DAINIS AND COMPANY, INC.
PSYCHOMETRICS AND EVALUATION

Validation Report

Amanda Dainis, Ph.D.
Lead Psychometrician
Amanda@DainisCo.com

Prepared for:

Washington State Board of Pilotage Commissioners (BPC)

July, 2024

Dainis & Company, Inc.

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Executive Summary

The Washington State Board of Pilotage Commissioners (BPC) administered their 2024 Written Examination and Simulator Evaluation in coordination with psychometric consultants at Dainis and Company, Inc. (Dainis & Co.). The Written Examination and Simulator Evaluation are used to select aspiring marine professionals who are qualified to enter BPC's pilot training program. As such, BPC sought psychometric expertise to ensure the most recent iterations of the Written Examination and Simulator Evaluation were updated to establish validity evidence, adhered to current codes and regulations (i.e., Washington Administrative Code; WAC), and met best practices to maintain legal defensibility.

A Job Task Analysis (JTA) was conducted with participation of actively working and retired marine pilots to develop a comprehensive overview of the job role for a Washington State pilot. Dainis & Co. conducted a detailed review of previous BPC marine pilot program specifications, Written Examination content/procedures, and Simulation Evaluation content/procedures before enlisting marine pilot Subject Matter Experts (SMEs). The marine pilots provided expertise during a two-day workshop as well as during on-site observation trips. This allowed the SMEs and the psychometric consultants to ensure that materials, procedures, and decision-making directly mirrored the marine pilot job role. The knowledge and tasks that served as the foundation for examination questions and simulator scenarios were reviewed and revised through an iterative process. Upon completion of the JTA, an updated exam content outline (i.e., Domains and Knowledge/Task Statements) and exam blueprint (i.e., weighting of content areas) were produced.

The exam content outline and exam blueprint were used as the foundation for Written Examination item development, and pilots drafted new, evidence-based examination questions aligned with the updated content areas. These new examination items (in addition to items already available in a previous item bank) were reviewed and amended by multiple SMEs through an iterative process that included a psychometric review. Towards the end of the Written Examination item development process, a Standard Setting process was implemented using a modified-Angoff method to establish a criterion-referenced passing cut score. The Standard Setting methodology allowed the pilot experts to provide feedback on the relative difficulty of the items. Any items of concern were revised yet again, resulting in a comprehensive, content-corresponding item bank used for the Written Examination.

In addition to the Written Examination, the content for the Simulation Evaluation was refreshed using the knowledge and tasks identified during the JTA. Dainis & Co. reviewed previous administrations of the Simulation Evaluation and worked with pilot experts to develop new simulation scenarios with an updated scoring paradigm based on Dr. Dainis's performance-based testing scoring approach. Beta-testing of the Simulation Evaluation allowed for refinement of the test scenarios and the scoring approach. Simulator development was conducted in partnership with development experts from the Maritime Institute of Technology and Graduate Studies (MITAGS) in Seattle, WA.

As with previous administrations of the Marine Pilot Examination, aspirants who met the eligibility requirements to sit for the Written Examination were invited to participate. The Written Examination was conducted virtually on April 8th, 2024. Twenty aspirants who successfully passed the Written Examination were invited to participate in the Simulation Evaluation the week of April 22nd, 2024. In total, 13 aspirants passed both the Written Examination and Simulator Evaluation, putting them on the trainee list for the Washington State marine pilot training program.

The Washington State Board of Pilotage Commissioners implemented multiple changes to the 2024 administration compared to past administrations, including:

- The introduction of a public-facing Aspirant Handbook created to provide supplemental information for all aspects of the 2024 administration. The Aspirant Handbook provided a tentative timeline of examination events, information about prerequisites for acceptance, specifications about the Written Exam and Simulation Evaluation, procedures for the appeal process, and sample Written Exam questions.
- The exam content outline and exam blueprint were posted to BPC's website to ensure complete transparency of the content areas that represented the job role.
- The Written Examination, which had previously been conducted only in-person using pencil and paper methods, was conducted virtually. The Surpass Assessment platform was used to safely and remotely administer the 2024 Written Examination to aspiring marine pilots regardless of their location. All aspirants were monitored via proctor using live camera feeds.
- Due to the change to a virtual Written Examination format, a Remote Proctoring Guideline document was developed and posted on BPC's website and distributed to all aspirants who met eligibility requirements. Additionally, all aspirants were required to complete a practice exam using the Surpass Assessment platform prior to the examination date to ensure their technological devices were working appropriately.
- Aspirants were able to schedule a one-on-one meeting with the psychometric consultant, Dainis & Co., if they had any concerns about the Written Examination, Simulation Evaluation, or the Written Examination's virtual testing paradigm.

Assessment Process Development

Job Task Analysis

The Job Task Analysis (JTA) process for the BPC Marine Pilot Exam spanned approximately three months, from July 2023 to September 2023. The process began with a review of program specifications, job role descriptions, codes/regulations (i.e., WAC), and previous JTA materials by Dainis & Co. in coordination with BPC staff. From this review, Dainis & Co. recreated a draft job role content outline containing the Domains, Subdomains, and Knowledge/Task (KT) Statements that represent the content areas previously used as the foundation for the knowledge-based Written Examination. A total of nine (9) major content areas (Domains) served as the high-level structure of the content outline (see Appendix E). A group of marine pilot experts was recruited to serve as a Subject Matter Expert (SME) panel, ensuring that the job role was being updated by professionals with intimate knowledge of the marine pilot job (see Appendix D).

Dainis & Co., BPC staff, and the JTA Panel met in-person on July 11th and 12th, 2023 to begin updating the exam content outline to meet current codes, regulations, standards, and best practices, while simultaneously ensuring the pilotage job role was up-to-date and accurate. The JTA Panel first discussed any recent trends in the profession and any changes to the WAC that might dictate any necessary alterations spanning the entirety of the exam content outline. The JTA Panel then worked through each Domain and revised, removed, or added any content they thought necessary to ensure the pilotage job role was conclusive. Over the course of the two-day JTA workshop, the Panel decided to merge two existing Domains (Domain 9: Main Ship Channels was incorporated into Domain 6: Safe Navigation) and to create a new Domain (Domain 9: Tugs). Through the JTA Panel's work, a revised job role content outline was drafted.

The revised job role content outline served as the basis for a Validation Survey, which was distributed to 71 incumbent and retired marine pilots. The survey was completed by 43 pilots, which represents 61% of those invited to respond. The purpose of the Validation Survey was to develop validity evidence for the revisions made by the JTA Panel to the job role content outline, as those changes would eventually be used to determine Written Examination and Simulator content. The Validation Survey asked questions pertaining to demographic information (e.g., years of experience, age, licensure, activity status) and most importantly, asked each respondent to provide some critical rating information pertaining to the content areas of the revised content outline. Specifically, all respondents were asked to provide a percentage weighting for the relative importance of each of the nine (9) Domains in relation to the pilotage job (e.g., "If I was building a training program, 15% of the training should be devoted to Docking and Undocking), and to provide a rating of importance for the Knowledge and the Task statements in each Domain of the revised content outline. The importance ratings ranged from 1-5, with 1 being "Not at all Important" to 5 being "Very Important"; these ratings allowed Dainis & Co. to determine if any of the content was non-essential to the job role, and helped the JTA Panel confirm whether the content should serve as a basis for Written Examination questions and the Simulator Evaluation. Respondents had the opportunity to provide any qualitative feedback that they wished, which was also analyzed for common themes or concerns.

After a thorough analysis of both quantitative and qualitative data resulting from the Validation Survey, a draft exam blueprint was created based on the revised job role content outline and Domain weighting feedback provided by respondents. The draft exam blueprint and any concerns surrounding content (i.e., KT Statements) were presented to the JTA Panel on September 21, 2023. The JTA Panel reviewed the findings from the Validation Survey, making any necessary changes to the content outline, and finalized exam weightings for the Written Examination's Domains, determining the number of items that needed to be assigned to each of the corresponding content areas. The revised JTA Panel-approved job role content outline and exam blueprint were submitted for approval to the Board later that day. The Board approved the updated exam content outline and exam blueprint on September 21, 2023.

Written Examination Development

The end result of the JTA produced an updated job role content outline and exam blueprint, which were used as the foundation for the item writing process. The Surpass Assessment Platform utilizes an item banking feature with SME-friendly accessibility capabilities; as such, the software platform was used to facilitate item writing and item revisions, wherein the marine pilot experts serving as an item writing and review panel could work asynchronously to update exam content. Some pre-existing items and item "shells" (i.e., empty/incomplete items) were uploaded and created for each pilot expert for drafting new examination items; these items were all mapped directly to a content area aligned with the updated content outline. After a sufficient number of new items was written to meet the exam blueprint's requirements, the pilot experts began an item review and revision process, wherein each item was reviewed by at least two (2) marine pilot experts in addition to the original author. Throughout the item review and revision process, the pilot experts provided meaningful qualitative feedback, made direct changes to items based on their expertise, and ensured each item had a corresponding evidence-based reference/citation. They were asked to ensure that each item was correctly testing the content area assigned to it and that the question pertained to the work of marine pilots working in both the Puget Sound and Grays Harbor (see Appendix F for training information).

The pilot SMEs began asynchronous item writing and reviews in August 2023. Additionally, they met in-person with Dainis & Co. staff on October 31 and November 1, 2023, to collaboratively revise exam items. Ongoing asynchronous reviews continued through December 2023 and January 2024, when all items to be used on the Written Exam form were finalized.

Once the item writing, review, and revision processes were completed, the updated item bank underwent a psychometric review by Dainis & Co. to ensure all items met psychometric standards and were ready to be placed on the operational exam. Finally, to set the pass/fail cut score for the Written Examination, a Standard Setting process was facilitated by Dainis & Co. psychometricians. The pilot experts were provided instruction about the purpose and methodology of the Standard Setting for criterion-referenced examinations on February 8, 2024. A detailed overview of the modified-Angoff rating method was presented, and the group discussed the concept of a minimally competent aspirant to ensure calibration before rating. Each pilot expert provided an Angoff rating for every item in the operational item bank via the Surpass Assessment Platform, which afforded the marine pilot experts the ability to leave their Angoff rating and qualitative feedback (if desired), while ensuring item security.

Based on the ratings of the items and the approved exam blueprint, a single form was engineered. A preliminary cut score of 70 was recommended by Dainis & Co. based on the overall predicted difficulty of the examination items.

Simulator Evaluation of Shiphandling Skills (SESS) Development

The 2024 Simulator Evaluation saw some changes in format from previous administrations. The scope of the Simulator Evaluation was developed to focus on shiphandling skills reflected in four of Domains from the content outline (Domain 4: Docking and Undocking, Domain 6: Safe Navigation, Domain 7: Shiphandling, and Domain 8: Restricted Waterway Transit). This change produced two benefits. First, this change resulted in a more balanced assessment process for all aspirants, regardless of their prior captain experience. Second, this change allowed evaluators to get a clearer picture of aspirants' shiphandling skills, while stripping out more procedural skills, such as master-pilot exchange, or aspirants' simulator skills, acquired through simulator practice time.

Simulator Evaluation of Shiphandling Skills (SESS) Development began in August 2023. A panel of four Washington State pilots was assembled to develop the exercise scenarios and measurement points in collaboration with Dainis & Co. The panel met virtually on three occasions (August 1, August 15, and September 1 of 2023) to discuss the skills that would be assessed, the vessels that would be utilized, the particulars of the fictional port, and environmentals and traffic, among other things. Once all details of the scenarios were sufficiently finalized, the developers at MITAGS-West began building the simulation. The simulator development panel and Dainis & Co. met in person on several occasions (November 2-3, 2023; November 30-December 1, 2023; February 1-2, 2024; February 14-15, 2024, and March 11-12, 2024) to beta test the simulation exercises.

Prior to the administration of the SESS, the simulator development panel provided predicted difficulty ratings for specific tasks in the simulator exercises. Based on these ratings, Dainis & Co. developed an a priori cut score for the evaluation.

Administration of Written Examination and Simulator Evaluation

Administration of Written Examination

The structure of the Written Examination underwent significant changes resulting from the work done during the JTA and programmatic decision-making. The 2024 Written Examination was the first time that BPC used a virtual-only testing format, requiring aspirants to complete their Written Examination remotely instead of meeting in-person. This change was recommended because it was a net positive for both BPC and aspirants: BPC had the ability to use an online program to bank their examination items and host their exam, and aspirants were no longer required to potentially travel from locations across the country to sit for the Written Examination. In addition to the change in testing format, the number of items on the Written Examination was reduced to 100 from 150 in previous administrations. Simultaneously, the amount of time allotted for the Written Examination was increased to five (5) hours from four (4) hours.

The Written Examination was held on April 8th, 2024, from 9:00 A.M. PDT to 2:00 P.M. PDT. The Written Examination was completed using the Surpass Assessment Platform, and all aspirants were monitored using ProctorExam's proctoring services; a single proctor could monitor up to three (3) aspirants at a single time. Proctors were able to examine each aspirant's environment to ensure there were no distractions, opportunities to cheat, or non-permitted materials prior to the beginning of the examination. Aspirants were required to be in a location with a secure and constant internet

connection on a laptop or desktop computer with working speakers and a working front-facing video camera. The aspirant's workspace was required to be clear of all items except for a few permitted items (please see Appendix B for more details).

Prior to the testing date, all approved aspirants were provided the Aspirant Handbook (see Appendix A), the Remote Proctoring Guidelines (see Appendix B) and the Written Examination Information document (see Appendix C) via email to familiarize themselves with the remote testing process. The Remote Proctoring Guidelines provided information about the aspirant's device's minimum system requirements for testing, and extremely detailed instructions on how to conduct a system check (which was required to sit for the Written Examination) of ProctorExam's requirements prior to the actual testing date. The system check tested each aspirant's computer, camera, speakers, and connection capabilities, as well as their ability to share their screen, as the entirety of each aspirant's Written Examination was recorded. Soon after the aspirants received the acclimation materials, they received an email containing a link to a Practice Exam. The email communications and link to the Practice Exam directly mirrored the process of the actual testing day.

All aspirants were required to complete the system check and Practice Exam to sit for the actual Written Examination on testing day. During this pre-examination time period, aspirants were able to schedule a one-on-one meeting with the Dainis & Co. team in case they experienced any roadblocks or confusion in the online testing process.

On testing day (April 8th, 2024), aspirants were instructed to be ready and at their testing environment by 8:30 A.M. PDT to confirm their device was working properly. The aspirants received a link via email to begin their proctoring session and conduct a final system check. The proctors worked with each aspirant to confirm the safety and security of their testing environment and their devices/materials and confirmed all identities. Once the proctors approved the aspirants, they were provided a unique keycode that allowed them to access the examination. When aspirants were finished with their exams, they were instructed to finalize and close their examination webpage. Following the Written Examination administration, Dainis & Co.' psychometric team examined the test's operational data. The resulting test scores supported the preliminary cut score, which was reviewed and approved by the Board during their April 12th, 2024, meeting after a summary of the entire Standard Setting process and Examination test statistics was shared.

Administration of Simulator Evaluation of Shiphandling Skills (SESS)

Of the 25 aspirants who sat for the Written Examination, 20 achieved the necessary cut score to move on to the Simulator Evaluation of Shiphandling Skills (SESS). The SESS was conducted Monday, April 22 through Friday April 26, 2024, at MITAGS-West in Seattle, Washington.

In order to prepare aspirants for the Evaluation, they were each allowed one hour of guided simulator time. These Familiarization Runs were held the evening before an aspirant was scheduled to complete their Simulator Evaluation (e.g., if an aspirant was scheduled to complete the Evaluation on Monday, their Familiarization Run was held on Sunday evening). Aspirants also received a Rules

and Guidelines Packet , which contained port guidelines, vessel characteristics, and detailed instructions for the SESS they were to complete the next day.

Aspirants were scheduled a time and date to arrive at MITAGS-West for their SESS administration. The aspirant was instructed that they would take on the role of the pilot during the evaluation and were provided a captain and a helmsman to accompany them in the simulator. Each aspirant completed two simulator exercises with a 15-minute break in between. The exercises were recorded in many formats (video, audio, screen recording, etc.) to allow the evaluation team to revisit events if needed. The evaluators were not given the names of the aspirants, and they were not told the ranked order in performance on the written exam.

Following the completion of the final SESS session on Friday, April 26, Dainis & Co. facilitated a discussion with the Simulator Evaluators to finalize the cut score. The panel of evaluators used the a priori cut score developed the week prior along with the data gathered over the course of the week to develop a finalized cut score of 91.02.

Results and Reporting

Written Examination Results

SUCCESSFUL APPLICANT I.D. NUMBERS (listed in no particular order)

77746	52001	81345
94416	15481	56826
35776	51010	98370
29110	20340	49267
98873	48438	36529
12032	13868	14494
90124	29544	

UNSUCCESSFUL APPLICANT I.D. NUMBERS (listed in no particular order)

60014	75382	59153
88784	78614	

Simulator Evaluation Results

SUCCESSFUL APPLICANT I.D. NUMBERS (listed in no particular order)

90124	56826
36529	49267
48438	13868
77746	35776
15481	51010
20340	98370
29544	

UNSUCCESSFUL APPLICANT I.D. NUMBERS (listed in no particular order)

12032	98873
52001	29110
81345	94416
14494	

Protests

Pursuant to WAC 363-116-084, *Simulator Evaluation Review and Appeals Procedures*, aspirants have the right to submit an appeal for review. Aspirants were instructed that any protests to scores needed to be received *in writing* to BPC no later than May 8th, 2024 by 2:00 P.M. PDT. Written requests were submitted via email to BPCSupport@DainisCo.com, and were required to include specific details regarding which components of the performance evaluation were being protested (WAC 363-116-084 (d)).

There was one formal request for review of SESS performance received. Dainis & Co., with review and approval by the pilot expert Appeals Committee, submitted detailed feedback to the aspirant. There were no adjudicative hearing requests.

Appendices

Appendix A: Aspirant Handbook

ASPIRANT

HANDBOOK

WASHINGTON STATE
BOARD OF PILOTAGE
COMMISSIONERS

2024

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INTRODUCTION

ANNOUNCEMENT OF WASHINGTON STATE MARINE PILOT EXAMINATION FOR THE GRAYS HARBOR AND PUGET SOUND PILOTAGE DISTRICTS

On Monday April 8, 2024, the Washington State Board of Pilotage Commissioners (BPC) will administer to qualified applicants a **Written Examination** to be followed by a **Simulator Evaluation of Shiphandling Skills (SESS)** to those eligible. Applicants who meet or exceed the cut score set by the Board on the Written Examination and Simulator Evaluation will be placed on a waiting list to be called into a pilot training program as needed. Successful completion of a pilot training program is required to qualify for issuance of a state pilot license for the applicable Pilotage District.

The aspirant **Examination Application** is available on our website at www.pilotage.wa.gov, by written or e-mail request, and as an appendix to this Handbook.

Board of Pilotage Commissioners
2901 Third Avenue, Suite 500
Seattle, WA 98121
Fax: 206-515-3906
E-mail: PilotageInfo@wsdot.wa.gov.

Any inquiries regarding the application contents or process must be made in writing via email: PilotageInfo@wsdot.wa.gov.

The complete application must be postmarked to the Board office at 2901 Third Avenue, Suite 500, Seattle, WA 98121, by March 1, 2024, unless prior written permission to file an application at a later time is obtained from the Board. If you wish to deliver your application in-person, please contact Jolene Hamel at either 206.515.3904 or hamelj@wsdot.wa.gov. Applications will not be considered valid if they are faxed or emailed.

Please submit all parts of the application together in one envelope, including the reference letter. The 2024 Washington State Marine Pilot Exam and licensing process will be governed by and administered pursuant to Chapter 363-116 WAC. A copy of the applicable WAC is available on our website.

Washington State
Board of Pilotage Commissioners
Examination Timeline

March 1, 2024

Applications must be postmarked by this date to be considered.

March 21, 2024

Last day for aspirants to receive notice of approval to test.

March 25, 2024

Information regarding the written exam instructions will be emailed to aspirants by this date.

March 28, 2024

Requests for 1-on-1 meeting regarding remote proctoring due by this date.

April 8, 2024

Written examination held for approved aspirants via remote proctoring.

April 12, 2024

Notification of Pass/Fail decisions sent via email to aspirants.

Information regarding the simulation evaluation instructions will be emailed to aspirants by this date.

April 21 - 25, 2024

Simulation familiarization sessions held the day before each aspirant's evaluation.

April 22 - 26, 2024

Simulation evaluation held for approved aspirants in Seattle, WA.

Aspirants will receive an assigned timeslot on one of the days during this window.

May/June 2024

Final ranked list of approved aspirants posted.

Board of Pilotage Commissioners
2901 Third Avenue, Suite 500
Seattle, WA 98121
Fax: 206-515-3906
Email: PilotageInfo@wsdot.wa.gov
https://pilotage.wa.gov/

Impartiality Statement: The Washington State Board of Pilotage Commissioners (BPC) is committed to actively implementing the practice of impartiality with regard to all recruitment, selection, training, and licensing of marine pilots. This commitment prohibits the board from tolerating any bias or undue influence with regard to organizational and professional associations, past employment experience, stakeholder representation on boards and committees, and financial interests.

Commitment to Diversity, Equity, and Inclusion (DEI): The Washington State Board of Pilotage Commissioners (BPC) is committed to supporting diversity, equity, and inclusion (DEI) within the board's activities. Specifically, the Board will not tolerate and will actively prevent unfair practices or treatment of pilots and stakeholders due to race, ethnicity, gender, age, sexual orientation, national origin, religion, or disability.

The BPC strongly supports inclusion and diversity in pilotage. In April 2022, the Board transitioned the BPC/PSP Joint Diversity Committee (JDC), established in 2016, to the BPC Diversity, Equity, and Inclusion Committee (DEIC) with the goal to: Promote diversity in the Washington state-licensed marine pilot corps.

Helpful Links to Additional Information: For information regarding Puget Sound and Grays Harbor, the two districts for which the BPC issues pilot licenses, please visit https://www.pspilots.org/ (Puget Sound) and https://www.portofgraysharbor.com/(Grays Harbor).

For information regarding the BPC, its staff, and its governing board, please visit https://pilotage.wa.gov/about-us.html.

For direct access to review the applicable sections of the Washington Administrative Code, please visit:

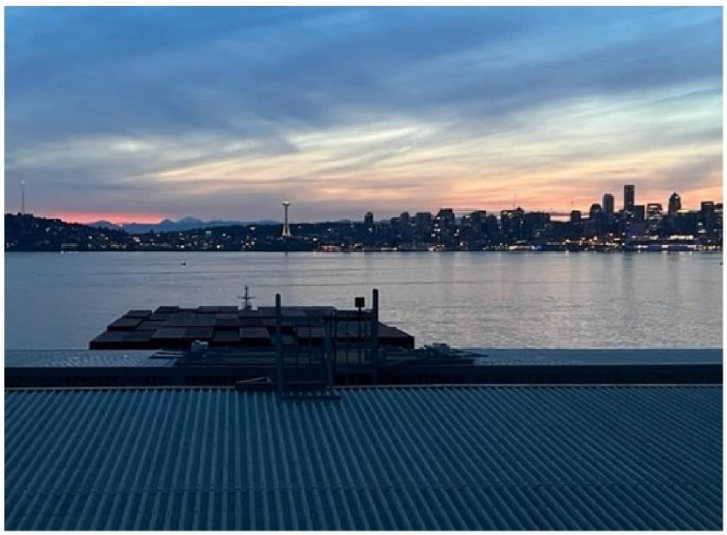
- **Qualifications**: https://app.leg.wa.gov/WAC/default.aspx?cite=363-116-0751
- **Written Exam**: https://app.leg.wa.gov/WAC/default.aspx?cite=363-116-076&pdf=true
- **Simulator Evaluation**: https://app.leg.wa.gov/WAC/default.aspx?cite=363-116-077&pdf=true

PREREQUISITES TO ACCEPTANCE

Prerequisites to Acceptance

To be admitted into the Washington State pilot training program, the following pre-requisites must be met:

1. The aspirant must be over the age of 25 and under the age of 70.
2. The aspirant must be a citizen of the United States.
3. The aspirant must meet the minimum required Captain sea service as detailed in WAC 363-116-0751.
4. The aspirant must submit an Examination Application and supporting documentation, including employment history, a letter of reference, documentation of sea service, copies of all USCG licenses. Details regarding this documentation can be found in the Examination Application.
5. Federal Pilotage Requirements are NOT required to qualify for the exam process.
6. The aspirant must receive a passing score on the Written Exam (to be administered via computer-based testing platform and remotely proctored).
7. The aspirant must receive a passing score on the Simulator Evaluation of Shiphandling Skills (SESS).
8. Fees: A $400 application fee is due upon submission of the Examination Application and supporting documents. If approved to test, the aspirant will pay a $1,000 fee to take the Written Exam. Upon approval to enter the Simulator Evaluation, the fee is $2,000.



WRITTEN EXAM

Background on Written Exam Development

In accordance with psychometric best practices, a Job Task Analysis (JTA) was conducted in the summer of 2023. A panel of Subject Matter Experts (SMEs) convened to identify and detail the knowledge and tasks necessary to be a successful Washington State Pilot. These knowledge areas and tasks were then reviewed by pilots and retired pilots, who both validated and weighted the content for the job role. The full Pilot job role description is presented in the **Job Role Content Outline**. The exam process (both the Written Exam and the Simulator Evaluation of Shiphandling Skills) will assess a subset of the knowledge areas and tasks within this outline.

These weightings were analyzed to develop the **Exam Blueprint**, which details the percentage of test questions of the Written Exam that will cover specific knowledge and task areas. Further, the Simulator Evaluation will address shiphandling skills that fall within four of the Domains in the Exam Blueprint.

Following the JTA and validation / approval of the Exam Blueprint, two additional panels of SMEs were engaged over the span of six months to develop the multiple-choice test questions for the Written Exam and to design and test the skills to be assessed in the Simulator Evaluation. The passing scores for both exams are established in a two-part process utilizing a modified-Angoff method, in accordance with psychometric best practice and engaging multiple SMEs and a team of psychometricians. This method involves careful review of each test question by the SME panel, resulting in an estimation of each question's difficulty. All estimates are analyzed for reliability and consistency, and the cut score is derived from these results.

Test Specifications

The exam will have **100 multiple-choice questions** that are mapped to the Exam Blueprint. All questions will have four possible response options and only one correct answer. Every question will have a citation (Author, Year) provided.

There will be no topics covered on the exam that are not listed in the Exam Blueprint, and there will be no questions drawn from references other than those listed on the 2024 Exam Bibliography. For example, Chart One is not listed on the Bibliography, as the knowledge related to Chart One that may be covered on the exam can be found clearly in other texts listed in the Bibliography. See Appendix A for sample questions.

Written Exam Specifications	
Date	April 8, 2024 (9:00 A.M. – 2:00 P.M. PST)
Time Allowed	Five (5) Hours
Total Number of Questions	100 Questions
Type of Questions	Multiple-choice, with four (4) response options, one (1) correct response, and citation for source provided
Sections[1]	Section 1: 2 Hours & 15 Minutes Break: 15 Minutes Section 2: 2 Hours & 15 Minutes
Materials Allowed During Exam	Small (no larger than 24" x 24") dry-erase board and marker, to be used for scratch paper One piece of blank 11" x 17" paper, used to keep track of any items which the examinee wishes to protest (more details provided to aspirants after their approval to test) A calculator is not required/allowed

[1]Examinees move at their own pace from Section 1 to the Break as soon as they complete 50 items. They will start Section 2 once the 15-minute break is over, and can finish the test session when they have completed the second set of 50 questions.

Administration

The 2024 Written Exam will be administered on April 8, 2024, from 9:00 A.M. to 2:00 P.M. PST. The exam will be computer-based, utilizing the Surpass test platform. Videos about Surpass are available at www.Surpass.com.

Examinees will take the exam in a location of their choosing, as long as the environment meets the requirements set forth in the 2024 Remote Proctoring Guidelines, which will be provided to aspirants following their approval to test. Please see the following section for additional information regarding remote proctoring.

Once an aspirant receives approval to test from the BPC, they can request a 1:1 virtual meeting with the testing team to review the remote proctoring requirements and process; this is an optional meeting and not required by aspirants. Contact information will be provided with approval notification email.

Remote Proctoring

Remote proctoring is a testing industry-accepted practice, with numerous security and anti- cheating mechanisms in place. Examinees may use their own computer, as long as it meets specific hardware and software requirements as outlined in the 2024 Remote Proctoring Guidelines. Moderate internet speed is also required, as is a webcam and microphone.

Each examinee will be monitored by a live proctor for the entirety of the exam duration. They will have access to a chat function so that they may ask any technical-related questions of the proctor. The proctors will have no pilotage-specific knowledge.

The remote proctoring process is as follows:

1. Aspirant receives notification of eligibility to take the written exam via email from BPC by March 21st at the latest.
2. Once an aspirant receives approval to test from the BPC, they can request a 1:1 virtual meeting with the testing team to review the remote proctoring requirements and process. Contact information will be provided with approval notification email.
3. Aspirant receives specific instructions in notification email regarding their account with Surpass testing platform.
4. Aspirant is provided detailed instructions and a key code and will use their account information and key code on the examination day to access the test.
5. Aspirant is to run the hardware and software test (more details will be provided in the Remote Proctoring Guidelines) at least two (2) weeks (14 days) prior to examination day.
6. If the aspirant has any issues or questions, they can email a consulting psychometrician (contact information to be provided to qualified aspirants) to set up a 1:1 meeting. They must request this meeting by March 25, 2024.
7. On April 8, 2024, the aspirant prepares their testing environment according to the 2024 Remote Proctoring Guidelines.
8. At least 30 minutes prior to the scheduled exam time on April 8, 2024, the aspirant will sign on and check all last-minute requirements.

Scoring and Notification

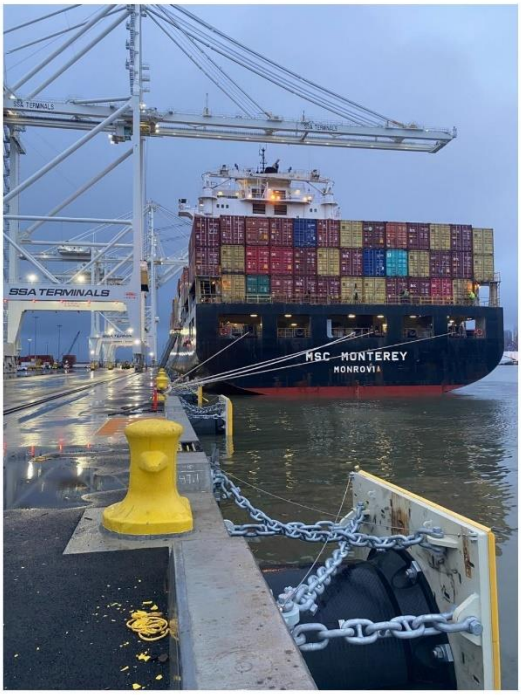
In accordance with the WAC and psychometric best practices, the data from the written exam administration will be analyzed by a team of psychometricians. A passing score will be recommended to the BPC.

Once the passing score is approved, aspirants will be notified whether they passed or failed the exam via email on April 12, 2024.

Appeals: Written Exam

If an aspirant would like to make an appeal about a specific question on the Written Exam, an Appeals Form will be provided at the conclusion of each 50-question section of the exam. This form will allow the aspirant to note which item they are appealing and what their specific concerns may be.

The content of the Appeals Forms will be reviewed immediately following the written exam administration by the psychometric team and the Appeals Committee, consisting of three SMEs who will have access to all source material from the 2024 Bibliography. If any question is found to be erroneous, it will be removed from the analysis and the total score for all aspirants. Notification of such an adjustment will be made in writing to all examinees.



SIMULATOR EVALUATION

Simulator Evaluation of Shiphandling Skills (SESS)

The 2024 Simulator Evaluation of Shiphandling Skills (SESS) is scheduled in the OSV (Offshore Supply Vessel) simulator at MITAGS West, Seattle Washington, the week of April 22, 2024. The objective of the SESS is to assess an aspirant's overall skills as a Pilot. You will be acting as the Pilot during the evaluation, and you will have a Captain and Helmsperson with you on the bridge.

In order for candidates to more effectively plan their study time the following guidelines are provided: The simulation evaluation will focus primarily on general ship handling skills. There are no charts to study ahead of time, as the specific area chart will be provided to examinees following their familiarization session.

Simulator training or experience is not a prerequisite to passing the SESS. Limited guided simulation time (approximately 1 hour), as well as a broad outline of the skills to be assessed, will be provided to all aspirants progressing to the SESS portion of the exam.

Information regarding scheduling for the familiarization and testing sessions will be provided to aspirants once they are notified on April 12 th that they have passed the Written Exam.

General Instructions for the SESS

1. The SESS will focus primarily on general shiphandling skills. Candidates wishing to practice for the exam in a simulator would do well to focus on shiphandling skills rather than on the type of pilot prep courses that were offered by outside parties in the past. Candidates should not assume that the content or format of the upcoming simulation evaluation will be similar to past evaluations.
2. The evaluation will not include the Master Pilot Exchange and watch turnover and you will not be expected to conduct either one.
3. You are acting as the Pilot during the evaluation.
4. You will have a Captain and a Helmperson with you on the bridge.
5. The ECDIS will be on in the simulator and will give a heading line and a course-over-ground vector. You will not be permitted to make any adjustments.
6. The radars are secured and are not available for use. There will be unrestricted visibility during the evaluation.
7. Your exam will be recorded from the moment you walk onto the bridge.
8. In the event of technical problems or malfunctions affecting the OSV simulator prior to or during a simulator session, the Evaluation will be switched to one of the other two remaining simulators available at MITAGS West.

Familiarization Session

Each aspirant will be given one hour conning time in the simulator on the evening prior to your evaluation session. During this familiarization session, there will be a Captain and a Helmsperson with the aspirant on the bridge. Each aspirant will receive the full SESS Examinee Packet, including port guidelines and a chartlet, immediately following the familiarization session.

Scoring and Notification

In accordance with WAC 173-340-820 and psychometric best practices, the data from the SESS will be analyzed by a team of psychometricians with guidance provided by SMEs. A passing score will be recommended to the BPC for approval after all the simulator evaluation sessions occur. *This passing score will be based on (1) the modified-Angoff process completed prior to the administration and (2) the results of the administered evaluations, considering statistical analysis of the items and the sample of test-takers.*

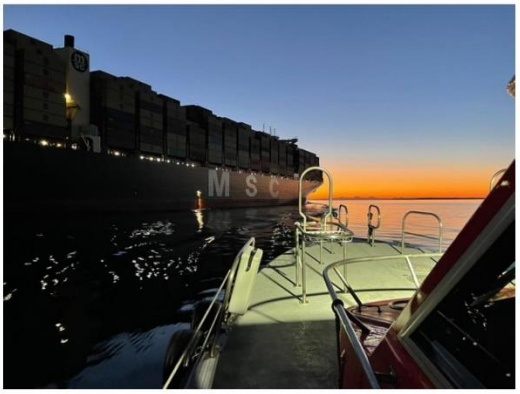
Once the passing score is approved, aspirants will be notified of their results via email.

The overall scores will also be posted on the BPC website.

In addition to the overall results of the SESS, each aspirant will receive a Simulator Evaluation of Shiphandling Skills Feedback Form, which will present a percentage-based grade to relay their performance in each main category of shiphandling tasks. The purpose of this feedback is to provide pilot aspirants information to help them prepare to retake the SESS in the future, if they choose to do so.

