



STATE OF WASHINGTON
BOARD OF PILOTAGE COMMISSIONERS

BPC Mission: to ensure against the loss of lives, loss of or damage to property and vessels, and to protect the marine environment by maintaining efficient and competent pilotage service on our State's inland waters.



THE BPC PILOTAGE QUARTERLY

Winter 2021

Happy New Year!

Announcements

THE PEAK IS WITHIN REACH

Washington State Marine Pilot Exam

04 - 05 - 2021

www.pilotage.wa.gov



**Marine Pilot Exam
April 5, 2021**

Exam applications are due by March 1, 2021! Visit our website for more details.

<https://pilotage.wa.gov/exa-m-information.html>

Puget Sound Licensures!



Captains Matt Hannuksela (top), Joe Siddell (middle), and Neil McGourty (below)



received their licenses to pilot in the Puget Sound Pilotage District during the 4th quarter of 2020.



Congratulations on this achievement!

We would like to take this opportunity to reflect a bit on 2020, which has been challenging for all of us. It is easy to bury the year under the stress of the COVID-19 pandemic, political environment, and social unrest. However, good things have come out of 2020, and we would like to spend some time shining a light on a few positives.

For instance, despite COVID-19 challenges and federal closures, six (6) pilot trainees were able to complete their State pilot training programs and federal pilotage endorsements resulting in licensure during 2020, including the three highlighted in Announcements. In addition, our pilots were hard at work with an abundance of caution, keeping the supply chain moving throughout the region. We offer much gratitude to the pilots!



Captain Bill Sliker, Puget Sound Pilots, dons full PPE while piloting a vessel.



Puget Sound pilots Captains Travis McGrath and Sandy Bendixen welcomed the next generation of pilots in the form of two baby girls! Congratulations to both!

From left: Captains McGrath and Bendixen hold up their daughters in their Puget Sound Pilots onesies.

The BPC, in partnership with Puget Sound Pilots and the Port of Grays Harbor, held a successful WA State Marine Pilot Exam Overview webinar, which provided valuable information to pilot aspirants interested in pilotage in our state. The webinar is available for viewing on our website [here](#).



Cheers to a healthy and happy 2021!

BPC Staff Highlight

November 1, 2020 was the one-year anniversary of Bettina Maki joining our team as the BPC's Program Analyst. Since coming aboard,

Bettina has provided an array of helpful data visualizations bringing clarity to and supporting the BPC's various programs. We're so happy to have Bettina as a part of our team!



Jaimie Bever (left), Jolene Hamel (middle) and Bettina Maki (right) celebrate the holidays with a virtual office party in December.

BPC staff will continue to telework and take turns in the office until June 2021, under the guidance of Governor Inslee.

Changes in BPC Industry Representation

The BPC welcomes Andrew Drennen as the new American Shipping Representative on the Board. Mr. Drennen is the Marine Superintendent for Polar Tankers. He was already a regular at BPC's meetings and an alternate Industry Representative on the Board's Pilot Safety Committee. Welcome aboard!

We would like to recognize and thank outgoing Commissioner Phil Morrell, TOTE. Commissioner Morrell has been on the Board since 2012. He was the Chair of the BPC's Fatigue Management Committee and was Co-Chair of the Pilot Safety Committee upon his departure from the BPC. Commissioner Morrell has provided years of excellent service to the State of Washington. We thank him for his contribution to safe pilotage!



2020 Salish Sea Shared Waters Forum

The 2020 Salish Sea Shared Waters Forum was held virtually on October 14 and 15. At the forum, BPC Commissioner and Department of Ecology representative Dale Jensen shared perspectives regarding knowledge gained from the 2018 and 2019 forums and BPC Executive Director Jaimie Bever presented updates to ESHB 1578 in a session titled *Authorities, Legislation and Implementation Actions that have been done to Ensure Protection of Treaty Rights of Indigenous Peoples and Advance Transboundary Spill Preparedness, Prevention, and Response*. Presentation slides and YouTube videos of all the presentations are available on The Pacific States – British Columbia Oil Spill Task Force website at <http://oilspilltaskforce.org/task-force-events/2020-salish-sea-forum/>.

