibious warfare ships under construction from 2030 to 2054 would be 50 percent higher, on average, than it is today."

President Donald Trump signed into law a new policy aimed at revitalizing an American shipbuilding industry that has fallen behind production levels of its rivals from the People's Republic China.

In an April 8 hearing of Navy leadership before the Senate Armed Services Subcommittee on Seapower, service officals voiced concerns regarding stagnant shipbuilding and what that could mean for success in great power conflicts.

The USS Gerald R. Ford (CVN 78) launched in 2017 as the largest, most powerful warship the world had ever seen - ten times larger than the USS Langley (CV 1), America's first aircraft carrier.

The Warship Is the Ford-Class Aircraft Carrier Worth the Cost?

Summary and Key Points: The Ford-class aircraft carriers, the biggest warships sailing today, despite facing years of delays, cost overruns, and criticisms, have revolutionized maritime power projection with groundbreaking technologies. These include electromagnetic propulsion, advanced computer automation, electric weapons elevators, and unprecedented electrical power, enabling a higher sortie rate.

While initially plagued by high costs, the class is designed for long-term savings with reduced crew requirements and maintenance costs. The USS Ford's successful shock trials in 2022 demonstrated its resilience.

-The Ford-class represents a pivotal shift in naval warfare, showcasing the U.S. Navy's commitment to innovation and operational excellence.

Following years of delays, cost overruns, and Congressional criticisms, some might be inclined the question the wisdom of the U.S. Navy's Ford-class aircraft carriers, despite the known reality that the new platforms have ushered in a new era in maritime power projection.

Meet the Ford-Class

The Ford-class is afloat after no small amount of challenge. However, upon evaluation, one needs to consider the scope and depth of its accomplishments. Clearly, its shortcomings, failings, and greatest benefits all pertain to the ambitious and ultimately successful effort to introduce many new unprecedented technologies into a platform at the same time.

The project was ambitious. Years later after much duress, the ship is operational with electromagnetic propulsion, breakthrough computer automation, electric weapons elevators, unprecedented on-board electrical power, and of course a much larger deck space to support a higher sortie rate.

If the Navy is to blame in any way for the ship's problems, one might look at the sheer ambition of the project.

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The Gerald R. Ford-class nuclear-powered aircraft carriers are currently being constructed for the United States Navy, which intends to eventually acquire ten of these ships in order to replace current carriers on a one-for-one basis, starting with the lead ship of her class, Gerald R. Ford (CVN-78), replacing Enterprise (CVN-65), and later the Nimitz-class carriers. The new vessels have a hull similar to the Nimitz class, but they carry technologies since developed with the CVN(X)/CVN-21 program,[N 1] such as the Electromagnetic Aircraft Launch System (EMALS), as well as other design features intended to improve efficiency and reduce operating costs, including sailing with smaller crews.[15] This class of aircraft carriers is named after former U.S. President Gerald R. Ford.[16] CVN-78 was procured in 2008 and commissioned into service in July 2017. The second ship of the class, John F. Kennedy (CVN-79), is scheduled to enter service in 2025.

The ability to carry up to 90 aircraft, including the Boeing F/A-18E/F Super Hornet, Boeing EA-18G Growler, Grumman C-2 Greyhound, Northrop Grumman E-2 Hawkeye, Lockheed Martin F-35C Lightning II, Sikorsky SH-60 Seahawk helicopters, and unmanned combat aerial vehicles.

The biggest visible difference from earlier supercarriers is the more aft location of the island (superstructure).[26] The Gerald R. Ford-class carriers will have a reduced whole-life cost due in part to reduced crew size.[18] These ships are intended to sustain 160 sorties per day for 30-plus days, with a surge capability of 270 sorties per day. Director of Operational Testing Michael Gilmore has criticized the assumptions used in these forecasts as unrealistic and has indicated sortie rates similar to the 120/240 per day of the Nimitz class would be acceptable.

Development

The current Nimitz-class aircraft carriers in US naval service have been part of United States power projection strategy since Nimitz was commissioned in 1975. Displacing about 100,000 tons when fully loaded, a Nimitz-class carrier can steam in excess of 30 knots (56 km/h; 35 mph), cruise without resupply for 90 days, and launch aircraft to strike targets hundreds of miles away.[30] The endurance of the Nimitz class is exemplified by USS Theodore Roosevelt, which spent 159 days underway during Operation Enduring Freedom without visiting a port or being refueled.

The Nimitz design has accommodated many new technologies over the decades, but it has limited ability to support the most recent technical advances. As a 2005 Rand report said, "The biggest problems facing the Nimitz class are the limited electrical power generation capability and the upgrade-driven increase in ship weight and erosion of the center-of-gravity margin needed to maintain ship stability."