Appeals: SESS

In accordance with WAC 363-116-084 an aspirant may submit an appeal to the board to review their SESS results if they feel they were scored incorrectly. This appeal must be made in writing and filed within five (5) business days following the SESS results email being sent from BPC. The appellant will have an opportunity to review their evaluation session results with the SESS Appeals Committee. All decisions regarding the appeal will be given in writing to the appellant, within five (5) business days following the review session.



APPENDIX A: SAMPLE QUESTIONS

Sample Questions for Release

*** Indicates Correct Answer

These sample questions reflect the format of the exam, but are not necessarily indicative of the difficulty level of the actual test.

1. According to Rule 20 of 72 COLREGS, when shall The Rules concerning shapes be complied with? (USCG Navigation Rules, 2014)
    a. They shall be complied with by day.***
    b. They shall be complied with from sunrise to sunset.
    c. They shall be complied with from sunset to sunrise.
    d. They shall be complied with at all times.

2. If dredging an anchor is to be considered a successful maneuver, which action should the shiphandler consider? (House, 2002)
    a. Pay out the anchor chain to three times the depth of the water.
    b. Add as much speed as possible to move the pivot point farther forward.
    c. Walk the anchor out at the last minute to avoid wear on the anchor gear.
    d. Walk the anchor out as soon as possible to acquire the feel of the vessel.***

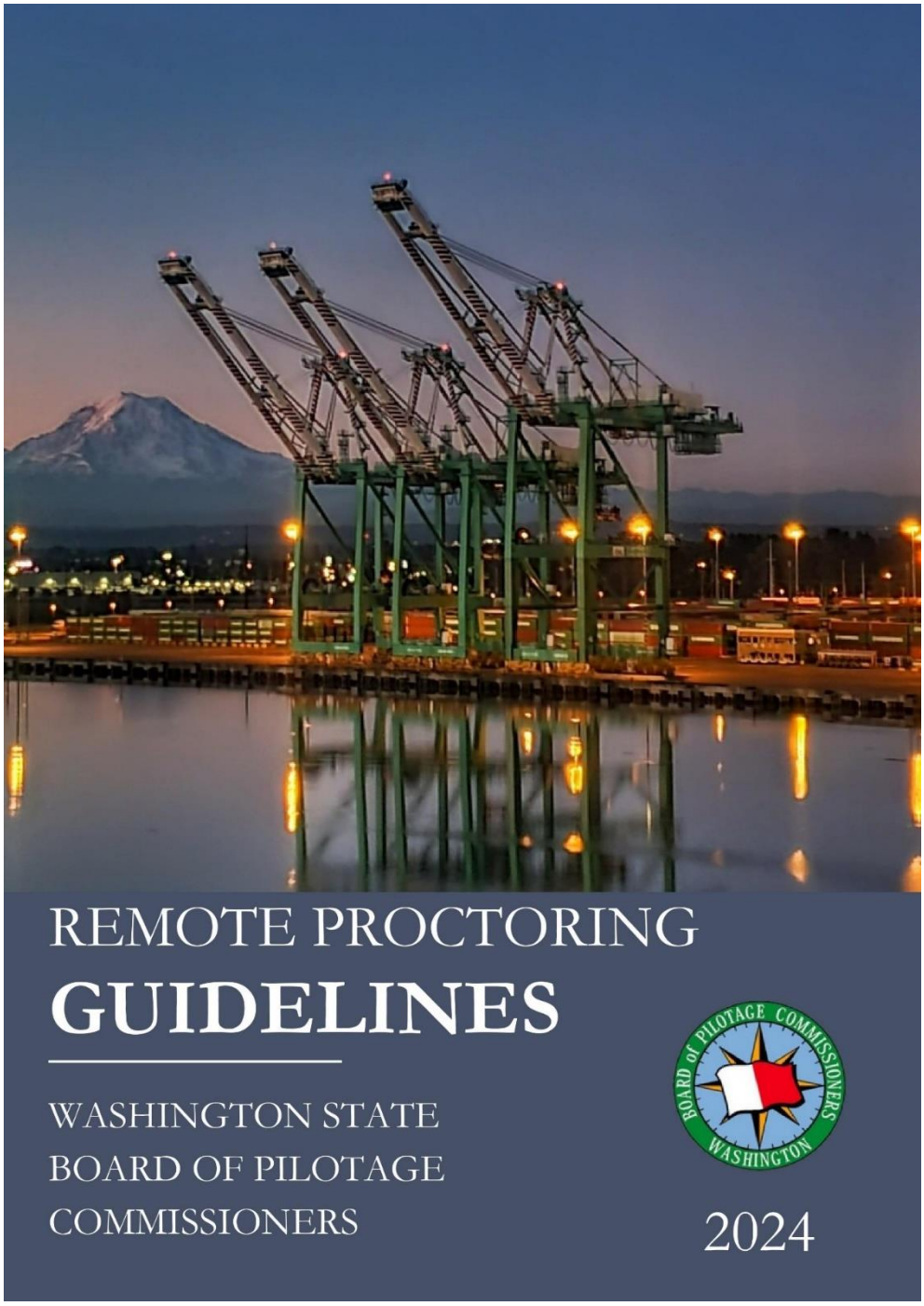
3. What effect on steering, if any, can be expected from a vessel trimmed by the head? (MacElrevey & MacElrevey, 2018)
    a. Neutral directional stability
    b. Positive directional stability
    c. Negative directional stability***
    d. No effect on directional stability

4. What series of steps should be taken to keep the phase of anchoring simple? (MacElrevey & MacElrevey, 2018)
    a. Approach, placement, laying out, and fetching up***
    b. Approach, wind, current, and placement
    c. Placement, laying out, range, and bearing
    d. Entering, reduce speed, back and fill, and final heading

5. How does vessel speed impact the effectiveness of assist tugs? (Hooyer, 1983)
    a. Tug effectiveness increases as the vessel's speed increases.
    b. As vessel speed increases, tugs are better able to remain at right angles to the vessel's hull.
    c. An increase in vessel speed has little influence on assist tug effectiveness.
    d. Tug effectiveness diminishes with the increase in vessel speed.***


YANG MING

Appendix B: Remote Proctoring Guidelines



SYSTEM REQUIREMENTS

All online proctored exams must be taken using either a laptop or desktop computer. Your chosen device must have a working webcam, microphone, and speakers. Additionally, your chosen device must also conform to the below minimum specifications. Mobile devices (such as phones or tablets) are NOT acceptable devices on which to complete the Written Exam.

Your device must meet all system requirements as detailed in the table below. This webpage (click on "About Your Devices" in the FAQ) has helpful links to confirm your device meets all requirements: https://proctorexam.com/test-taker-support/

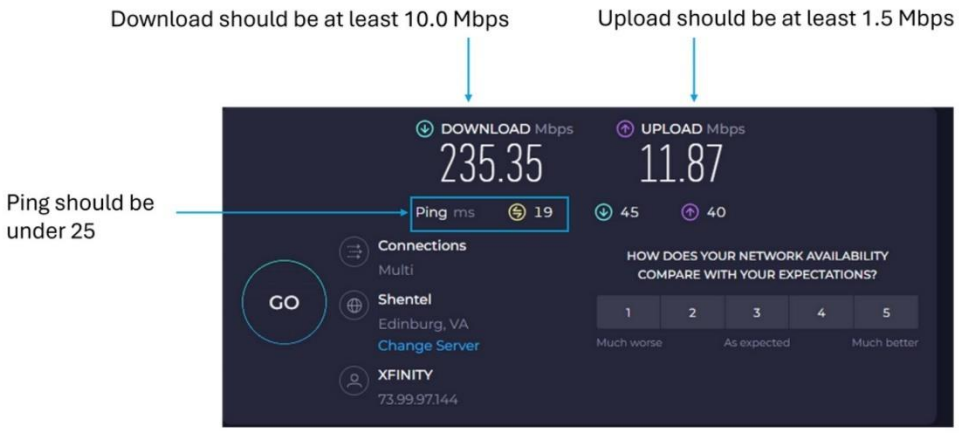
DISCLAIMER: Attempting to use a laptop or device that is intended for work purposes may have restricted access and admin rights installed. This may cause issues when trying to access the ProctorExam platform, therefore, it is always recommended to use a personal computer.

System Requirements	
Acceptable Operating Systems	▪ ChromeOS ▪ macOS (the latest two macOS releases) ▪ Windows 10 (32-bit/64-bit) ▪ Windows 11
Bandwidth[1]	▪ 1.50 Mbps upload speed minimum (Note: this is NOT your download speed) ▪ 10.00 Mbps download speed ▪ Ping under 25 ms
Resolution	▪ 1280 x 768 pixels or higher
Browser	▪ Google Chrome (latest version)

[1]It is strongly recommended that you use an ethernet cable to connect your computer to ensure a stable connection if possible.

HOW TO CHECK YOUR BANDWIDTH

1. Navigate to https://www.speedtest.net/
2. Click "Go" and wait for tests to run. Results will appear in the format below.



PERFORMING A SYSTEM CHECK

We recommend completing the system check process as early as possible so that you have plenty of time before your exam day to rectify any potential issues, and then again the day of the exam.

Click on the following link to learn how to perform a system check for your device; if your device does not meet at least the minimal system requirements, you will not be able to sit for the examination: https://tds.surpass.com/oi-resources/candidate-tutorial/

DISCLAIMER: You will not need to complete any steps that involve the use of a mobile device.

You must first ensure you're using the latest version of the Google Chrome browser before beginning the system check process.

If you do not currently have Google Chrome downloaded to your device, use this link and follow the installation instructions provided: https://www.google.com/chrome/

WRITTEN EXAM SETUP

The Written Exam Setup will be similar to the steps you will have completed during the system check performed prior to your testing date , but will include additional steps surrounding proctoring. The process of accessing the Written Exam is presented in detail below.

As a reminder, you can find a video tutorial on setting up your exam by clicking the following link: https://tds.surpass.com/oi-resources/candidate-tutorial/

Written Exam Setup

1. On the day you are scheduled to test, you should log in to your computer approximately 30 minutes before the exam start time.
2. You will have received an email from Surpass (www.Surpass.com) welcoming you to your proctored exam; open this email.
3. Within the email, find the button that says "Launch Your Exam Now" and click on it.
4. Clicking the launch button should open a web browser that will start the exam set up process. If for some reason the webpage does not open in a Google Chrome tab, make sure to set Google Chrome as your default browser, or access your email using Google Chrome only.
5. You are required to read the Online Invigilation/Proctoring Service Policies. After reviewing them, click the checkbox(es) to indicate that you agree with the policies.
6. Continue to read the policies and indicate your acceptance until you are able to click the blue "Set Up ProctorExam" button.
7. Read the webpage that makes you aware of examination specifications before moving into the exam setup process. Press the blue "Next" button to begin setting up your examination device.

Reminders

1. For this exam, you will only be allowed the use of one screen. If you use two screens (monitors), please disconnect your auxiliary screen and leave your primary one connected.
2. The following materials are allowed during the exam:
    - A small (no larger than 24" x 36") dry-erase board and marker, to be used for scratch paper
    - One piece of blank 11" x 17" paper and a pen or pencil, used to keep track of any items which the examinee wishes to protest
    - A clear or translucent water bottle
    - A passport or government-issued driver's license to use as a photo ID

TAKING THE WRITTEN EXAM

You will be taking the Written Exam using ProctorExam and the Surpass Assessment Platform. Surpass is the platform used for the Practice Exam, so you will be familiar with its functionality.

During the exam, the proctor will be able to see and hear you. You may proceed through the Written Exam at your own pace, keeping in mind that there are two (2) sections of 50 questions each, followed by an open-ended form in which you may provide information about items that you would like to appeal. **Please note that you will <u>NOT</u> be able to move backwards to previously seen questions while taking the Written Exam.**

You will have 2 hours and 15 minutes to complete each section. You will have a 15-minute break in between the sections, during which the proctor will remain online and you will leave the browser open on your computer.

After you have completed the Written Exam Setup and selected the "Start Your Exam" button, you will be redirected to an important information page. **This information page should remain open for the entirety of the Written Exam**. Make sure to carefully review this information and be diligent in not closing it accidentally.

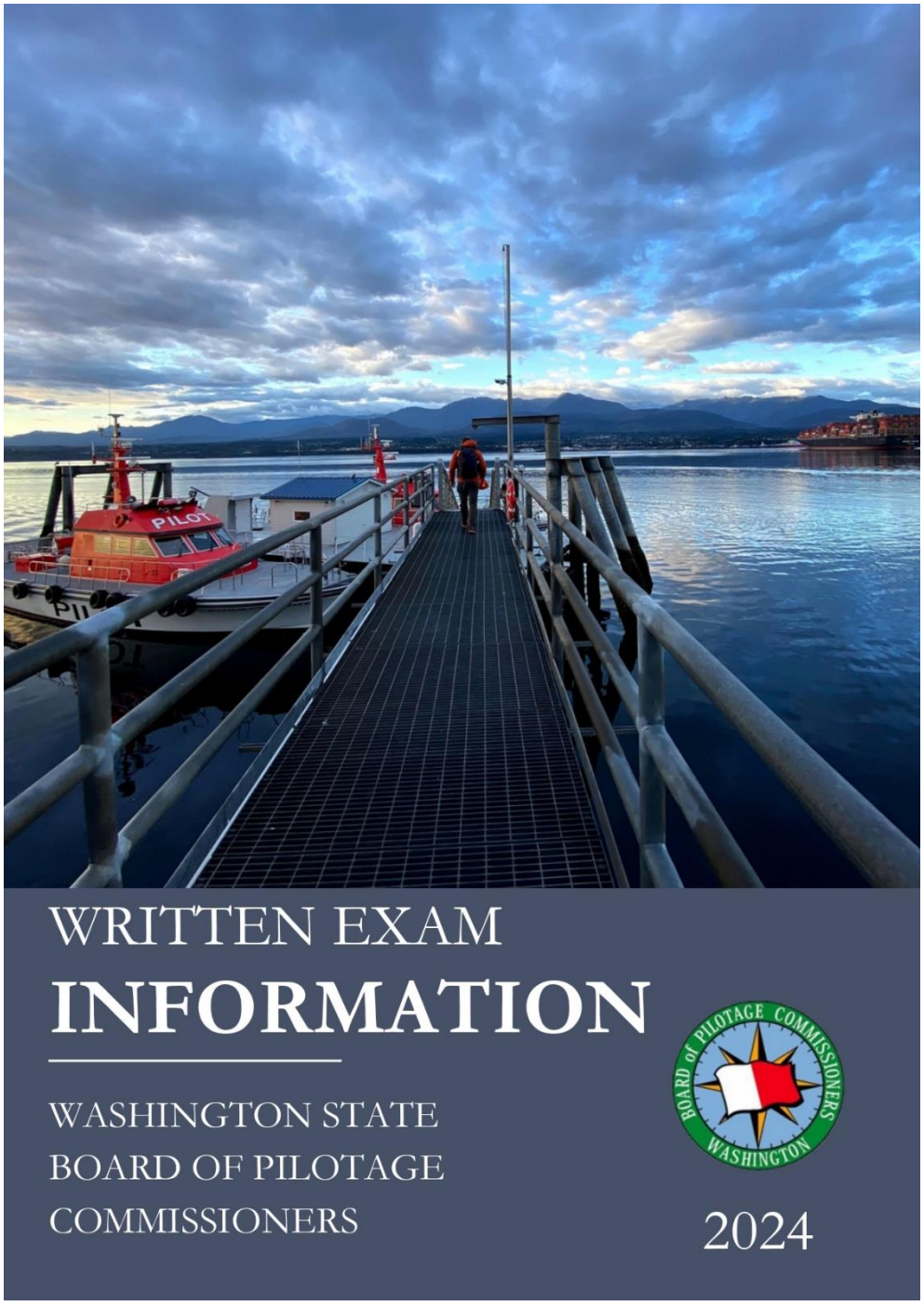
When you are ready to begin your test, either use your computer to copy your exam code (Ctrl + C) or write the exam code down using your supplemental materials. This exam code can be found under "Individual Instructions" at the bottom of the information webpage. This code is unique to you and the exam you are taking.

Click the "Launch Test" weblink on the information page to open a new tab where you can enter your exam's code. Leave open this new tab and the information tab for the duration of your exam.

Once you have completed the second and final section of the Written Exam, you may click "Finish Test" to end your exam, and exit out of the browser windows.

Board of Pilotage Commissioners
2901 Third Avenue, Suite 500
Seattle, WA 98121
Fax: 206-515-3906
Email: PilotageInfo@wsdot.wa.gov
https://pilotage.wa.gov/

Appendix C: Written Examination Information



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- About the Written Exam.....2
- Rules for the Written Exam.....4
- Basic Hardware and Software Requirements.....7
- Next Steps.....8

INTRODUCTION TO THE WRITTEN EXAM

This document provides detailed information to aspirants who have been approved to take the 2024 Marine Pilot Written Exam. This document is accompanied by the Remote Proctoring Guidelines, which is attached to the same email message that included this document. Additionally, a Practice Exam is available for approved aspirants. Details about the Practice Exam, including the link and required individual key code, are provided in the informational email sent to aspirants.

Support for Aspirants

The psychometric team from Dainis and Company, Inc. (www.DainisCo.com) is available to all aspirants for support. Aspirants are encouraged to email the team with any questions regarding the written examination process at the following email address:

BPCSupport@DainisCo.com

Additionally, if requested by the aspirant, the team is available to meet for a one-on-one, virtual session to go over any questions or issues the aspirant may have, helping to ensure that they are ready for the day of the exam. Please use the same BPCSupport@DainisCo.com email to inquire about scheduling a one-on-one session.

Aspirants can also email the Board of Pilotage Commissioners with any questions or concerns at the following email address:

Pilotageinfo@wsdot.wa.gov

ABOUT THE WRITTEN EXAM

Each examinee will take the exam using their own laptop or desktop computer in a location of their choice, while being remotely proctored (via web camera) by a live proctor. There are specific, but basic, hardware and software requirements that must be met for this process, and these details are covered in the Remote Proctoring Guidelines provided to each approved aspirant.

The table below details the Written Exam Specifications, ranging from when the exam will take place to what materials are allowed during the exam.

Written Exam Specifications		
Date	April 8, 2024 9:00 A.M. PST – 2:00 P.M. PST	Examinees should access their email and exam link by 8:30 A.M. PST.
Time Allowed	Five (5) Hours	Examinees have until 9:15 A.M. PST to being the exam.
Total Number of Questions	100 Questions	The questions are split into two 50-question sections, with space/time at the end of each section to submit any appeals about specific items in that section.
Type of Questions	Multiple-choice, with four (4) response options, one (1) correct response, and citation for source provided	There are sample questions in the Aspirant Handbook and the Practice Exam in the Examinee Welcome Email.
Sections	Section 1: 2 Hours & 15 Minutes Break: 15 Minutes Section 2: 2 Hours & 15 Minutes	Examinees move at their own pace from Section One to the Break as soon as they complete 50 items. They will start Section Two once the 15-minute break is over and can finish the test session when they have completed the second set of 50 questions. Examinees will only be able to progress forward through the exam; there is no option to go back to previous questions
Materials Allowed During Exam	Small (no larger than 24" x 24") dry-erase board and marker, to be used for scratch paper One piece of blank 11" x 17" paper, used to keep track of any items which the examinee wishes to protest A pen or pencil to write with A clear/translucent glass or water bottle A calculator is not required/allowed	Examinees will use the dry-erase board to sketch or work out answers. No labor-intensive calculations are required. Examinees will note the item number and appeal details on their blank paper. They will then tear up the paper at the end of the test session, witnessed by the live proctor. See the section concerning Written Exam Appeals in the Aspirant Handbook for more information. A cellular phone is NOT needed/allowed.

Examinees will be taking the Written Exam using ProctorExam (an online proctoring service organization) and the Surpass Assessment Platform (the platform used to deliver the actual Written Exam). Surpass is the platform aspirants will use to take the practice test so that they can become familiar with its functionality. Examinees are encouraged to visit the following websites and view tutorial videos to learn more about these systems before the examination date.

Helpful Links	
ProctorExam	https://proctorexam.com/
Surpass	https://surpass.com/
System Check	https://proctorexam.com/test-taker-support/
Tutorial Videos	https://tds.surpass.com/oi-resources/candidate-tutorial/

Please note that although some tutorial videos refer to the use of a mobile device as a second camera during the exam session, the 2024 Written Exam will NOT utilize this process. There will be no additional devices needed and NO CELLULAR PHONES ARE ALLOWED IN THE TESTING ENVIRONMENT.

RULES FOR THE WRITTEN EXAM

Testing Environment

Please consider the environment in which you will be taking the exam. The environment should be quiet with minimal risk of disturbance. A home office/den, quiet or private library conference room, or hotel room is advised. A coffee shop or other areas with people cannot be used as a testing environment.

The selected testing location must be indoors (walled), well-lit, with a closed door, and free from background noise and potential disruptions. The aspirant will be allowed to have a clear or translucent water bottle or cup located on their desk, along with the other acceptable materials, including a dry-erase board (no larger than 24“ x 36“) and marker, a blank piece of paper (no larger than 11“ x 17“), a pen or pencil, and photo ID.

Exam Security

Please note the following measures/rules in place to protect the security of both the Written Exam and the aspirant.

- The aspirant’s entire exam session will be recorded (from beginning to end), and any aberrant behavior will be immediately flagged and documented. The proctor for the session will be able to see the aspirant, as well as the aspirant‘s screen.
- Prior to beginning the exam, the aspirant will be required to show the proctor their passport or government-issued driver’s license as a form of photo ID.
- The aspirant will be required to show the proctor their desk surface, underneath their desk, on and under the chair they will be using, and a 360-degree view of their testing location.
- Prohibited items include: cellular phones, headphones or ear buds, tablets, calculators, books/publications of any kind, sunglasses, and food.
- The aspirant must be the only person in the testing room for the entirety of the session (from beginning to end).
- Once the Written Exam begins, the aspirant may not leave the proctor’s view until it is time for the 15-minute break. Once the aspirant begins Section 2, they are again required to stay within the proctor’s view until they complete the exam.
- The aspirant will only be able to progress forward through the exam; there is no option to go back to previous questions once they have been answered or if they are skipped.

BASIC HARDWARE AND SOFTWARE REQUIREMENTS

Device Guidelines and System Requirements

Please note the following guidelines pertaining to the device aspirants will be using to complete their exam.

- Aspirants may only use one monitor or screen. Any auxiliary monitors or screen must be disconnected prior to examination.
- Aspirants must have audio (microphone and speakers) and video (web camera) capabilities. Using a built-in web camera is allowed.

The table below details the system requirements that must be met by an aspirant's device to be able to access the Written Exam. For more information about system requirements, please refer to the Remote Proctoring Guidelines.

System Requirements	
Acceptable Operating Systems	▪ ChromeOS ▪ macOS (the latest two macOS releases) ▪ Windows 10 (32-bit/64-bit) ▪ Windows 11
Bandwidth[1]	▪ 1.50 Mbps upload speed minimum (Note: this is NOT your download speed) ▪ 10.00 Mbps download speed ▪ Ping under 25 ms
Resolution	▪ 1280 x 768 pixels or higher
Browser	▪ Google Chrome (latest version)

[1]It is strongly recommended that you use an ethernet cable to connect your computer to ensure a stable connection if possible.

NEXT STEPS

Prior to April 5th, 2024

- Aspirants should read through the Aspirant Handbook (available on the BPC website) and the Remote Proctoring Guidelines.
- Aspirants should familiarize themselves with the exam websites and watch the tutorial videos that are linked in this document under "Helpful Links."
- Aspirants should sign the electronic Non-Disclosure Agreement (NDA) and take the Practice Exam. The NDA is located on the first page of the Practice Exam.
    - The link and the aspirant's individual unique key code was provided in the body of the email this document was received in. The answers the aspirant provides in the Practice Exam will NOT be retained or counted towards scoring.
    - The aspirant MUST sign the NDA to be able to receive further notification emails and to sit for the 2024 Written Exam.
- The aspirant should conduct their system check (using links found under the Frequently Asked Questions (FAQ) "About Your Devices" section on the Proctor Exam Test-Taker Support Page).
- The aspirant should email the support team at BPCSupport@DainisCo.com as needed with any questions. The aspirant can also schedule a one-on-one meeting to go over any questions they may have about the written examination process by March 28th, 2024.

On or About April 5th, 2024 (72-Hours Prior to Exam Time)

The aspirant will receive an email from BPCExam.DainisCo.com. This email will have the link to the Written Exam, as well as the aspirant's unique, individual key code. They will use this link and key code to begin the 2024 Written Exam. Please see the Remote Proctoring Guidelines for more details on this. The aspirant will have used a similar process (accessing a link and entering a key code) to complete their Practice Exam in the Surpass Assessment Platform.

On the Day of the Exam

The aspirant should plan to access their email account and click on the Written Exam link by 8:30 A.M. PST on April 8th, 2024. They will then follow the steps outlined in the Remote Proctoring Guidelines. Although the steps may seem extensive, it is an easy process with clear and detailed instructions on each of the webpages. It is NOT necessary to have all of the steps memorized prior to the test date.

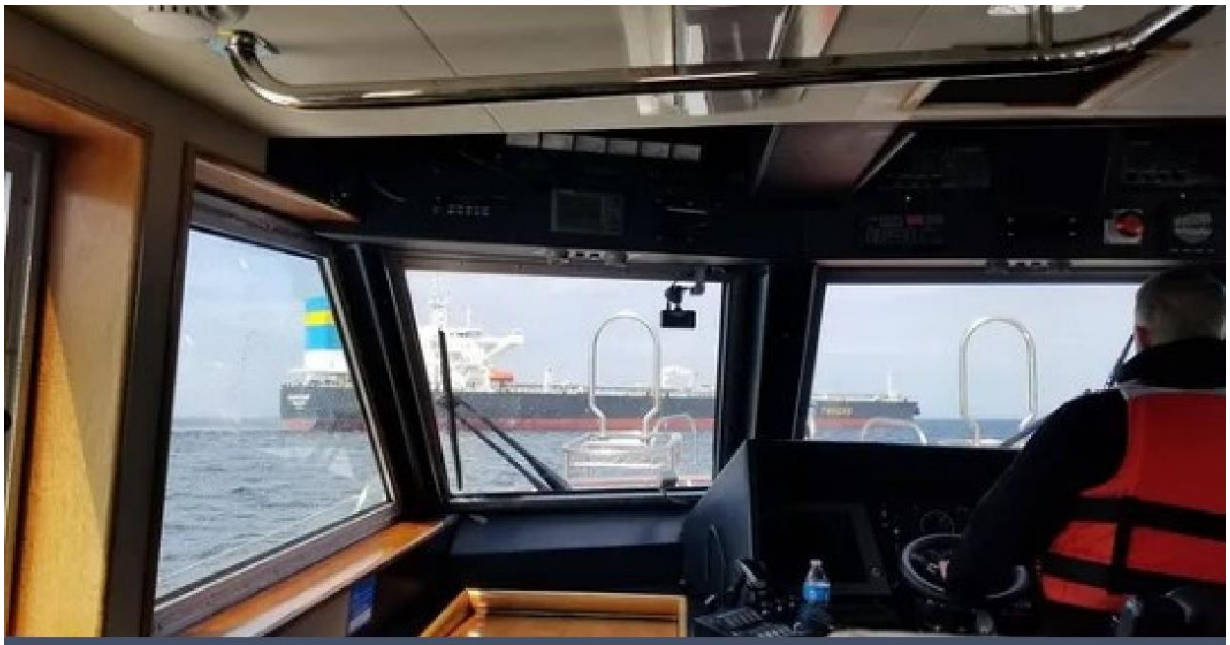
The aspirant will have until 9:15 A.M. PST to begin their exam. Please note that the exam CANNOT be started until the proctor has checked the aspirant's passport or government-issued photo ID and confirmed the suitability of their testing environment.

During the Exam

- If an aspirant is displaying any questionable behavior (please see the "Rules for the Exam" section above), the proctor will immediately notify the aspirant and document the occurrence.
- The aspirant will be able to communicate directly with the proctor to let them know the aspirant will be beginning their break. The aspirant will have up to 15 minutes for a break.
- If an aspirant would like to appeal a specific Written Exam question, they should note the item (question) number and any relevant notes on their blank piece of paper. The aspirant will then have an opportunity to enter their item appeal information into the Surpass Assessment Platform at the end of each 50-item section.
- If there are any issues with connectivity, please follow the instructions of the proctor via the in-page chat function. Chat functionality can be found on the right-hand side of the screen (look for a blue speech bubble with a question mark). Click on the button and type in your issue or query to the support team. If the support team needs to contact you, they will use this functionality to do so.
- If an aspirant loses connection and cannot reconnect to the proctor within five (5) minutes, they should immediately call (571)-336-2124, which will connect them to a member of the Dainis & Company team.

After the Exam

For more information regarding the Written Exam's cut score (pass score) and the appeals process, please see the Aspirant Handbook available on the BPC website.



Board of Pilotage Commissioners
2901 Third Avenue, Suite 500
Seattle, WA 98121
Fax: 206-515-3906
Email: PilotageInfo@wsdot.wa.gov
https://pilotage.wa.gov/

Appendix D: List of Subject Matter Expert Panels

BPC JTA Panel

First Name	Last Name	Pilot Status	Location
Sandy	Bendixen	Active	Puget Sound
Ryan	Leo	Active	Grays Harbor
John	Scragg	Active	Puget Sound
Eric	Lichty	Retired	Puget Sound
David	Sanders	Retired	Puget Sound

BPC Written Examination Development Panel

First Name	Last Name	Pilot Status	Location
Sandy	Bendixen	Active	Puget Sound
Trevor	Bozina	Active	Puget Sound
Warren	Carley	Active	Puget Sound
Colby	Grobschmit	Active	Grays Harbor
Ryan	Leo	Active	Grays Harbor
Peter	Mann	Active	Puget Sound
Nick	Moore	Active	Puget Sound

BPC Written Examination Standard Setting Panel

First Name	Last Name	Pilot Status	Location
Mark	Bostick	Active	Puget Sound
Ryan	Leo	Active	Grays Harbor
Travis	McGrath	Active	Puget Sound
Nick	Moore	Active	Puget Sound
Pat	Ninburg	Active	Puget Sound
Kevin	Riddle	Active	Puget Sound
Adam	Seamans	Active	Puget Sound
Joe	Siddell	Active	Puget Sound

BPC Simulation Evaluation Development Panel

First Name	Last Name	Pilot Status	Location
Sandy	Bendixen	Active	Puget Sound
Ken	Grieser	Active	Puget Sound
Ryan	Leo	Active	Grays Harbor
John	Scragg	Active	Puget Sound

BPC Simulator Evaluators

First Name	Last Name	Pilot Status	Location
Sandy	Bendixen	Active	Puget Sound
Ryan	Leo	Active	Grays Harbor
Alec	Newman	Retired	Puget Sound
John	Scragg	Active	Puget Sound

BPC Board of Pilotage Commissioners

First Name	Last Name	Position	Contact
Sheri	Tonn	Chair	TonnS@wsdot.wa.gov
Sandy	Bendixen	Pilot	BPCCommissionerBendixen@gmail.com
Mike	Anthony	Pilot	BPCCommissionerAnthony@gmail.com
Richard	Firth	Foreign Flag	BPCCommissionerFirth@gmail.com
Andrew	Drennen	U.S. Flag	BPCCommissionerDrennen@gmail.com
Eleanor	Kirtley	Marine Environment	BPCCommissionerKirtley@gmail.com
Nhi	Irwin	Department of Ecology	Nhoa461@ecy.wa.gov
Timothy	Farrell	Public	BPCCommissionerFarrell@gmail.com
Jason	Hamilton	Public	BPCCommissionerHamilton@gmail.com
Jamie	Bever	Executive Director	BeverJ@wsdot.wa.gov
Jolene	Hamel	Training Program Manager	HamelJ@wsdot.wa.gov
Bettina	Maki	Program Analyst	MakiB@wsdot.wa.gov

Appendix E: Written Examination Content Outline and Exam Blueprint

2024 Marine Pilot Job Task Analysis

Domain 1: Pre-voyage Planning

Pre-voyage Planning consists of preparation for all known parameters relating to a job assignment. Proper planning includes developing a voyage plan considering ship's particulars, tides and currents, weather conditions, suitability of tugs, tanker escort requirements, under keel clearance, and air draft. Pre-voyage planning also considers contingencies, local notice to mariners, state, federal and internal guidelines, route and waterway congestion (recreational and commercial traffic), and wildlife considerations.

Tasks:

1. Plan voyage by reviewing current, tide, weather prediction, and other environmental considerations.
2. Evaluate suitability of assigned tugs by considering type, number, capabilities, escort requirements, limitations, and bollard pull for assigned job.
3. Plan voyage based on potential congestion, other traffic, anticipated vessel characteristics, under keel clearance, air draft, safety considerations, and regulatory requirements and guidelines.
4. Evaluate environmental conditions for docking and undocking.

Knowledge:

1. Knowledge of information contained on pilot orders
2. Knowledge of methods of determining tides and currents
3. Knowledge of effect of environmental conditions on intended route (e.g., height of tide, direction and speed of current, wind, sea state, and visibility)
4. Knowledge of effect of different configurations on handling characteristics
5. Knowledge of type, limitations, and bollard pull/horsepower of available tugs
6. Knowledge of vessels in port
7. Knowledge of vessels underway
8. Knowledge of Local Notice to Mariners
9. Knowledge of vessels at anchor and their locations
10. Knowledge of waterway depths and berth depths
11. Knowledge of minimum under keel clearances
12. Knowledge of procedures for calculating under keel clearance
13. Knowledge of procedures for calculating air draft and overhead clearance
14. Knowledge of effects of salinity on draft of the vessel
15. Knowledge of regulatory requirements and guidelines

Domain 2: Master-Pilot Exchange

The Master-Pilot Exchange concerns the scope and exchange of relevant factors that affect the safe and efficient conduct of a particular pilotage evolution to include discussion of ship's critical equipment and details of the intended transit. The exchange between the pilot and the master informs and confirms relevant factors and is expected to be an immediate and common information base that is continuously updated and exchanged throughout transit.

Tasks:

1. Confer with master regarding pilot's expectations of bridge team, ship's particulars (pilot card), ship's maneuvering characteristics, and speed change requirements.
2. Confer with master regarding condition of propulsion systems, control systems, navigation systems, anchors, and any limitations or deficiencies.
3. Confer with master regarding number, placement, types of tugs needed, and safe working load (SWL) of ship's deck gear.
4. Confer with master regarding contingency plan.
5. Communicate voyage plan and maneuvering (e.g., docking, anchoring) plan with the master.
6. Communicate relevant regulatory requirements and guidelines.

Knowledge:

1. Knowledge of propulsion and steering systems, including wheelhouse poster
2. Knowledge of capabilities of escort and assist tugs
3. Knowledge of crew duties and bridge procedures when assuming the conn
4. Knowledge of responsibilities to fix position
5. Knowledge of routing, current, environmental conditions, expected traffic, and visibility
6. Knowledge of pilot card information
7. Knowledge of bridge resource management
8. Knowledge of Navigation Rules and Regulations (Rules of the Road)
9. Knowledge of closed loop communication protocols to prevent misunderstandings between pilot and bridge team
10. Knowledge of federal regulations related to minimum equipment requirements
11. Knowledge of regulatory requirements and guidelines

Domain 3: Operational Safety

Safety considerations in pilotage encompass the protection of life, property, and environment. Safe piloting includes evaluation of environmental, operational, and regulatory aspects of the transit and determination of suitable conditions and actions. Conditions and parameters are continuously reevaluated to recognize and prevent errors and make adjustments as appropriate.

Tasks:

1. Evaluate pilot transfer arrangements.
2. Determine if environmental conditions are safe for movement of ship.
3. Identify conditions that may result in an error chain.
4. Comply with fatigue-related regulations for routine operations.