District Snapshots

Puget Sound



PSP Leadership:

Congratulations to Captain Ivan Carlson for his election to the office of PSP President for 2021!

Many thanks to outgoing PSP President Captain Eric vonBrandenfels for his leadership and service!

Retirements:

There were no retirements in the 4th Quarter of 2020.

License Upgrades to Unlimited:

There were no upgrades to Unlimited in the 4th Quarter of 2020.

Training Program:

Currently training are Captains Severin Knutsen, Ryan Gartner, Eric Michael, Nick Moore, Robert Ekemann, Andrew Stewart, Mark Bostick, and Peter Mann.

Grays Harbor

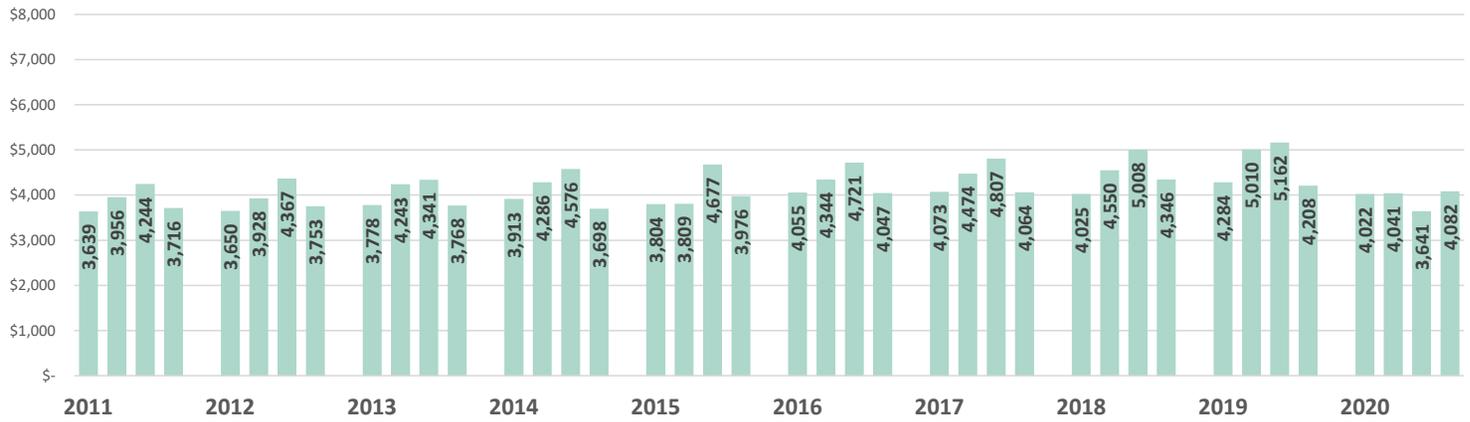


Training Program:

