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# Improving Precommissioning Assignments and Readiness on the U.S. Coast Guard Offshore Patrol Cutter

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## Abstract

As the first of 25 offshore patrol cutters (OPCs) nears delivery, the U.S. Coast Guard (USCG) is focusing greater attention on the staffing needs of these ships, particularly during the precommissioning period. USCG leadership believes that crew satisfaction with these assignments is low and that this has implications for force readiness. In addition, the USCG has limited return on its training investment if crew members leave the service or return to shore duty soon after their precommissioning assignments. Thus, increasing institutional knowledge is also a priority.

Researchers evaluated 11 courses of action (COAs) that the USCG could consider to improve crew satisfaction with precommissioning assignments and overall fleet readiness—the first being the status quo precommissioning process. Of the remaining 10 COAs, five would delay crew reporting; three would develop expertise, facilitate the sharing of best practices across OPC crews, and promote standardization; and two would adjust personnel assignment and compensation policies.

Although some COAs are mutually exclusive, others could be combined to address a broader set of problems or more effectively address a single issue. The most appropriate combination depends on how the USCG prioritizes the various evaluation criteria. One way forward would be for the USCG to adopt an incremental approach: Implement some of the more-feasible COAs in the short term while working toward some of the higher-impact COAs over the long term.

This executive summary presents the key findings of this research. A more detailed account of the research methods and findings can be found in Improving Precommissioning Assignments and Readiness on the U.S. Coast Guard Offshore Patrol Cutter, by Jennifer Lamping Lewis, Aaron C. Davenport, Brynn Tannehill, Austin Lewis, James V. Marrone, Victoria M. Smith, and Barbara Bicksler, RR-A1617-1, 2022 (www.rand.org/pubs/research_reports/RRA1617-1.html).

## Executive Summary

As the first of 25 offshore patrol cutters (OPCs) nears delivery, the U.S. Coast Guard (USCG) is focusing greater attention on the staffing needs of these ships, particularly during the precommissioning (PRECOM) period. USCG leadership believes that crew satisfaction with these assignments is low and that this has implications for force readiness. In addition, because of the timing of crew training and rotations, the USCG has limited return on its training investment if crew members leave the service or return to shore duty soon after their PRECOM assignments. Thus, increasing institutional knowledge is also a priority.

The USCG is interested in strategies to improve the desirability of assignment to a precommissioned cutter and retain top talent within the major-cutter community. To assist the USCG, researchers from the Homeland Security Operational Analysis Center, in collaboration with the Major Cutter Post-Delivery Modernization Tiger Team, developed and evaluated options that the USCG could consider to improve crew satisfaction with PRECOM assignments and overall fleet readiness. This work was based on a review of relevant documents and literature, interviews with subject-matter experts throughout the USCG and at the prime contractor, and analysis of personnel data.

## Courses of Action

The research team and the USCG developed 11 courses of action (COAs)—the first being the status quo PRECOM process. The remaining 10 COAs take varied approaches to improving crew satisfaction, ensuring that crews are adequately prepared for operational patrols, promoting the transfer of knowledge from crew to crew, and achieving standardization across the fleet.

Some COAs would delay crew reporting, thereby shaving 10 to 15 months off the time crews would spend on activities that precede operational readiness of the vessel. In most cases, this would require a reorganization of PRECOM activities and a reassignment of some of these activities to other parties, such as a preliminary crew assembly facility (PCAF), contracted mariners, or the shipbuilder. Delayed reporting would allow the crew to spend fewer days in port performing postdelivery installations and tests and more days underway participating in operational patrols. The COAs that fall into this category are

- COA 2: expanded PCAF
- COA 3: further expanded PCAF for training and home port transit
- COA 4: contracted mariner crew
- COA 5: cutter delivery at home port
- COA 6: more than two crew reporting phases.

Other COAs would focus more on developing expertise, sharing best practices across crews, and promoting standardization. The requisite transfer of knowledge could occur across multiple hulls or within a single hull. The former could be achieved by establishing a cadre that performs postdelivery installations and other PRECOM activities on multiple hulls. The latter could be achieved by varying tour lengths or staggering crew reporting dates such that veteran crew members overlap with newly assigned personnel on a single hull. The COAs that share this orientation are

- COA 7: operational centers of excellence (a hub-and-spoke model)
- COA 8: voluntary tour extensions
- COA 9: phased crewing across OPC hulls.