Knowledge:

1. Knowledge of pilot transfer arrangements specified by IMO, SOLAS, US Coast Guard, and IMPA
2. Knowledge of traffic requiring minimum wake
3. Knowledge of effects of fatigue on performance of pilot and crew
4. Knowledge of distractions that may cause lack of situational awareness
5. Knowledge of personal safety practices for embarking and disembarking vessels
6. Knowledge of risk management strategies and their application to maritime pilotage
7. Knowledge of procedures for identifying potential error chain
8. Knowledge of keys to successful error chain breaking in a timely manner

Domain 4: Docking and Undocking

Docking and undocking consists of managing the vessel's inertia, momentum, and overall movement while using available tools including propulsion, rudder, thrusters, and tugs while taking into consideration physical and environmental elements.

Tasks:

1. Plan number and placement of tugs by considering capabilities of thrusters, tug capabilities, weather, current, ship characteristics, berth, and maneuverability required to dock/undock ship.
2. Confer with tugs regarding communication protocol, terminology, tug position and lines, bollard pull, safe working load (SWL) of bitts and chocks on ship, and docking/undocking plans prior to arriving/departing berth.
3. Maneuver vessel, with tugs as needed, to adjust angle of approach depending upon current flow, wind, and sail area.
4. Use tugs to place ship in final position for docking.
5. Use tugs to assist control when undocking.
6. Manage safe speed by considering proximity to other vessels, under keel clearance, weather conditions, and capabilities of tugs in approaching or leaving berth.
7. Monitor speed to safely maneuver ship.
8. Make adjustments for cushion effect, dock condition, and fendering when docking or undocking ship.
9. Anticipate ship's response to propeller rotation when ordering an astern bell.
10. Manage ship's inertia and momentum to determine actions required to manage ship's movements toward or away from berth.
11. Safely execute mooring line operations when docking and undocking.

Knowledge:

1. Knowledge of vessel characteristics (e.g., propulsion, thrusters, type of rudder, engine RPMs, safe working load (SWL) of bitts and chocks, propeller type)
2. Knowledge of berth (e.g., azimuth, depth alongside, currents, tight quarters, fendering, crane height and position)
3. Knowledge of approach and departure maneuvers
4. Knowledge of docking/undocking maneuvers
5. Knowledge of configuration of line placement, line type, and their function
6. Knowledge of effects of speed in confined and shallow waters
7. Knowledge of inertia and its effects when coming alongside
8. Knowledge of effects of hydrodynamics on docking/undocking
9. Knowledge of effects of propeller forces when going ahead or astern
10. Knowledge of effects of sail area on maneuverability of ship
11. Knowledge of effectiveness of thrusters relative to the speed of the vessel
12. Knowledge of amount of bollard pull/horsepower/kW to overcome effects of wind loading
13. Knowledge of sequence of taking lines in or out (e.g., proximity to thruster and propeller)

Domain 5: Anchors

Use of anchors considers relevant factors to successfully bring a vessel to or from anchor, enhance maneuvering, or manage an emergency situation.

Tasks:

1. Assess intended anchorage location for potential hazards.

2. Verify ship's anchored position by using ranges and bearings and other available means.
3. Determine approach angle, speed, and amount of anchor chain needed after considering configuration of the ship, wind/current conditions, depth of water, quality of holding ground, and maneuvering room.
4. Confer with master regarding procedures for dredging anchor.
5. Confer with master regarding procedures for walking out anchor or letting go with the brake.
6. Confer with master regarding condition of anchor windlass.
7. Determine actual position of the anchor when calculating swing radius in the area of other anchored vessels and all other hazards.
8. Use anchors for emergency maneuvers.
9. Determine intended placement of anchor by considering range and bearing and other available means.
10. Assess direction of current, wind, and other external forces on ship's approach to anchoring position.
11. Monitor ship's behavior after anchoring.
12. Maintain safe speed when using an anchor.

Knowledge:

1. Knowledge of natural hazards of anchorages (e.g., depths, obstructions)
2. Knowledge of navigational practices for determining location of anchorage area
3. Knowledge of chart information relative to anchoring
4. Knowledge of regulated or designated anchorages
5. Knowledge of factors to consider in determining scope of chain when anchoring
6. Knowledge of standards of care for vessels at anchor
7. Knowledge of techniques for dredging the anchor
8. Knowledge of ship's anchoring equipment
9. Knowledge of deep-water anchor procedures
10. Knowledge of procedures to anchor in narrow channels
11. Knowledge of emergency use of anchors
12. Knowledge of techniques for using anchors to dock and undock ships
13. Knowledge of anchoring techniques to drop anchor, lay out the scope, set the anchor, and assess where the vessl ends up

Domain 6: Safe Navigation

Navigation for safe piloting applies visual and electronic navigational tools such as radar, AIS, ECDIS, and VHF radio. A pilot uses electronic and visual aids for navigation to ascertain the ship's position, vessel targets, and CPA by parallel indexing, plotting, and visual landmarks. Navigation also involves aids to navigation, ranges, VTS protocol, and knowledge of rules of the road, and local and state regulations.

Tasks:

1. Evaluate traffic conditions in boarding area prior to embarking and disembarking.
2. Obtain information regarding names of vessels by using Automatic Information Systems (AIS), Vessel Traffic Service (VTS), Electronic Chart Display and Information System (ECDIS).
3. Assess information for collision avoidance by using all available means.
4. Identify vessels by their light characteristics at night or day shapes by day.
5. Navigate ship in accordance with applicable Navigation Rules and Regulations.
6. Confirm location in channel based on visual landmarks.
7. Develop radar ranges around transit points, tangents, or fixed marks to determine vessel's location.
8. Establish parallel index lines off points and/or fixed aids to navigation.
9. Verify vessel's position by comparing data from electronic navigational aids with visual observations.

10. Use natural ranges to determine set and drift motion of vessel.
11. Verify commands by visual confirmation, by audible confirmation, and by monitoring ship's equipment to ensure command has been executed.
12. Monitor ship's position by using ranges and bearings from fixed objects and all other available means to determine ship position.
13. Consider configuration of ship, trim, draft, speed, and proximity to shoreline to prevent wake damage.
14. Monitor environmental conditions that affect safe movement of the ship.
15. Monitor appropriate radio channels.
16. Post a lookout or crew member to stand by anchors beyond Navigation Rules and Regulations, navigation requirements, or restrictions.
17. Monitor and amend the voyage plan as safety, scheduling, and changing conditions require.
18. Consider effects of environmental, traffic conditions, and wake effects when establishing safe speed.
19. Calculate Estimated Times of Arrival (ETAs).

Knowledge:

1. Knowledge of Chart One
2. Knowledge of aids to navigation
3. Knowledge of navigational equipment, including the capabilities and potential errors, and techniques for compensating
4. Knowledge of Navigation Rules and Regulations (COLREGS)
5. Knowledge of different methods to assess risk of collision
6. Knowledge of traffic, weather, or environmental conditions that will affect safe navigation of the vessel
7. Knowledge of radar tools to keep safe distances from navigational hazards
8. Knowledge of electronic navigation equipment used in piloting and collision avoidance (e.g., radar, AIS, ECDIS safety contour settings and chart symbols)
9. Knowledge of visual cues to assess fore and aft motion
10. Knowledge of navigating rivers, points, and bends
11. Knowledge of factors that affect estimated time of arrival (ETA) calculations
12. Knowledge of the difference between speed over ground and speed through the water
13. Knowledge of calculations for set and drift
14. Knowledge of engine slowdown procedures
15. Knowledge of VHF radio protocols and bridge-to-bridge communication
16. Knowledge of regulatory requirements related to navigation equipment function and vessel visibility

Domain 7: Shiphandling

Shiphandling involves continuous control, evaluation, and adjustment of a vessel's position and progress considering ship's characteristics, capabilities, environmental factors, and intended route.

Tasks:

1. Evaluate ship's responsiveness when executing maneuvers (e.g., turns, slowing down, speeding up).
2. Consider vessel types and configurations on maneuvering.
3. Assess rate of turn from visual or electronic means.
4. Monitor ship's performance by using visual and all other available means.
5. Adjust amount of rudder as needed to account for pivot point and speed changes.
6. Monitor advance and transfer.
7. Consider effect of current and wind on course over ground versus heading.
8. Determine effectiveness of thrusters by considering speed, trim, and draft.
9. Assess effects of change in pivot point location.

10. Evaluate effect of engine type and propulsion system on maneuverability of ship.
11. Evaluate effect of propeller transverse thrust going ahead and astern.
12. Evaluate effects of different types and size of rudders on handling of ship.
13. Manage effects of pivot point changes with speed (e.g., wind, thrusters).
14. Determine whether ship has positive, negative, or neutral directional stability.
15. Respond effectively to a rudder or propulsion failure.

Knowledge:

1. Knowledge of different vessel types and configurations and their capabilities and limitations
2. Knowledge of rate of turn versus rudder commands
3. Knowledge of vessel response under various loaded conditions and speeds
4. Knowledge of slowdown time and distance necessary for reducing speed
5. Awareness that actual responses may vary from expectations
6. Knowledge of techniques for emergency shiphandling
7. Knowledge of emergency procedures in maneuvering vessel
8. Knowledge of limitations and discrepancies of navigation instrumentation
9. Knowledge of uses of navigational equipment during maneuvering situations
10. Knowledge of ranges and bearings to estimate speed, set, and drift
11. Knowledge of location of pivot point of a vessel underway
12. Knowledge of advance and transfer and the forces that affect it
13. Knowledge of effects of speed, trim, and draft on thrusters
14. Knowledge of effects of water speed and engine speed on rudder control
15. Knowledge of effect of engine types, propellers, and rudders on maneuverability of ship
16. Knowledge of trim and its effect on vessel handling
17. Knowledge of propeller thrust and rudder effectiveness while maneuvering ahead or astern
18. Knowledge of specialized rudders and propulsion systems and their effect on vessel handling
19. Knowledge of effect of turning forces (e.g., rudder, transverse thrust, tug forces, etc.) interactive forces, and forces of wind and tide on position of pivot point
20. Knowledge of effects of loading on vessel's handling
21. Knowledge of effects of rudder actions on directional rotation
22. Knowledge of directional stability
23. Knowledge of techniques and effects or rudder cycling on ship's speed

Domain 8: Restricted Waterway Transit

A restricted waterway is a narrow area that may contain docks or obstructions on one or both sides. Restricted waterway transit consists of managing the overall movement and position of the vessel in the waterway while compensating for the effects of hydrodynamics, environmental conditions, and nearby vessels.

Tasks:

1. Evaluate effects of moored vessels in waterway by considering their blockage factor and wind shadow.
2. Compensate for effects of currents and weather on maneuverability of ship.
3. Consider sail area, moored vessels, hydrodynamic forces, swept path, and effective use of tugs during waterway transit.
4. Counter effect of bank cushion, bank suction, and squat in shallow waterways.
5. Manage vessel heading in a narrow waterway to avoid excessive changes in ship's profile as related to swept path.
6. Manage effects of speed on moored vessels.
7. Maneuver vessel in and out of locks.

8. Manage vessel speed to effectively control the ship.

Knowledge:

1. Knowledge of techniques to maneuver ships in narrow channels
2. Knowledge of effects of predicted depth versus observed depth of water (e.g., barometric pressure, water level, river flow, reported shoaling)
3. Knowledge of vessel's draft and squat in relation to speed and depth of water
4. Knowledge of effects of wind and/or visibility on ability to maneuver in waterway
5. Knowledge of visual cues to assess current
6. Knowledge of visual cues to assess wind
7. Knowledge of safe speed to proceed through waterway
8. Knowledge of waterway dimensions and width of horizontal clearance when calculating available room to navigate vessel
9. Knowledge of maneuvering in turning basins
10. Knowledge of turning forces (e.g., bank cushion, bank suction, wind forces) in shallow waterways
11. Knowledge of the effects of shallow water on vessel maneuverability
12. Knowledge of hydrodynamic effects of a vessel in or approaching/departing a lock
13. Knowledge of methods to determine swept path
14. Knowledge of techniques necessary to maintain safe position while minimizing swept path
15. Knowledge of bridge signaling methods and requirements for opening

Domain 9: Tugs

Use of tugs involves general knowledge of tug types, capabilities, and limitations, various escort techniques for tethered and untethered transit, the safe positioning of the tugs, and establishing and maintaining effective communication with tugs.

Tasks:

1. Operate the vessel in compliance with regulations pertaining to escorts.
2. Maintain safe positioning for tugs (e.g., proximity to anchors, mooring lines, obstructions).
3. Adjust tug forces to account for change in pivot point.
4. Establish and maintain effective communication with tugs.
5. Position and use tugs in a safe and effective manner.

Knowledge:

1. Knowledge of different types of tugs (e.g., conventional, Z-drive, voith) and their capabilities and limitations
2. Knowledge of tug escort techniques for tethered and untethered transit
3. Knowledge of emergency maneuvering techniques using tugs
4. Knowledge of escort regulations and guidelines
5. Knowledge of vessel speed on tug effectiveness
6. Knowledge of differences between horsepower and bollard pull as applied to tugs
7. Knowledge of tug-ship interaction
8. Knowledge of tug maneuvering levers
9. Knowledge of basic tug positions for ship work
10. Knowledge of dead ship towing techniques

Washington State Marine Pilot Exam Blueprint

Written Exam:

Content Domain	Weighting
Domain 1: Pre-voyage Planning	8%
Domain 2: Master-Pilot Exchange	6%
Domain 3: Operational Safety	8%
Domain 4: Docking and Undocking	15%
Domain 5: Anchors	8%
Domain 6: Safe Navigation	12%
Domain 7: Shiphandling	21%
Domain 8: Restricted Waterway Transit	12%
Domain 9: Tugs	10%
TOTAL	100%

The 2024 Written Examination will use all listed domains above the foundation of the exam; however the Simulator Evaluation will focus only on the following domains:

- Domain 4: Docking and Undocking
- Domain 6: Safe Navigation
- Domain 7: Shiphandling
- Domain 8: Restricted Waterway Transit

The JTA analysis is made with the understanding that this knowledge is what is needed to be a pilot in Washington State, however it has many uses beyond the exam process. The written exam will have no local knowledge and will only have material sourced from the bibliography. Please use the detailed JTA for a high-level overview of the tasks and knowledge needed to be a Washington state pilot.

DAINIS AND COMPANY, INC.
PSYCHOMETRICS AND EVALUATION

ITEM WRITING WORKSHOP

WASHINGTON STATE MARINE PILOT EXAM
OCTOBER 20-21, 2022 | OAKLAND, CA

AGENDA

- Welcome + Introductions
- Item Review Guidelines
- Workshop Process Overview/Instructions

ϑ|DC

EXAM DEVELOPMENT PROCESS

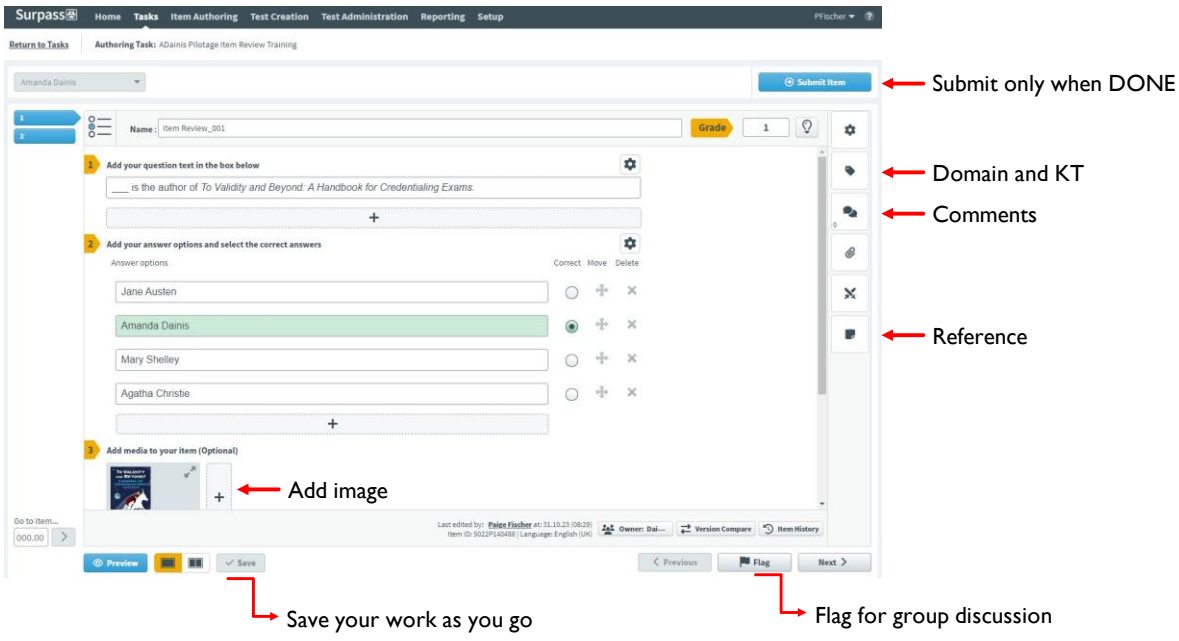
- JTA
- Validation Survey
- Finalization of Content Outlines and Exam Blueprints
- Item Writing and Review ← We are here!
- Psychometric review of items by DC Inc.
- Item Bank is finalized
- Exam form assembly and procedure for setting cut score
- New exams launched

GUIDELINES

- Refer to the Item Writing and Item Review Guidelines packet
- Item Reviews today:
  - Read item and check comments
  - Revise item as needed
  - Check "tags" (Domain and KT Statements)
  - Check citation
  - Flag for discussion tomorrow

ADDITIONAL DISCUSSIONS

- Acronyms and Terminology
  - Discuss with each other
  - Leave in a comment
- Bibliography / References
  - * = new text
  - CFRs
  - Anything else?



Happy Reviewing!

If you have questions, please email:
paige@dainisco.com
(you should have an email from me already)
meranda@dainisco.com
charles@dainisco.com

Or ask during our check ins!

DAINIS AND COMPANY, INC.
PSYCHOMETRICS AND EVALUATION

ITEM REVIEW TRAINING

AUGUST – SEPTEMBER 2023

BUILDING BLOCKS OF A MULTIPLE-CHOICE ITEM

- **Stem**
  - Beginning part of the item that presents the item as a problem to be solved or a question asked of the respondent, as well as any other relevant information
- **Response Options**
  - Possible answers to the problem defined in the stem
- **Correct Answer**
  - This is the response option that is keyed as correct
- **Distractors**
  - Incorrect response options

BUILDING BLOCKS OF A MULTIPLE-CHOICE EXAM

STEM

STEM: What should you do if you have been given written instructions that you do not understand?

RO1: You should do what you think is best.
RO2: You should ask a co-worker what to do.
RO3: You should ask your supervisor about the instructions.
RO4: You should ask the author to explain the instructions.

RESPONSE OPTIONS

RO4 is correct. RO1, RO2, and RO3 are distractors.

WHILE REVIEWING, ANSWER THESE QUESTIONS

1. What is the correct answer?
2. Does the reference/citation match the content of the item?
3. Is there only one correct option?
4. Is this item relevant to the job of a Puget Sound or Grays Harbor Pilot?
5. Is the question something that is basic or essential knowledge for someone with the prerequisite experience and credentials?

ITEM WRITING PROCESS – THE SURPASS PLATFORM

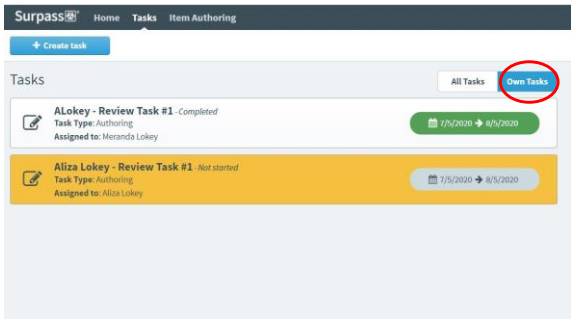
INTRODUCTION TO USING SURPASS

1. Follow the link sent to you by a Dainis team member and then use the pre-created login credentials to log in.
2. Please keep track of your username and password. ☺
3. Now the FUN begins!!!

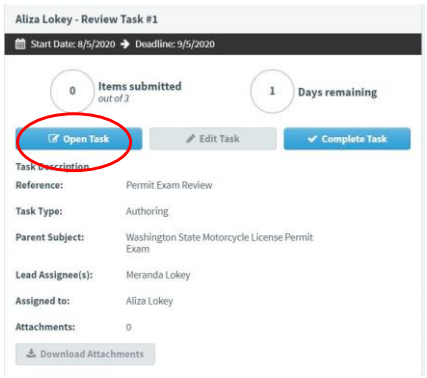
REVIEWING AN EXISTING ITEM

- From the Surpass home screen, please select "Tasks" from the toolbar at the top of the page.

- Once inside the tab, click on "Own Tasks" to see a list of your current tasks.

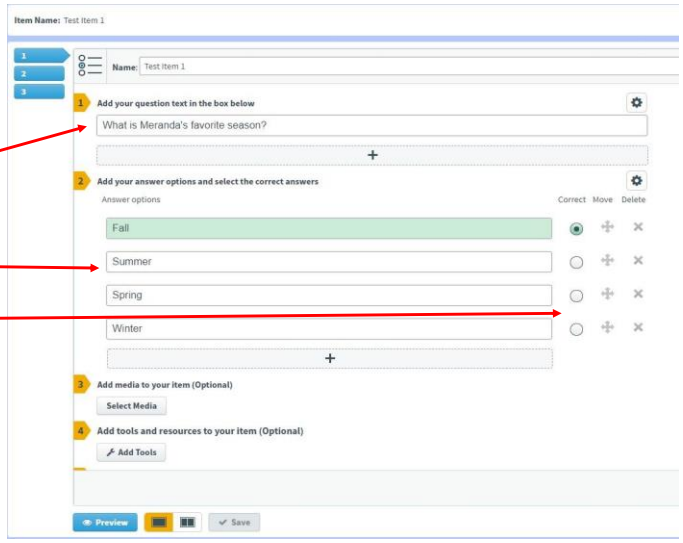


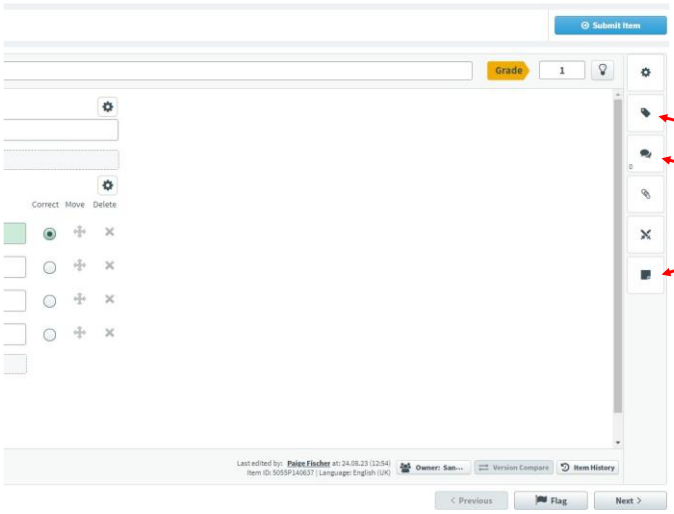
- Next click "Open Task" in the text block to the right of the task.



- Now you are ready to review your first item.

1. Review the stem.
2. Review the four response options (ROs).
3. Select the correct RO by clicking a bubble.

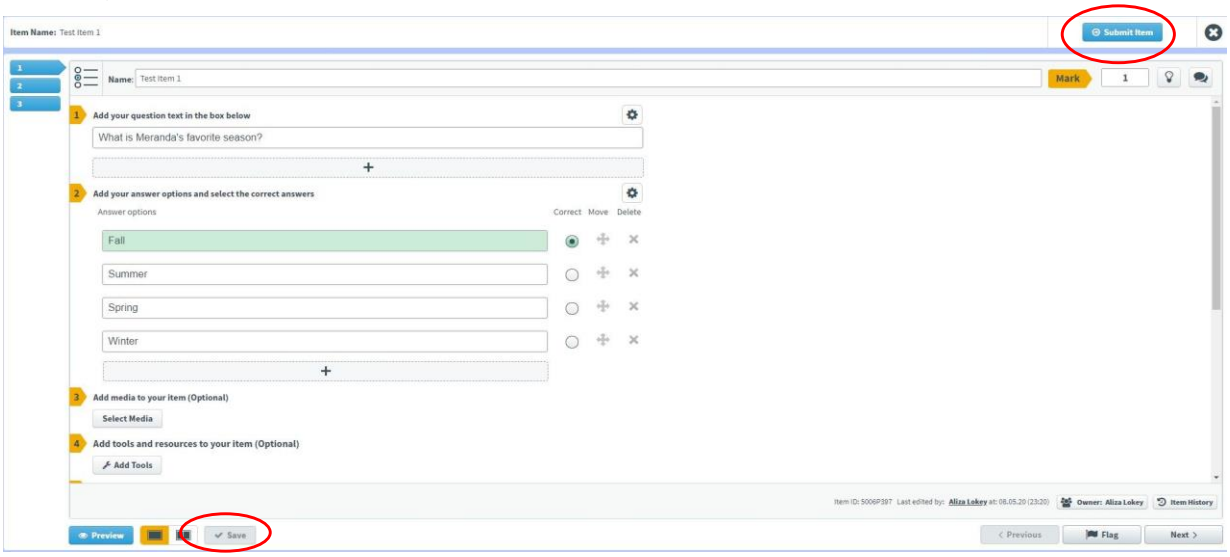




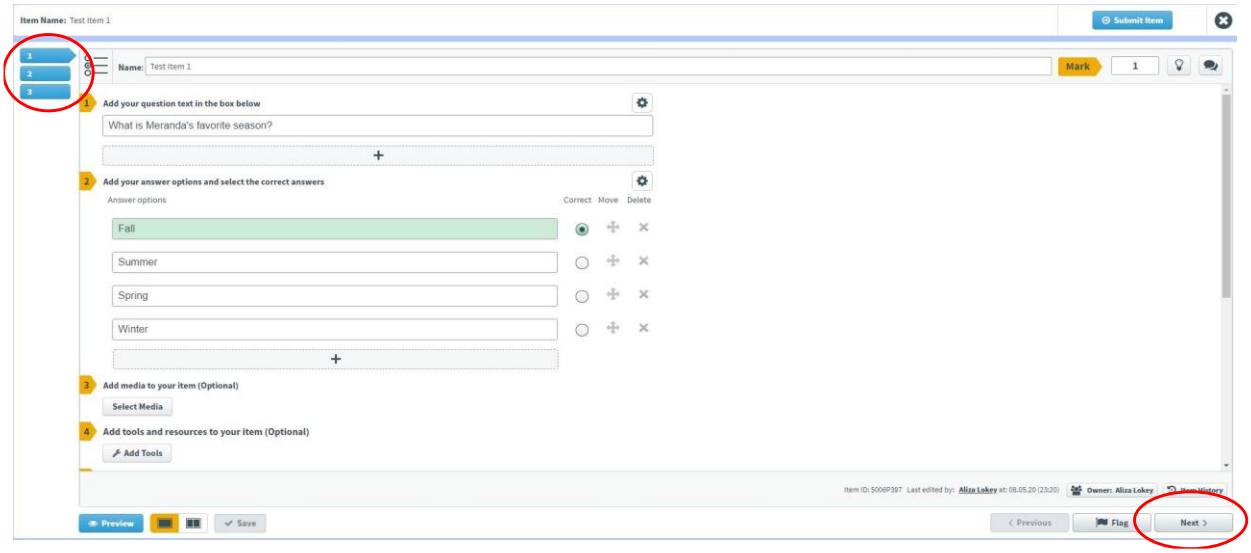
On the right side of the screen:

1. Check the Domain
2. Leave comments
3. Check the references/citations

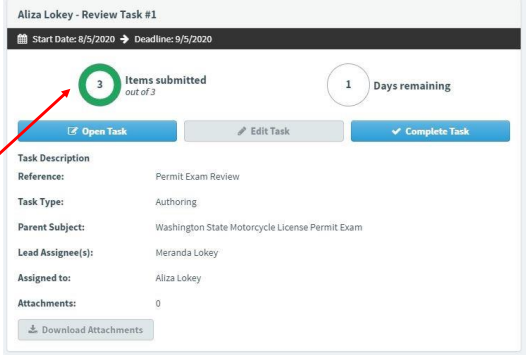
When you are done with an item click SAVE and then SUBMIT. Once you click SUBMIT, you can no longer work on an item.



To move to the next item use the flags on the left or click Next at the bottom.



You may work on items at your own pace. Once you SAVE an item, your progress will be saved and you can log out and return to more items at a later time. As you submit items, this counter will show your progress.



HAPPY REVIEWING!

I LOVE helping SMEs troubleshoot Surpass. PLEASE email me with any questions ☺

-Paige

(Paige@DainisCo.com)

Appendix G: Written Examination, Simulator Evaluation, and Overall Ranking Results

The scoring of the 2024 State Marine Pilot Written Examination has been completed. The following Applicant Numbers identify the successful applicants whose results met or exceeded the Board-established cut score. These applicants will advance to the Simulator Evaluation. Applicant Numbers are listed in no particular order.

Successful applicants must pay for their Simulator Evaluation via credit/debit card ($2,000.00) PRIOR to your Simulator Evaluation Familiarization Session. You must make this payment by phone to Ginger 206.801.1241, payments can be accepted M-F 0730-1500. Further instructions regarding the Simulator Evaluation will be sent under separate email. There is a mandatory conference call on Monday 4/15/24 at 1200 PDT for all successful applicants.

SUCCESSFUL APPLICANT I.D. NUMBERS (listed in no particular order)

77746	52001	81345
94416	15481	56826
35776	51010	98370
29110	20340	49267
98873	48438	36529
12032	13868	14494
90124	29544	

We regret to inform the following unsuccessful applicants that your score on the written portion of the Washington State Pilotage Examination was below the cut score established by the Board of Pilotage Commissioners. You therefore will not be moving on to the Simulator Evaluation.

UNSUCCESSFUL APPLICANT I.D. NUMBERS (listed in no particular order)

60014	75382	59153
88784	78614	

All protests have been individually reviewed and discussed by a panel of pilot experts and with the consultation of a psychometrician. Based on this review, the Board has determined there were no changes to the scoring.

The Board has also determined that no other protests meet the minimum standard of review as required in WAC 363-116-083(2) and (3). This email is your notification pursuant to WAC 363-116-083(4)(b) of the decision of the Board in this regard.

Your final score and ranking for the written exam will be emailed to you after the Simulator Evaluation has been scored and the final overall ranking established.

All applicants continue to be known and identified by their Application Identifying Number; therefore this notice is being sent to all applicants.

The scoring of the 2024 Washington State Marine Pilot Exam Simulator Evaluation has been completed. **The following Applicant Numbers identify the successful applicants whose results met or exceeded the cut score approved by the Board of Pilotage Commissioners.**

SUCCESSFUL APPLICANT I.D. NUMBERS (listed in no particular order)

90124	56826
36529	49267
48438	13868
77746	35776
15481	51010
20340	98370
29544	

We regret to inform the following unsuccessful applicants that your score on the Simulator Evaluation portion of the Washington State Marine Pilot Exam was below the Board-approved cut score.

UNSUCCESSFUL APPLICANT I.D. NUMBERS (listed in no particular order)

12032	98873
52001	29110
81345	94416
14494	

Further information regarding ranking and the Simulator Evaluation Review process will be distributed and posted to our website by 5:00pm PDT on May 2, 2024.

www.pilotage.wa.gov

All applicants continue to be known and identified by their Application Identifying Number; therefore, this notice is being sent to all applicants.

2024 WASHINGTON STATE MARINE PILOT EXAMINATION
PRELIMINARY RANKED LIST OF COMBINED SCORES

Grouped below are those applicants who passed both the Simulator Evaluation and Written Exam.

ID Number	Total Score	Overall Simulator Score	Written Score
77746	92.10	91.20	93.00
35776	90.63	93.25	88.00
15481	90.35	91.70	89.00
51010	90.18	94.35	89.00
20340	89.88	93.75	86.00
98370	89.80	92.60	87.00
29544	89.23	98.45	80.00
13868	88.38	95.75	81.00
48438	87.98	96.95	79.00
49267	87.90	91.80	84.00
36529	86.75	91.50	82.00
90124	86.20	93.40	79.00
56826	83.03	95.05	71.00

Scores are presented in percentages. The Written Score and the Overall Simulator Score are averaged to weight each portion at 50%.

Overall Simulator Cut Score = 91.02 **Written Cut Score = 70.00**

Grouped below are those applicants not achieving the Simulator Evaluation cut score.

ID Number	Overall Simulator Score
12032	69.75
52001	79.25
29110	79.35
81345	84.20
94416	87.15
14494	87.30
98873	87.55

Grouped below are those applicants not achieving the Written Examination cut score.

ID Number	Written Score
60014	43.00
75382	46.00
59153	52.00
88784	62.00
78614	65.00

Pursuant to WAC 363-116-084; *Simulator Evaluation Review and Appeal Procedures,* if you intend to submit a protest of your Simulator Evaluation score, this request must be received **in writing** no later than **Wednesday, May 08, 2024 at 2:00 p.m. PDT**. Written requests must be sent via email to BPCsupport@dainisco.com and must include specific details regarding which part of the performance evaluation is being protested (WAC 363-116-084 (d)).

PACIFIC MERCHANT SHIPPING ASSOCIATION

WA State Board of Pilotage Commissioners Industry Update

July 18, 2024 Meeting

Arrivals Up 5 in June 2024 to June 2023 Comparison

- Containers up 2
- Bulkers up 13
- General up 4
- Other down 5
- Car Carriers down 6
- Tankers up 2
- ATB's down 2
- RoRo's down 4

Year to Date Total Arrivals More than 2023 But Comparable to 2022

The pace of total arrivals so far in 2024 is more than 2023 per our earlier updates but slightly less than 2022. In terms of painting a more beneficial picture, it might be helpful to look at trends in vessel types. Recall last year there was a jump in car carriers over the prior years while this year tankers and bulker calls led the increases over 2023. There is also a correlation between vessel types and total ship moves or assignments per port call.

Assignments Per Vessel Call by Vessel Type

This can be a useful metric for the BPC in terms of evaluating pilotage demand. For example, a grain ship goes to anchor before being cleared to accept grain so there are 3 pilot assignments for one ship call. Typically, container vessels go directly to the dock but we all know some involve a 2nd pilot for a waterway transit. Although a 2nd pilot assignment is much shorter than a full arrival or departure, it is counted the same when looking at aggregated assignment data thus the need to evaluate pilot demand by both assignment volume and type of assignment.

A metric that might be useful to the BPC is average assignments per vessel call broken down by vessel type. That way, when we see trends by vessel type there can be a better correlation to pilot assignments or demand.

Canada's West Coast Port Strike Averted After Board Order

A strike planned for July 8th by ship and dock foremen at west Canadian ports was called off after Canada's Industrial Relations Board (CIRB) found the union's strike notice was in violation of the labor code. It is unclear whether this action would have led to any cargo or ship call diversion

Windfall for West Coast ports News

9 Jul 2024 by Jasmina Ovcina Mandra https://www.worldcargonews.com/ports-terminals/2024/07/windfall-for-west-coast-ports/

Top US West Coast ports have secured over $170 million from the Harbor Maintenance Tax Fund (HMTF) this year. The HMTF, administered by the US Army Corps of Engineers and funded through a 0.125% tax on importers' cargo values, is intended for financing maintenance projects on the US navigable waterways. Certain US deep-water ports historically received minimal federal investment despite contributing significantly to HMTF revenue. Los Angeles and Long Beach, which contribute around half of the fund's revenue, saw modest returns, due to their naturally deep harbours. The Port of Los Angeles has received just 3% of its contributions in recent years. In 2020, the America's Water Infrastructure Act of 2018 was amended to allow the use of the funds to be extended to wharf repairs and other maintenance work on the waterfront. **The Northwest Seaport Alliance (NWSA), representing Seattle and Tacoma, anticipates a substantial injection of $40 million from the fund.** Discussing the funding at a Board meeting, Managing Members of the NWSA heard that the HMTF money will free up operational revenues typically allocated for maintenance for other activities. The NWSA has used this budget room to create two new incentive schemes that will run from May 2024 to April 2025: the Voyage Consistency & On-Time Arrival Award Programme and the Gate Operation Incentive.