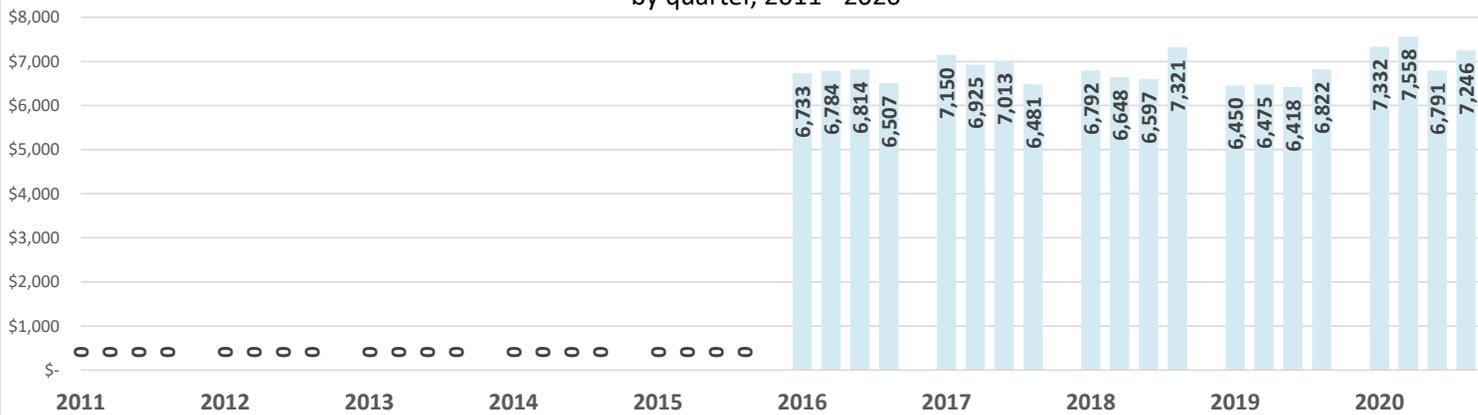
Currently in training is Captain Forest McMullen.



Puget Sound District
Average Revenue per Assignment
 by quarter, 2011 - 2020



Grays Harbor District
Average Revenue per Assignment
 by quarter, 2011 - 2020



**State of Washington
Pilotage Commission
January 21, 2021**

Grays Harbor District Report

In December we had 6 dry bulk vessels and 1 liquid bulk for a total of 21 jobs. That brings arrivals YTD December 31, 2020 to 74 vessels arrivals and a total of 213 jobs. Capt. D'Angelo has the watch and Capt. McMullen continues observe. Capt. White employment with the Port ended Jan. 2, 2020.

Dry bulk is starting the new year strong with 7 arrivals scheduled for January 2021.

Sampling of work being done on Port Terminals to begin 2021 that are related to Pilotage activities:

1.Contract No. 1966 Terminals 3 and 4 Fender System Repair (Rognlin's, Inc.)

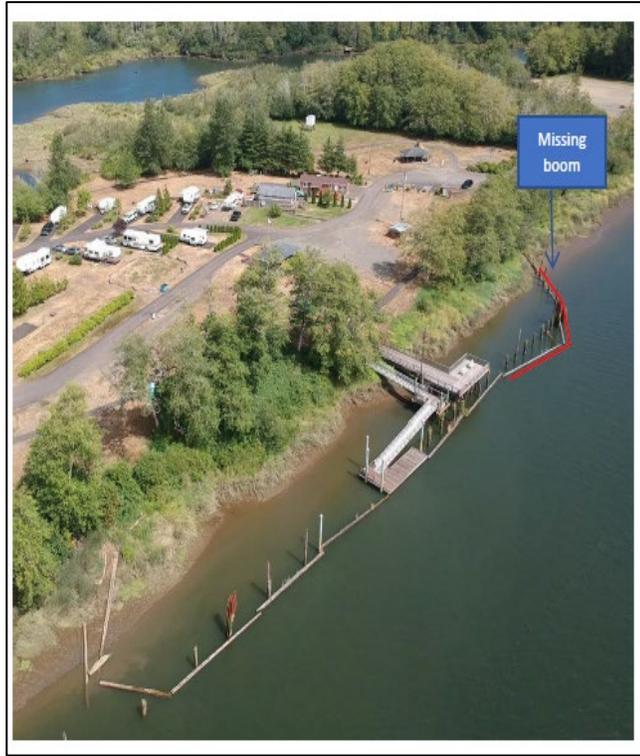
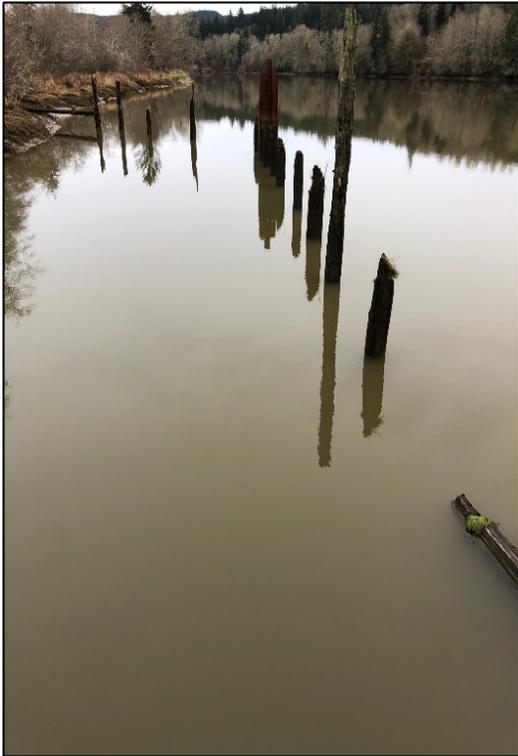
Contract Award has been sent to the contractor as well as the Notice to Proceed. They are still planning to receive their materials and have everything ready to go for repair by mid-January 2021 and have the in-water work completed by 2/15/2021. We received the Corps Permits this week and have sent to the contractor. All permits are now in place.