The two remaining COAs would preserve the current PRECOM process and schedule but adjust personnel assignment and compensation policies to (1) select those service members who find PRECOM assignments more desirable and (2) use incentive pay to compensate them appropriately for any remaining dissatisfaction. These COAs are

- COA 10: targeted incentive pays
- COA 11: bidding for assignment incentive pay.

Table 1 maps the full set of COAs to the problems associated with the current PRECOM process, as detailed in an October 2020 issue paper prepared by the Deputy Commandant for Operations, Office of Cutter Forces (CG-751; Office of Cutter Forces, 2020). The column for COA 1 is empty because it represents the status quo. A check mark indicates that the COA would address the problem in that row.

**Course-of-Action Evaluation**

To evaluate the COAs, we developed a broad set of criteria that reflect the concerns expressed by the study sponsor and members of the Major Cutter Post-Delivery Modernization Tiger Team. We grouped these criteria into five classes:

- crew satisfaction
- crew preparation and knowledge retention
- timeliness
- feasibility or ease of implementation
- cost.

Because the available quantitative data were sparse, the evaluation was largely qualitative. For each COA, we identified the potential benefits and drawbacks within each of the five criterion classes, but, in many cases, we could not quantify the benefits and drawbacks or their associated probabilities. Nevertheless, the information gleaned from the event and timeline analyses, personnel data analysis, literature review, and case studies was sufficient to identify which COAs are likeliest to achieve the USCG's goals within each of the five criterion classes.

Table 1. Alignment of Courses of Action with Identified Problems

| Problem | Status Quo | Delayed Crew Reporting | | | | | Developing Institutional Knowledge | | | Incentive Pays | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| **Precommissioning assignments are not desirable.** | | | | | | | | | | | |
| No sea pay or sea time | | | | | | | | | | ✓ | ✓ |
| More than 180 days on temporary duty | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ |
| No basic-allowance-for-housing protection | | | | | | | | | | ✓ | ✓ |
| Postdelivery activities and ready-for-operations workload significant | | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | ✓ |
| Phase I crews unable to attend special events | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ |
| Minimal operations for officers with 2-year tours | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ |
| **The crew is not adequately prepared, and the fleet lacks standardization.** | | | | | | | | | | | |
| Investments in factory and familiarization training not realized | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | |
| Loss of institutional knowledge and lack of standardization | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | | |
| First underway periods are high risk | | | ✓ | | | | | | ✓ | | |

NOTE: ✓ = the COA would address the problem indicated. The COAs are as follows:
- 1 = the current PRECOM process
- 2 = expanded PCAF
- 3 = further expanded PCAF for training and home port transit
- 4 = contracted mariner crew
- 5 = cutter delivery at home port
- 6 = more than two crew reporting phases
- 7 = operational centers of excellence (a hub-and-spoke model)
- 8 = voluntary tour extensions
- 9 = phased crewing across OPC hulls
- 10 = targeted incentive pays
- 11 = bidding for assignment incentive pay.