Seattle, Port of Seattle agreement will implement shore power across all berths

By Spencer Pauley | The Center Square • Jul 3, 2024

https://www.everettpost.com/blog/seattle-port-of-seattle-agreement-will-implement-shore-power-across-all-berths

The Seattle City Council has unanimously approved a two year agreement with the Port of Seattle to implement shore power into Terminal 46 and Pier 66 to help reduce greenhouse gas emissions. With the city council's Tuesday approval of the agreement, Seattle will become one of the first cruise ports in the U.S. to make shore power available at all of its berths. The necessary infrastructure will be paid for by the Port of Seattle with a total budget of $44 million. The city is adding an additional $3.5 million from Seattle's Maritime Transportation Electrification Program.

Climate Commitment Act Repeal Imperils Port's Pollution Reduction Efforts

By Ashli Blow - July 2, 2024 The Urbanist

In June, the ports of Seattle and Tacoma announced the Puget Sound Maritime Air Forum's emissions inventory — a count of greenhouse gasses within port boundaries, conducted every five years. According to the inventory, diesel particulate emissions from the Port of Tacoma have decreased by at least 80% since 2005, while the amount of freight moved has increased. It mirrors a broader trend of emissions reductions across Puget Sound ports. Next to Harbor Island, Seattle's Terminal 5 has seen over $300 million in upgrades in recent years, including the addition of infrastructure that allows ships to plug into shore power and reduce carbon emissions.

Largest US Ports Report Volume Declines For May But Some Facilities Experience Container Volume Growth

June 27, 2024 2:16 PM, EDT TT News

U.S. ports posted a mixed bag of results for May, with certain facilities seeing volume gains while some of the nation's largest saw container traffic decline. The Northwest Seaport Alliance noted that combined volumes between the ports of Seattle and Tacoma, Wash., increased 20.6% to 277,388 from 229,974 TEUs. The alliance noted that voyage consistency, increased vessel calls and low import rail dwells continue to drive strong container volumes in the gateway. Container volumes for the first five months of the year were up 8.2% at 1,235,446.

Mayor Bruce Harrell Signs Legislation Sending Transportation Levy to Seattle Voters

Seattle Press Release

Today, Mayor Bruce Harrell signed into law the legislation that will place the Transportation Levy on Seattle voters' ballots in November 2024. The legislation was unanimously approved by the City Council on Tuesday. If approved by voters, the eight-year $1.55 billion Transportation Levy will provide funding to enhance the city's transportation infrastructure including building sidewalks, paving streets, repairing bridges, and improving transit connections. The levy includes investments in the safety, maintenance, and modernization needs of Seattle's transportation infrastructure and incorporates robust community input.

PMSA

West Coast Trade Report

June 2024

Nearly Complete May TEU Numbers

The National Retail Federation's Global Port Tracker (NRF/GPT) issued a June 10 estimate that the thirteen U.S. ports it covers handled 2.09 million TEUs, up 8.3% from May 2023. "Imports of containerized goods at U.S. ports are booming, with particularly strong growth on the West Coast," according to the press release. Similarly, Descartes expects a "robust" 11.9% y/y bump in inbound loads at U.S. ports in May. Descartes further reports that, while Los Angeles would see inbound loads slip by 6.3%, the volume at Long Beach was expected to surge by 13.1%.

PMSA monitors the monthly TEU numbers for 25 North American ports, twenty in the United States, three in Canada, and two in Mexico. Here is what those ports are reporting about the container traffic they saw in May.

Starting in Southern California, the **Port of Los Angeles** announced that it handled 390,663 inbound loads in May, a 4.5% fall-off from a year earlier. At the neighboring **Port of Long Beach**, inbound loads in May amounted to 345,271 TEUs, which was also down 4.5% year-over-year.

While the two busiest West Coast container ports hardly supplied evidence of strong growth, the **Port of Oakland** did realize a 12.9% gain in inbound loads from a year earlier. Meanwhile, the **Northwest Seaport Alliance Ports of Tacoma and Seattle** reported 103,556 import loads in May, a sharp 32.5% jump over a year ago. Collectively, then, the five major U.S. West Coast ports processed a total of 919,529 inbound loads in the year's fifth month, a statistically flat decline of 320 TEUs from May 2023. Not exactly the robust boom expected.

Elsewhere on the Pacific Coast, British Columbia's **Port of Vancouver** recorded 157,588 inbound loads in May, up 10.2% from last May. Further north, the **Port of Prince Rupert** recorded a 12.2% year-over-year gain in inbound loads from 42,557 to 47,769 TEUs this May. Back on the U.S. side of the border, Oregon's struggling **Port of Portland** saw the arrival of 3,324 inbound loads in May, a 39.9% fall-off from a year earlier.

Along the East Coast, the **Port of Virginia** handled 153,701 inbound loads in May, up 19.0% year-over-year, while 233,675 inbound loads arrived at the **Port of Savannah**, a 23.8% boost over a year earlier. However, the **Port of Charleston** saw 91,204 inbound loads in May, an 8.0% fall-off from May 2023.

On the Gulf Coast, **Port Houston** handled 164,572 inbound loads in May, 17.8% more than in the same month a year earlier.

Pacific Merchant Shipping Association
475 14th Street, Suite 300, Oakland, CA 94612
510-987-5000 info@pmsaship.com

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FOR THE RECORD

April 2024 TEU Tallies

All 25 of the North American ports we now monitor report their total container throughput statistics each month. Not all, however, distinguish loaded from empty TEUs. That's why not all 25 ports appear in Exhibits 1 and 2.

In Southern California, the **Port of Long Beach** handled 364,665 inbound loads in April, a healthy 16.3% gain over a year earlier and a 14.7% gain over the volume recorded in April of pre-pandemic 2019. However, outbound loads this April (98,266) plunged by 19.9% year-over-year and were 20.6% below April 2019. Total container traffic (loads and empties) so far this year amounted to 2,753,244 TEUs, up 15.8% from the same months last year and 13.1% ahead of the first four months of 2019.

Over at the neighboring **Port of Los Angeles**, inbound loads (416,929) jumped 21.3% year-over-year. That meant the nation's busiest container port processed 15.6% more inbound loads than it had in April 2019. Outbound loads in April (133,046) soared by 50.8% from a year earlier but remained 14.3% shy of April 2019's volume. Total container trade YTD through the Southern California gateway (3,150,841) was up 7.0% from the same period in 2019.

Up in the San Francisco Bay Area, the **Port of Oakland** reported 75,335 inbound loads in April, up 7.4% from a year earlier but still 6.7% shy of the volume experienced in April 2019. Outbound loads (67,566) were similarly up 6.9% year-over-year but down 14.8% from the volume recorded five years ago. Total inbound container traffic

Exhibit 1

April 2024
Inbound Loads at Major North American Ports

	April 2024	April 2023	April 2019	Change from 2023	Change from 2019
Los Angeles	416,929	343,689	360,745	21.3%	15.6%
Long Beach	364,665	313,444	317,883	16.3%	14.7%
San Pedro Bay Total	**781,594**	**657,133**	**678,628**	**18.9%**	**15.2%**
Oakland	75,335	70,112	80,702	7.4%	-6.7%
NWSA	96,852	85,339	112,652	13.5%	-14.0%
Hueneme	11,515	10,388	5,364	10.8%	114.7%
San Diego	5,816	7,520	5,840	-22.7%	-0.4%
USWC Total	**971,112**	**830,492**	**883,186**	**16.9%**	**10.0%**
Boston	12,509	9,625	12,247	30.0%	2.1%
NYNJ	349,792	320,948	297,825	9.0%	17.4%
Philadelphia	37,198	26,203	25,209	42.0%	47.6%
Maryland	102	49,338	42,984	-99.8%	-99.8%
Virginia	146,779	118,964	119,266	23.4%	23.1%
South Carolina	106,877	101,024	87,675	5.8%	21.9%
Georgia	211,881	195,679	175,661	8.3%	20.6%
Jaxport	30,448	25,001	27,094	21.8%	12.4%
Port Everglades	31,657	27,903	32,308	13.5%	-2.0%
Miami	37,965	38,255	32,831	-0.8%	15.6%
USEC Total	**965,208**	**912,940**	**853,100**	**5.7%**	**13.1%**
New Orleans	10,073	11,376	10,527	-11.5%	-4.3%
Houston	146,910	140,720	100,627	4.4%	46.0%
USGC	**156,983**	**152,096**	**111,154**	**3.2%**	**41.2%**
Vancouver	160,956	140,744	145,168	14.4%	10.9%
Prince Rupert	31,598	28,103	51,686	12.4%	-38.9%
British Columbia Total	**192,554**	**168,847**	**196,854**	**14.0%**	**-2.2%**
L Cardenas	54,098	40,889	42,339	32.3%	27.8%
Manzanillo	142,568	118,983	108,005	19.8%	32.0%
Mexico Pacific Coast	**196,666**	**159,872**	**150,344**	**23.0%**	**30.8%**
U.S. Totals	**2,093,303**	**1,895,528**	**1,847,440**	**10.4%**	**13.3%**
Top Ten	**1,916,020**	**1,689,919**	**1,653,036**	**13.4%**	**15.9%**

Source Individual Ports

April 2024 TEU Numbers
Continued

so far this year through the Northern California gateway (754,686) was up 11.3% from the same period last year but down 8.9% from the first four months of 2019.

Up in Washington State, the **Northwest Seaport Alliance Ports of Tacoma and Seattle** recorded 96,852 inbound loads in April, a 13.5% year-over-year gain but down 14.0% from April 2019. Outbound loads (54,489) were up 15.6% from a year earlier but down 33.0% from the same month in 2019. Total loads and empties YTD (958,069) were up 5.0% y/y but still represented a 23.7% fall-off from the first four months of 2019.

Collectively, the U.S. West Coast ports we monitor posted a 16.9% year-over-year gain in inbound loads in April as well as a 9.8% increase in outbound loads. While outbound loads this April exceeded April 2023's volume by 9.8%, outbound loads remained down 19.4% from the fourth month of 2019.

Across the border in British Columbia, the **Port of Vancouver** handled 160,956 inbound loads in April, up 14.4% from a year earlier and also up 10.9% from April 2019. However, outbound loads (68,379) were down 8.7% y/y and 29.8% from April 2019. Total container traffic YTD through Canada's busiest port (1,155,439) was up 20.0% from a year earlier but still fell 24.8% behind the same months in 2019.

Even further north of the border, the **Port of Prince Rupert** continues to operate in the shadow of its pre-pandemic self. Inbound loads in April (31,598), although up a satisfying 12.4% from a year earlier, remained down 38.9% from April 2019. Worse, outbound loads in April (9,077) were down 8.3% y/y and down 55.2% from April 2019. Total

Exhibit 2

April 2024
Outbound Loads at Major North American Ports

	April 2024	April 2023	April 2019	Change from 2023	Change from 2019
Los Angeles	133,046	88,202	155,333	50.8%	-14.3%
Long Beach	98,266	122,663	123,804	-19.9%	-20.6%
San Pedro Bay Total	**231,312**	**210,865**	**279,137**	**9.7%**	**-17.1%**
Oakland	67,566	63,193	79,291	6.9%	-14.8%
NWSA	54,489	47,121	81,305	15.6%	-33.0%
Hueneme	1,590	1,928	1,340	-17.5%	18.7%
San Diego	505	608	176	-16.9%	186.9%
USWC Total	**355,462**	**323,715**	**441,249**	**9.8%**	**-19.4%**
Boston	4,589	5,173	7,754	-11.3%	-40.8%
NYNJ	121,847	110,243	131,311	10.5%	-7.2%
Philadelphia	7,064	7,376	7,605	-4.2%	-7.1%
Maryland	108	20,695	20,940	-99.5%	-99.5%
Virginia	104,073	91,471	85,378	13.8%	21.9%
South Carolina	59,220	62,062	73,295	-4.6%	-19.2%
Georgia	122,514	118,277	129,726	3.6%	-5.6%
Jaxport	41,217	41,595	42,353	-0.9%	-2.7%
Port Everglades	34,057	31,408	36,084	8.4%	-5.6%
Miami	22,072	21,989	30,719	0.4%	-28.1%
USEC Total	**516,761**	**510,289**	**565,165**	**1.3%**	**-8.6%**
New Orleans	21,460	19,597	24,545	9.5%	-12.6%
Houston	119,302	110,318	106,654	8.1%	11.9%
USGC	**140,762**	**129,915**	**131,199**	**8.3%**	**7.3%**
Vancouver	68,379	74,924	97,394	-8.7%	-29.8%
Prince Rupert	9,077	9,894	20,271	-8.3%	-55.2%
British Columbia Total	**77,456**	**84,818**	**117,665**	**-8.7%**	**-34.2%**
L Cardenas	5,836	3,069	19,166	90.2%	-69.6%
Manzanillo	26,232	26,556	63,702	-1.2%	-58.8%
Mexico Pacific Coast	**32,068**	**29,625**	**82,868**	**8.2%**	**-61.3%**
U.S. Totals	**1,012,985**	**963,919**	**1,137,613**	**5.1%**	**-11.0%**
Top Ten	**880,323**	**813,550**	**966,097**	**8.2%**	**-8.9%**

Source Individual Ports

April 2024 TEU Numbers
Continued

container traffic YTD through the British Columbia gateway (246,592) was 28.7% below the volume recorded in the first four months of 2019.

Back East, the **Port of New York/New Jersey** counted 349,792 inbound loads in April, a 9.0% increase over a year earlier and a 17.4% gain over April 2019. Outbound loads (121,847) were up 10.5% y/y but still down 7.2% from April 2019. YTD, total TEU traffic (2,710,918) through the nation's third busiest container port was up 13.0% from the same period in 2019.

The **Port of Baltimore** had a predictably off month. Inbound loads in April (102) were down from 49,338 a year earlier, while outbound loads (108) were well shy of last April's 20,695. Year-to-date, the Maryland port's total container volume (260,066) was down 27.9% from a year earlier. The **Port of Philadelphia** ("PhilaPort") appeared to pick up a lot of the shipments diverted from Baltimore, posting a 42.0% year-over-year bump in inbound loads in April.

The **Port of Virginia** also appeared to have gained from Baltimore's misfortune. Inbound loads (146,779) jumped by 23.4% year-over-year, while outbound loads (104,073) were up by 13.8%. Measured against this point in pre-pandemic 2019, inbound loads in April were up 23.1%, while outbound loads saw a 21.9% gain. Total container traffic YTD (1,167,884) exceeded the volume of the first four months of 2019 by 22.4%.

The **Port of Charleston** saw the arrival of 106,877 inbound loads in April, up 5.8% from a year ago and up 21.9% from April 2019. Outbound loads at the South Carolina seaport in April (59,220) slipped by 4.6% year-over-year, while

Exhibit 3 Total YTD TEU Traffic at Major North American Ports

	April 2024	April 2023	April 2019	Change from 2023	Change from 2019
Los Angeles	3,150,841	2,525,204	2,945,200	24.8%	7.0%
Long Beach	2,753,244	2,377,375	2,434,846	15.8%	13.1%
NYNJ	2,710,918	2,439,521	2,398,108	11.1%	13.0%
Georgia	1,756,676	1,593,073	1,516,928	10.3%	15.8%
Houston	1,394,094	1,241,910	946,860	12.3%	47.2%
Manzanillo	1,272,955	1,112,497	984,816	14.4%	29.3%
Virginia	1,167,884	1,050,576	954,230	11.2%	22.4%
Vancouver	1,155,439	989,446	1,133,669	20.0%	-24.8%
NWSA	958,069	912,142	1,256,237	5.0%	-23.7%
South Carolina	842,355	823,842	802,554	2.2%	5.0%
Oakland	754,686	677,814	828,153	11.3%	-8.9%
Lazaro Cardenas	711,148	527,272	429,468	34.9%	65.6%
Montreal	484,124	492,379	561,861	-1.7%	-13.8%
JaxPort	435,991	411,096	443,481	6.1%	-1.7%
Port Everglades	369,549	354,238	357,390	4.3%	3.4%
Miami	362,021	368,063	376,101	-1.6%	-3.7%
Philadelphia	274,731	237,100	191,538	15.9%	43.4%
Maryland	260,066	360,815	358,715	-27.9%	-27.5%
Prince Rupert	246,592	239,082	346,055	3.1%	-28.7%
New Orleans	175,642	157,141	204,493	11.8%	-14.1%
Boston	85,088	52,316	97,988	62.6%	-13.2%
Hueneme	84,045	91,207	44,230	-7.9%	90.0%
San Diego	49,993	54,165	48,029	-7.7%	4.1%
Portland, Oregon	33,098	44,055	20	-24.9%	∞
U.S. Ports Total	**17,618,991**	**15,771,653**	**16,205,101**	**11.7%**	**8.7%**

Source Individual Ports

April 2024 TEU Numbers
Continued

falling short of April 2019's export volume by 19.2%. Total container traffic YTD (842,355) edged up 2.2% from a year earlier and 5.0% from the first four months of 2019.

Inbound loads at the **Port of Savannah** in April (211,881) were higher by 8.3% from a year earlier and were up 20.6% over April 2019. Outbound loads (122,514) increased by 3.6% from last April but remained down 5.6% from the same month in pre-pandemic 2019. Total container traffic through the Georgia gateway through the first four months of this year (1,756,676) were up 10.3% from last year and by 15.8% from this point in 2019.

Down on the Gulf Coast, inbound loads at **Port Houston** (146,910) were up a modest 4.4% in April from a year earlier, while rising a downright impressive 46.0% from April 2019. Outbound loads (119,302) were up 8.1% year-over-year as well as 11.9% over April 2019. Year-to-date, total container traffic through the Texas port amounted to 1,394,094 TEUs, a 12.3% gain over the first four months of last year and up 47.2% from the same period in 2019.

On Mexico's Pacific Coast, the **Port of Manzanillo** processed 142,568 inbound loads in April, up 19.8% over last April, while outbound loads (26,232) were down 1.2%. Total container moves through the Colima port (1,272,955) was up 14.4% from a year ago.

The **Port of Lazaro Cardenas** reported 54,098 inbound loads in April, a 32.3% y/y jump. Outbound loads (5,836) soared by 90.2% y/y. Total container traffic through the Michoacan port so far this year (711,148) was up 34.9% from last year.

Container Contents Weights and Values

Exhibit 4 and **Exhibit 5** display the U.S. West Coast ports' shares of the nation's containerized trade through the mainland U.S. ports against which USWC ports compete for discretionary cargo. These April 2024 data are derived from import/

Exhibit 4 Major USWC Ports Shares of U.S. Mainland Ports Worldwide Container Trade, April 2024

		Apr 2024	Apr 2023	Apr 2019	Apr 2014
Import Tonnage	**USWC**	**35.8%**	**34.3%**	**36.8%**	**43.7%**
	LA/LB	26.8%	25.1%	25.9%	31.6%
	Oak.	3.2%	3.6%	4.0%	4.7%
	NWSA	4.0%	3.8%	5.4%	5.8%
Import Value	**USWC**	**40.6%**	**39.4%**	**44.3%**	**50.9%**
	LA/LB	31.7%	30.7%	32.9%	39.3%
	Oak.	3.1%	2.9%	3.6%	3.8%
	NWSA	4.7%	4.5%	7.0%	7.0%
Export Tonnage	**USWC**	**34.7%**	**30.7%**	**36.5%**	**43.7%**
	LA/LB	20.8%	18.5%	21.0%	26.6%
	Oak.	6.2%	5.7%	6.3%	6.7%
	NWSA	7.1%	5.6%	7.8%	9.5%
Export Value	**USWC**	**28.4%**	**27.5%**	**32.5%**	**35.9%**
	LA/LB	18.9%	17.7%	21.8%	23.9%
	Oak.	6.0%	6.0%	6.1%	5.9%
	NWSA	3.3%	3.3%	4.2%	5.5%

Source: U.S. Commerce Department

Exhibit 5 Major USWC Ports Shares of U.S. Mainland Ports Containerized Trade with East Asia, April 2024

		Apr 2024	Apr 2023	Apr 2019	Apr 2014
Import Tonnage	**USWC**	**55.5%**	**52.0%**	**57.3%**	**66.6%**
	LA/LB	44.3%	41.0%	43.7%	50.8%
	Oak.	3.8%	4.1%	4.6%	4.9%
	NWSA	6.4%	5.7%	8.4%	9.6%
Import Value	**USWC**	**63.3%**	**59.5%**	**66.8%**	**74.5%**
	LA/LB	50.8%	47.7%	51.0%	58.8%
	Oak.	4.0%	3.4%	4.4%	4.4%
	NWSA	7.2%	6.8%	10.7%	10.4%
Export Tonnage	**USWC**	**57.7%**	**51.9%**	**58.1%**	**69.7%**
	LA/LB	35.0%	31.8%	35.6%	44.4%
	Oak.	9.2%	8.6%	9.4%	9.5%
	NWSA	12.5%	10.2%	12.8%	15.0%
Export Value	**USWC**	**57.5%**	**56.4%**	**62.8%**	**71.5%**
	LA/LB	39.3%	36.7%	43.1%	48.9%
	Oak.	10.7%	11.1%	10.5%	9.2%
	NWSA	7.2%	7.8%	8.5%	11.1%

Source: U.S. Commerce Department

April 2024 TEU Numbers
Continued

export documents shippers file with U.S. Customs and Border Protection. For a broader perspective, we compare the most recent month for which data are available with the same month in the preceding year, in pre-pandemic 2019, and a decade earlier. For those who are inclined to add up the numbers, the USWC totals in these two exhibits include international container traffic moving through smaller West Coast ports like San Diego, Hueneme, and Everett in addition to the container figures from the USWC Big Five ports.

Exhibit 4 shows a year-over-year boost in the USWC share of all containerized import tonnage flowing into all mainland U.S. ports. Oakland was the only exception. On the export side, all five major USWC ports increased their tonnage share from a year earlier.

Exhibit 5 focuses on the USWC shares of U.S. containerized trade involving trading partners in East Asia. Again, the numbers indicate that the Ports of Los Angeles and Long Beach are capturing a significantly larger share of the containerized import tonnage from East Asia. Oakland saw its import tonnage shares slip from a year earlier, while the Northwest Seaport Alliance Ports of Tacoma and Seattle enjoyed an appreciable gain. As for export tonnage, all major USWC ports saw significant year-over-year bumps in containerized shipments to East Asia.

Washington State's Drought

As if to remind the rest of the nation that there is a lot more to Washington State than rainy Seattle, word comes that irrigation water allotments to farmers in Yakima Valley are being cut back because last winter was relatively dry.

According to a June 4 report in the *Seattle Times*, "two-thirds of the state is either abnormally dry or suffering from a moderate drought". In late May, the Roza Irrigation District — covering 72,000 acres in the Yakima River Basin, including some of the state's most fertile ground — shut off its spigots in an attempt to conserve water for the dry months ahead.

The drought will almost certainly have far-reaching consequences, especially for the state's ports. The Washington State Department of Agriculture reports that, in 2023, the value of Washington-grown or processed food and agriculture exports amounted to $7.5 billion. Products that are especially reliant on global trade include wheat (up to 90% of the crop is exported each year), potatoes (up to 70% are exported in the form of French fries), and tree fruit (approximately 30% of apples and 25% of cherries are shipped abroad each year).

U.S. Commerce Department foreign trade statistics show that $12.699 billion in exports of Agricultural Products sailed from Washington State ports last year. That total includes shipments of soybeans, wheat, and grains produced elsewhere but shipped through the Ports of Tacoma and Seattle as well as the Ports of Kalama, Longview, and Vancouver on the Washington State side of the Columbia River.

Exhibit 6 Outbound Loads at U.S. West Coast Ports

Sources: Respective Seaports

Where Did America's Export Trade Go?

We should periodically remind our younger readers that, once upon a time, the United States of America enjoyed surpluses in its foreign trade. But that was a while back. If you were born in the year the nation's merchandise trade ledger was in the black, congratulations, you will be turning 50 next year.

In recent years, with the notable exception of Port Houston, the volume of outbound loaded TEUs sailing from U.S. mainland ports has been declining. **Exhibit 6** details the situation at the largest U.S. West Coast ports, while **Exhibit 7** depicts the trend along the Atlantic Coast. Even the Port of Oakland, which used to regularly export more than it imported, hasn't seen a year in which its outbound loads exceeded its traffic in inbound loads since 2017.

April 2024 TEU Numbers
Continued

The growing export trade in polymers, a petrochemical industry byproduct, has made Port Houston the exception among major U.S. mainland ports.

Maintaining Complete and Accurate Container Statistics

An astute reader of this newsletter has asked why we regularly post our newsletter first with "Nearly Complete" monthly TEU statistics that do not include the latest container trade numbers from the Port Authority of New York/New Jersey. The quick answer is that PANYNJ very seldom releases its TEU tallies before our publication deadline (we do prefer to publish our June newsletter before the end of June.)

This is true even though monthly TEU volumes for PANYNJ have already been "reported" in the maritime industry media, so why are there widely reported TEU numbers that routinely appear to scoop the ***West Coast Trade Report***? Most of the time, this occurs because these statistics are sourced to projections and estimates of monthly volumes that employ proprietary methodologies to generate reports that are released days before all of the month's boxes have actually been counted and made public by the Port itself.

We do not use methodologies or models to predict anything.

Our operating premise is that, more than anyone else in the maritime transport industry, the port authorities have a direct financial stake in accurately keeping track of how many containers pass over their docks. And because we want our container statistics to be the statistics of record, we patiently wait for the ports we monitor to tell us exactly how many TEUs they handle each month. While this might result in a delay, it ensures an accurate full month of container counts, and it avoids the situation where PANYNJ will invariably post numbers that are at odds with initially projected figures.

The ***West Coast Trade Report*** will continue to cite only the actual TEU numbers we obtain from ports, even if that means we publish this newsletter with "nearly complete" and partial counts before PANYNJ, or any other port, tells us how their last month actually went.

Exhibit 7 Outbound Loads at U.S. East Coast Ports

Sources: Respective Seaports

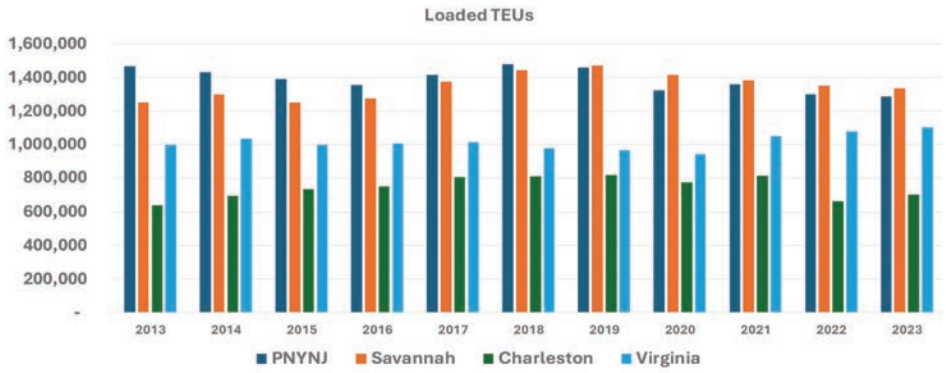
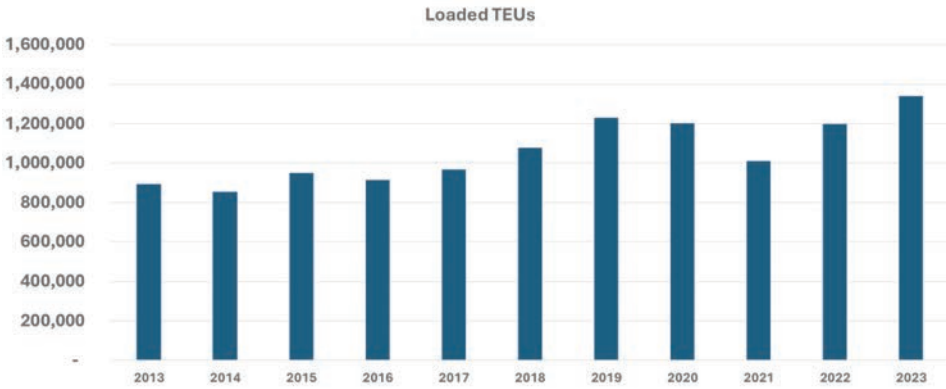


Exhibit 8 Outbound Loads at Port Houston

Source: Port Houston



NUMBER OF THE MONTH

$700 Million

THE ZE EQUIPMENT FUNDING MATCH PROPOSED BY US WEST COAST PORTS IN THEIR REQUESTS FOR $1.75 BILLION IN GRANTS FROM THE FEDERAL CLEAN PORTS PROGRAM

Latest Emissions Inventory Shows Maritime Industry Making Progress Reducing Pollution

By Jordan Royer, Vice President, Pacific Merchant Shipping Association

At a time when there is a lot of bad news around the world, it was encouraging this month to get the results from the latest Puget Sound Emissions Inventory (PSEI) which compiles air emissions from the maritime industry in Puget Sound. Key findings from the PSEI reveal an 82 percent reduction in diesel particulate matter and a 10% decrease in greenhouse gas emissions from port and maritime sources throughout the greater Puget Sound area from 2005 – the first year an inventory was conducted. The full inventory can be found here.

As we all learned during the pandemic, supply chains are important, complex, and easily disrupted. And the same goes for other challenges we face, such as reducing environmental impacts on the air and water in our communities. The solutions to these impacts are multifaceted and must involve the entire supply chain as well as the government in order to avoid unintended consequences. The good news is that the industry, in partnership with state, local, federal, and international entities, has made great progress on reducing air emissions in the last two decades, with more advancements on the way.

The Pacific Merchant Shipping Association (PMSA) was one of the founding members of the Puget Sound Maritime Air Forum in 2005, along with the Ports of Seattle, Tacoma, and Everett, regional clean air agencies, the American Lung Association, and others. The goal of our efforts was to measure and track maritime emissions and start work to reduce harmful pollutants like sulfur, nitrous oxides, and diesel particulate matter. In the beginning, most of the emphasis was on human health and not climate change – although our emission inventories are some of the first in the world to measure CO2.

Flash forward to today, and multiple inventories later, after billions of dollars have been invested in infrastructure and new equipment by the ports, their marine terminal operator tenants and ocean carriers, we are exceptionally proud of the progress that has been achieved.

PMSA member ocean carriers have committed to meeting the International Maritime Organizations (IMO) emissions target of being carbon neutral by 2050, and in many cases have set their own earlier targets. On the waterfront side, PMSA member marine terminal operators are participating in the carbon market in California to transition to zero and near-zero emission equipment on the docks. PMSA is also helping to develop Washington State's Clean Fuels Standard (CFS) modeled after California's Low Carbon Fuel Standard (LCFS) to further reduce emissions in the Puget Sound.

But these kinds of programs and investments are expensive, non-revenue producing overhead, and they require economically viable and competitive ports with growing cargo volumes to underwrite them. The Northwest Seaport Alliance – a partnership between the Ports of Tacoma and Seattle – understands this. It is why they recently created an incentive program to make the Pacific Northwest Gateway more competitive for intermodal rail cargo. We applaud their efforts and hope they are successful, as it is only by growing our overall cargo volumes that we can secure the funding and financing necessary to continue to make these investments in the West Coast port infrastructure, equipment, and operations that will deliver the positive environmental and economic impacts that everyone desires.

The overwhelming consensus is that we need clean, competitive, efficient ports for our economy to be successful in Washington State. In order to

Emission Inventory Progess

Continued

make this ambition a reality, the entire supply chain needs to be working together at all levels to ensure the best way to get there is reached with the fewest amount of market disruptions, least amount of costs, and avoiding unnecessary disruptions and inefficiency. But the latest inventory in Puget Sound is encouraging that with public-private partnership we are on the right track to reaching our common goals.

West Coast Ports to US EPA: "Show Me the Money"

By Jacqueline M. Moore, Vice President, Pacific Merchant Shipping Association

West Coast ports have made it clear that they expect an overwhelming majority of the $3 billion for the maritime industry's transformation to a zero-emission future to be awarded by the US Environmental Protection Agency (EPA) through its Clean Ports Program. Established through the Inflation Reduction Act of 2022, this is an exceptional amount of funding for seaport emissions reductions; comparatively, the size of these grants is over one-third of the agency's entire budget over the last decade. The maritime industry will likely never again see federal funding at this level for zero-emission port equipment, infrastructure and associated planning activities.

Of the $3 billion available, the largest US West Coast ports are seeking almost two-thirds of the pot: $1.75 billion in funding. In addition, the ports are committing over $700 million in the form of matching public funds to be expended. The Ports of Hueneme, Long Beach, Los Angeles, and Oakland, as well as Seattle and Tacoma, all threw their hat in the ring. And PMSA is in support of all these grant requests.

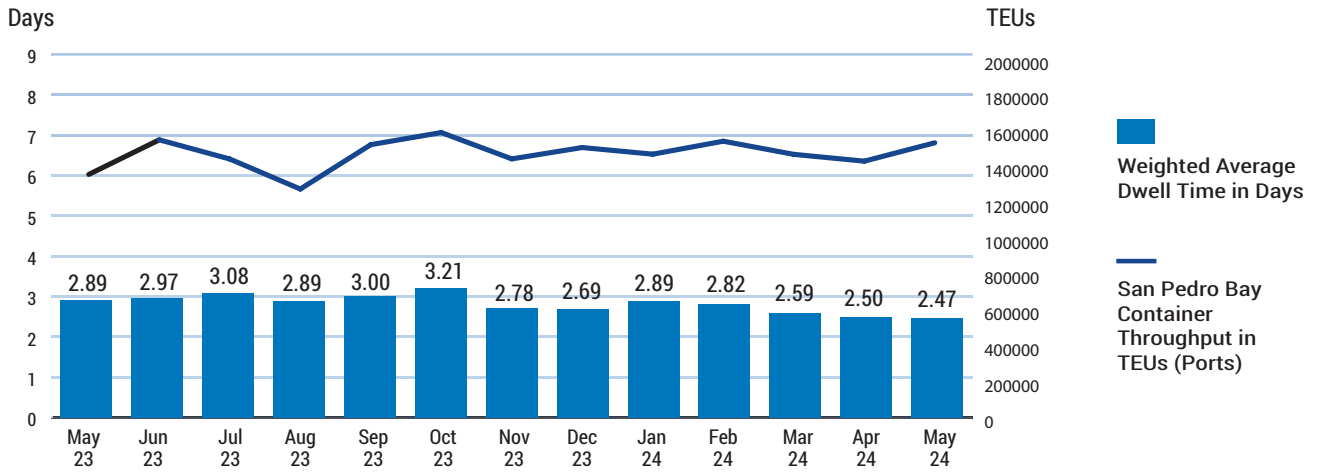
The projects propose funding a range of equipment purchases and infrastructure projects, including acquisition of hundreds of cargo handling equipment units and drayage trucks. While California's ports already have a head start in the zero-emissions port paradigm, these proposed projects have the ability to demonstrate whether or not it is practical to fully metamorphosize the fleets. What is imperative is that the program embraces and rewards those ports who have already proactively worked with industry partners and their customers to finance existing emissions reductions, and not reward those who were dragging their feet. Doing this right would favor West Coast projects, not penalize them.