2.Contract No. 2012 Terminal Maintenance Dredging Dock Damage (American Construction Company)

American has received the materials for repairs to the Terminal 4. Per our Terms and Conditions for Construction and Similar Work outlined in the bid specification, they will be required to repair the damage at no cost to the Port. It has been determined that the H-beam for the Jet Array Nozzle is damaged beyond repair and the contractor is planning to remove the damaged beam and install a new beam. American contacted us this week to request approval to hire Rognlin's as a sub-contractor to make the repairs. We have approved their request.

3.Contract No. 2036 Friends Landing Log Boom Replacement (Brumfield Construction, Inc.)

We have received all of the required documents from the contractor and a Notice to Proceed has been issued.



4.Contract No. 2055 Terminal Maintenance Dredging (HME Construction, Inc.)

Notice of Award was sent out this week to the contractor. Staff is currently waiting for documents to return as well as the required Work Plans needed for the project. As soon as the Work Plans have been approved, a pre-dredge conference will be held with the agencies prior to startup. It is expected that we will get work done this first round at Terminal 2.

5.Contract No. 2061 Terminal 3 Dolphin Replacement (Rognlin's, Inc.)

Pile installation started this week and will continue over the next week and be complete by 1/26/2021.

6.Contract No. 2067 New Exhaust for the Chehalis Pilot Boat (Oszman Service, Inc.)

Ship schedule will not allow for the boat to be shut down next week. Staff is working on a plan to schedule when there is a 4-day window.

Pilot Boat -Chehalis

Chehalis remains primary transport as we prepare VEGA for active duty.

New exhaust ready for installation. Just waiting for Capt. D'Angelo to identify a window that it will be available.

Pilot Boat- Vega

Block heaters have been installed.

New aft door is ordered.

New fender system being manufactured and will be installed when complete.

Business Development

Commission authorized Executive Director to sign and option with PNW Renewables a division of Mohegan Energy Group of New Jersey. The option will be for 30 acres at Terminal 3 for the manufacture and export of wood pellets to the Asian market.

Existing liquid bulk customer BWC Terminals has submitted plans to City of Hoquiam to convert one of their storage tanks to **Methylene diphenyl diisocyanate (MDI)** a component of polyurethane which is used in various consumer products.

AGP. In October 2020 we hit a new milestone for tonnage throughput. We loaded our 20 millionth ton.



Around the Docks

Satsop Business Park Westport Marina Coastal Innovation Zone Bowerman Airport PGH Pilotage Services Friends Landing & Sterling Landing

PGH Mission: To best utilize our resources to facilitate, enhance and stimulate international trade, economic development and tourism for the region.