THE GERALD fORD BATTLESHIP - Page 3

Development

With these constraints in mind, the US Navy developed what was initially known as the CVN-21 program, which evolved into CVN-78, Gerald R. Ford. Improvements were made through developing technologies and more efficient design. Major design changes include a larger flight deck, improvements in weapons and material handling, a new propulsion plant design that requires fewer people to operate and maintain, and a new, smaller island that has been pushed aft. Technological advances in electromagnetics have led to the development of an Electromagnetic Aircraft Launch System (EMALS) and an Advanced Arresting Gear (AAG). An integrated warfare system, the Ship Self-Defense System (SSDS), has been developed to allow the ship to more easily take on new missions.

Flight deck

Aerial view of Gerald R. Ford (CVN-78, bottom) alongside USS Harry S. Truman (CVN-75, top), a ship of the preceding Nimitz class

Catapult No. 4 on the Nimitz class cannot launch fully loaded aircraft because of low wing clearance along the edge of the flight deck.

The movement of weapons from storage and assembly to the aircraft on the flight deck has also been streamlined and accelerated. Ordnance will be lifted to the centralized rearming location via higher-capacity weapons elevators that use linear motors.[35] These elevators are located so that ordnance need not cross any areas of aircraft movement, thereby reducing traffic problems in the hangars and on the flight deck. In 2008, Rear Admiral Dennis M. Dwyer said these changes will make it hypothetically possible to rearm the airplanes in "minutes instead of hours".

Power Generation

The new Bechtel A1B reactor for the Gerald R. Ford class is smaller and simpler, requires fewer crew, and yet is far more powerful than the Nimitz-class A4W reactor. Two reactors will be installed on each Gerald R. Ford-class carrier, providing a power generation capacity at least 25% greater than the 550 MW (thermal) of the two A4W reactors in a Nimitz-class carrier.[37] The portion of thermal power allotted to electrical generation will be tripled.

Power generation (cont)

The propulsion and power plant of the Nimitz-class carriers were designed in the 1960s, when onboard technologies required less electrical power. "New technologies added to the Nimitz-class ships have generated increased demands for electricity; the current base load leaves little margin to meet expanding demands for power."

The Gerald R. Ford-class ships convert steam into power by piping it to four main turbine generators (MTG) to generate electricity for major ship systems, and the new electromagnetic catapults. The Gerald R. Ford-class ships use steam turbines for propulsion.

A larger power output is a major component of the integrated warfare system. Engineers took extra steps to ensure that integrating unforeseen technological advances onto a Gerald R. Ford-class aircraft carrier would be possible. The Navy expects the Gerald R. Ford class will be part of the fleet for 90 years, until the year 2105, which means that the class must successfully accept new technology over the decades. Only half of the electric power generation capacity is used by currently planned systems, with half remaining available for future technologies.

Electromagnetic Aircraft Launch System

Main article: Electromagnetic Aircraft Launch System

The Electromagnetic Aircraft Launch System (EMALS) launches aircraft by means of a catapult employing a linear induction motor rather than the steam piston used on the Nimitz class. The EMALS accelerates aircraft more smoothly, putting less stress on their airframes. The EMALS also weighs less, is expected to cost less and require less maintenance, and can launch both heavier and lighter aircraft than a steam piston-driven system. It also reduces the carrier's requirement for fresh water, thus reducing the demand for energy-intensive desalination.

Advanced Arresting Gear landing system

Main article: Advanced Arresting Gear

The Electromagnets are also being used in the new Advanced Arresting Gear (AAG) system. The current system relies on hydraulics to slow and stop a landing aircraft.

Electromagnets are also being used in the new Advanced Arresting Gear (AAG) system. The current system relies on hydraulics to slow and stop a landing aircraft. While the hydraulic system is effective, as demonstrated by more than fifty years of implementation, the AAG system offers a number of improvements. The current[needs update] system is unable to capture unmanned aerial vehicles (UAVs) without damaging them due to extreme stresses on the airframe. UAVs do not have the necessary mass to drive the large hydraulic piston used to trap heavier, manned airplanes. By using electromagnetics, the energy absorption is controlled by a turbo-electric engine. This makes the trap smoother and reduces shock on airframes. Even though the system will look the same from the flight deck as its predecessor, it will be more flexible, safe, and reliable, and will require less maintenance and manning.