How EPA will choose to divide the funds remains to be seen. Will they sprinkle money around such that each port receives a little something, resulting in only a portion of each project moving forward, or will some ports be awarded large shares and others excluded all together? California's ports submitted grant requests individually; and that's a lot of hats in the ring to choose from. As these are unprecedented federal funds, we can only speculate as to whether a single statewide application could potentially have made for one tantalizing project.

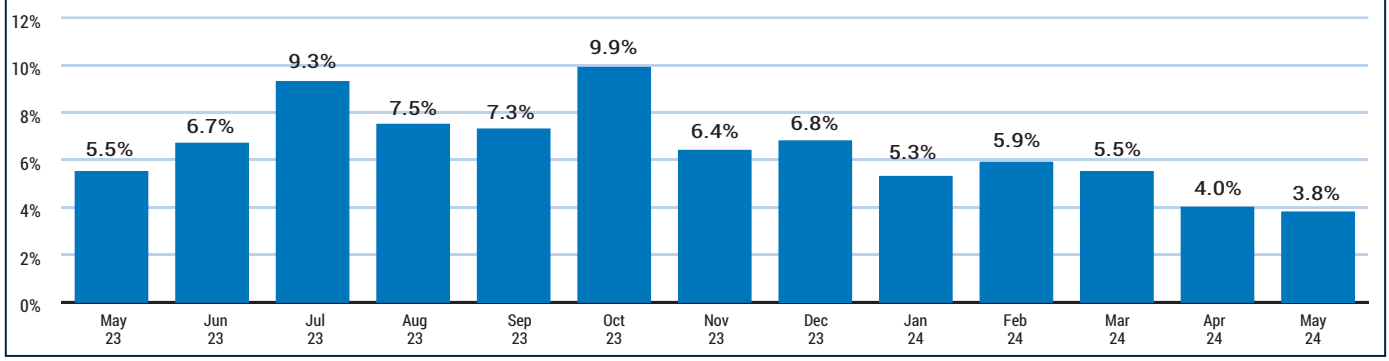
But one thing is undoubtedly clear: if the federal government actually desires these funds to be truly transformational and establish our West Coast ports as the model, world-class zero-emission ports, then all the US EPA has to do is show us the money.

Container Dwell Time Remains Steady for May

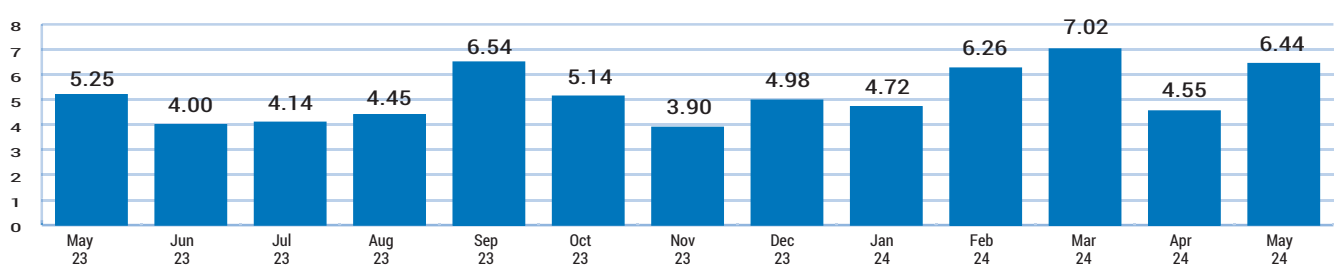
San Pedro Bay Weighted Average Inbound Laden Container Dwell Time in Days



Dwell Time in Days % > 5 Days



Rail Dwell Time in Days



July 2024 Board of Pilotage Commissioners Meeting
NWSA report notes

June numbers

- Total TEU volumes increased **26.3%** for the month and are up **11.5%** YTD.
- Breakbulk metric tons volumes decreased **1.6%** for the month and are up **2.1%** YTD.
- Auto units increased **10.1%** for the month and are up **8.6%** YTD.
- Intermodal lifts increased **47.5%** for the month and are up **10.9%** YTD.

General

- 20 ad-hoc vessels anticipated through June, compared to 12 last year this time
- 50 voids anticipated so far for 2024 (through September), compared to 180 through September in 2023

Service and Operations Notes

Gateway Performance and Outlook: attached you will find our weekly report including key statistics at our terminals. If this is of interest to the BPC and other stakeholders, we can continue to include this each month moving forward.

General

- Peak season "seems" to be early this year as shippers mitigate risks across the industry: Red Sea diversions & longer transit to USEC, ILA/USMX contract expirations, improved retail import forecast, return to "need for speed" and JIT inventory for some commodities, etc. This leads to consistent service across our gateway, i.e. much fewer voids.
- Continuing to see impacts of diverted rail cargo from via Canada ports due to ongoing threat of Canada rail strike.

Autos

- Gateway remains up 8.6% YTD
- **Terminal 46 Auto Handling:** GLOVIS has requested all available space at Terminal 46 as AWC Tacoma has over 19,000 KIA's arriving in July. To put this in perspective, AWC averaged approximately 15,000 vehicles per month for all its auto manufacturer accounts in 2023. We are expecting two additional auto vessel calls at T46 before the end of July.

Container terminal details:

T5

- MSC CLX: Consistent weekly service through September, one of the best performing services for on time performance; no change to vessel size
- MSC's Chinook: Consistent weekly service through September, no change in current vessel sizeT18

T18

- Swire Shipping's EB Service: Consistent, no voids, now getting back on schedule after experiencing port congestion at Tomakomai (Japan), which they've now dropped

- Swire Shipping/UWL's Sun Chief Express: Consistent fortnightly service, may have additional vessel late August
- ANL/Hapag/Maersk's PCX/WSN(PNW)/PANZ: Continues to be consistent and on time fortnightly service
- CMA's Columbus PNW: Possibly one void in September, otherwise weekly service; 3 vessels = 7-9K TEU, 2 vessels = 10K TEU, 1 vessel = 13K TEU
- SM Line's PNS: Consistent weekly service that'll continue to call T18 for foreseeable future due to conditions in Canada (rail strike threat, draft restrictions at Fraser Surrey), note it changed rotation from VAN-SEA to SEA-VAN

T30

- OOCL's PNW1: Still one void in late July, possibly another in September (TBA), otherwise arriving on time, no change in vessel size or terminal
- COSCO's ad hocs: No more "ad hocs," replaced by CPV
- COSCO's CPV: Started with first voyage ATA 30-June. Unless they put in more vessels look like it'll have voyages in 4 of 6-week period (2 consecutive voids 5th and 6th week); 4200-5K TEU vessels

PCT

- Evergreen's new ANP: One void early August, otherwise weekly service with same size vessels (S-class, 7K TEU)
- Evergreen's ad hoc: No "ad hocs" on the horizon yet

Husky

- THEA's PN2: No voids through September, although on time performance unreliable
- THEA's PN3: It's back in full rotation and no more FPOC changes on the horizon (now back to VAN-TIW); two new HMM vessels fully phased in (14K TEU)
- Maersk TPX: Consistent service, no voids through September, no change in current vessel size

WUT

- THEA's PN1: Weekly service and transit time from Tokyo consistently 12 days, but vessel lineup off proforma; no change in vessel size (5-7K)
- THEA's PN4: One void in mid-August, otherwise consistent weekly service
- Note above ships are being metered at WUT due to high terminal utilization, caused mainly by increased rail volume

Other notes

VOIDS

Pace continues with fewer voids than last two years.

By port month & year:

	2018	2019	2020	2021	2022	2023	2024
January	1	1	6	6	35	24	6
February	2	3	8	9	36	26	7
March	9	10	19	25	37	26	14
April	3	5	6	21	29	17	4
May	2	4	7	22	26	19	5
June	1	5	8	20	33	17	6
July	0	2	3	22	28	17	4
August	3	2	1	18	30	22	2
September	2	2	1	35	43	12	2
October	2	3	0	36	36	10	0
November	5	9	3	38	21	8	0
December	0	13	3	49	32	10	0
Grand Total	**30**	**59**	**65**	**301**	**386**	**208**	**50**

AD HOCS *(no change from last month)*

Port Month	2018	2020	2021	2022	2023	2024
January	0	0	4	4	2	3
February	2	0	6	5	0	0
March	0	0	12	7	2	3
April	0	1	10	6	3	2
May	0	0	6	6	3	5
June	0	0	11	6	2	7
July	0	0	6	4	3	0
August	0	1	3	4	3	0
September	0	2	5	4	8	0
October	1	1	5	2	2	0
November	0	1	6	3	1	0
December	1	4	7	2	4	0
Grand Total	**4**	**10**	**81**	**53**	**33**	**20**

GATEWAY PERFORMANCE AND OUTLOOK

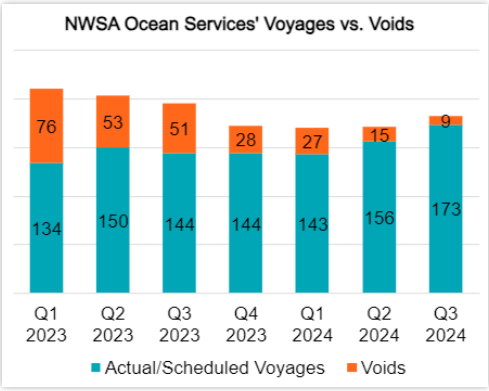
Week ending July 12, 2024

THE NORTHWEST SEAPORT ALLIANCE
SEATTLE + TACOMA

Highlights & Updates

- The holiday schedule for the upcoming July 29 holiday (Harry Bridges' Birthday) can be found here.
- COSCO launched a new transpacific service called CPV that calls Terminal 30. OOCL will also participate and call it PNW5. The port rotation is Ningbo – Shanghai – Vancouver – **Seattle** – Lianyungang – Ningbo. More information and a list of all NWSA ocean services can be found here.
- Husky Terminal launched a guaranteed hoot shift program June 25th. Hoot shifts (0300-0700) will be offered Tuesday-Thursday for at least the next three months in addition to the standard Monday-Friday dayside gate hours. Hoot shift will be open to all transaction types with window #1 appointments (0300-0500) and window #2 appointments (0500-0700). Hoot shift appointment windows will NOT carry over into the day shift window. Contact Husky for more information.
- Husky Terminal will have a weekend gate this Saturday 7/13 for peel pile delivery and empty receiving and delivery. Appointments are required.
- Husky's hoot gates next week will be July 15-18 (0300-0700) for all transaction types (excluding empty reefers). Contact Husky for export receiving details and additional information.
- T30 will be closed Mondays in July and August.
- T18 will be closed July 12, 19, 26 and 29.
- T5 will be closed July 22 and 29.
- Effective Monday, July 15 WUT will accept empty reefers and other specialty equipment on single transactions. All other empty containers will only be accepted on dual transactions and appointments are required.
- T5 has added unlimited empty appointments in the afternoon. Cut-off to schedule appointments will be the day before at noon. Empty drops can still be paired with import picks (dual transactions).
- North Star Award nominations are now open! Click here to nominate a company for a Cargo Anchor, Environmental Stewardship or Service Excellence Award.
- The next Trucker Outreach Forum will be Wednesday, July 24 both virtually and in-person at the Fabulich Center (3600 Port of Tacoma Rd) from 9:00am-10:30am. Contact wta@watrucking.org to get added to distribution.

Resource of the Week – Consistent Voyage Frequency



Voyage consistency has improved significantly this year as the 15 services that call the NWSA are arriving in a more predictable, frequent pattern.

The number of voids (also known as blank sailings) will see its lowest quarterly amount since 2018. There are currently 17 more voyages expected to call Seattle/Tacoma in Q3 2024 vs. Q2 2024 according to the latest schedules.

For more details by specific service, please contact your Business Development representative.

GATEWAY PERFORMANCE AND OUTLOOK

Week ending July 12, 2024

THE NORTHWEST SEAPORT ALLIANCE
SEATTLE + TACOMA

Terminal Gate Schedule (Day Shift)

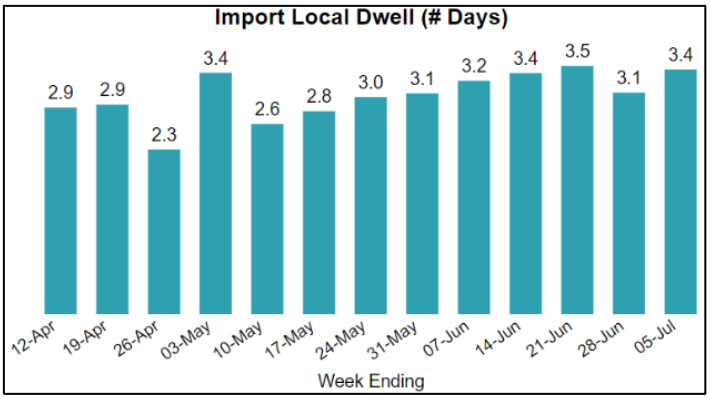
	Mon 7/15	Tue 7/16	Wed 7/17	Thurs 7/18	Fri 7/19	Sat 7/20	Sun 7/21
T5	✓	✓	✓	✓	✓	Check with SSA	Check with SSA
T18	✓	✓	✓	✓	Closed		
T30	Closed	✓	✓	✓	✓		
Husky	Hoot gate (0300-0700)	Hoot gate (0300-0700)	Hoot gate (0300-0700)	Hoot gate (0300-0700)	✓	Closed	Closed
PCT	✓	✓	✓	✓	✓	Closed	Closed
WUT	✓	✓	✓	✓	✓	Closed	Closed
West Hylebos Yard	TRAC only	Closed	Closed	Closed	TRAC only	Closed	Closed

Truck Turn Times

Average total turn times (queue + in-terminal) are provided below. Additional details on how turn times are calculated is available on the NWSA website.

PMA Week	Husky	PCT	WUT	T5	T18	T30
	Total Turn Time	Total Turn Time	Total Turn Time	Total Turn Time	Total Turn Time	Total Turn Time
24	143 min	91 min	125 min	66 min	58 min	53 min
25	85 min	67 min	149 min	97 min	63 min	51 min
26	145 min	47 min	140 min	54 min	75 min	54 min
27	124 min	62 min	136 min	73 min	61 min	51 min
28	84 min	51 min	89 min	70 min	69 min	52 min

Import Local Dwell Time



This chart shows the average number of days local imports have dwelled on terminal by week.

Use the trucker appointment capacity dashboard interactive visual to understand when and where there is availability at NWSA terminals for appointments here.

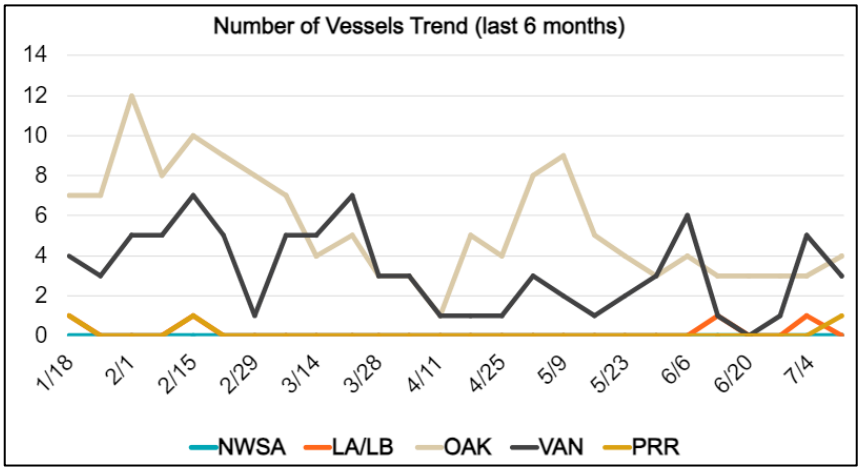
GATEWAY PERFORMANCE AND OUTLOOK

Week ending July 12, 2024

THE NORTHWEST SEAPORT ALLIANCE
SEATTLE + TACOMA

West Coast Container Vessels Waiting for a Berth

Port	At Anchor / Drifting as of 7/11/24
NWSA	0
LA/LB	0
Oakland	4
Vancouver	3
Prince Rupert	1



NWSA Container Vessels Waiting for a Berth

There are currently no vessel(s) waiting to berth as of July 11. For a complete list of arriving vessels see pages 6-7.

Scheduled Vessel Calls & Estimated Vessel Lifts

	July 13 – July 19		July 20– July 26		July 27 – August 2	
Terminal	Regular Calls	Ad Hoc	Regular Calls	Ad Hoc	Regular Calls	Ad Hoc
Husky – Tacoma	4	0	4	0	5	0
WUT – Tacoma	4	0	3	0	3	0
PCT – Tacoma	2	0	1	0	0	0
T18 – Seattle	5	0	3	0	5	0
T30 – Seattle	2	0	1	0	2	0
T5 – Seattle	3	0	3	0	3	0
Total Vessel Calls	**20**		**15**		**18**	
Total Vessel Lifts	**28,915**		**27,581**		**28,507**	

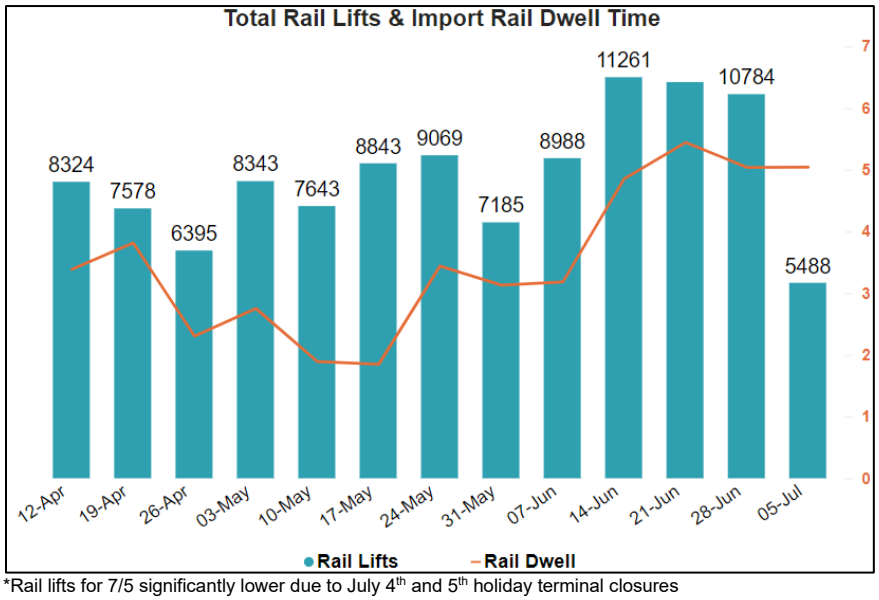
GATEWAY PERFORMANCE AND OUTLOOK

Week ending July 12, 2024

THE NORTHWEST SEAPORT ALLIANCE
SEATTLE + TACOMA

International Intermodal Service

This chart shows the number of total rail lifts for all on dock rail yards by week and the average dwell time from vessel discharge to rail loading. Import rail dwell at on dock rail yards has averaged 3.0 days YTD.



*Rail lifts for 7/5 significantly lower due to July 4th and 5th holiday terminal closures

Chassis Resources

- Chassis Start Stop Locations for The Northwest Seaport Alliance can be found on our website.
- If you have questions or would like further information on chassis in the PNW, please contact operators directly:
  - TRAC Intermodal: Cindy Davies, Director, Western Region cdavies@tracintermodal.com
  - DCLI: Amy Hume, General Manager, Logistics West amy.hume@dcli.com
  - FlexiVan/AIM: Susan Duran, Director, Western Region sduran@flexivan.com
  - Milestone: Sandra Magallanes, Account Executive, West Coast sandra.magallanes@milecorp.com

Resources

Rotation Schedule:
Rotation Schedule.pdf

Off Dock CY Space:
Off-dock Container Yard Storage

Available Warehouse Capacity:
Warehouse & Transload Space Availability.pdf

Drayage Provider Contacts (Updated 7/5):
Drayage Provider Contacts.pdf

Ports of Call Matrix:
Ports of Call Matrix.pdf

Marine Terminal Operator Contacts:
Marine Terminal Operator Contacts.pdf

GATEWAY PERFORMANCE AND OUTLOOK

Week ending July 12, 2024

THE NORTHWEST SEAPORT ALLIANCE
SEATTLE + TACOMA

The Northwest Seaport Alliance Business Development Team

Steve Balaski	253-888-4403	sbalaski@nwseaportalliance.com
Georgette Bonagofski	253-383-9415	gbonagofski@nwseaportalliance.com
Jeff Brubach	253-592-6211	jbrubach@nwseaportalliance.com
Jordan Hash	253-428-8659	jhash@nwseaportalliance.com
Louis Terdan	253-888-4785	lterdan@nwseaportalliance.com
John Tullis	253-219-3338	jtullis@nwseaportalliance.com

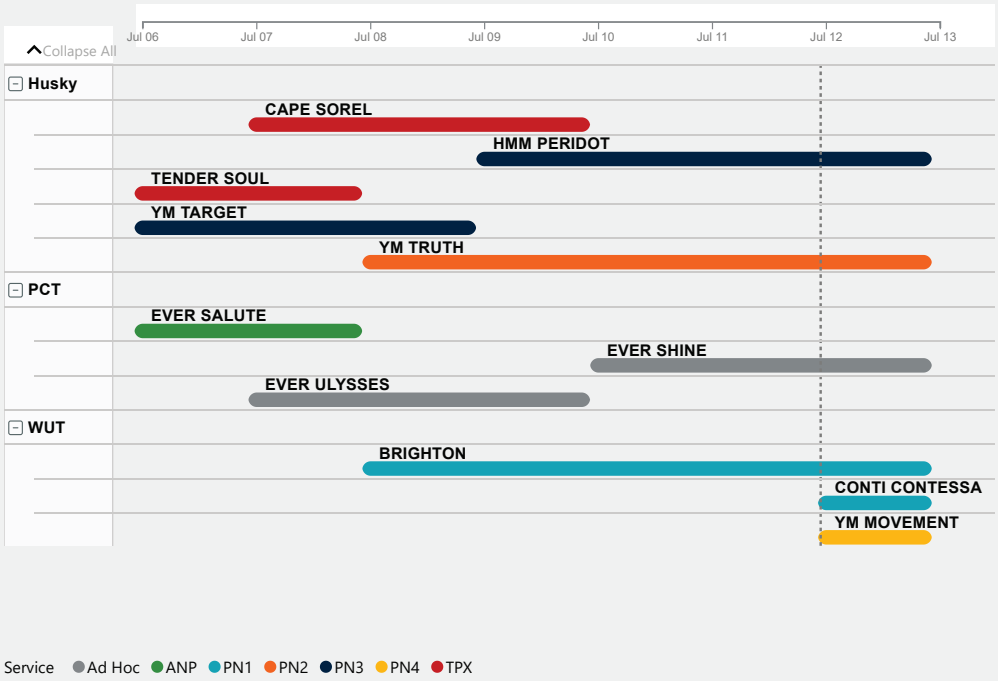
THE NORTHWEST SEAPORT ALLIANCE
SEATTLE + TACOMA

Tacoma 4-Week Vessel Forecast

Last refreshed: *7/11/2024 5:31:26 PM (PST)*

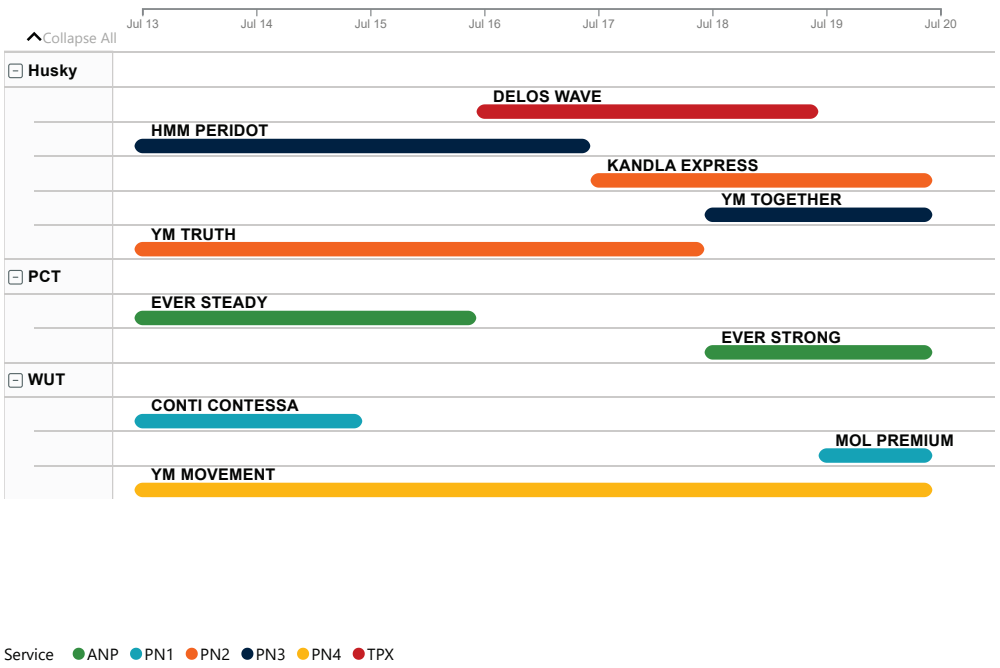
*** Schedule subject to change without notice*

Current Week



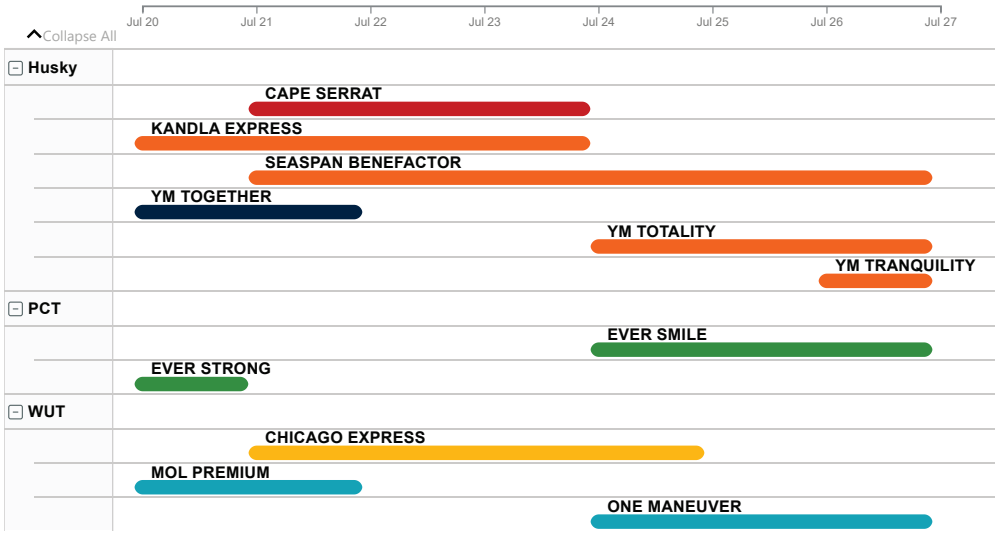
Service Ad Hoc ANP PN1 PN2 PN3 PN4 TPX

Next Week



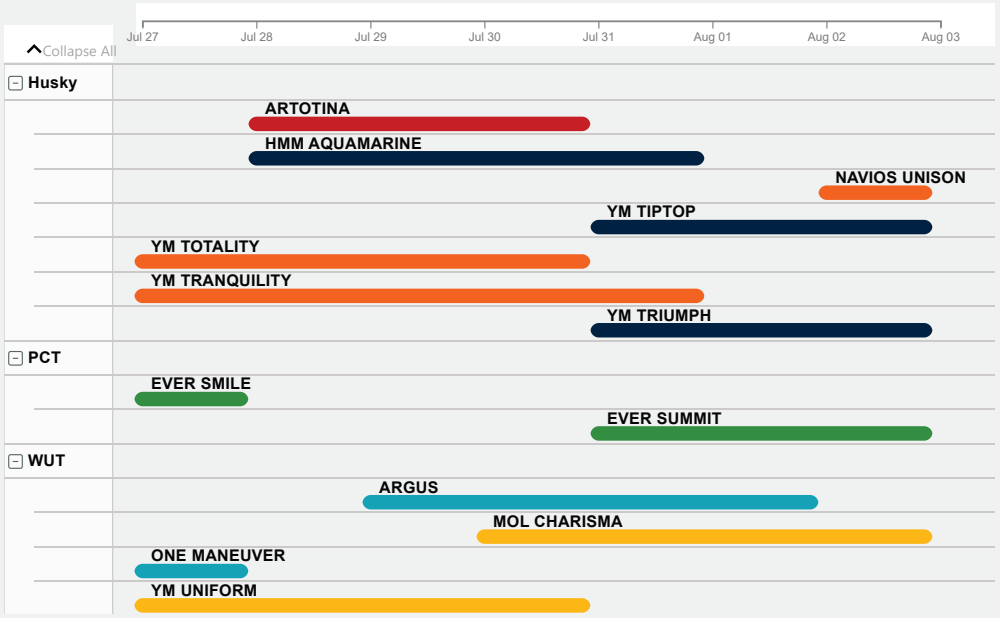
Service ANP PN1 PN2 PN3 PN4 TPX

Week 3



Service ANP PN1 PN2 PN3 PN4 TPX

Week 4



Service ANP PN1 PN2 PN3 PN4 TPX

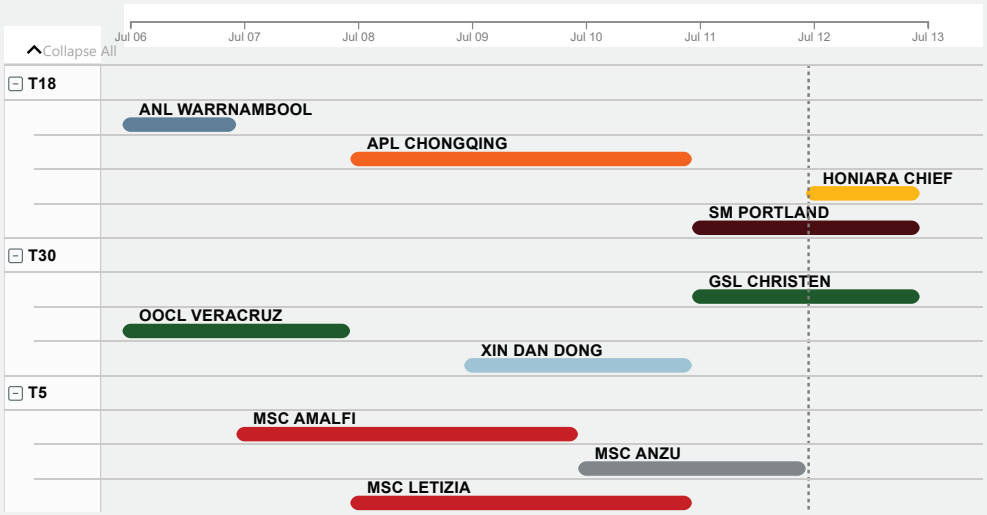
THE NORTHWEST SEAPORT ALLIANCE
SEATTLE + TACOMA

Seattle 4-Week Vessel Forecast

Last refreshed: *7/11/2024 5:31:26 PM (PST)*

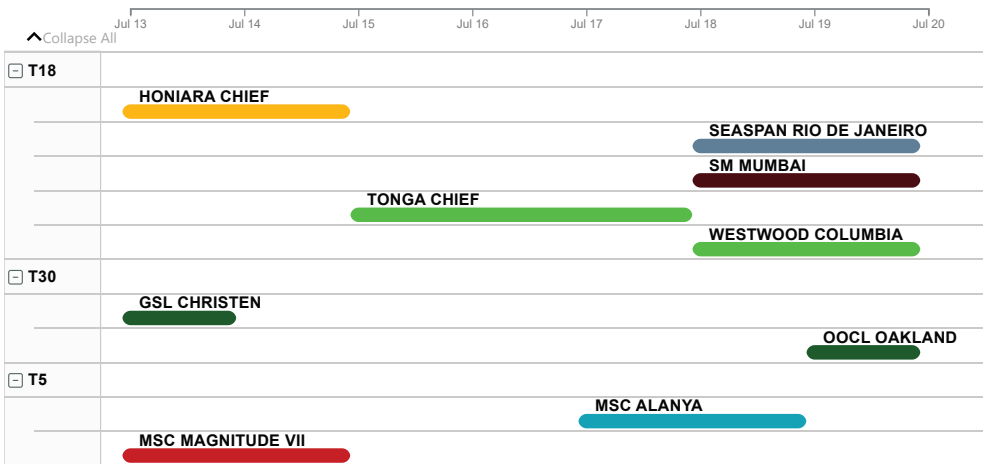
*** Schedule subject to change without notice*

Current Week



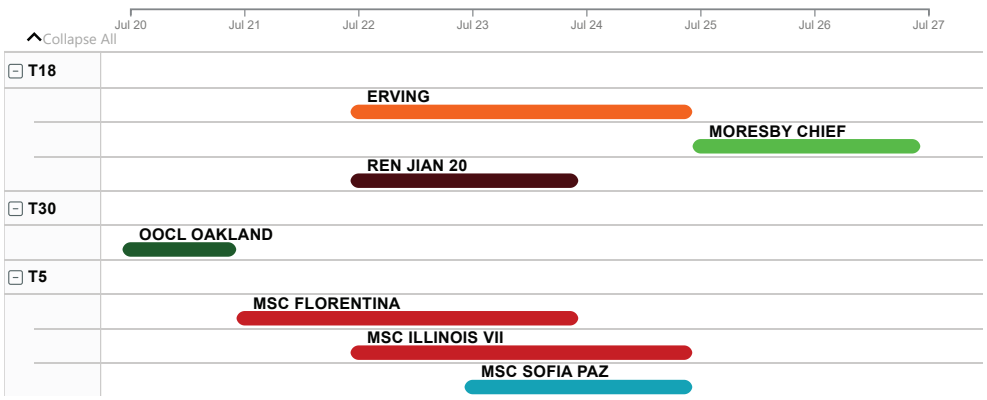
Service Ad Hoc Chinook CPNW CPV Oceania PNS PNW1 Sun Chief Express

Next Week



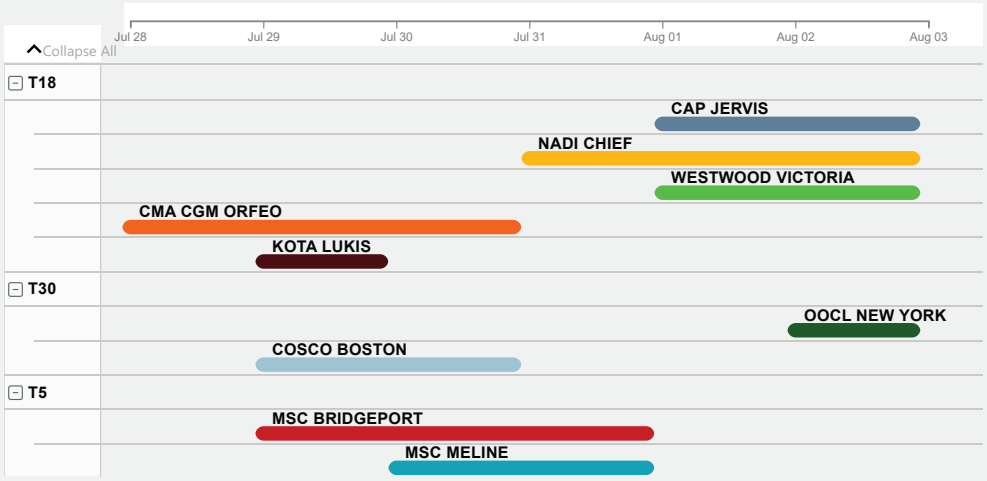
Service Chinook CLX EB Service Oceania PNS PNW1 Sun Chief Express

Week 3



Service Chinook CLX CPNW EB Service PNS PNW1

Week 4



Service Chinook CLX CPNW CPV EB Service Oceania PNS PNW1 Sun Chief Express

PUGET SOUND PILOTAGE DISTRICT ACTIVITY REPORT

Jun-2024

The Board of Pilotage Commissioners (BPC) requests the following information be provided to the BPC staff **no later than two working days prior to a BPC meeting** to give Commissioners ample time to review and prepare possible questions regarding the information provided.