Fiscal Responsibility

PGH earns clean 2019 audit

The Port of Grays Harbor's accounting team earned a clean audit report from the Washington State Auditor for 2019.

The accountability and financial statement audits concluded that the Port complied with applicable state laws, regulations, and its own policies. It provided adequate controls over the safeguarding of public resources. The 2019 audit examined payroll, procurement, public works compliance, accounts receivable, tracking and monitoring of assets, financial condition, fiscal sustainability and open public meetings compliance.

In addition, the State Auditor's Office also completed a Federal Single Audit, as required due to the Port receiving more than \$750,000 of federal funding in 2019, specifically for the Bowerman Airport drainage project. The Federal Single Audit evaluated internal controls and tested compliance with the federal program requirements.

"We congratulate and thank the accounting department and all Port staff for their continuous commitment to responsibly managing public assets," stated Port Commission President Stan Pinnick.

The Port of Grays Harbor's audit reports are available on the State Auditor's website, www.sao.wa.gov.



Infrastructure Improvements

Westport Marina dredging wraps up



Underwater Earth Movers dredge works to complete the dredging of the boat basin at the Westport Marina. A total of 130,000 cubic yards was dredged from the boat basin.

For the first time in 40 years, the boat basin at the Westport Marina has been dredged to proper depths that will serve its various users for decades to come.

While the first phase of dredging kicked off in August 2019, the coordination and navigation of 17 floats, 550 slips, multiple fishing seasons, and limited fish-windows to dredge within, brought the project to the end of 2020.

An estimated total of 130,000 cubic yards of material was dredged, with approximately 80,000 cubic yards being disposed of offshore and 50,000 cubic yards being placed in a constructed upland disposal facility.

The contract for the third and final phase was awarded to Underwater Earth Movers in August. Construction began in September.

"We want to thank all of our Marina tenants and users for their cooperation and patience throughout this important project," shared Port Commission President Stan Pinnick. "We also want to thank the State of Washington and Grays Harbor County for partnering with us to make this project possible. With dredging of the boat basin complete, the Westport Marina now stands ready to serve the users of Washington State's number one commercial seafood landing port for many years to come."

Westport comes together to “Deck the Docks” for the holidays



The Westport Marina District is ready to welcome you during the holidays: the garland is hung, Christmas lights are aglow and the iconic viewing tower is lit!

Last month, more than 40 people came together to help decorate the Marina District for the holidays. A joint-effort organized by the Westport-Grayland Chamber of Commerce, the City of Westport, and the Port of Grays Harbor saw volunteers hanging lights, garland and wreaths on floats, planting seasonal arrangements, the traditional crab pot Christmas tree and the stringing of lights atop the viewing tower thanks to the South Beach Regional Fire Authority.

“It was great to see so many folks come out and support the Marina District,” shared Port of Grays Harbor Commissioner Tom Quigg. “A big thank-you to the organizers of the event who got the job done and made sure all CDC-guidelines were adhered to.”

While Westport is typically at its busiest during the summer months, the Marina District and its many year-round shops and restaurants stand ready to welcome you this holiday season.

Calendar

- December 12 *Sety @ T2*
- December 13 *Asali @ T2*
- December 15 *Genco Auvergne @ T2*
- December 16 *Mari Jane @ T1*
- December 17 *PMS Seagull @ T2*
- December 24-25 PGH Offices Closed, Christmas Holiday
- December 30 *Unity Explorer @ T2*
- January 1 PGH Offices Closed, New Year's Day
Alonissos @ T2
- January 12 PGH Commission Meeting, Remotely, 9am

Around the Docks

is a publication of the

Port of Grays Harbor

On Washington's Pacific Coast



It is available online at
PortofGraysHarbor.com

To join our mailing list contact
Amy Carlson at acarlson@portgrays.org

Join Us: Harbor Lights at Satsop Business Park

The Satsop Business Park is proud to partner with Summit Pacific Medical Foundation to offer a safe, free, festive and family-friendly holiday experience.