Sensors and self-defense systems

Diagram of AN/SPY-3 vertical electronic pencil beam radar conex projections

An Evolved SeaSparrow Missile launching

Another addition to the Gerald R. Ford class is an integrated active electronically scanned array search and tracking radar system. The dual-band radar (DBR) was being developed by Raytheon, for both the Zumwalt-class guided missile destroyers and the Gerald R. Ford-class aircraft carriers. The island can be kept smaller by replacing six to ten radar antennas with a single six-faced radar. The DBR works by combining the X band AN/SPY-3 multifunction radar with the S band AN/SPY-4 Volume Search Radar (VSR) emitters, distributed into three phased arrays. The S-band radar was later deleted from the Zumwalt-class destroyers to save money.

The three faces dedicated to the X-band radar handle low-altitude tracking and radar illumination, while the three S-band faces handle target search and tracking regardless of weather. "Operating simultaneously over two electromagnetic frequency ranges, the DBR marks the first time this functionality has been achieved using two frequencies coordinated by a single resource manager."

This new system has no moving parts, therefore minimizing maintenance and manning requirements for operation. The AN/SPY-3 consists of three active arrays and the Receiver/Exciter (REX) cabinets above-decks and the Signal and Data Processor (SDP) subsystem below-decks. The VSR has a similar architecture, with the beamforming and narrowband down-conversion functionality occurring in two additional cabinets per array. A central controller (the resource manager) resides in the Data Processor (DP). The DBR is the first radar system that uses a central controller and two active-array radars operating at different frequencies. The DBR gets its power from the Common Array Power System (CAPS), which comprises Power Conversion Units (PCUs) and Power Distribution Units (PDUs). The DBR is cooled via a closed-loop cooling system called the Common Array Cooling System (CACS).

The Enterprise Air Surveillance Radar (EASR) is a new design surveillance radar that is to be installed in the second Gerald R. Ford-class aircraft carrier, John F. Kennedy (CVN-79), in lieu of the Dual Band radar. The America-class amphibious assault ships starting with LHA-8 and the planned LX(R) will also have this radar. The EASR suite's initial per-unit cost will be about $180 million less than the DBR, for which the estimate is about $500 million.

AN/SEQ-3 laser prototype during an on-board test

Possible upgrades

Future defense systems, such as free-electron laser directed-energy weapons, electric armor, and tracking systems will require more power. "Only half of the electrical power-generation capability on CVN-78 is needed to run currently planned systems, including EMALS. CVN-78 will thus have the

Possible Upgrades (cont)

power reserves that the Nimitz class lacks to run lasers and electric armor." The addition of new technologies, power systems, design layout, and better control systems results in an increased sortie rate of 25% over the Nimitz class and a 25% reduction in manpower required to operate.

Waste management technology will be deployed on Gerald R. Ford. Co-developed with the Carderock Division of the Naval Surface Warfare Center, PyroGenesis Canada Inc. - was in 2008 awarded the contract to outfit the ship with a Plasma Arc Waste Destruction System (PAWDS). This compact system will treat all combustible solid waste generated on board the ship. After having completed factory acceptance testing in Montreal, the system was scheduled to be shipped to the Huntington Ingalls shipyard in late 2011 for installation on the carrier.

The Navy is developing a free-electron laser (FEL) to defend against cruise missiles and small-boat swarms.

omputer-aided design

Newport News Shipbuilding used a full-scale three-dimensional product model developed in Dassault Systèmes CATIA V5 to design and plan the construction of the Gerald R. Ford class of aircraft carriers.3D computer-aided design.

The CVN 78 class was designed to have better weapons movement paths, largely eliminating horizontal movements within the ship. Current plans call for advanced weapons elevators to move from storage areas to dedicated weapons handling areas. Sailors would use motorized carts to move the weapons from storage to the elevators at different levels of the weapons magazines. Linear motors are being considered for the advanced weapons elevators. The elevators will also be relocated such that they will not impede aircraft operations on the flight deck. The redesign of the weapons movement paths and the location of the weapons elevators on the flight deck will reduce manpower and contribute to a much higher sortie generation rate.

Crew accommodations

A typical berthing on Gerald R. Ford-class aircraft carriers of three racks per section.

Systems that reduce crew workload have allowed the ship's company on Gerald R. Ford-class carriers to total only 2,600 sailors, about 700 fewer than a Nimitz-class carrier. The massive, 180-man berthing areas on the Nimitz class are replaced by 40-rack berthing areas on Gerald R. Ford-class carriers. The smaller berthings are quieter and the layout requires less foot traffic through other spaces. Typically the racks are stacked three high, with locker space per person. The berthings do not feature modern "sit-up" racks with more headroom; bottom and middle racks only accomodate a sailor lying down.