We found that, among the five COAs that would delay crew reporting, COAs 2 and 3 (expanded PCAF and further expanded PCAF) are strongest on crew satisfaction and the transfer of knowledge, COA 5 (cutter delivery at home port) is strongest on timeliness, and COA 6 (more than two crew reporting phases) is strongest on feasibility and cost.
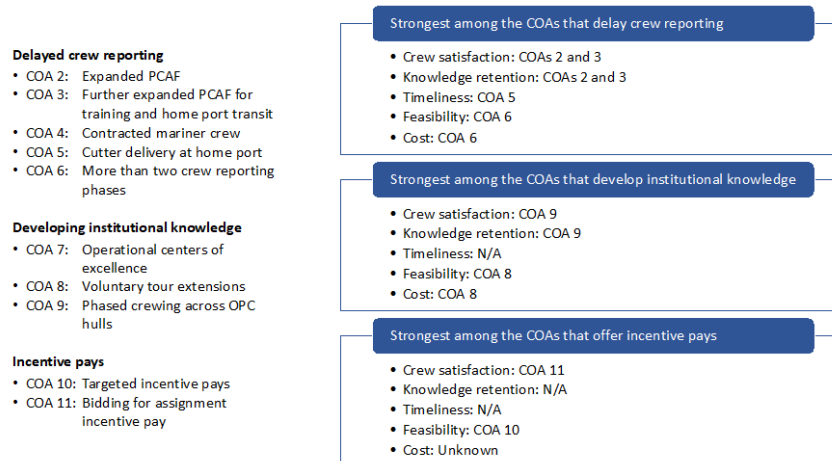
Among the three COAs that center on developing institutional knowledge, COA 9 (phased crewing across OPC hulls) is strongest on crew satisfaction and the transfer of knowledge, and COA 8 (voluntary tour extensions) is strongest on feasibility and cost. None of the COAs would improve timeliness by a meaningful margin.

Between the two remaining COAs, which focus on incentive pay, COA 11 (bidding for assignment incentive pay) is stronger on crew satisfaction, and COA 10 (targeted incentive pays) is stronger on feasibility. Neither COA would affect timeliness or the transfer of knowledge from crew to crew. Both COAs would have cost implications, but it is not clear which one would be more cost-effective. Figure 1 summarizes these findings.

Although some COAs are mutually exclusive, others could be combined to address a broader set of problems or more effectively address a single issue. The most appropriate combination depends on how the USCG prioritizes the various evaluation criteria. Many of the COAs present a trade-off between (1) improvements in crew satisfaction and knowledge transfer and (2) ease of implementation (feasibility) and affordability (cost). One way forward would be for the USCG to adopt an incremental approach: Implement some of the more-feasible COAs in the short term while working toward some of the higher-impact COAs over the long term.

In this report, we do not recommend a specific COA; instead, we provide the USCG with an array of options, the information necessary to identify those options that align best with the service's priorities, and a structure for combining the selected options to address a broader set of problems or more effectively address a single issue. The discussion provided in this report is aimed at informing the USCG's decisions. These include updates to the OPC operating facility change order, vessel acceptance procedures, and deployment plan, as well as assignment policies and practices for the crew of the third OPC hull, the USCG Cutter *Ingham* (WMSM-917), and following vessels.[*]

**Delayed crew reporting**
- COA 2:  Expanded PCAF
- COA 3:  Further expanded PCAF for training and home port transit
- COA 4:  Contracted mariner crew
- COA 5:  Cutter delivery at home port
- COA 6:  More than two crew reporting phases

**Developing institutional knowledge**
- COA 7:  Operational centers of excellence
- COA 8:  Voluntary tour extensions
- COA 9:  Phased crewing across OPC hulls

**Incentive pays**
- COA 10: Targeted incentive pays
- COA 11: Bidding for assignment incentive pay

**Strongest among the COAs that delay crew reporting**
- Crew satisfaction: COAs 2 and 3
- Knowledge retention: COAs 2 and 3
- Timeliness: COA 5
- Feasibility: COA 6
- Cost: COA 6

**Strongest among the COAs that develop institutional knowledge**
- Crew satisfaction: COA 9
- Knowledge retention: COA 9
- Timeliness: N/A
- Feasibility: COA 8
- Cost: COA 8

**Strongest among the COAs that offer incentive pays**
- Crew satisfaction: COA 11
- Knowledge retention: N/A
- Timeliness: N/A
- Feasibility: COA 10
- Cost: Unknown

*Note.* COA = course of action, N/A = not applicable. "Unknown" indicates that the study team did not have enough information to identify the strongest COA.

Figure 1. Course-of-Action Evaluation, by Criterion Class, Within Course-of-Action Group

## References

Office of Cutter Forces, Assistant Commandant for Capability, Deputy Commandant for Operations. (2020, October 30). *Issue paper: Major cutter post delivery modernization*. U.S. Coast Guard.

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[*] A WMSM is a maritime security cutter, medium.