# SHIP OPERATIONS

($ in millions)

| | FY 2001 Actual | Price Change | Program Change | FY 2002 Estimate | Price Change | Program Change | FY 2003 Estimate |
|---|---|---|---|---|---|---|---|
| **Active Forces** | **7,063.0** | **+172.9** | **+224.9** | **7,460.8** | **+154.0** | **+685.0** | **8,299.8** |
| Mission and Other Ship Operations | 2,337.8 | +40.8 | -53.2 | 2,325.4 | +40.8 | +76.7 | 2,442.9 |
| Operational Support and Training | 516.0 | +6.8 | +3.0 | 525.9 | +18.6 | +45.2 | 589.7 |
| Intermediate Maintenance | 390.5 | +4.6 | -14.9 | 380.2 | +23.2 | +2.8 | 406.2 |
| Depot Maintenance | 2,561.1 | +79.5 | +274.6 | 2,915.2 | +33.3 | +587.9 | 3,536.4 |
| Depot Operations Support | 1,257.7 | +41.2 | +15.2 | 1,314.1 | +38.1 | -27.6 | 1,324.6 |
| **Reserve Forces** | **143.8** | **+1.0** | **-9.6** | **135.2** | **+2.5** | **+26.6** | **164.3** |
| Mission and Other Ship Operations | 57.1 | +0.3 | -3.7 | 53.7 | +0.9 | +13.6 | 68.2 |
| Operational Support and Training | 8.6 | +0.1 | -8.2 | 0.5 | +0.1 | 0.0 | 0.6 |
| Intermediate Maintenance | 11.5 | -0.5 | -3.8 | 7.2 | +0.2 | +4.3 | 11.7 |
| Depot Maintenance | 64.5 | +1.1 | +5.8 | 71.4 | +1.3 | +7.6 | 80.3 |
| Depot Operations Support | 2.1 | 0.0 | +0.3 | 2.4 | 0.0 | +1.1 | 3.5 |
| Total | 7,206.8 | +173.9 | +215.3 | 7,596.0 | +156.5 | +711.6 | 8,464.1 |

Ship Operations funds the operating tempo (OPTEMPO), intermediate maintenance, depot level maintenance, engineering support, and logistical support to maintain and deploy combat-ready ships to ensure control of the sea. From this activity, the Navy purchases ship fuel, repair parts, utilities, consumable supplies, and repair maintenance at public and private shipyards, as well as Fleet intermediate maintenance facilities. In addition, this category includes the cost to charter logistics support and other ships from the Military Sealift Command (MSC), and includes payments to the Department of Energy (DOE) for consumed nuclear fuel as well as storage and processing of expended nuclear cores. The FY 2003 Ship Operations budget increases by $868.1 million from the FY 2002 level. The increase is composed of a price increase of $156.5 million and net program increases of $711.6 million (+9.2 percent).

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The FY 2002 budget request provides $8,299.8 million for Active ship operations, which includes price growth of $154.0 million and program increases of $685.0 million (+9.0 percent) above the FY 2002 level. This price increase results primarily from increases in Working Capital Fund (WCF) rates ($151.4 million), civilian pay raises (including CSRS and health care accrual charges) ($44.9 million) and general inflation charges (44.4 million), offset by decreases in fuel costs ($–86.7 million).

The key components of the $685.0 million net program increase for the active forces are described below:

- $76.7 million increase in Mission and Other Ship Operations for per diem costs due to the transition of AOE ships to the Military Sealift Command ($45.6 million), increase due to the addition of Patrol Coastal functions ($20.4 million); and increases due to the change in ship mix and increased operating months ($15.2 million); offset by decreases in other MSC services ($-10.3 million).
- $45.2 million increase in Operational Support and Training associated primarily with increases for AEGIS ship support ($17.0 million), surface ship configuration management program ($14.4 million), support for the introduction of Seawolf class submarines to the fleet ($7.0 million), as well as in the Shipboard Electromagnetic Compatibility Program (SEMCIP) investigations ($1.3 million) and a ramp-up in the Deep Submergence Systems Program (DSSP) to support the new One Atmosphere Diving Program ($4.4 million)
- $587.9 million increase in Ship Depot Maintenance funds the attainment of increased notional requirements for depot maintenance availabilities ($+310.1 million), and an increased level of Continuous Maintenance (depot level work performed outside of a full scheduled maintenance availability period) ($+25.6 million). The funded amount of depot maintenance requirements increases from 89.3 percent in FY 2002 to 95.5 percent in FY 2003. Of this, $353.7 million was a transfer of funding for the Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility from Navy Ship Depot Operations Support (Subactivity Group (SAG) 1B5B to Ship Depot Maintenance (SAG 1B4B) in order to consolidate depot maintenance funding in one SAG. These increases are offset by completion of repairs to USS COLE in FY 2002 ($-101.5 million).
- $-27.6 million decrease in Depot Operations Support, comprised of increased funding for Fleet Modernization Program efforts for CVN68, FFG7, CG47, SSN, LHD and LPD4 class ships ($+276.8 million); increases in Enterprise Resource Planning (ERP) effort for regional maintenance that will benefit both the fleets and the support establishment, including deployment to initial afloat units, supervisors of shipbuilding, a depot level activity, and consolidation of national systems ($+100.5 million); offset by decreases in Supervisor of Shipbuilding and Fleet Technical Support Center requirements ($-51.2 million), and the transfer of the Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility to Ship Depot Maintenance ($-353.7 million).