The community is invited to attend Harbor Lights at one of two evening times on Wednesday, December 23rd. The 15-minute laser show will be projected on the west cooling tower for easy viewing and will be synced to holiday music available on your radio.

Parking is limited and attendees are asked to stay in their vehicles to view the holiday laser light show. Restrooms will not be available for this event.



HARBOR LIGHTS
FREE HOLIDAY MUSIC & LASER LIGHT SHOW AT THE SATSOP WEST TOWER

WEDNESDAY, DEC. 23rd
SATSOP BUSINESS PARK
TWO TIMES - 6 PM & 7 PM

Presented by
SUMMIT PACIFIC Medical Foundation | Port of Grays Harbor | SLICK LASERS | Emerald City Events

Watch from the warmth and safety of your car. Social Distancing and Masks Required. No onsite restrooms.

WA State Board of Pilotage Commissioners

Industry Update:
January 21, 2021 BPC Meeting

Vessel Arrivals Plummet in 2020

Port calls "lowest ever"

- + Lowest level ever by a large margin (dating back to the 70's)
- + Puget Sound **down 395** Arrivals in 2020
 - NOTE:** Day to day activities being tracked now – histogram shows range of arrivals/departures at extremely low levels
 - NOTE 2:** Activity report shows arrivals several days out providing lead time
- + Container Vessel arrivals **down 98**
- + Bulkers **up 39**
- + Car Carriers **down 63**
- + RoRo's down 5
- + Passenger **down 212**
- + Tankers/ATB's **down 38**
- + Grays Harbor **down 12**

Pilot Assignments Plummet in 2020

Assignment also at lowest level (several decades of data)

- + Assignments **Down 1,212** or more than 16% since 2018
- + Assignments **Down 887** or 12.7% in 2020 over 2019
- + PMSA opposed increase in pilots last July – see letter

Workload Future?

Container Volumes Increase; Ship Calls Not So Much

- + Container volumes are increasing along the coast
- + Congestion is significant in LA/LB – through the first 10 days of January:
 - o Peak of 34 Container Ships at Anchor including 12 over 10,000 TEU's
 - o On the same day, there were 28 Container Ships at a Berth
- + One added service (NWSA briefed BPC on this); potential to add services in the PNW?

LA Struggles; The Domino Effect of Congested Ports

<https://www.supplychaindigital.com/logistics-1/la-struggles-domino-effect-congested-ports>

The Port of Los Angeles is becoming congested due to global supply chain issues caused by COVID-19. What's the knock-on effect?

By Laura V. Garcia, Supply Chain

Gene Seroka, Port of Los Angeles executive director, said cargo volume was up 50% in the second half of 2020 compared to the first half—and that it's become common for loaded ships to have to wait, anchored at sea until a dock opens up for unloading. "The port is strained," he said. "We're shipping back two times the amount of empty boxes than we are American exports across our docks." Seroka said the increased volume is all due to "the change in the American consumer," explaining that during the pandemic, "we're not buying services, we're buying goods."

The Domino Effect

Volume at the Port of Los Angeles is expected to be up an average of 88% YoY in the first two weeks of 2021 — a sign that swelling imports have yet to let up. However, the increase in import volumes has not been met with increased human resources, operating capacity or assets. Labour shortages due to the pandemic, chassis shortages in Southern California caused by increased "street dwell" times, and delayed vessel arrival contribute further to the ongoing congestion. In short, increased volume without increased capacity creates a bottleneck not easily resolved.

West and East Coast Ports Report Strong November Volume

<https://www.ttnews.com/articles/west-and-east-coast-ports-report-strong-november-volume>

The nation's ports continued their breakneck pace in November as imported products arrived and unloaded at a record or near-record rate at facilities on the Pacific and Atlantic coasts. The Port of Los Angeles had a strong month as the nation's busiest facility processed 889,746 20-foot equivalent units, a 22% increase compared with November 2019, when the facility moved 728,917 TEUs.