Activity

Total pilotage assignments:	692			Cancellations:	7				
Total ship moves:	685	Cont'r:	166	Tanker:	208	Genl/Bulk:	105	Other:	206
Assignments delayed due to unavailable rested pilot:	19					Total delay time:	52.75	hours	
Assignments delayed for efficiency reasons:	13					Total delay time:	33.5	hours	
Billable delays by customers:	53					Total delay time:	136		
Order time changes by customers:	132								
2 pilot jobs:	36	Reason:	PSP GUIDELINES FOR RESTRICTED WATERWAYS						
Day of week & date of highest number of assignments:	Saturday, 6/22/24						36		
Day of week & date of lowest number of assignments:	Tuesday, 6/18/24						13		
Total number of pilot repositions	130	Upgrade trips	13	YTD	104				
3 consecutive night assignments:	53	YTD	249						

Callback Days/Comp Days

	Starting Total	Call Backs (+)	Used (-)	Burned (-)	Ending Total
Licensed	2685	94	71		2708
Unlicensed	0			0	0
Total	2685				2708

On watch assignments	**591**	**Call back assignments**	**101**	**CBJ ratio**	**14.60%**

Pilots Out of Regular Dispatch Rotation (pilot not available for dispatch during "regular" rotation)

A. Training & Continuing Education Programs

Start Dt	End Dt	City	Facility	Program Description	Pilot Attendees
10-Jun	12-Jun	Starting Total	PMI	BRMP	CAS(3off), HOA(1off, 2on*) RID(2off, 1on*)
					SCS(3off), VON(3off)
1-Jun	30-Jun			Upgrade Assignments On Duty	MCN(1)
1-Jun	30-Jun			Upgrade Assignments Off Duty	CAS(1), HAM(2), MCN(1), MEL(1), MOO(2),
					NIN(2), SCS(3)

* On Watch	Off Watch	** paired to assign.	
3	12	0	

B. Board, Committee & Key Government Meetings (BPC, PSP, USCG, USACE, Port & similar)

Start Dt	End Dt	City	Group	Meeting Description	Pilot Attendees
1-Jun	2-Jun	Seattle	PSP	President	GRK(2off)
3-Jun	5-Jun	Seattle	PSP	Admin	KLA(3off)
4-Jun	4-Jun	Seattle	PSP	Quiet Sound	SEA

Start Dt	End Dt	City	Group	Meeting Description	Pilot Attendees
5-Jun	5-Jun	Seattle	PSP	Admin	SEA
5-Jun	5-Jun	Seattle	BPC	OTSC	BOU, KRI
6-Jun	16-Jun	Seattle	PSP	Admin	GRK (11on*)
6-Jun	6-Jun	Seattle	PSP	Rate Committee	GRK*, KLA, KNU, MCG**
10-Jun	10-Jun	Seattle	PSP	AWO/PSHSC	BOU**
10-Jun	10-Jun	Seattle	BPC	BPC & Waypoint	MCG
11-Jun	11-Jun	Seattle	BPC	BPC Prep	ANA, SCR*
11-Jun	11-Jun	Seattle	BPC	BPC	ANA, SCR*
11-Jun	11-Jun	Seattle	PSP	US BANK	MCG
13-Jun	13-Jun	Seattle	PSP	Lobbyist Prep	VON*
13-Jun	13-Jun	Seattle	PSP	Houston Pilots	RID**, VON*
13-Jun	13-Jun	Seattle	PSP	Lobbyist	VON*
18-Jun	18-Jun	Seattle	BPC	OTSC	BOU*, KRI*
18-Jun	18-Jun	Mill Creek	PSP	Outreach	KEP
19-Jun	19-Jun	Seattle	PSP	Rate Negotiations Prep	GRK, KLA, KNU*, MCG
19-Jun	19-Jun	Seattle	PSP	Rate Negotiations	KLA, MCG
19-Jun	19-Jun	Seattle	BPC	BPC Prep	ANT, BEN*, KLA, KNU*, SCR
20-Jun	30-Jun	Seattle	PSP	Admin	KLA(11on*)
20-Jun	20-Jun	Seattle	BPC	BPC	ANT*, BEN*, KNU*
21-Jun	21-Jun	Seattle	PSP	Interview	MYE*
25-Jun	25-Jun	Seattle	USCG	Safety, COTP	HAM, RID
27-Jun	27-Jun	Seattle	PSP	BOD Executive	GRK, HAM*, HUP, KLA*, MCG*, MYE
27-Jun	27-Jun	Seattle	PSP	BOD	GRK, HAM*, HUP, KLA*, MCG*, MYE

* On Watch	Off Watch	** paired to assign.	
43	32	3	

Safety/Regulatory

Outreach

Administrative

C. Other (i.e. injury, not-fit-for-duty status, COVID risk

Start Dt	End Dt	REASON	PILOT
27-Jun	30-Jun	COVID RISK	HOA

Number of assignments during the 12 months prior to setting the number of pilots at 56 at the July 2019 065 hearing.

7,101

Number of assignments during the last 12 months (June 2023-May 2024).

7,634

Call back job ratio during the last 12 months (June 2023-May 2024) **13.05%.**

Puget Sound District
Activity Report Dashboard

Licensed Pilots Including President: 56

PS District Trainees: 5

2024 June

Last modified 7/8/2024. *No changes.*

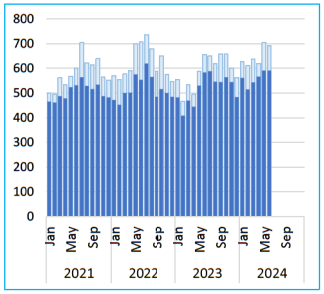
Licensed Pilots w/o Pres 55

Pilots NFFD entire month 0

Available Pilots 55

Total Assignments

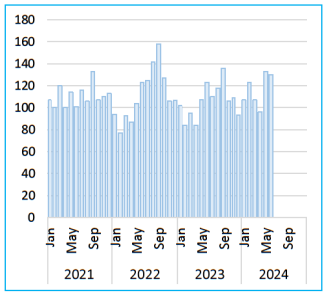
692



591 On-Watch (dark blue), 113 Off-Watch (light blue)

Repositions

130



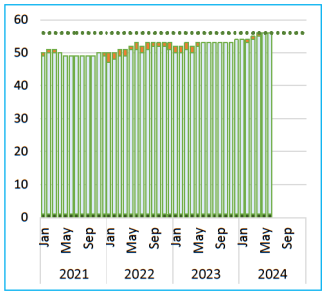
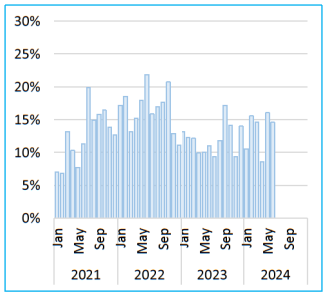


chart also includes president (1 pilot)

Off-Watch Assignments

(Callbacks)

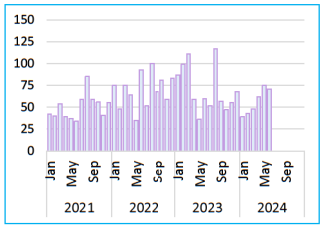
15%



Comp Days Used

(Licensed Pilots)

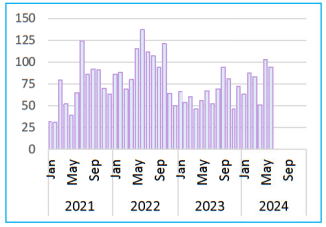
71



Comp Days Earned

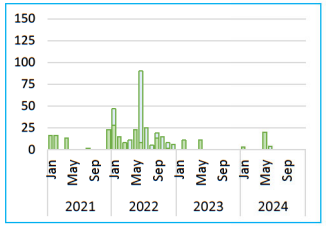
(Callbacks)

94



COVID Days* 4

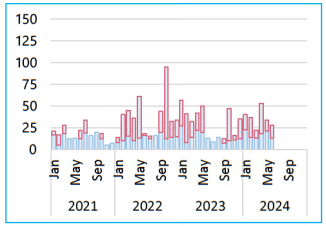
NFFD Days* 0



count of NFFD days if pilot(s) not NFFD whole month

Training Days 15

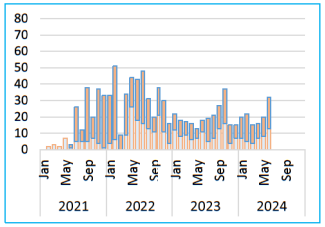
Upgrade Trips 13



training days (red) stacked on upgrade trips (blue)

Pilot Delays (Count) combined total

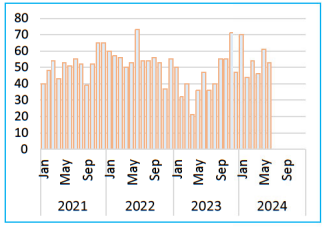
32



efficiency delay **counts** stacked on top of pilot shortage delay **counts** on bottom

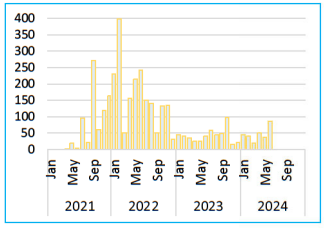
Billable Delays (Count) by Customers

53



Pilot Delay Hours (Pilot Shortage & Efficiency)

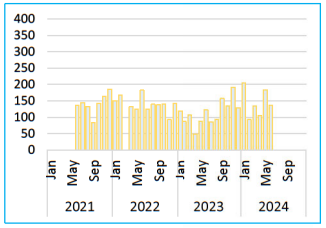
86.25 hrs



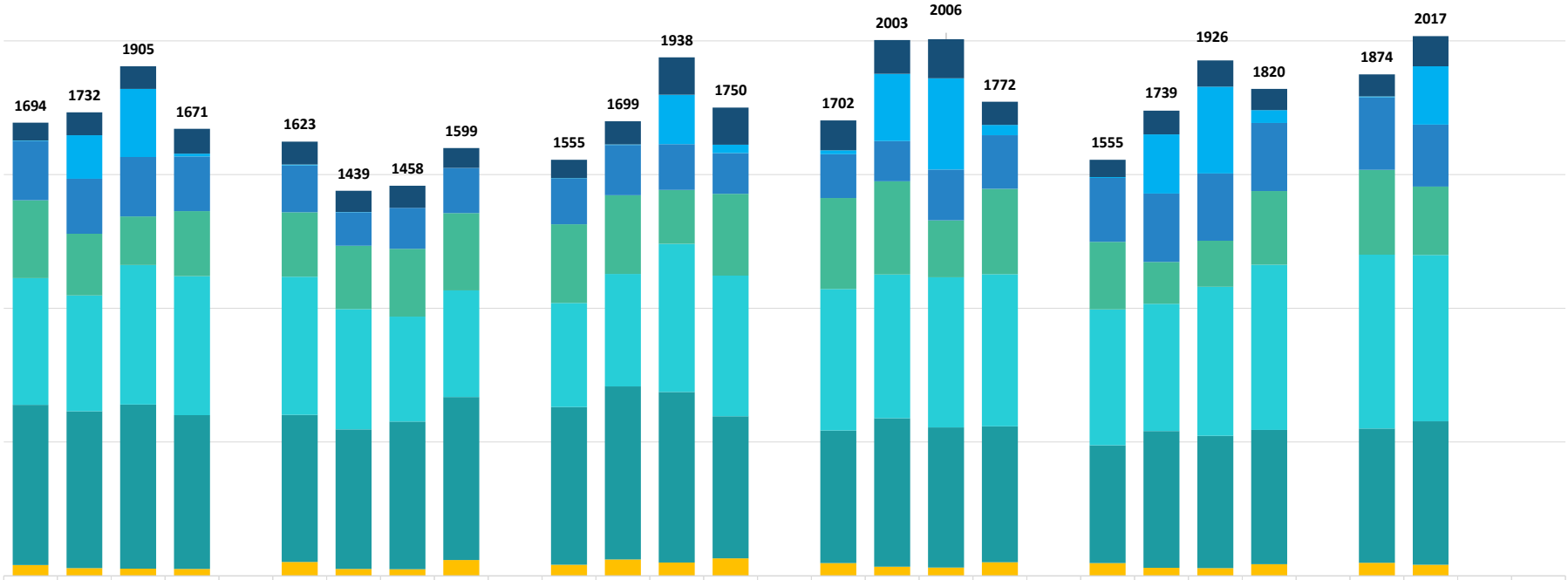
total pilot delay **hours** (not separated into efficiency & pilot shortage components)

Billable Delay Hours by Customers

136 hrs



Puget Sound Pilotage District Assignments 2019-2024
quarterly, by vessel type, including cancellations



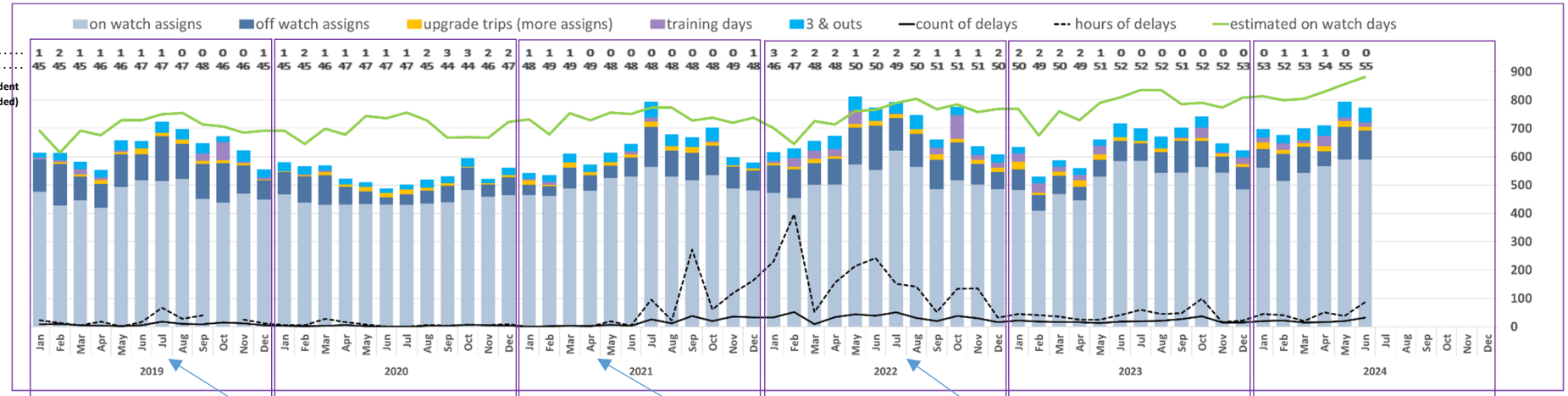
	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3	2024 Q4
6 Other	67	85	85	93	86	79	82	74	69	87	140	139	111	127	146	86	65	89	98	79	82	112		
5 Passenger	2	163	255	10	3	1	0	0	2	2	185	31	15	251	341	39	3	221	324	48	3	218		
4 Carrier/RoRo	221	205	222	205	175	125	154	169	170	187	171	152	164	150	190	200	239	256	251	255	272	232		
3 Bulker	291	231	181	243	241	237	253	289	294	295	201	306	340	349	213	320	252	156	173	275	317	256		
2 Tanker	474	433	522	520	517	450	393	399	389	420	554	526	529	537	561	568	508	476	557	618	650	622		
1 Container	599	586	613	574	549	521	551	609	590	647	637	531	496	555	524	508	441	511	494	502	501	536		
_CANCELS	40	29	27	26	52	26	25	59	41	61	50	65	47	34	31	51	47	30	29	43	49	41		
TOTAL	1694	1732	1905	1671	1623	1439	1458	1599	1555	1699	1938	1750	1702	2003	2006	1772	1555	1739	1926	1820	1874	2017		

Grays Harbor Pilotage District Assignments 2019-2024
quarterly, by vessel type, including cancellations

	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3	2024 Q4
GH BB/Log/Oth	2	2	2	0	0	0	2	0	0	0	12	0	2	0	2	2	2	3	3	0	2	2		
GH Ro-Ro	12	10	14	12	12	2	2	0	0	4	0	0	0	0	0	0	6	10	0	5	10	12		
GH Bulker	45	39	46	45	43	40	56	51	51	33	43	29	34	29	44	57	65	45	36	63	58	60		
GH All Types																								
_CANCELS	0	0	0	0	0	0	2	2	1	0	0	1	1	0	1	1	2	1	0	2	4	2		
TOTAL	59	51	62	57	55	42	62	53	52	37	55	30	37	29	47	60	75	59	39	70	74	76		

Puget Sound District pilot availability, pilotage assignments and additional duties, and delays 2019 – 2024

updated July 8, 2024



2019	2020	2021	2022	2023	2024
6971 total assigns	**6072 total assigns**	**6950 total assigns**	**7483 total assigns**	**7031 total assigns**	
6540 noncruise	6068 noncruise	6725 noncruise	6834 noncruise	6435 noncruise	
431 cruise	4 cruise	225 cruise	649 cruise	596 cruise	

Policy Statement adopted by BPC 10/18/2018 & RCW 88.16.103 revised effective 7/28/2019

– 10 hrs min off duty between assigns (increased from 8 hrs, eliminates round trip cruises)
PSP implemented in October 2018

– 13 hrs max duration for multiple harbor shifts (limits options for multiple assignments)
PSP implemented in July 2019

– Three-and-out rule requiring additional rest after 3 consecutive night assignments
PSP implemented in 2015 – already part of operating rules

WAC 363-116-081 Rest period.
Revised effective 4/19/2021

Defines "assignment" consistently as call time to check in time for both rest calculations AND night assignment definition (increasing number of night assignments, increasing 3 & outs).

WAC 363-116-081 Rest period.
Revised effective 7/24/2022

Allows "multiple assignments" (instead of only "multiple harbor shifts"), as long as total duration does not exceed 13 hrs (improves dispatch efficiency.)
PSP implemented in May 2022, along with other efficiency measures.

This chart compares aggregate on-watch pilot availability to aggregate assignments & nonrevenue tasks each month and shows timing of rest rule changes and increased delays.

~ Everything is on the same axis – all values are counts.

~ Green line shows aggregate on-watch days each month (pilot availability) calculated as follows:

- ~ count pilots who were licensed during the month (exclude president and any pilot(s) NFFD <u>entire</u> month),
- ~ multiply by number of days in month
- ~ subtract NFFD days for any pilot NFFD for <u>part</u> of the month & subtract prelicense/postretirement days of pilots who were licensed mid-month or retired mid-month *(pilots are included in count but unlicensed days are subtracted from aggregate days (green line),*
- ~ multiply total (aggregate licensed days) by 0.496 (accounts for off-watch respite & ETO) to get on-watch days;
- ~ add any PPW (peak period work) days during cruise season to get total aggregate on-watch days.

~ Stacked bars show on-watch assignments, off-watch assignments, upgrade trips, training days, and 3 & outs. **Meetings are not shown.**

~ Black lines represent count of delays (solid line) and hours of delays (dotted line).

It was expected that the increased rest requirements adopted by BPC in October 2018 (revised RCW effective date 07/28/2019) would reduce the number of assignments pilots would be able to complete while on watch, but reduced vessel traffic during the COVID-19 pandemic mitigated the impacts of both the increased rest requirement and the worsening pilot shortage, and delays continued to be uncommon. However, in 2021, as cruise ship and other vessel traffic began returning to pre-pandemic levels, delays began to be observed at levels not seen previously. The delays have been coming under control as PSP continues to identify and implement dispatch efficiencies while BPC's training program slowly but steadily reduces the pilot shortage.

Port of Grays Harbor

Pilotage Report

July 18, 2024

Pilotage Activity

There were 9 arrivals in June (4 dry bulkers, 2 liquid bulker and 3 RoRo) for a total of 25 jobs. Year to date, through June, there have been a total of 54 arrivals for a total of 150 jobs.

The July schedule is looking steady with 7 arrivals so far: 3 dry bulkers, 1 logger and 3 RoRo's.

Merchant Mariner Medical Certificate Application Backlog

The National Maritime Center (NMC) is currently experiencing a backlog of medical certificate applications. The NMC recommends you submit your application 90 days in advance of your current medical certificate's expiration. NMC processing times are currently close to 30 days for COMPLETE applications but may be longer for incomplete applications.

Processing times at the NMC have grown due to large e-mail volume. Sending multiple e-mails for individual pages of the application or sending the same information multiple times only causes delays in processing for other mariners and will significantly delay the processing of your information. For example, during the week of 10-14 June, 2024, approximately 25 percent of all e-mails processed were duplicate medical certificate applications (CG-719K).

You can help us improve processing times by adhering to the following guidelines:

- Review your application to ensure it is COMPLETE prior to submission. Please review our website to avoid common medical certificate application errors.
- Check your medical certificate expiration date and apply 90 days before it expires.
- E-mail medical certificate applications (CG-719K or K/E) directly to MEDAIP@uscg.mil. (Other submission options include sending to an REC, fax or U.S. mail, but these options are not processed as quickly as direct submission to MEDAIP@uscg.mil.)
- Enter the e-mail subject line in the following format: LAST NAME_FIRST NAME_MARINER REFERENCE NUMBER.
- Name your PDF file in the following format: LAST NAME_FIRST NAME_REFERENCE NUMBER.
- Medical certificate applications (CG-719K) should be submitted as one PDF.
- JPEG and other formats are not accepted.
- Do not send drug test results with your medical certificate applications (CG-719K). Drug testing results should be sent with your MMC application to MMCApplications@uscg.mil.
- If necessary, e-mail medical-related documentation **other than medical certificate applications** (i.e., additional information) to NMCMedicalClerks@uscg.mil.

As a reminder, only COMPLETE medical applications are accepted for processing. Incomplete applications are returned to the mariner for correction and must be resubmitted, which delays the processing of your medical certificate application.

Sincerely,

/B. W. Clare/

Bradley W. Clare
Captain, U.S. Coast Guard
Commanding Officer

July 5, 2024

STATE OF WASHINGTON BOARD OF PILOTAGE COMMISSIONERS

Attention: Dr. Sheri J. Tonn, Chair

2901 Third Avenue, Suite 500 Seattle, WA 98121

Subj: Matson Marine Safety Occurrence Report

Dear Dr. Tonn,

Attached is a Root Cause analysis for the Marine Safety Occurrences filed by the Puget Sound Pilots. Please note we gather most of our analysis from Nautical System Enterprise (NSE), Matson's official record to manage our vessels maintenance, repairs, purchasing, and work history. In addition, we also vetted our information against United States Coastguard and American Bureau of Shipping databases to give Board of Pilotage Commissioners to ensure accuracy of information provided.

Please note the following:

Occurrence 2019 11 23 Mahimahi engine failed to start. Matson conducted a rigorous investigation where we searched NSE, US Coast Guard, ABS, and shipboard documentation and could not locate this specific occurrence.

Occurrence 2022 09 17 Maunalei, crew member was given remedial training in deck seamanship. There are two concerns in one incident that were addressed.

1. When passing a heaving line from vessel to pilot boat the pilot ladder must remain clear.
2. Before sending a heaving line verbal communication shall be established, with an understanding that heaving lines are lowered at a controlled rate.

Kindly review the attached Root Cause Analysis for MSO's and if you need any further clarification.

Best Regards,

Brian Spillane

Brian Spillane

Matson Navigation Company, Inc.

Director of Vessel & Chartering Operations

bspillane@matson.com

415.244.5619

YYYY MM DD VESSEL	PROBLEM CATG	OCCURRENCE DESCRIPTION	Action Taken Immediately	Investigation and Corrective actions	Recommendation/Level
2016 07 15 MANOA	ENGINE / PROPULSION PROBLEM	1. The chief engineer reported a problem starting the main engine remotely during arrival test at the Port Angeles Pilot Station. 2. The engine started locally without difficulty. 3. MANOA proceeded to Seattle in local control without incident or restriction on the engine. 4. Nearing the berth, the engine failed to respond to local commands.	The crew changed out this regulator with a new spare and had no further trouble. While alongside the dock, the chief engineer serviced the Air Starting lever cylinder. The seals found in worn condition and new seals were installed.	1. Conducted 'dry' test (no admission of start air to engine) at the dock with slow system air pressure recovery despite full starting air reciever. 2. Inspected the turning gear interlock device and found a groove impeded smooth actuator motion. 3. Adjusted the interlock device position onto ungrooved section with satisfactory results. 4. Initiated fleetwide inspection for all actuator tracks on Sulzer control system.	1. Adust the interlock position away from groove (Level 1). 2. Initiate fleetwide inspection of this device within the starting system (Level 3).
2018 09 28 MANOA	ENGINE / PROPULSION PROBLEM	1. Engine Fail to Start. 2. Engine failed to start on Dead Slow Ahead command. 3. Fuel Pump shut downs had tripped without alarm indication.	1. Reset fuel pumps with reset procedure. 2. Equipment tested satisfactory with fuel pumps on line. 3. The crew inspected the rotation direction safeguard. 4. The crew ran the automation tests with satisfactory results.	1. Inspected control air system and supply. 2. Verified the rotation direction safeguard spring tension. 3. Ordered new clutch springs to replace existing items. 4. Cleaned and verified air supply lines and changed out air filters.	1. Verify system component integrity and cleanliness (Level 1). 2. Replace clutch springs (Level 1).
2019 07 06 MAHIMAHI	ENGINE / PROPULSION PROBLEM	Fuel Leak at Main Engine	1. Shut down the main engine 2. Repair leaking coupling.	1. Inspect Main Engine fuel return lines 2. Evaluate whether any couplings were not tight. 3. Verify support brackets are secure.	1. Insepct return line integrity (Level 1). 2. Evaluation coupling integrity (Level 1). 3. Verify bracket security (Level 1). 4. Verify FO return line integrity fleetwide (Level 3).
2019 11 23 MAHIMAHI	ENGINE / PROPULSION PROBLEM	Engine failed to start	No issue report on NSE		
2022 07 08 MANOA	ENGINE / PROPULSION PROBLEM	Main Engine failed to Start.	1. Engine tested and started. 2. Crew lubricated and execised the air start valve. 3. Crew demonstrated operation to satisfaction of class with remote survey.	1. Performed scheduled maintenance (open and inspect). 2. Replaced valve packoing. 3. Replaced Non-return valve found in open position. 4. Replaced bracketing.	1. Perform Maintenance (Level 1) 2. Replace damaged parts (Level 1) 3. Generate notification to fleet (Level 3)
2022 07 22 MANOA	ENGINE / PROPULSION PROBLEM	Main engine failed to start.	1. Exercised Main Engine Air Start distributor. 2. Verified Engine Start reliablilty.	1. Performed major overhaul to air start distirbutor. 2. Tested engine start to satisfaction of surveyor.	1. Perform Overhaul (Level 1) 2. Optimize maintenance interval (Level 3).
2023 08 18 MANULANI	ENGINE / PROPULSION PROBLEM	1. Engine failed to start in astern. 2. Escort tug ordered by COTP. 3. Required class surveryor prior to proceding. 4. Class surveyor dispatched to observe astern function.	Replaced 3/2 solenoid valve in the start air system.	1. Identified control valve as defective. 2. Replaced failed component. 3. Tested to satisfaction of the surveyor.	1. Replaced failed component (Level 1). 2. Review and optimize automation controls mainenance interval (Level 3).

2024 03 30 MANULANI	ENGINE/ PROPULSION PROBLEM	1. During mainuevering, the crew discovered a main engine fuel pump fuel leak and secured the main engine. 2. Engine failed to start when attempting to depart the second time.	1. A missing plug on a newly installed fuel pump allowed fuel to leak once engine started. 2. Rebuilt the main engine air start distributor.	1. The crew discovered a plug missing from newly installed fuel pump. 2. The crew installed a replacement plug and tested satisfactory. 3. Fail to start symptoms led to crew to inspect air start distributor. 4. On inspection, discovered damaged starting air distributor camshaft. 5. Vendor assisted in overhauling the starting air distributor with new components. 6. Tested to safisfaction of the surveyor.	1. Replaced missing item (Level 1). 2. Sent advisory to fleet (Level 2). 3. Performed component rebuild (Level 1).
2017 01 04 MATSON TACOMA	ENGINE / PROPULSION PROBLEM	Equip: exhaust leak in Main Engine #2 Cylinder	1. Repaired Exhaust Leak		1. Repaired defective part (Level 1)
2017 04 04 MATSON KODIAK	ENGINE / PROPULSION PROBLEM	#2 Main Engine Exhaust Temperature Sensor Failure	1. Overrode the deviation alarm.	1. Inspect Main Engine exhaust thermocouple 2. Replace as necessary.	1. Repaired defective part (Level 1).
2017 05 04 MATSON ANCHORAGE	ENGINE / PROPULSION PROBLEM	#4 Main Engine Suction Valve Failure	1. Replaced suction valve	1. Inspect suction valve for wear and replace.	1. Repaired defective part (Level 1)
2020 04 04 MATSON ANCHORAGE	ENGINE / PROPULSION PROBLEM	#5 Main Engine Cylinder not firing	1. Took cylinder off stroke	1. Inspected fuel system at Main Engine Cylinder #5. 2. Changed out fuel pump plunger and barrel, suction valve, and fuel injectors.	1. Replaced defective parts (Level 1).
2022 10 01 RJ PFEIFFER	ENGINE / PROPULSION PROBLEM	1. SW Pump discharge check valve leaking.	1. Determined source of water ingress. 2. Replaced failed valve with spare.	1. located and replaced failed component.	1. Repaired defective part (Level 1)
2022 12 17 MATSON TACOMA	ENGINE / PROPULSION PROBLEM	1. Stopped main engine to change out leaking valve.	1. Went to anchorage and secured Main Engine. 2. Located leaking valve and replaced.	1. located and replaced failed component.	1. Repaired defective part (Level 1)
2023 06 21 MATSON KODIAK	ENGINE / PROPULSION PROBLEM	1. Vessel went to anchorage to change out suction valve.	1. Shifted to anchorage. 2. Changed out suction valve.	1. located and replaced failed component.	1. Repaired defective part (Level 1)
2023 09 02 MATSON KODIAK	ENGINE / PROPULSION PROBLEM	1. Vessel went to anchorage to do repair. 2. Repaired lube oil leak.	1. Went to anchorage and secured Main Engine. 2. Located oil leak and repaired..	1. located and replaced failed component.	1. Repaired defective part (Level 1)
2024 03 30 MATSON TACOMA	ENGINE / PROPULSION PROBLEM	1. Ship reported both whistles not operational.	1. Replaced both ship's whistles.	1. Located and replaced failed component.	1. Repaired defective part (Level 1)

PMSA
PACIFIC MERCHANT SHIPPING ASSOCIATION

July 10, 2024

Chair Sheri Tonn
Washington State Board of Pilotage Commissioners
2901 Third Ave., Ste 500
Seattle, WA 98121

Re: BPC Determination of the Number of Pilot Licenses

Dear Chair Tonn and Commissioners,

On behalf of the members of the Pacific Merchant Shipping Association (PMSA), we appreciate the opportunity to provide comments regarding setting the number of pilot licenses to fully support the Pilotage Act requirements of safe, competent, and efficient pilotage. PMSA's position is that the current level of pilot licensure is more than adequate to safely, competently staff a fully efficient and optimized pilotage service. Increasing the number of pilots requires a rational, legal, and complete evidentiary basis with clear, logical, and factual findings including the identification and implementation of continuous improvements in the administration of the Pilotage Act. The Board of Pilotage Commissioners (BPC) has not yet fully developed such a record or findings in the current proceeding.

PMSA supports and applauds many improvements made in recent years by the BPC and the Puget Sound Pilots (PSP), ranging from rest rule changes to the candidate screening and exam process. However, the average number of pilots currently licensed and scheduled for watch exceeds the current average daily demand for pilots, resulting in no systematic need for additional pilot licensees. With respect to the management of pilotage resources that already do exist, there are numerous improvements in the efficient provision of pilotage services which would better ensure pilot availability.

As described below, although there have been good discussions around the available data, “some” key relevant data has not been fully reported or analyzed which means the evidence to support adding pilots is incomplete. We also note that only recently has the number of licensed pilots reached 56. Therefore, the full impact of those additional pilots is not yet fully reflected in BPC data or analysis.

We therefore urge an incremental and conservative approach to adding pilots noting that pilotage demand is now relatively comparable to 2022 and that any licensed issued is a 20+ year decision. We strongly recommend BPC evaluate multiple year activity trends versus potentially focusing on just a single year-to-date or 12-month data set. For the record, industry and PSP have historically agreed to a multiple year approach, during application of the self-correcting formula, and in the years when industry and PSP jointly agreed to tariff adjustments.

Average Scheduled On-Watch Pilots Exceed Average Pilotage Assignment Demand: The average aggregate daily assignment level over the past eight years has averaged 19.2 per day (see BPC staff chart dated 02/15/2024) with the 2023 average also being 19.2 assignments per day. This has recently increased to between 20 and 21.

> *Logically and mathematically, one must conclude that since the average aggregate number of pilots scheduled to be on watch (25) is larger than the average number of assignments (19 to 21), that there is an adequate number of pilots.*

And, barring a dramatic 16% decrease in the number of pilots scheduled to be on watch, there should be minimal issues with delays or callbacks. Given this reality, the focus should be on how daily pilotage demand is being satisfied by the management of a greater average daily pilotage supply.

Ensure the new Target Assignment Level is Mathematically Accurate: When the BPC recently set the on-watch TAL at 123, it also acknowledged that the PSP-advocated 5% buffer to provide for off watch assignments equates to just over 6 more assignments per year per pilot. This results in a total of 129.15 assignments per pilot per year.

Using the latest 5-year trend in annual assignments (2017, 2018, 2019, 2022, and 2023, and excluding anomalous COVID years 2020 and 2021), the annual assignment demand averages 7,209 assignments per year. (see Encl 2 - BPC Staff Chart dated 02/15/2024).

> *If BPC, in isolation of other factors, simply applied the total TAL of 129.15 (on watch of 123 + 5% off watch), to this 5-year average demand of 7,209 assignments per year, the number of necessary pilot licensees would be 55.8.*

If this formula is applied, the result would be 57 pilots, the total of 56 pilots plus the PSP President, which would mean that the only possible justification under the new TAL would be an increase in one licensee from 56.

With this introduction and backdrop, we offer these additional comments and recommendations for BPC consideration in conjunction with setting the number of pilots.

Supply and Demand: Efficiency in the compulsory pilotage system requires examination of pilotage supply and demand. Pilotage system demand is driven exclusively by the number and type of pilotage assignments, but supply is a function controlled by the state and PSP monopoly. The state controls the potential upper limit of pilotage supply by setting the number of licenses approved at the BPC, but actual day to day pilotage supply is controlled by PSP's

private work rules and management of its dispatch system by providing or limiting the number of actual individuals available to provide pilotage services on any given day.

To our knowledge, BPC does not monitor or require disclosure by PSP of actual daily pilotage supply and dispatch. PMSA is on record numerous times requesting this data be reported and analyzed to best identify causes of delays and callbacks. We do note that the aggregate monthly pilot availability chart developed by BPC Staff - originally dated 02/15/2024 - is a helpful tool that would be very productively augmented by the daily analysis. We also agree with PSP President Carlson's statement when it was first introduced that the pilotage system experiences a "problem" when the stacked "activity" bars on this BPC Staff chart approach the green line indicating aggregate on watch pilot availability on a monthly/yearly basis. We further note that this chart now indicates a separation between the activity bars and the pilot supply green line which is a positive trend.