The FY 2003 Operation and Maintenance, Navy Reserve (OMNR) Ship Operations request includes $2.5 million in price growth, and a program increase of $26.6 million (19.3 percent) above the FY 2002 level, associated primarily with the net increase of one Reserve

Battle Force ship in FY 2003, an increase in depot and intermediate maintenance to obtain 95% of the maintenance requirement funding goal versus 92% in FY 2002, and an increase in ship operations funding to reach deployed and non-deployed OPTEMPO goals based on repricing analysis of the ship operations model since the FY 2002 Amended Budget Submission .

| Ship Inventory (End of Year) | FY 2001 Actual | Change | FY 2002 Estimate | Change | FY 2003 Estimate |
|---|---|---|---|---|---|
| Navy Active | 259 | -2 | 257 | -8 | 249 |
| MSC Charter/Support | 42 | +1 | 43 | - | 43 |
| **Battle Force Ships (Active)** | 301 | -1 | 300 | -8 | 292 |
| Reserve Battle Force | 15 | -1 | 15 | +1 | 16 |
| Reserve Non-Battle Force | 11 | -1 | 10 | - | 10 |
| **Naval Reserve Force** | 26 | -2 | 25 | +1 | 26 |
| **Total Battle Force Ships (Active plus Reserve)** | **316** | **-2** | **315** | **-7** | **308** |

The size of the deployable Battle Force declines from FY 2002 to FY 2003 as more multipurpose capability ships are added to the naval inventory and the inactivations of the older Spruance Class Destroyers is accelerated.

| Battle Force Ships Inventory by Category | FY 2002 Ending Inventory | Gains | Losses | FY 2003 Ending Inventory |
|---|---|---|---|---|
| Strategic (includes two SSGN's in FY 2003) | 18 | - | - | 18 |
| Carriers | 12 | +1 | -1 | 12 |
| Surface Combatants | 116 | +6 | -9 | 113 |
| Submarines | 54 | - | - | 54 |
| Amphibious | 39 | - | -2 | 37 |
| Mine Warfare, Patrol | 17 | - | -1 | 16 |
| Support Ships | 59 | +1 | -2 | 58 |
| **Total** | **315** | **+8** | **-15** | **308** |

The total number of Battle Force ships decreases by seven between FY 2002 and FY 2003. In FY 2003, the Navy gains one CVN, three DDGs, and three reserve FFGs, and loses one CV, six DDs, three FFGs, one LSD, one reserve LST, one reserve MCS, and one

MSC ammunition ship (TA-E). Also in FY 2003, the Navy transfers a fast combat support ship (AOE 7) to the Military Sealift Command which is displayed as one loss and one gain in the Support Ships line. The Navy will continue to maintain a force of 12 aircraft carriers in FY 2003.

| Shipyears | FY 2001 Actual | Change | FY 2002 Estimate | Change | FY 2003 Estimate |
|---|---|---|---|---|---|
| Conventional, OMN [1] | 177 | -1 | 176 | +4 | 180 |
| Nuclear, OMN | 82 | -1 | 81 | +1 | 82 |
| Conventional, OMNR [2] | 26 | - | 26 | +1 | 27 |

1 Operation and Maintenance, Navy
2 Operation and Maintenance, Navy Reserve

Shipyear data provides a more accurate indicator of the overall force level for that year. A shipyear measures that portion of a fiscal year that a ship serves in the fleet. For example, a ship decommissioning on June 30th would have 0.75 shipyears for that fiscal year (October through June) – whereas the end-of-year ship inventory would be zero.

The changes from FY 2002 to FY 2003 for the Conventional Forces reflect the net loss of eight conventional battle force ships offset by the gain of 13 non-battle force Patrol Coastals ship. The Nuclear Forces are reflective of the gain of one CVN. There is net gain of one Reserve ship year between FY 2002 and FY 2003.

| Operating Tempo (Underway Days Per Quarter) | FY 2001 Actual | Change | FY 2002 Estimate | Change | FY 2003 Estimate |
|---|---|---|---|---|---|
| Deployed Fleet (Readiness Goal) [1] | 50.5 | - | 50.5 | - | 50.5 |
| Deployed Fleet (Includes Southwest Asia & Balkans Military Operations) [1] | 56.2 | -2.2 | 54.0 | - | 54.0 |
| Nondeployed Fleet (Readiness Goal) | 28.0 | - | 28.0 | - | 28.0 |
| Deployed Mine Warfare (Reserve) | 51.0 | - | 51.0 | - | 51.0 |
| Non-Deployed Mine Warfare (Reserve) | 13.8 | +10.2 | 24.0 | - | 24.0 |
| Surface Combatant/Amphibious (Reserve) | 28.5 | -10.5 | 18.0 | - | 18.0 |

1 In FY 2002 and FY 2003, Deployed Operating Tempo reflects an estimated 3.5 additional underway days per quarter associated with support of contingency operations previously funded from the Overseas Contingency Operation Transfer Fund but now included in the baseline.