CXrew Accomodations (cont)

Each berthing has an associated head, including showers, vacuum-powered septic-system toilets (no urinals since the berthings are built gender-neutral) a**nd sinks to reduce travel and tr**affic to access those facilities. WiFi-enabled lounges are located across the passageway in separate spaces from the berthing's racks.

Since deployment, the first two carriers of the class have run into problems with the plumbing of the waste system. The pipes were too narrow to handle the load of users, resulting in the vacuum failing and repeatedly clogged toilets. To alleviate the problem, specialized acidic cleaning solutions have been used to flush out the sewage system. These cleaning treatments cost about $400,000 each time, resulting in a substantial unplanned increase in the lifetime expense of operating these ships according to the GAO. These cleanings will have to be performed for the lifetime of the ship.

Medical facilities

Gerald R. Ford, first in the class, has an on-board hospital that includes a full laboratory, pharmacy, operating room, 3-bed intensive care unit, 2-bed emergency room, and 41-bed hospital ward, staffed by 11 medical officers and 30 hospital corpsmen.

Construction

Gerald R. Ford while under construction at Newport News, along with her construction crew, 2013

Construction of the first vessel in the class, CVN-78 Gerald R. Ford, officially began on 11 August 2005, when Northrop Grumman held a ceremonial steel cut for a 15-ton plate that would form part of a side shell unit of the carrier, but construction began in earnest in early 2007.[60] The carrier was assembled at Newport News Shipbuilding, a division of Huntington Ingalls Industries (formerly Northrop Grumman Shipbuilding) in Newport News, Virginia. This is the only shipyard in the United States that can build nuclear-powered aircraft carriers.

In 2005, Gerald R. Ford was estimated to cost at least $13 billion: $5 billion for research and development plus $8 billion to build. A 2009 report raised the estimate to $14 billion, including $9 billion for construction. In 2013, the life-cycle cost per operating day of a carrier strike group (including aircraft) was estimated at $6.5 million by the Center for New American Security.

Originally, a total of three carriers were authorized for construction, but if the Nimitz-class carriers and Enterprise were to be replaced one-for-one, 11 carriers would be required over the life of the program. The last Nimitz-class aircraft carrier is to be decommissioned in 2058.

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In a speech on 6 April 2009, Secretary of Defense Robert Gates announced that each Gerald R. Ford-class carrier would be built over five years, yielding a "more fiscally sustainable path" and a 10-carrier fleet after 2040. That changed in December 2016, when Navy Secretary Ray Mabus signed a Force Structure Assessment calling for a 355-ship fleet with 12 aircraft carriers. If enacted, this policy would require each Gerald R. Ford-class carrier to be built in three to four years.

First-of-class type design changes

As construction of CVN-78 progressed, the shipbuilder made first-of-class type design changes, which it will use to update the model before the construction of the remaining vessels of its class. Several of these design changes related to EMALS configuration changes, which required electrical, wiring, and other changes within the ship. The Navy anticipates additional design changes stemming from remaining advanced arresting gear development and testing. According to the Navy, many of these 19,000 changes were programmed into the construction schedule early on—a result of the government's decision, at contract award, to introduce improvements to the ship's warfare systems during construction, which are heavily dependent on evolving commercial technologies.

Naming

There was a movement by the USS America Carrier Veterans' Association to have CVN-78 named after America rather than after President Ford. Eventually, the amphibious assault ship LHA-6 was named America.

On 27 May 2011, the U.S. Department of Defense announced the name of CVN-79 would be USS John F. Kennedy.

On 1 December 2012, Secretary of the Navy Ray Mabus announced that CVN-80 would be named USS Enterprise. The information was delivered during a prerecorded speech as part of the deactivation ceremony for the previous Enterprise (CVN-65). The future Enterprise (CVN-80) will be the ninth U.S. Navy ship to bear this name.

On 20 January 2020, during a ceremony in Pearl Harbor, Hawaii, on Martin Luther King Jr. Day, Acting Secretary of the Navy Thomas B. Modly named a future Gerald R. Ford-class aircraft carrier in honor of World War II hero Doris Miller. This will be the first aircraft carrier named for an African American, and the first aircraft carrier to be named for a sailor in the enlisted ranks. It is the second ship named in honor of Miller, who was the first African American to be awarded the Navy Cross.

On 13 January 2025, President Joe Biden announced that CVN-82 and CVN-83 would be named after former Presidents Bill Clinton and George W. Bush respectively.

I hope you enjoyed the piece on The Gerald Ford Battleship as much as I did learning about our largest Battleship. I'm sure a lot of you sailors probably already know about this fine ship and eventually will have another in the not so distance future.