> Recommendation 1: Require daily reporting of assignments and number of pilots on watch and available for or engaged in a ship movement assignment.

The missing daily supply/demand data would help pinpoint causes of delays/callbacks. What is missing is how daily pilot availability is created or discouraged, managed or unmanaged. While we urge the BPC to continue updating and evaluating this supply/demand chart to assist in tracking/determining overall trends, it is not a substitute for actual knowledge of specific causes (and solutions) for demand exceeding supply on any particular day.

> Recommendation 2: The BPC consider, measure, and evaluate factors going forward that might trigger when to next consider the TAL or number of pilots including but not limited to efficiency improvements, evaluation of the type/mix of assignments (shifts and 2nd pilot assignments vs arrivals/departures), and the impacts of key issues such as the expected reduction of comp day accumulation/use leading to a reduction of callbacks generated by comp days.

Efficiency: Presentations, statements and updates at BPC meetings indicate there are different perspectives on exactly what is meant by efficient pilotage. PMSA has submitted comprehensive documents in the past regarding the number of pilots and potential efficiency improvements (see previous PMSA Submittals, Encl 1 & 6). PSP has implemented some of these measures and reported on those as well, yet they do not actually address PSP inabilities to effectively manage their dispatch system or compel pilots to actually stand their stated watch schedules.

As further noted, and described in numerous prior PMSA submissions that are still relevant for consideration today, the Pilotage Act reference to efficiency, requires sufficient oversight of PSP to evaluate whether the statutory efficiency mandate is being met. While we appreciate prior

BPC sentiment that it seeks to avoid the day-to-day management of PSP assignments and dispatching policies, it cannot ignore these factors if it wants to use pilot utilization levels as a basis for changing the number of licensees.

In short, the BPC cannot have it both ways; it cannot cite and rely on aggregate pilot assignment levels as a basis for changing the number of pilots, and simultaneously disregard a desire to know about the policies that direct how many pilots are actually being given assignments.

Pilot Utilization Rate: We agree with the statement from former PSP Executive Director Charlie Costanzo at a BPC meeting that the task at hand of setting the number of pilot licenses might best be characterized as identifying an appropriate pilot utilization rate. The current approach is to set a target on watch assignment level with pilots essentially standing watch in a half on, half off rotation.

According to the PSP watch schedule, the actual number of scheduled on-watch days per year per pilot is 177.65 per year (see Encl 3). This schedule fully reflects all BPC and PSP fatigue rules. PSP has confirmed that there are also 3 additional days of duty during cruise season. For the record, we fully support this PSP adjustment which partially addresses "peak" season demand.

This results in a total of 180.65 days each pilot is scheduled for watch per year. Naturally, the baseline for any BPC pilot utilization rate analysis must therefore start with the presumption that each pilot licensee is capable of safely and competently providing at least 180.65 days of pilotage service supply to customers each year. Starting with this presumptive baseline, PMSA recommends the following tools and steps also be implemented:

Recommendation 3: Set and measure an acceptable scheduled on-watch utilization rate.

- Continuously measure the scheduled on-watch utilization rate. Recently, the BPC set the annual on-watch target assignment level (TAL) at 123 per recent BPC action. This represents a target utilization rate of 123/180.65 or 68%.
- The lowest number of on watch and available pilots documented has been 11 pilots on two occasions (NASA's Puget Sound Pilot Fatigue Study Report which the BPC has). PMSA highlighted this when the study was completed as a area of concern given there were over 50 licensed pilots.
- The BPC should identify relevant criteria and determine whether the 68% on-watch utilization rate meets the efficiency intent articulated in the Pilotage Act.
- Could PSP efficiency improvements assist in setting it higher?

- Measure the impact of the reduction in callbacks and accumulated comp days upon the on-watch utilization rate (assuming less overall comp days means fewer comp days taken which means more on watch days available for assignment).
- It is worth noting that at the 68% utilization rate, up to 32% of on scheduled on watch days would be comparable to recovery or respite days unless such days were NFFD or BPC meetings/committees or required training and so on. Given the references to the need for rest during respite or off-watch days, it is also important from a fatigue management perspective to also consider how many on-watch rest and recovery days there are to provide a complete picture of total annual rest/recovery days.
- For the record, PMSA supports the rest rules now in place and appreciates the context provided by the BPC Staff chart (recently updated) indicating the timeline of implementation which began in 2015.

Recommendation 4: Fully implement a complete half on, half off rotation.

- Add 2 duty days to bring the total to 182.65 days of scheduled watch per year. At the current working pilot license level of 55, this represents an additional 110 days of duty.
- These days should be added during cruise season peak days during the year to help eliminate delays and reduce callbacks.

Recommendation 5: Shift additional watch days from non-cruise season months to peak days of cruise season to better match available pilot on duty days (supply) to the average number of assignments per day (demand).

- For context the lowest average day for any month in 2023 was 16.6 assignments per day and so far in 2024 it has been as high as 23 assignments per day. Those are the extremes in the past year and half so adjustments would not target this delta but instead target the average non-cruise days with average cruise season days.

Recommendation 6: Track daily trends to identify highest and lowest assignment days of the week and avoid reductions in on watch availability during highest days of the week while ensuring transition days target the most likely busiest days of the week. This was done in 2021 by BPC Staff (see Encl 4)

Recommendation 7: Reduce the transition protocol from an entire day period of 24 hours to a specific fixed transition time; for example, noon on Wednesday. The elimination of an overlap of an entire duty day would provide several more on duty days/hours per pilot per transition, which could also be used to cover peak demand during cruise season.

Moreover, we observe that these improvements could benefit the TAL, and that it would be much higher still beyond 129 per pilot if PSP managed its dispatch such that the issue of comp days creating callbacks is reduced through the implementation of Recommendations 1-7 above as well as the following:

> Recommendation 8: Measure/estimate the number of callbacks created by comp days.
>
> Recommendation 9: Given the increase in the number of licensed pilots measure the reduction in total callbacks and total comp days taken and if sufficiently reduced, then revisit the TAL.

If the Number of Pilot Licenses is Increased, PSP Should Be Held to Its Expert Testimony That Additional Pilots Lead to Reduction of Callbacks: PSP's expert testimony, submitted to UTC on November 19, 2019 seeking a tariff based on higher levels of pilot licensure, asserted that the benefits of adding pilots included "…decreased callbacks, and decreased vessel delays." (see PSP Exh. SK-1T Encl 7).

The BPC should hold PSP to account and require that it demonstrate such a benefit if that is what it intends to accomplish in a contemplated increase in the number of pilots. We note the following regarding PSP's expert testimony:

- PSP analysis used a data set from October 2017 through September of 2018 that had been cleaned by NASA for their report. Rest rule implementation began in 2015 per the BPC staff chart of 02/15/2024.
- PSP activity reports indicate there were 7,365 assignments during the above described 12-month period (there were some slight differences on various reports).
    - BPC reported no accidents involving fatigue and PMSA could find no instance of an accident in any year where fatigue was cited as a factor.
    - PMSA fully agrees with and supports constant vigilance in approaching fatigue management.
- BPC staff chart of 2/15/2024 indicates the average number of available pilots per month during the above-described period ending September 2018 to be 48.4. PSP's expert stated that a 10-year average indicated 0.5 pilots NFFD each year but used 1 in his calculations. Therefore, the 7,365 assignments were completed by an average of 48.4 available pilots for an average of 152 assignments each. This included 1,188 callbacks cited by PSP for an average of nearly 3.3 callbacks per day.

- How does this compare to 2023?
    - For context, there were on average 51.1 available pilots in 2023 averaging 137.4 assignments which is 10% or 15 fewer assignments than the year ending September 2018.
    - The 2023 callback numbers fell to 2.1 per day or 35% less than the year ending September 2018; a significant improvement.
    - Reducing the average number of assignments to the 129+ (123 plus 6+) recently set by BPC should result in another marked reduction in callbacks to an approximate average of 1 per day or less.
- PSP's expert analysis indicated that adding 3 on watch pilots that test year would have reduced the 1,188 callbacks by 900 leaving only 288 callbacks.
    - The recent increase to the 55 working pilot roster is 3.3 more "on-watch" pilots or an increase of 13.6% compared to the 48.4 available pilots in PSP's analysis. This is a significant increase.
- BPC discussions have continued to target 5% callbacks though it is unclear how this numeric number was calculated. PSP reports 7,634 assignments for the 12 months through June of 2024. Applying the 5% target indicates 382 callbacks. Note that 55 pilots doing 6.15 callbacks per year each (123 * 5%) equals 338 callbacks.
- PSP's testimony and expert analysis did not directly address how many callbacks were created by comp days. It is rational to conclude that the reduction of total comp days will lead to fewer comp days being taken and therefore less creation of callbacks due to this dynamic. Given this relationship, PSP's analysis understates the impact of additional pilots in reducing callbacks, meaning the outcome should be better than PSP's methodology would indicate.

On Watch Pilot Availability: Additional data in recent years has been helpful but there is a glaring omission in actual daily on watch pilotage demand versus stated or average aggregate pilot availability and utilization. These metrics/data are not currently being reported to or evaluated by BPC. The PSP Watch Schedule (referenced above and attached) indicates no fewer than 25 pilots scheduled for watch each day and ranges up to 35 pilots (transition days) for an average of 26.7 pilots on watch each day.

Recommendation 10: Require reporting of scheduled on watch pilots not being available for a ship movement assignment and the reason(s) for not being available.

Recommendation 11: Compare the daily assignment volume with scheduled on-watch and available pilots and if delays or callbacks were used. PSP reports the high and low assignment days each month and BPC staff has been able to report a years' worth of daily assignment data meaning it was available (see Encl 4).

- Identify/assess days involving more assignments than scheduled on watch pilots and whether they produced a delay or callback.
- Evaluate reasons scheduled on watch pilots are not available for ship movement assignments (NFFD, Comp days, etc.) to enhance ability to find efficiency adjustments: Note - the adage of you can't manage what you don't measure seems particularly applicable here.
- Recall, the watch schedule produces several days each month with more than 25 pilots scheduled for watch primarily due to PSP productively adding in more transition days to provide additional coverage (something discussed in past years and PSP implemented in more recent years – a good thing).

Recommendation 12: review PSP reports on multiple assignment days and evaluate if there are more opportunities for this efficiency measure.

- There is less overall pilot time required for shifts and 2nd pilot assignments versus longer arrival/departure assignments. Multiple shift assignments do happen and when they do the number of assignments able to be performed by on watch pilots can exceed the number of on watch pilots. Pilots completing a shift or 2nd pilot assignment have more hours available for assignment than pilots on longer assignments.

PSP Activity Reports Including Meetings and Training: The data provides a helpful snapshot and predictably generates questions regarding delays, type of assignments, training, meetings and so on. The report lists training and meetings and whether they were on watch or off watch, which is helpful while also leading to some questions.

Recommendation 13: Establish a target expectation for splitting meetings and training between on watch and off watch days.

- In the past, PSP documented an effort to schedule more training and meetings for off watch days than on watch but recently stated 50/50 was the goal.
- One would expect BPC required meetings to essentially average out to a 50/50 on watch/off watch split but if the priority is to have rested on watch pilots, then there should be an expectation that when discretion is available, off watch time would be used more than on watch time.
- We fully understand that given the number of on-watch days without an assignment or due to short duration of some meetings (or training) that a pilot would not necessarily be unavailable for an on-watch assignment. It would be helpful to better understand the length of meetings/training to better understand the impact on the ability to conduct an on-watch assignment.

In summary, so long as the BPC seeks to make decisions regarding the number of pilots based on aggregated and average number of pilots supplied, there is no compelling mathematical basis for an increase in licensees when this supply exceeds demand. If the BPC instead wants to consider the management of pilot availability and pilot utilization, and optimize and create efficiency in this system, PMSA respectfully offers that the consideration of the foregoing recommendations be pursued prior to a change in the number of pilots.

Sincerely,

Captain Mike Moore
Vice President

Encl: (1) PMSA Jan 19, 2022 Ltr to BPC re Pilotage Efficiencies
(2) BPC Staff Chart Dated 02/15/2024
(3) Exh PMSA MM-20-2-10-23 PSP Watch Schedule with Numeric Summaries on First Page
(4) Exh PMSA MM-25-2-10-23 Puget Sound Pilots 2021 Total Assignments Per Day
(5) Exh PMSA MM-24-2-10-23 Puget Sound Pilots 2021 Assignments per Pilot per Month
(6) PMSA Setting the Number of Pilots Comments 071519
(7) PSP Exh. SK-1T

PUGET SOUND PILOTS
Protecting Puget Sound Since 1935

July 10, 2024

Washington State Board of Pilotage Commissioners
2901 3rd Ave., Suite 500
Seattle, WA 98121

VIA EMAIL to Ms. Jaimie Bever at Beverj@wsdot.wa.gov

Re: PSP Proposal for Number of Pilots

WAC 363-116-065 (attached on page 5) lists 10 factors that may be considered by the board in setting the number of pilots. All but two (2) of these 10 factors relate either to setting the target assignment level (TAL) or deciding when to start applicants in the training program. At its meeting on June 20, 2024, the board adopted by unanimous vote a TAL of 123 based on the recommendation of the Pilot Safety Committee. This proposal will address the two factors not already resolved by the Board when it set the TAL: (d) the regional maritime economic outlook; and (g) time lost to injury and illness. The factors listed in the WAC are not exclusive and the Board may consider other factors as well. PSP is asking that the Board also address the backlog of callback days being carried by PSP.

The hard part of setting the number of pilots pursuant to WAC 363-116-065 has been done: determining TAL. The board is now in a position to determine how many licenses to issue using a data driven, streamlined process. It can do this because of two events. First, the new rest rules and dispatch system changes put enacted by PSP over the last few years have now been in place for over 20 months and provide reliable data. Second, based on this data, the Board staff has completed its exhaustive analysis of what TAL is needed under the new rule to provide a safe and competent pilotage service.

All parties have recognized that the district has been overly dependent on callbacks to meet the needs of shipping (PSP currently has 2,708 comp days outstanding.) This reliance on callbacks creates a risk to the State of fatigued pilots and causes ship delays. One of the goals of the recent TAL analysis by BPC staff, the PSC and the Board was to reduce the percentage of callback assignments to 5% (It was 12% in 2023 is up to 13% over the last 12 months.)

The Regional Maritime Outlook

WAC 363-116-065(d) provides that the Board may consider the:

> *Regional maritime economic outlook, including without limitation: Current economic trends in the industry, fluctuations in the number of calls, the types of assignments, the size of vessels, the cyclical nature of the traffic and whether traffic is increasing or decreasing and the need to minimize shipping delays;*

The next step in the process is to set a number of assignments that will be used to derive a number of pilots from the TAL. There is no way to predict how many assignments the district will have over the upcoming year. Therefore, PSP suggests using the assignment level of the last 12 months adjusted for any known and documented changes in traffic in the immediate future.

The Problem with Trying to Predict Traffic

PSP suggests using the trailing 12 months of assignment data for a number of reasons. First and most obviously, the most recent data is the best evidence of current industry trends. Second, because of the safety and dispatch rule changes that completed 27 months ago, any data before those rules were final is no longer relevant. Third, some of the reasons the pilot corps has been undersized for so many years are the past attempts in these proceedings to predict future ship traffic with any degree of certainty. It can't be done.

The history of 065 and the number of years that it has produced pilotage shortages (in 14 out of the last 18 years, the pilot corps has been below the Board authorized level) indicate the dangers inherent in attempting to predict future shipping. Over the years, a staggering amount of data has been presented to the Board, *ad nauseum*, about what people think will happen to shipping. It is true that there are sometimes known events that will affect the number of ships. For example, this year we know from the Northwest Seaport Alliance Rotation Schedule that Evergreen will be removing one two-pilot weekly line and that Cosco will be adding a one pilot weekly line. This will be a net reduction of 104 assignments. **However, it is also true that there are always unknown events that will also have an impact.** In past 065 proceedings, stakeholders and the board have spent a lot of time trying to predict what will happen in an industry that no one can predict. In fact, there are several trends today indicating that assignment numbers will continue to climb but we urge the Board to adopt the less speculative and more reliable data from the last 12 months.

Examples of the kind of unpredictable events that can affect traffic are described in a very recent article from the *New York Times* (June 26, 2024, Page B-1), analyzing

renewed supply chain challenges in the shipping world. It discusses the uncertainties the maritime shipping industry is facing right now, many of which could directly affect West Coast traffic in the upcoming year:

- Panama Canal drought;
- Rail worker labor unrest in Canada that could slow or shut down BC ports;
- Labor unrest that could shut down East Coast ports; and

No one knows how much these factors will affect the immediate future of shipping in Puget Sound. However, it is clear from looking at the history since 2006, that it would be advisable to be more aggressive in setting a higher number of pilots. This will get the pilot corps to the size it needs to be to "minimize shipping delays" as directed by the WAC quoted above.

The Value of More Frequent 065 Proceedings

When the Board sets the number of pilots it sends a signal to all parties in the pilot supply system. It is the key event that triggers all other pilot supply actions. An increase tells the pool of pilot applicants to get ready and plan for an exam. It tells the Board staff when to put an exam together. Most importantly, it is a signal to start pilots in the training program. Increasing the number of pilots to the correct number gives an immediate signal to the public that the Board will be taking all steps available to get the pilot corps to its right size as quickly as possible.

Along with its more streamlined and data driven approach, PSP suggests a more frequent setting of the number of pilots based on the application of the TAL to the trailing 12 months of assignments. This would allow the Board to adjust the number up or down based on the best evidence available on industry trends. The real work in setting the number of pilots is the determination of the TAL which has been done. Therefore, PSP suggests that the number of authorized licenses be re-examined at least annually based on the preceding 12 months of traffic. This will ease the administrative burden on the Board and its staff and provide a more properly staffed pilot corps better able to provide a safe and efficient pilotage service. It will end the district's unsustainable dependence on comp days with its heightened risks of fatigue and ship delays.

The Comp Day Backlog

PSP now has 2,708 comp days accrued as a result of past pilot shortages. To address this backlog, PSP suggests licensing of two (2) extra pilots in addition to those dictated by the new TAL. This is consistent with the recommendation of Dr. Erin Flynn-Evans of NASA submitted to the BPC as part of the 065 proceeding in 2019 that there should be extra pilots authorized to facilitate pilots taking days off to work down this accrual. With

an understaffed pilot corps such as the one we have had for some time, a pilot needing to use a comp day to take a day off, whether it be for fatigue, illness, family emergency, the need for a license upgrade trip or for personal reasons, can put more pressure on the dispatch system. This pressure can be eased by licensing extra pilots and moving us closer to a sustainable comp day practice.

Time Lost to Injury and Illness

Recent analysis by board staff reviewed time lost to injury and illness since 2019. After removing Covid from the numbers, this analysis showed an average of .87 pilot FTE lost each year. Obviously, with Covid, the actual number was quite a bit higher. Covid is not over yet and PSP currently has two pilots not fit for duty suffering from it. Nonetheless, PSP suggests using the BPC staff's figure of .87 pilot FTE.

PSP's Request for 62 Pilots

Applying the new TAL of 123 per watch standing pilot gives the following calculation:

- The trailing 12 months of assignments is 7,634
- NW Seaport Alliance shows a reduction of 104 assignments in its latest Carrier Rotation Schedule, leaving 7,530
- 95% of 7,530 = 7,153
- 7,153 divided by TAL of 123 = 58.2
- plus the President=59.2
- plus .87 FTE of not fit for duty pilots=60.2
- +2 pilots to reduce the backlog of accrued comp days, reduce fatigue and increase efficiency; and
- Total = 62 pilots

Respectfully Submitted

Puget Sound Pilots

By Capt. Ivan Carlson, President

WAC 363-116-065

Number of pilots.

(1) The board will, from time to time, set the number of pilots to be licensed in each pilotage district of the state that is best calculated to optimize the operation of a safe, fully regulated, efficient, and competent pilotage service. This determination will be made by the board at meetings for which the agenda lists this issue as a topic for resolution. In addition, the board shall plan ahead to ensure, to the extent possible, that pilot trainees enter the training program set forth in WAC **363-116-078** so that they complete the training program in a timely manner.

(2) In setting the number of pilots and making decisions as to when to hold an examination and admit applicants to the training program, the board may consider factors which include, but are not limited to, the following:

(a) Policy of the state to ensure safety of persons, vessels, property and the environment by providing competent, efficient and regulated pilotage for vessels;

(b) The importance of the maritime industry to the state balanced by the potential hazards presented by the navigation of vessels requiring pilots;

(c) The lead time necessary to select and train new pilots;

(d) Regional maritime economic outlook, including without limitation: Current economic trends in the industry, fluctuations in the number of calls, the types of assignments, the size of vessels, the cyclical nature of the traffic and whether traffic is increasing or decreasing and the need to minimize shipping delays;

(e) Workload, assignment preparation and rest needs of pilots;

(f) Trends in size of piloted vessels;

(g) Time lost to injury and illness;

(h) Anticipated retirements;

(i) Administrative responsibilities, continuing education and training requirements consistent with the policy of chapter **88.16** RCW; and

(j) Surface transportation and travel time consumed in pilots getting to and from assignments.

STATE OF WASHINGTON
BOARD OF PILOTAGE COMMISSIONERS
2901 Third Avenue, Suite 500 | Seattle, Washington 98121 | (206) 515-3904 | www.pilotage.wa.gov

Meeting Minutes – Oil Transportation Safety Committee (OTSC)
June 5, 2024, 10:00am – 12:00pm
Via MS Teams

Attendees:
Jaimie Bever (Chair/BPC), Brian Kirk (Ecology Alternate/BPC), Adam Byrd (Ecology Alternate/BPC), Haley Kennard (Ecology Alternate/BPC), Angela Zeigenfuse (Ecology Alternate/BPC), Megan Hillyard (Ecology Alternate/BPC), Laurie Wood (Ecology Alternate/BPC), Blair Bouma, (Pilot/PSP), Clyde Halstead (Tribal Government/Swinomish), Brian Porter (Tribal Government/Swinomish), Rein Attemann (Environment Alternate/WEC), Jason Hamilton (Commissioner/BPC), Tim Johnson (Oil Industry Alternate/WSPA)

1. **Introductions & Meeting Minutes**
   Jaimie Bever (OTSC Chair/BPC) welcomed everyone to the meeting and introduced everyone to the Ecology Spills Program new Rule and Process Coordinator Megan Hillyard. Jaimie also introduced the Subject Matter Experts (SMEs) specifically invited for today's conversation: Keith Kridler, Artie Seamans, Tim Johnson, and David Corrie. Jaimie asked if the SMEs could talk about their experience. At that time, neither Keith nor Artie had joined the meeting.

   Tim Johnson (Oil Industry Alternate/WSPA) clarified that he was not a tug SME. Antonio asked that he join as an alternate.

   Captain Dave Corrie (Tug Industry/SME) just retired from Foss Maritime after a 45-year career. He worked on escort tugs, and during the last 10 years on the GARTH FOSS and LINDSEY FOSS. He is also a San Juan Islands resident with personal interest in the area.

   Jaimie then described an online comment submission process for this rulemaking that will allow interested parties to share perspectives and feedback on draft rule language. The team will email the OTSC the link and provide the link to the comments form on the rule webpages, including Ecology's Public Input & Events webpage. She added that the OTSC may continue to send comments via email; They will submit a comment on the OTSC's behalf using the online comment form. The online comment submission process is important for several reasons: It provides a transparent and accessible way for stakeholders and the public to share their thoughts. It expands opportunities for public engagement, encouraging broader participation in the rulemaking process. This online record ensures that all comments are acknowledged, reviewed, and considered. The digital platform allows for easier submission and tracking of comments, reducing the administrative burden on our team.

All comments are stored in a single, searchable database, making it simpler to review, analyze, and respond to feedback.

Next, Jaimie asked for any comments or changes to the meeting minutes for 3/11 and 5/16. The minutes will be included in the packet materials for the June Board meeting being sent to the Board on 6/13.

Blair Bouma (Pilot/Puget Sound Pilots) asked that he be removed from the March attendance list, as he was not present.

2. Meeting Goal

Jaimie reviewed the objectives for the meeting, which were to:

- Review escort tug operational and functionality requirement ideas, and
- Come to consensus on which ideas to propose to the BPC.

3. Scope

Next, Jaimie reminded the group of the scope for the rulemaking, which will amend WAC 363-116-500 and, if needed, add new sections to Chapter 363-116 WAC. Where tugs are required, the rules will specify operational and functional requirements.

4. Geographic Zones Under Consideration

Expand 2020 escort requirements to the waters of STRAIT OF GEORGIA SOUTH, AND A CORNER OF STRAIT OF GEORGIA: Expand current escort requirement for laden tank barges and ATBs over 5,000 DWT and oil tankers between 5,000 and 40,000 DWT, while not engaged in bunkering, to the waters of Strait of Georgia South, and a corner of Strait of Georgia.

Jaimie then passed the presentation over to Sara Thompson (Ecology Alternate/BPC).

5. Today's Discussion Topic

Sara explained that today's discussion topic will be on requirements for escort tug operational and functionality requirements. The goal was to use this meeting and the meeting in June 18 to develop and finalize recommendations to the Board related to proposed operational and functionality requirements for the tugs conducting the escorts required by this rulemaking.

6. Existing RCW 88.16.190

This slide contains the existing requirements for tug escorts, RCW 88.16.190, in the Pilotage Act.
The existing operation and functionality requirement are shown in bold underline 'an aggregate shaft horsepower equivalent to at least five percent of the deadweight tons of a forty thousand deadweight ton oil tanker'. Adopting the existing horsepower-based escort standard is one option for consideration in this rulemaking.

7. Tug Operational and Functionality Ideas

During the second workshop, the team listened to feedback on the tug operational and functionality requirements. The discussion in workshop 2 suggested that the ideas in green were worthwhile to consider while the ideas in red were not.

Propulsion	Escort Equip
Horsepower	Auxiliary Equip

Tethering
Pre-Escort Conference
Certification
Escort Provider Training and drills
Deck fittings

Bollard Pull
Bollard Pull Testing

8. **Discussion – Continue to Not Consider These Potential Requirements?**
   The ideas that did not appear to be a good fit for the rulemaking based on workshop 2 were: bollard pull, bollard pull testing, escort equipment (render-recovery etc.), and firefighting equipment.

   Reasons why these might not be a good fit based on feedback received were:
   - Bollard pull – Not easy to verify, particularly if you're interested in indirect pull.
   - Bollard Pull testing – HSC voluntary standard of care.
   - Escort equipment (render-recovery etc.) – Nice to have but expensive and likely not necessary in our regional conditions.
   - Firefighting equipment – Better suited for a sentinel tug. Tugs providing escort services may not have space for this equipment and crews many not have training to fight fires beyond their own vessel.

   Question for OTSC: Continue to not consider these potential requirements? Sara asked the OTSC to make a note and that they would be considered toward the end of the presentation.

9. **Ideas for Discussion Today**
   The ideas that showed promise for consideration within the rulemaking were: horsepower, propulsion, certification, deck fittings, pre-escort conference, escort training and drills, and tethering.

10. **Operational and Functionality Requirement Considerations**
    The next slide contained considerations to keep in mind when discussing these ideas.
    - Benefit of requirement
    - Drawbacks of requirement
    - Voluntary Options
    - Implementation and compliance

11. **Functionality: Horsepower**
    Sara explained that this section of the presentation would be a round table discussion.

    RCW: Aggregate shaft horsepower equivalent to at least 5% of a 40,000 DWT tanker (2,000).
    Previous workshop discussion: Horsepower doesn't tell the whole story, but it is measurable and can be used to set minimum criteria.
    Local usage: Horsepower used by local escort providers is 4,700 – 8,000.

Benefits	Drawback	Voluntary Approach	Implementation and Compliance
Assurance of power	Current 5% requirement may be insufficient, but a different requirement would result in inconsistent HP requirement for smaller verse larger tanker escorts.	Create new voluntary HSC SOC	Would need database of tugs meeting HP requirement to verify compliance. More challenging for unpiloted vessels.

Round Table Comments:

PILOT: Blair Bouma (Pilot/Puget Sound Pilots) asked if the "5% of 40,000" requirement was imbedded in an RCW that could be changed at this time. Sara responded that there is access for the less than 40,000 tankers, ATBs, and barges, but not for the larger, over 40,000 tankers. Blair said that at 5%, the bottom end of the 40,000 is the 2,000-horsepower requirement. However, they have not used a tug with less than 4,700 horsepower. He said 2,000 would be adequate for an ATB or towed barge, but not for a tanker. He suggested adjusting the floor, if possible, up to 3,000 horsepower, would be more effective.

OIL INDUSTRY: Tim Johnson (Oil Industry Alternate/WSPA) questioned the Harbor Safety Committee Standards of Care (HSC SOC). He thinks using that would be an interesting concept. He wanted to know more about what that would look like. Sara responded that this idea came out of existing standards of care for escorting, recognizing that they were established before the change in vessels and size required to be escorted. She added that they would need to make a pitch to the HSC that there was interest in adopting new SOC. She reminded everyone that the SOC were voluntary not regulatory initiatives. The team has been regularly updating at the HSC and will do another one in August. She suspects they would be open to considering it. Tim offered that he thought it merited consideration of that approach. He wondered if looking at performance standards would be a good first step.

TUG INDUSTRY: Jeff Slesinger (Tug Industry/Delphi Maritime) offered a different approach. Considering the number of variables with equipment, vessels in the range for consideration, and the different places they go, it would be very difficult to come up with regulatory standards. His approach was simple. Yes, have escorts. Perhaps come up with a minimum threshold. But the bulk of the regulations should be institutionalizing the process that ensures that the pilots and tug operators go through case-by-case, job-by-job points regarding the job. And perhaps consider a guidance document, like SOC. Develop a process that covers those bases, but don't tell them how to do it.

David Corrie (Tug Industry SME) agreed with Jeff that there were a lot of experts out in the field doing this work. They could be given outlines on how to do the job, but should be left with utilizing "masters discretion" to do it correctly. He agreed that there could be some minimums (horsepower and bollard pull).

TRIBAL: Clyde Halstead (Tribal/Swinomish) had no comments.

ENVIRONMENTAL: Fred Felleman (Environment/Friends of the Earth) said he was deferential to those working on the water. He appreciated the idea of setting a floor. He recognized that while the mariners were the best to make judgements, the folks concerned by costs may limit their ability to articulate their judgement. Therefore, may need the flexibility to not be constrained by cost cutting concerns. He also mentioned that when double hulls came in, there were exercises done, not just simulations but actual drills. If this is going to be a permanent

rule, he saw great value in doing some actual drills, perhaps starting with simulator, but then actually getting out there. Sara responded that they would be sure to include his comment about drills in the discussion around slide 16 if he was no longer in the meeting.

12. Functionality: Propulsion (Screw/Drive)

Previous workshop discussion: Tractor or Z drive are preferrable for larger vessels, but twin screw is ok for smaller vessels. Local usage: Local escort providers have voith, Z-drive, or ASD propulsion.

Benefits	Drawback	Voluntary Approach	Implementation and Compliance
Assurance of maneuverability	• Not required for larger (over 40,000 DWT) escorts. • May not be necessary for under 40,000 DWT vessels.	Create new voluntary HSC SOC	Would need database of tugs meeting propulsion requirement to verify compliance. More challenging for unpiloted vessels.

Round Table Comments:

PILOT: Blair Bouma (Pilot/Puget Sound Pilots) said there was a delineation in the 5-40k range where a conventional tug could be okay on the smaller end. In his opinion, on any ATB or towed barge, a conventional tug would likely be adequate. On the bigger, faster vessels, which require more tethering, a conventional tug is not an optimum configuration. Sara suggested they could consider different tankers versus barge and ATB escorts or different requirements for the 30k – 40k tankers. Blair could see that making sense. He added that massive tugs were being used on smaller vessel right now, which was inefficient. There could be a way to optimize environmental impacts while keeping an adequate size for the vessels.

Dave Corrie (Tug Industry SME) said at the very least, the requirement should be a twin-screw tug, whether the language keeps conventional or not. If a tug loses one engine, they can still function. It is uncommon for a tug to lose an engine, but it could happen.

OIL INDUSTRY: No comment.

TUG INDUSTRY: Jeff Slesinger (Tug Industry/Delphi Maritime) suggested having some faith in the market taking care of the need. The available tug fleet is now predominately Z drive or tractor because that's what the market and the professionals doing the job demanded. He suggested they will likely see the same thing with the category of under 40k. Also, there has not been a major oil spill in this area due to a grounding. The market determined the best available technology and how to deploy it. It was a reasonable expectation to see the same thing with this new class of vessels.

Dave Corrie (Tug Industry SME) agreed with Jeff that industry has raised the bar on tugs. However, as the regulation is written, be aware that new players. Smaller companies may come in, but they need to show up with the right equipment. Sara agreed that looking at minimum requirements made sense.

TRIBAL: Clyde Halstead had no comments.

ENVIRONMENTAL: Fred Felleman (Environment/Friends of the Earth) appreciated the fact that equipment has improved over time. At the same time, he was amazed that there are still tugs built in the 1950's working out on the water. He would like to see the mariners identify what they think would be the best if they had the choice, and then identify what that would be. He agreed with setting a floor.

Jim Peschel (Tug Industry Alternate/Vane Brothers) said they don't currently have escort requirements for their vessels, but he checked if any providers they use were single screw, and the answer was no. He believes the market will at least have twin screw or Z drives available.

13. Functionality: Certification

Previous workshop discussion: There are many potential options (escort, noise). Concept that certification is unnecessary due to Subchapter M.

Benefits	Drawback	Voluntary Approach	Implementation and Compliance
Assurance of ability to conduct escort	• Not required for larger (over 40,000 DWT) escorts. • May not be necessary for under 40,000 DWT vessels. • Expensive • Limited number of escort certified vessels in the region	?	Would need database of tugs meeting certification requirement to verify compliance. More challenging for unpiloted vessels.

Round Table Comments:

PILOT: Blair Bouma (Pilot/Puget Sound Pilots) referred to the tug industry.

OIL INDUSTRY: Antonio Machado (Oil Industry/WSPA) had no comments at that time.

TUG INDUSTRY: Jeff Slesinger (Tug Industry/Delphi Maritime) agreed with Captain Corrie regarding the twin screw requirement as well as considering a requirement regarding the age of the vessel but with certain asterisks. For instance, 25-30 year. But if a vessel had a current classed certificate, it could go beyond. There could also be a certificate for the type of propulsion. If a vessel exceeded the age limit but had a more modern system, allowances could be included for that vessel to be able to escort. That was just a suggestion to build a minimum requirement and that those types of certifications could be included. The certification piece would need to be part of a bigger picture.

TRIBAL: Clyde Halstead (Tribal/Swinomish) had no comment.

ENVIRONMENT: Fred Felleman (Environment/Friends of the Earth) replied that he was not qualified to make any further comments.

14. Functionality: Deck Fittings

Previous workshop discussion: Consider whether there should be requirements for bitt tonnage. This is

currently best practice written into the Harbor Safety Plan.

Benefits	Drawback	Voluntary Approach	Implementation and Compliance
Assurance of strength of escort tug deck fittings	• Not required for larger (over 40,000 DWT) escorts. • May not be necessary for under 40,000 DWT vessels.	Update to voluntary HSC SOC to include smaller tank vessel escorts	Would need database of tugs meeting deck fitting requirement to verify compliance. More challenging for unpiloted vessels.