"Since August, monthly cargo volume has averaged almost 930,000 TEUs," Port of Los Angeles Executive Director Gene Seroka said in a statement. "It's unusual to see this kind of import activity this late in the year. But 2020 has been anything but normal. With consumers continuing to stay at home and purchase goods rather than services, we expect robust activity on our docks to continue for at least several months."

The Port of Oakland reported a 2.2% year-over-year increase in the number of containers processed, moving 197,692 in November, compared with 193,363 in 2019. Also on the West Coast, the Northwest Seaport Alliance, which operates the facilities at Seattle and Tacoma, Wash., reported an 11.3% year-over-year increase when measured against November 2019. The ports processed 301,932 containers, compared with 271,178 last year. The Tacoma facility recently finished work on a new gate complex and truck staging area, designed to speed up trucks' entry process while freeing up real estate for continued redevelopment.

US coalminers' Asia 'pipe dream' evaporates

<https://www.ft.com/content/1e4890c9-8ef1-41f6-a057-a92f9ae5fcb1>

Financial Times

US coal miners' last-ditch hope for shipping big volumes to Asia has crumbled as the developer of a sprawling export terminal abandons its project on the Pacific coast. The Millennium Bulk Terminal would have loaded 44m metric tonnes a year of thermal coal for export to electric utilities — a potential boost for producers reeling from the decline of coal-fired power generation in the US. But the project's bankrupt owner on Saturday pulled the plug, making it the last of more than half a dozen proposed west coast coal ports never to be built. "It's the end of the pipe dream that Asia can save the US coal industry," said Clark Williams-Derry, analyst at the Institute for Energy Economics and Financial Analysis, a research group that favours clean energy.

Washington state, led by the climate-activist governor Jay Inslee, denied Millennium a water-quality permit in 2017. Lighthouse Resources sued and was joined by the governments of Montana and Wyoming, which argued that Mr Inslee was unfairly restraining trade.

PUGET SOUND PILOTAGE DISTRICT ACTIVITY REPORT

Dec-2020

The Board of Pilotage Commissioners (BPC) requests the following information be provided to the BPC staff no

Activity									
Total pilotage assignments:	532				Cancellations:	17			
Total ship moves:	515	Cont'r:	209	Tanker:	130	Genl/Bulk:	115	Other:	61
Assignments delayed due to unavailable rested pilot	4					Total delay time:	9Hrs		
2 pilot jobs:	34	Reason:	PSP GUIDELINES FOR RESTRICTED WATERWAYS						
Day of week & date of highest number of assignment	SAT				12-Dec			32	
Day of week & date of lowest number of assignment	FRI				25-Dec			7	
Total number of pilot reposition	119								

Comp Days									
Beg				Licensed		Unlicensed		Ending	
Total	3107	Call Backs (+)	65	Used (-)	45	Burned (-)	52	Total	3075

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

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

Start Dt	End Dt	City	Group	Meeting Description	Pilot Attendees
1-Dec	1-Dec	Seattle	PSP	COE Systems	CAI
1-Dec	1-Dec	Seattle	PSP	UTC	ANA, CAI
2-Dec	4-Dec	Seattle	PSP	UTC	CAI
4-Dec	6-Dec	Seattle	PSP	President	CAI
4-Dec	4-Dec	Seattle	PSP	Ferry Study	MCG
7-Dec	7-Dec	Seattle	PSP	General Membership	COL
8-Dec	8-Dec	Seattle	PSP	UTC Compliance	MOT
9-Dec	9-Dec	Seattle	PSP	General Membership	ANA, CAI, COL
9-Dec	9-Dec	Seattle	BPC	TEC	ANT, BEN, KLA, SCR
10-Dec	31-Dec	Seattle	PSP	President	CAI
10-Dec	10-Dec	Seattle	PSP	In Office	ANA
19-Dec	19-Dec	Seattle	BPC	BPC	SCR
22-Dec	22-Dec	Seattle	PSP	Reference Manual	CAJ, KEN, LOB, MCG, MYE, NIN
22-Dec	22-Dec	Seattle	PSP	BOD	ANA, CAI, COL, KLA, NEW, SEM
23-Dec	23-Dec	Anacortes	PSP	Outreach	MCG