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Sustaining the ship operation tempo is critical to meeting global forward-deployed missions and overseas presence commitments of the deployed fleet and to maintain a combat ready and rapidly deployable force in the nondeployed fleet. The budget request meets the Navy's readiness goal of 50.5 underway days per quarter for the deployed fleet and 28 underway days per quarter for the nondeployed fleet. The budget also supports an additional 3.5 underway days per quarter in support of military operations in Southwest Asia and the Balkans starting in FY 2002.

| Operating Months (Less Charter Ships) | FY 2001 Actual | Change | FY 2002 Estimate | Change | FY 2003 Estimate |
|---|---|---|---|---|---|
| Conventional, OMN | 1,820 | -17 | 1,803 | +218 | 2,021 |
| Nuclear, OMN | 841 | -27 | 814 | -13 | 801 |
| Conventional, OMNR | 306 | -8 | 298 | +18 | 316 |

Operating month data is also a good measure of ship operations costs. Operating months reflect the part of the fiscal year that a ship is fully available for missions. The complement of operating months is repair months. For example, a ship not available for missions while undergoing a 3-month repair period would have 9 operating months and 3 repair months (assuming it was not to be commissioned or decommissioned in that particular year).

| Underway Steaming Hours (Thousands) [1] | | | | | |
|---|---|---|---|---|---|
| Conventional, OMN | 486 | -5 | 481 | -22 | 459 |
| Nuclear, OMN | 18 | +5 | 23 | -1 | 22 |
| Conventional, OMNR | 48 | -6 | 42 | +16 | 58 |

1 In FY 2002 and FY 2003, operations in Southwest Asia are funded in the baseline.

Underway steaming hours display the estimated total number of hours, ships (excluding MSC) are underway. Total steaming hours is dependent upon operating tempo and operating months. Fuel consumed will generally change directly with steaming hours for conventionally powered ships (although fuel burn rates vary widely between ship classes).

## Ship Depot Level Maintenance

Ship Depot Level Maintenance requires skills or facilities beyond the capacity or capability of organizational or intermediate level activities and is performed by naval shipyards, private shipyards, naval ship repair facilities, or item depot activities. Alterations and modifications to the ship's military and technical capabilities may also be performed during the maintenance availability. The majority of planned depot maintenance periods are categorized as overhauls, selected restricted availabilities (SRAs), or phased maintenance availablilties (PMAs). Each ship will undergo overhauls, SRAs, or PMA as part of its maintenance schedule, depending on the maintenance plan established for that ship class

Overhauls involve major repairs and modernization, typically take more than 6-months to complete, and require docking. Selected SRAs and PMAs are similar in that both are of relatively short duration (2-3 months), involve labor-intensive repair and modernization efforts, and may be docking or non-docking. However, ships that are scheduled for PMAs generally do not undergo overhauls. Since the SRAs are scheduled at longer intervals than PMAs, these ships periodically require an overhaul. Phased Incremental Availabilities (PIAs) are specific to USS NIMITZ class Aircraft Carriers. Both alterations and repairs are performed, and may be docking or non-docking.

Depot level maintenance work may also be performed outside of scheduled availabilities. Emergent Restricted Availabilities/Technical Availabilities (RA/TA) is used to repair items/problems that cannot wait until the next scheduled availability. Other RA/TA is maintenance planned for execution between scheduled availabilities, and is necessary to keep the ships systems fully operational. Continuous maintenance (CM) is depot level work that is performed outside of a full scheduled maintenance availability period. CM allows greater flexibility in completion of required maintenance and is intended to improve the material condition of our surface fleet.

The following table shows the number of major depot level maintenance availabilities executed in FY 2001 and planned for FY 2002 and FY 2003.

| Ship Depot Level Maintenance | FY 2001 | | FY 2002 | | FY 2003 |
|---|---|---|---|---|---|
| **Active Forces** | **Actual** | **Change** | **Estimate** | **Change** | **Estimate** |
| Overhauls | 6 | -2 | 4 | -1 | 3 |
| Selected Restricted Availability | 81 | +2 | 83 | -17 | 66 |
| Phased Maintenance Availability | 22 | +9 | 31 | -7 | 24 |
| Phased Incremental Availability | 6 | -2 | 4 | +4 | 8 |
| **Reserve Forces** | | | | | |
| Selected Restricted Availability | 3 | -1 | 2 | +2 | 4 |
| Phased Maintenance Availability | 10 | -3 | 7 | +2 | 9 |