Round Table Comments:

PILOT: Blair deferred to the tug SMEs. Keith Kridler (Pilot Alternate & SME/Puget Sound Pilots) replied that deck fittings were tricky because a lot of times it's related to the age of the vessel. Many times, one has to physically x-ray the wells and such. He thought it would be difficult to set any type of floor on fittings.

Dave Corrie (Tug Industry SME) said that if setting minimums, many companies would have to do a tremendous amount of engineering to make sure everything was compliant and holding up. He then asked if winches would be required. Any tug that was going to go out and escort has likely been engaging all those fittings prior to the escort. The hope is they are all holding up.

OIL INDUSTRY: No comments.

TUG INDUSTRY: Jim Peschel (Tug Industry Alternate/Vane Brothers) said that tug companies providing escorts participate in vetting programs through the oil industry and many require that tug companies stencil the strength of those deck fittings. But that is usually done when they were built and probably doesn't reflect what they are today.

Rein Attemann (Environment Alternate/WEC) asked if there were requirements to test the status and quality of the deck fittings over time? And were there ways to determine if they are weak? Jeff Slesinger (Tug Industry/Delphi Maritime) responded that other than class and inspections, there was no testing other than a visual test. An inspector may demand upon viewing that something be replaced. There are specific design requirements when the tugs are built about what those structural weights should be.

Blair Bouma (Pilot/Puget Sound Pilots) mentioned that there is a SOC in the Harbor Safety Plan (HSP) for bollard pull testing. In the PNW, the expectation is that companies do a full power test once every five years. It would test the entire boat, pulling full power for a fair amount of time. That is one practical test available. Jaimie asked about the compliance regarding the SOC. Blair responded that there was a five-year roll in period. Currently compliance was tepid. He said they would be discussing compliance at a meeting next week. The tethering SOC, on the other hand, has very high compliance. The SOCs are not regulatory and have no compliance requirement or enforcement, other than visibility and peer pressure. Sara responded that the OTSC might consider recommendations to the Board regarding updating the SOC to include the tug requirements for the 40k and up tankers.

TRIBAL: Clyde Halstead (Tribe/Swinomish) had no comments.

ENVIRONMENT: Fred Felleman (Environment/Friends of the Earth) had nothing to add at this time.

15. Operational: Pre-Escort Conference Conducted and Recorded Vessel Log 59:04

Previous workshop discussion: Consider requiring a pre-escort conference during which tethering, bollard pull, speed, and escort plan are discussed and agreed upon.

Benefits	Drawback	Voluntary Approach	Implementation and Compliance
Assurance that escort and escorted vessel have common understanding of escort plan	Add time to escort setup process	?	Challenging to verify compliance

Round Table Comments:

PILOT: Blair Bouma (Pilot/Puget Sound Pilots) said this was a critical part of the process. There was virtually no regulatory framework for this. Everyone needs to approach escorting not based on the 99% successful trips, but on that 1% chance of something going wrong. Most pilots use the old federal checklist even though there's no legal basis anymore. He suggested that was a good starting point. But also, there are nuances in the vessels, especially size, since the federal checklist was written. Blair will send the reference to the federal list. Sara mentioned she had some examples from tug companies to reference as well.

Jim Peschel (Tug Industry Alternate/Vane Brothers) said they developed a form when they started escorting in Rosario and will send a copy.

Dave Corrie (Tug Industry SME) said this topic was extremely important. It mostly set expectations between the two masters. That's where it all gets ferreted out. Jaimie asked how long the prep usually took. Blair responded ~ 5 mins and Dave agreed. Jaimie confirmed that this requirement would capture what's already happening, not adding anything new. Blair didn't think it was necessary to go granular in the regulations. Just set the expectations with the right objective of preventing or responding to any unforeseeable failure. Jeff Slesinger (Tug Industry/Delphi Maritime) suggested that if looking at it as a policy/procedure, the policy would explain the general goals and the procedures would be in a guidance document from the HSC. That would allow the professionals to work out in the HSC how granular to go. Dave added that either master could initiate the pre-escort conference.

OIL INDUSTRY: Tim Johnson (Oil Industry Alternate/WSPA) Agreed with comments by tug industry experts.

TRIBAL: Clyde Halstead (Tribe/Swinomish) had no comments.

ENVIRONMENTAL: Fred Felleman (Environment/Friends of the Earth) was baffled at the idea that pre-escort conferences may not be happening. He had no other comments. Jeff Slesinger (Tug Industry/Delphi Maritime)

provided an example of how things could go sideways without specific guidance. There may be good intentions but unforeseen outcomes. This would plug that one little hole when there are different operators, weather, etc. Fred concurred.

16. Operational: Escort Provider Training & Drills

Previous workshop discussion: Consider requirement for periodic drills to prove safe hookup in a live situation.

Benefits	Drawback	Voluntary Approach	Implementation and Compliance
Assurance of ability to safely hook up in emergency	Live drills are logistically intense and expensive	?	Would need database of tugs meeting training requirements.

Round Table Comments:

PILOT: Blair Bouma (Pilot/Puget Sound Pilots) offered that humans were the key with whether this particular one succeeds or fails. Encouraging some form of drills or training could be really good. He referenced the drills that ARCO and Polar conduct regularly. He said those are invaluable. Pilots also encourage small impromptu exercises in the normal courses of their work. If an opportunity presents itself, they practice various maneuvers. He wasn't sure how that could be a regulation. He knows that up in Valdez, every time the tanker sailed, the tugs asked if they wanted to do a drill. If not a regulation, some kind of encouragement would be good. It's important to practice those maneuvers.

OIL INDUSTRY: No comment.

TUG INDUSTRY: Jeff Slesinger (Tug Industry/Delphi Maritime) agreed with Blair. He wishes he had an answer for how to regulate training or set a standard, as it's such an important piece. It needs further discussion.

Dave Corrie (Tug Industry SME) concurred that standards would be hard to put together as there are many players and it's very expensive. He did say that simulators were very valuable and helpful.

Jim Peschel (Tug Industry Alternate/Vane Brothers) said that as a company that is escorted, they are under charter, which would make it difficult to do preplanned drills.

TRIBAL: Clyde Halstead (Tribal/Swinomish) had no comment.

ENVIRONMENT: Fred Felleman (Environment/Friends of the Earth) was unclear on the ongoing maintenance of a license for a tug operator. Could some of this be integrated into that? He liked the idea of practicing. He inquired about the fendering requirement, to the degree that rendering could be an extension of the training and perhaps incorporating into simulator work.

17. Operational: Tethering

Previous workshop discussion: Best to leave this decision to pilot or captain's discretion and to reference Puget Sound HSC SOC tethering areas

Local usage: Tethering is not required for newly escorted vessels. Standard for over 40,000 DWT vessels are in voluntary HSC SOC and Pilot Guidelines

Benefits	Drawback	Voluntary Approach	Implementation and Compliance
Faster time to control	Would take away some of mariner's discretion	Update to voluntary HSC SOC to include smaller tank vessel escorts	Challenging to verify compliance

Round Table Comments:

PILOT: Blair Bouma (Pilot/Puget Sound Pilot) responded that tethering or not tethering could be broken down into practical terms. The goal is keeping the vessel from touching the dirt. There are several factors that have to do with speed, distance from grounding point, how big the tank vessel is, and how big the tug is and what kind. Then when mashing those factors together one can come up with a rather clean decision on when to tether or not. With ATBs, the pilots have found that with simulator work and experience, areas about ½ mile from grounding points (i.e. Rosario) don't need tethering. The ATB will slow down enough to be brought under control before contact. However, in Guemes or Bellingham Channels, Sinclair or Vendovi, tethering is ideal. He suggested some guidance for setting expectation but could probably be done at the discretion of the operators. Sara asked is those items were documented in the pilot's guidelines. Blair said not currently. Pilots go through it in the escort training during their first year.

OIL INDUSTRY: Tim Johnson (Oil Industry Alternate/WSPA) had no comments.

TUG INDUSTRY: Jeff Slesinger (Tug Industry/Delphi Maritime) agreed with Blair and added that this would be one of the items on the pre-escort conference. HSC could include some of those guidelines in the SOC. For towed barges, there were different requirements. Therefore it's best to leave the decision to the pilot or master's discretion.

Dave Corrie (Tug Industry SME) also agreed with that. There are many safety factors in play when it comes to tethering including the design of the tug boat. He agreed 100% with pre escort conference covering this topic. TRIBAL: Clyde Halstead (Tribal/Swinomish) had no comment.

ENVIRONMENT: Fred Felleman (Environment/Friends of the Earth) mentioned a story he had seen regarding a former USCG who ran simulations on what could have avoided the DALI incident in Baltimore. The only answer was a tethered vessel. He wondered about simulations helping to inform boundary setting around this topic. He agreed in the real-life decision making of the masters.

18. Discussion: Regulatory Consistency Consideration

Any change to the operational and functional requirements would result in different requirements for tugs escorting newly escorted vessels (barges, ATBs, tankers under 40,000 DWT) than for tug escorting tankers over

40,000 DWT.

19. Discussion

Sara shared the notes she had been taking during the meeting. She reported:

General favor for continuing to look at horsepower with the thought that that they may want to try to set of minimum floor of 3,000 for certain vessels.

For propulsion – continue looking with similar thoughts as above.

For certification – talked abut caveats for age but may not be something they want to pursue.

For equipment and deck fittings – in general there wasn't support for moving this into a regulation.

For Pre-escort – consider including at a high level and capturing at either BPC or HSC guidance documents. Those are the three that seem to be a possible consideration.

There were others for potential consideration in guidance documents, but not for codification: training/drills, tethering, bollard pull testing.

Continuing to be off the table is bollard pull, escort equipment, and auxiliary equipment.

Sara suggested this was a good start for the meeting on the 18th. She asked if anyone else should be included as SMEs for that meeting, or any other resources, to let the team know. The plan will be to form the recommendation. If unable, there is a meeting tentatively scheduled for August to wrap up the discussion.

Blair Bouma (Pilot/Puget Sound Pilots) suggested looking at the idea of a middle break point around the 30k tankers.

20. Workshops & Outreach

Jaimie reviewed the upcoming workshop schedule.

Dates	Activity
June 18, 2024	OTSC – Escort tug operation and capability
July 10, 2024	Stakeholder Workshop 8 - SEPA
July 16, 2024	Tribal Workshop 8 - SEPA
July 17, 2024	OTSC Workshop 8 - SEPA
August 2024	Potential OTSC
September 3, 2024	Stakeholder Workshop 9 - SEPA
September 10, 2024	Tribal Workshop 9 - SEPA
September 12, 2024	OTSC Workshop 9 - SEPA
October 24, 2024	SEPA SME discussion

21. Wrap Up

Jaimie asked if there were any general questions or comments from the group. She thanked them for the great

discussion and providing their time and expertise on this very technical piece.

The meeting adjourned at 11:40am.

STATE OF WASHINGTON
BOARD OF PILOTAGE COMMISSIONERS
2901 Third Avenue, Suite 500 | Seattle, Washington 98121 | (206) 515-3904 | www.pilotage.wa.gov

Meeting Minutes – Oil Transportation Safety Committee (OTSC)
June 18, 2024, 10:00am – 12:00pm
Via MS Teams

Attendees:
Jaimie Bever (Chair/BPC), Brian Kirk (Ecology Alternate/BPC), Adam Byrd (Ecology Alternate/BPC), Haley Kennard (Ecology Alternate/BPC), Angela Zeigenfuse (Ecology Alternate/BPC), Megan Hillyard (Ecology Alternate/BPC), JD Ross Leahy (Ecology Alternate/BPC), Blair Bouma, (Pilot/PSP), Keith Kridler (Pilot Alternate/Puget Sound Pilots), Dave Corrie (Tug Industry Alternate/Foss – Retired), Jim Peschel (Tug Industry Alternate/Vane Brothers), Jeff Slesinger (Tug Industry/Delphi Maritime), Clyde Halstead (Tribal Government/Swinomish), Jason Hamilton (Commissioner/BPC), Antonio Machado (Oil Industry/WSPA)

1. **Introductions & Meeting Minutes**
   Jaimie Bever (OTSC Chair/BPC) welcomed everyone to the meeting. She asked if there were any questions, comments, or revisions to the June 5 meeting minutes. She asked that clarifying comment be sent to her via email. She will then finalize the minutes and include them in the BPC meeting materials for the July 15 meeting.

2. **Meeting Goal**
   Jaimie reviewed the objective for the meeting, which was to write a recommendation to the Board on escort tug functionality and operational requirements.

3. **Ideas for Today's Discussion**
   Functionality: Horsepower and Propulsion
   Operational: Pre-escort Conference
   Jaimie then handed the presentation over to Sara Thompson (Ecology Alternate/BPC) to walk through each one in more detail. Sara suggested that the group focus on the three items (horsepower, propulsion, and pre-escort conference) and then move onto to any additional recommendations.

4. **Functionality: Horsepower**
   Sara showed the horsepower slide, which was shown at the last meeting:

- **RCW:** Aggregate shaft horsepower equivalent to at least 5% of a 40,000 DWT tanker (2,000).
- **Previous workshop discussion**: Horsepower doesn't tell the whole story, but it is measurable and can be used to set minimum criteria.
- **Local usage**: Horsepower used by local escort providers is 4,700 – 8,000.

Benefits	Drawback	Voluntary Approach	Implementation and Compliance
Assurance of power	Current 5% requirement may be insufficient, but a different requirement would result in inconsistent HP requirement for smaller verse larger tanker escorts.	Create new voluntary HSC SOC	Would need database of tugs meeting HP requirement to verify compliance. More challenging for unpiloted vessels.

5. **Functionality: Horsepower**

Sara reiterated what was discussed at the previous meeting about a 3,000 minimum requirement. Language examples were:

Vessels escorted by the rule must have an escort with at least 3,000 horsepower or

Vessels between 30,000 and 40,000 DWT must have any escort with at least 3,000 horsepower

6. Sara then showed a slide for awareness of OTSC members that making a 3,000 floor for the purposes of the rulemaking would create a discrepancy in practice because the rulemaking does not include and will have no influence on the vessels at or above 40,000 DWT. Those vessels will still be required to follow the RCW, which is 5% of the DWT. This will not stop the rulemaking, as the charge is with the 5,000 – 40,000 DWT.

DWT	Horsepower	Source
5,000	2,000	Rulemaking
10,000	2,000	Rulemaking
15,000	2,000	Rulemaking
20,000	2,000	Rulemaking
25,000	2,000	Rulemaking
30,000	3,000	Rulemaking
35,000	3,000	Rulemaking
40,000	2,000	RCW
45,000	2,250	RCW
50,000	2,500	RCW
55000	2,750	RCW
60000	3,000	RCW

Sara then opened it up for discussion:

Blair Bouma (Pilot/Puget Sound Pilots), after conversations with other pilots and subject matter experts, suggested that the recommendation set the minimum horsepower at 3,000. On the small size vessels, a 2,000 could be adequate, but a 3,000-horsepower tug will be bigger and have better capabilities in general. Regarding the discrepancy with the 40,000 and over, he suggests making a note of it and recommend that it be addressed separately.

Jim Peschel (Tug Industry Alternate/Vane Brothers) offered a real-world scenario for Vane Brothers with a 5,000DWT barge towed by a 4,000-horsepower tug, which would then require at least a 2,000-horsepower escort. Sara inquired about the horsepower of the current escort tugs. He answered it was whoever they hired, sometimes a Dunlap tug, sometimes Foss, whichever happens to be in the area. His port captain then confirmed that all the of the tugs they use are at least 3,000 horsepower.

Jeff Slesinger (Tug Industry/Delphi Maritime) wondered what it would take process-wise to get the RCW to align the two different approaches. Jaimie explained that if the Board decided to lead the process, it would be Agency Request Legislation for the 2026 Legislation Session. Industry could lobby for a bill separately, which would be a shorter deadline that what is required by state agencies.

7. **Functionality: Propulsion (Screw/Drive)**

Sara shared the details of the propulsion discussed as depicted on the slide.

- **Previous workshop discussion**: Tractor or Z drive are preferrable for larger vessels, but twin screw is ok for smaller vessels.
- **Local usage**: Local escort providers have voith, Z-drive, or ASD propulsion.

Benefits	Drawback	Voluntary Approach	Implementation and Compliance
Assurance of maneuverability	• Not required for larger (over 40,000 DWT) escorts. • May not be necessary for under 40,000 DWT vessels.	Create new voluntary HSC SOC	Would need database of tugs meeting propulsion requirement to verify compliance. More challenging for unpiloted vessels.

8. **Functionality: Propulsion (Screw/Drive)**

Language phrasing examples included:

Vessels escorted by this rule much have an escort tug with at least two screws or

Conventional tugs may not provide escorts provided by this rule

Blair Bouma (Pilot/Puget Sound Pilot) suggested that saying twin-screw implied conventional propulsion. He deferred to Jeff for additional insight. Jeff Slesinger (Tug Industry/Delphi Maritime) suggested that it would depend on how granular the language should be. Right now, there are no Z-drives with one propulsion unit with a reversible propeller. Could that happen? He doesn't know. Blair wondered if using a negative versus a positive was the right move. He thought the negative was a little more confusing. Jaimie suggested it should be easy to decipher and follow. Dave Corrie (Tug Industry Alternate/Foss-retired) added that he pushed for twin-screw because of redundancy. If there are two engines and one fails, there is a backup. The issue isn't just maneuverability, but safety. The group settled on "must have at least twin-screw propulsion to provide escorts required by the rulemaking". Blair clarified this would mean two conventional propellers or better. Jeff suggested leaving the word screw in to capture both an engine and a propeller. Keith Kridler (Pilot Alternate/Puget Sound Pilots) agreed with that approach. Blair added that a 3,000 hp twin-screw conventional was adequate for this size range of vessels to be escorted.

9. Operational: Pre-escort conference conducted and recorded in vessel log

Sara shared the details of the propulsion discussed as depicted on the slide.

Previous workshop discussion: Consider requiring a pre-escort conference during which tethering, bollard pull, speed, and escort plan are discussed and agreed upon.

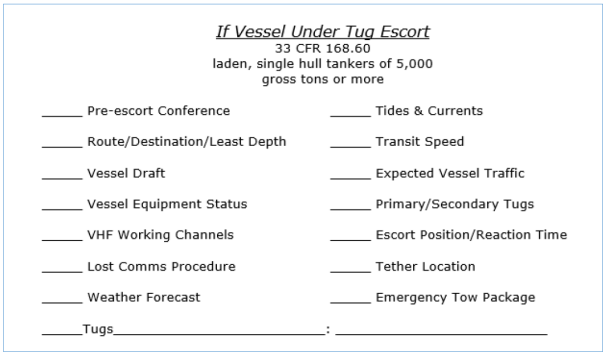
Benefits	Drawback	Voluntary Approach	Implementation and Compliance
Assurance that escort and escorted vessel have common understanding of escort plan	Add time to escort setup process	?	Challenging to verify compliance

10. Operational: Pre-escort conference conducted and recorded in vessel log

The group previously discussed a mandatory pre-escort conference that must be conducted between the escort tug and the escorted vessel prior to beginning the escort to discuss:

Transit speed and route
Positioning of escort tug relative to ship being escorted
Tethering plan
Safe working load of hard points used for tethering
Predicted weather and sea conditions included weather limitations

***11.* Operational: Pre-escort conference conducted**



If Vessel Under Tug Escort
33 CFR 168.60
laden, single hull tankers of 5,000
gross tons or more

_____ Pre-escort Conference
_____ Route/Destination/Least Depth
_____ Vessel Draft
_____ Vessel Equipment Status
_____ VHF Working Channels
_____ Lost Comms Procedure
_____ Weather Forecast
_____ Tides & Currents
_____ Transit Speed
_____ Expected Vessel Traffic
_____ Primary/Secondary Tugs
_____ Escort Position/Reaction Time
_____ Tether Location
_____ Emergency Tow Package
_____Tugs_____: _____

This slide contains components of pre-escort documentation from both Blair Bouma and Jim Peschel as a starting point to discussing the requirements for the rulemaking.

Blair Bouma (Pilot/Puget Sound Pilots) shared his screen and the document that he, Captain Kridler, and Captain Corrie had discussed previously. The items in blue were additions made via suggestions during the OTSC discussion. It was clear that there was a desire to leave details to the experts in the field, but that there should be some structure. Sara reminded everyone, prior to their review of the slide, to focus on the bullets and that rule language crafting would be happening at a future time.

- The location and approximate time of beginning and ending the escorted transit.
- The anticipated route and destination.
- The primary and secondary means of communication (i.e. VHF channels).
- The anticipated weather and state of tides, currents, sea-state and anticipated traffic.
- The operational status of each vessel and their equipment including any limitations such as speed.
- The propulsion type and maximum direct bollard pull of the escort tug.
- The safe working load of the deck fittings on the escorted vessel.
- The availability of appropriate crewmembers and their roles when responding to an emergency.
- The anticipated speeds along route.
- The relative position, direction of travel and tethering locations of the escort tug(s) while on transit.
- The method of connection of the escort tug to the tank vessel in an emergency or if tethering (i.e. tugs line, pennant, messenger lines etc.).
- Whether any training or escort exercise will be performed during the transit.

Regarding bullet point 6 – safe working load of the deck fittings on the escorted vessel – Jim Peschel (Tug Industry Alternate/Vane Brothers) responded that they know the safe load when it was built, but they can't necessarily say what it is today. Blair Bouma (Pilot/Puget Sound Pilots) responded that the point was to talk about it and make appropriate plans during the pre-escort conference. Sara wondered about how the points would be put into practice. Yes, they will be codified, but the hope would be that companies would create their own checklists. Jim Peschel wondered if bullet 10 should specify "in an emergency or if tethering". Blair agreed. On the last bullet, Blair suggested continued conversations about drills and training. He thought it should be talked about every transit in case there are opportunities. Jeff Slesinger (Tug Industry/Delphi Maritime) asked about identifying personnel in a specific role. Does that include experience of individuals without asking direct questions, just for information gathering? Blair suggested that bullet 8 would cover this. Blair and Jeff both agreed that adding the term "any training" should be added on the last bullet. Jim offered another real-world example of this situation, which was helpful for the group. Dave Corrie (Tug Industry Alternate/Foss-retired) cautioned that if asking people about their training, does that mean there will be a required certification for escort training? He wondered if it was necessary. After some discussion between members, Sara suggested keeping the language precise and self-explanatory. Jeff called the document a policy statement, in that it is non-negotiable. He cautioned that the committee leave out anything that would not be considered a must. He was feeling good about the list after the discussions and revisions.

12. Not requirements – consider BPC or Harbor Safety Committee guidance on best practices

Sara explained that the idea was to provide some broad recommendations to the BPC to develop or refer to the PS Harbor Safety Committee guidance and best practice on these items: Tethering, Training and Drills, and Pre-Escort Conference Details.

Blair Bouma (Pilot/Puget Sound Pilots) said that the group has talked about tethering and that it seemed to him that the OTSC was in general agreement that tethering decisions should be left to the operators. He pointed to his

pre-conference list which included a lot of tethering topics. Jeff Slesinger (Tug Industry/Delphi Maritime) responded that the language regarding tethering should clearly point back to the pre-escort conference and that decisions were being made by the experts. The group agreed on a general statement acknowledging that tethering is an effective tool that can be used mitigate risk when appropriate and agreed upon by both parties. Regarding training and drills, the group agreed on a recommendation for the encouragement of training and live drills when the opportunity is present.

13. Not requirements – include recommendation for BPC to request Harbor Safety Committee update to Escort Standards of Care to account for newly escorted vessels

Sara presented this section as likely a recommendation from the BPC, as opposed to actual rulemaking.

Blair Bouma (Pilot/Puget Sound Pilots) said it made sense to update the Harbor Safety Plan after the rulemaking is complete, and to include any other updates.

Blair then gave a shoutout to the towing industry. He reminded everyone that at the last OTSC meeting, a discussion occurred regarding bollard pull testing compliance with the Harbor Safety Plan Standards of Care. He was happy to report that last week, Puget Sound Pilots met with tug companies. He reported that Western Towboat is fully compliant and up to date on their tests. Foss has 5 of 7 boats in compliance and they plan to be fully compliant by June 1, 2025. Crowley is all but one boat compliant, and while committed to June 1, 2025 full compliance, they will be compliant in a few months. Brusco also agreed to full compliance by June 1, 2025. Blair acknowledged that COVID played a big part in the delay for compliance. He was happy to report that the companies are really leaning and that local tug companies are showing their integrity and performance of their boats. He reminded everyone that the Standards of Care have no funding, no accountability, and no enforcement.

Sara then showed her screen which captured the recommendations for OTSC voting:

Tug providing escorts to meet this requirement must have (at a minimum):
- 3,000 horsepower, and
- twin-screw propulsion.

PILOT: Blair Bouma (Pilot/Puget Sound Pilots) Agreed.

OIL INDUSTRY: Antonio Machado (Oil Industry/WSPA) Agreed.

TUG INDUSTRY: Jeff Slesinger (Tug Industry/Delphi Maritime) Agreed.

TRIBAL: Clyde Halstead (Tribal/Swinomish) Agreed.

ENVIRONMENT: Not present.

BPC: Jason Hamilton (BPC) Agreed.

<u>Before commencing an escort transit, the escorted vessel officer in charge shall confer with the pilot (if applicable) and escort vessel officer in charge to discuss and agree upon the operational details of the transit.</u> The escort transit shall be conducted in such a way that, in the event of a failure or emergency, the tank vessel can be kept under control within the limits of the available channel. A pre-escort conference must be recorded in the logbooks of the participating vessels and must include:

- The location and approximate time of beginning and ending the escorted transit.
- The anticipated route and destination.
- The primary and secondary means of communication (i.e. VHF channels).
- The anticipated weather and state of tides, currents, sea-state and anticipated traffic.
- The operational status of each vessel and their equipment including any limitations such as speed.
- The propulsion type and maximum direct bollard pull of the escort tug.
- The safe working load of the deck fittings on the escorted vessel.
- The availability of appropriate crewmembers and their roles when responding to an emergency.
- The anticipated speeds along route.
- The relative position, direction of travel and tethering locations of the escort tug(s) while on transit.
- The method of connection of the escort tug to the tank vessel in an emergency or if tethering (i.e. tugs line, pennant, messenger lines etc.).
- Whether any training or escort exercise will be performed during the transit.

PILOT: Blair Bouma (Pilot/Puget Sound Pilots) Agreed.

OIL INDUSTRY: Antonio Machado (Oil Industry/WSPA) Agreed.

TUG INDUSTRY: Jeff Slesinger (Tug Industry/Delphi Maritime) Agreed.

TRIBAL: Clyde Halstead (Tribal/Swinomish) Agreed.

ENVIRONMENT: Fred Felleman (Environment/Friends of the Earth) Not present.

BPC: Jason Hamilton (BPC) Agreed.

Other recommendations:
- General recommendation to set a minimum of 3,000 horsepower for 40,000 to 60,000 DWT tankers in the future.
- Recommend Board address:
  - Tethering: Acknowledge that it is an effective tool that that can be used to mitigate risk when appropriate. (point back to agreement between both parties and pre-escort conference)
  - Training and drills: Acknowledge their value and encourage live and simulator drills and training.
- Once rulemaking is complete, recommend Board work with the Harbor Safety Committee to update Standards of Care to address newly escorted vessels.

PILOT: Blair Bouma (Pilot/Puget Sound Pilots) Agreed.

OIL INDUSTRY: Antonio Machado (Oil Industry/WSPA) Agreed.

TUG INDUSTRY: Jeff Slesinger (Tug Industry/Delphi Maritime) Agreed.

TRIBAL: Clyde Halstead (Tribal/Swinomish) Agreed.

ENVIRONMENT: Fred Felleman (Environment/Friends of the Earth) Not present.

BPC: Jason Hamilton (BPC) Agreed.

Jaimie said she would run the recommendations by the Environmental members prior to presentation to the Board.

ENVIRONMENT: Fred Felleman (Environment/Friends of the Earth) Agreed via email after the meeting noting the "use of horsepower instead of bollard pull for a tug spec was a bit surprising". He added that "not using shaft horsepower ratio of original rule could have done something perhaps more indicative of vessel control."

14. Workshops & Outreach

Jaimie reviewed the upcoming workshop schedule. The August OTSC will not be needed.

Dates	Activity
June 18, 2024	OTSC – Escort tug operation and capability
July 10, 2024	Stakeholder Workshop 8 - SEPA
July 16, 2024	Tribal Workshop 8 - SEPA
July 17, 2024	OTSC Workshop 8 - SEPA
August 2024	Potential OTSC
September 3, 2024	Stakeholder Workshop 9 - SEPA
September 10, 2024	Tribal Workshop 9 - SEPA
September 12, 2024	OTSC Workshop 9 - SEPA
October 24, 2024	SEPA SME discussion

15. Wrap Up

She asked if there were any general questions or comments from the group. She thanked them for the great discussion and providing their time and expertise on this very technical piece.

The meeting adjourned at 11:30am.

STATE OF WASHINGTON
BOARD OF PILOTAGE COMMISSIONERS
2901 Third Avenue, Suite 500 | Seattle, Washington 98121 | (206) 515-3904 | www.pilotage.wa.gov

MEMORANDUM

TO: Board of Pilotage Commissioners

FROM: BPC Oil Transportation Safety Committee

DATE: July 18, 2024

SUBJECT: ESHB 1578 – Recommendation Regarding Escort Tug Operation and Functionality

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After conducting a two-part meeting series, the OTSC has unanimously agreed upon the following recommendations for escort tug operational and functional requirements:

Tug providing escorts to meet this requirement must have (at a minimum):

- 3,000 horsepower, and
- twin-screw propulsion.

Tug providing escorts to meet this requirement must hold a pre-escort conference and record it in the logbooks of the participating vessels. (Below are details on the pre-escort conference which, if approved, will be further refined in the rule language development process):

- The location and approximate time of beginning and ending the escorted transit.
- The anticipated route and destination.
- The primary and secondary means of communication (i.e. VHF channels).
- The anticipated weather and state of tides, currents, sea-state and anticipated traffic.
- The operational status of each vessel and their equipment including any limitations such as speed.
- The propulsion type and maximum direct bollard pull of the escort tug.
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- The availability of appropriate crewmembers and their roles when responding to an emergency.
- The anticipated speeds along route.
- The relative position, direction of travel and tethering locations of the escort tug(s) while on transit.

- The method of connection of the escort tug to the tank vessel in an emergency or if tethering (i.e. tugs line, pennant, messenger lines etc.).
- Whether any training or escort exercise will be performed during the transit.

Other recommendations:

- General recommendation to set a minimum of 3,000 horsepower for 40,000 to 60,000 DWT tankers in the future.
- Recommend Board address:
    - Tethering: Acknowledge that it is an effective tool that that can be used to mitigate risk when appropriate. (point back to agreement between both parties and pre-escort conference)
    - Training and drills: Acknowledge their value and encourage live and simulator drills and training.
- Once rulemaking is complete, recommend Board work with the Harbor Safety Committee to update Standards of Care to address newly escorted vessels.

Washington State Board of Pilotage Commissioners
Quarterly Key Performance Indicators Dashboard

12 MONTHS ENDING: **Jun 30, 2024**

Safety

Rest Rule Exceptions

	2023 Q3	2023 Q4	2024 Q1	2024 Q2
Puget Sound District *KPI target: rate of 0.3% or less (3 or less per 1000 assigns)*	0.31% ✗ 1926 assigns 6 rest exc.	0.27% ✓ 1819 assigns 5 rest exc.	0.21% ✓ 1874 assigns 4 rest exc.	0.25% ✓ 2016 assigns 5 rest exc.
Grays Harbor District *KPI target: 1 or less per year*	0 ✓ 39 assigns 0 rest exc.	0 ✓ 70 assigns 0 rest exc.	0 ✓ 74 assigns 0 rest exc.	0 ✓ 76 assigns 0 rest exc.

This KPI counts rest rule exceptions, excluding rest rule exceptions associated with emergent situations. The most common emergent situation is a ship dragging anchor in severe weather.

Rest rules require 1) that pilots have 10 hours rest between assignments, 2) that multiple assignments (e.g. harbor shifts) not exceed 13 hours total duration.

The BPC Pilot Safety Committee reviews rest rule exceptions each quarter.

	2023 Q3	2023 Q4	2024 Q1	2024 Q2
Unsafe Transfer Arrangements Resulting in Fall or Injury *KPI target: 0*	0 ✓	0 ✓	0 ✓	0 ✓

This KPI counts occurrences where a pilot or pilot trainee falls or is injured while embarking or disembarking a vessel with noncompliant transfer arrangement, or is physically endangered regardless of whether the incident results in physical injury.

	2023 Q3	2023 Q4	2024 Q1	2024 Q2
Pollution Incidents (Spills) with Pilot Error *KPI target: 0*	0 ✓	0 ✓	0 ✓	0 ✓

This KPI counts occurrences where actual or apparent collision, allision or grounding or navigational occurrence results in environmental damage (pollution/spill), with pilot error a contributing factor.

	2023 Q3	2023 Q4	2024 Q1	2024 Q2
Other Incidents (Non-Pollution) with Pilot Error *KPI target: 0*	0 ✓	0 ✓	1 ✗	1 ✗

This KPI counts occurrences where actual or apparent collision, allision or grounding or navigational occurrence results in personal injury or property damage, with pilot error a contributing factor. (Pilot injury associated with noncompliant transfer arrangements reported under Unsafe Transfer Arrangements.)

Diversity, Equity, and Inclusion

	2023 Q3	2023 Q4	2024 Q1	2024 Q2
DEI Committee Meetings *(quarterly)* *KPI target: 1 meeting per quarter or more*	July 6 ✓ DEI Steering Committee	✗ NONE	✗ NONE	May 16 ✓ DEI Steering Committee

DEI Events Attendance and/or Sponsorship *(yearly)*

KPI target: 3 events per year or more

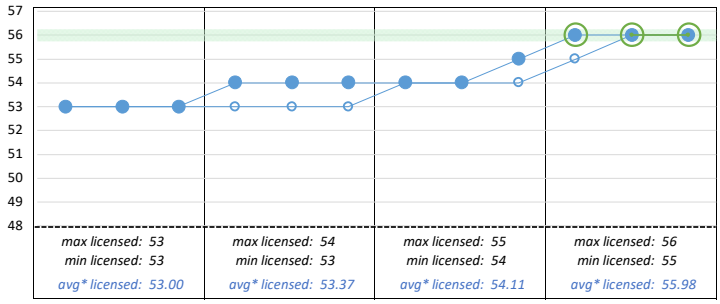
	Year	Date	Event	Location	Atten.	Spons.
1	2023	Aug 23	Women Offshore Inclusion Summit	Online	✓	
2	2023	Oct 11-13	Pride in Maritime	Online	✓	
3	2023	Oct 25-27	Women Offshore Conference	Galveston TX	✓	✓
4	2024	Feb 29-Mar 2	MARAD Women on the Water	Buzzards Bay MA	✓	✓
5	2024	Mar 15-16	Women in Maritime Leadership	Vallejo CA	✓	✓

Pilot Training and Licensing

Number of Licensed Pilots

Puget Sound District

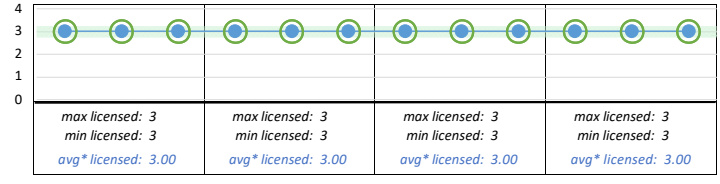
KPI target: authorized number of pilots (currently 56)



**average takes into account mid month retirements & licensures -- it is calculated using aggregate licensed days of all pilots*

Grays Harbor District

KPI target: authorized number of pilots (currently 3)



**average takes into account mid month retirements & licensures -- it is calculated using aggregate licensed days of all pilots*