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

Start Dt	End Dt	REASON	PILOT
1-Dec	31-Dec	Not fit for d	BUJ, HEN
2-Dec	4-Dec	ETO	LIC
8-Dec	15-Dec	ETO	BOU, COL, MYE, SEA
16-Dec	22-Dec	ETO	SHJ
22-Dec	29-Dec	ETO	KEN, MEL, NEW, SOR

Presentations

If requesting to make a presentation, provide a brief explanation of the subject, the requested amount of time for

- 🕒 *Presentations may be deferred if prior arrangements have not been made.*
- 🕒 *The Board may also defer taking action on issues being presented with less than 1 week notice prior to a schedule Board Meeting to allow adequate time for the Commissioners and the public to review and prepare for discussion.*

Other Information (Any other information requested or intended to be provided to the BPC)



STATE OF WASHINGTON
BOARD OF PILOTAGE COMMISSIONERS

2901 Third Avenue, Suite 500 | Seattle, Washington 98121 | (206) 515-3904 | www.pilotage.wa.gov

NOTICE OF PUBLIC MEETINGS 2021 MEETING SCHEDULE

The Washington State Board of Pilotage Commissioners typically meets on the third Thursday of each month, except for December, unless otherwise noted below, rescheduled, or canceled. Meetings are held at 2901 Third Avenue, Seattle, Washington, and/or virtually. Meeting times are subject to change.

* Special Meeting for the 2021 WA State Marine Pilot Exam

** *To accommodate the increased need for pilots, meetings will be adjusted during cruise season as noted below.*

In accordance with RCW 42.30.075, this schedule of regular meeting dates for the Board of Pilotage Commissioners is filed with the Office of the Code Reviser for publication in the Washington State Register.

	ADOPTED		PROPOSED	
January	21	10:00am		
February	18	10:00am		
March	18	10:00am		
*April	07	TBD		
April	19	10:00am		
**May	18	12:00pm	**May	25 12:00pm
**June	15	12:00pm	**June	22 12:00pm
**July	20	12:00pm		
**August	17	12:00pm		
**September	21	12:00pm	**September	28 12:00pm
**October	19	12:00pm	**October	26 12:00pm
November	18	10:00am		
December	09	10:00am		



RULE-MAKING ORDER

EMERGENCY RULE ONLY

CR-103E (December 2017) (Implements RCW 34.05.350 and 34.05.360)

Agency: Board of Pilotage Commissioners

Effective date of rule:

Emergency Rules

- Immediately upon filing.
 Later (specify) _____

Any other findings required by other provisions of law as precondition to adoption or effectiveness of rule?

- Yes No If Yes, explain:

Purpose: To amend WAC 363-116-078 Pilot Training Program, in order to address the Governor's State of Emergency Proclamation 20-05 concerning novel coronavirus/COVID-19.

Citation of rules affected by this order:

New:
 Repealed:
 Amended: 363-116-078
 Suspended:

Statutory authority for adoption: Chapter 88.16 RCW

Other authority:

EMERGENCY RULE

Under RCW 34.05.350 the agency for good cause finds:

- That immediate adoption, amendment, or repeal of a rule is necessary for the preservation of the public health, safety, or general welfare, and that observing the time requirements of notice and opportunity to comment upon adoption of a permanent rule would be contrary to the public interest.
 That state or federal law or federal rule or a federal deadline for state receipt of federal funds requires immediate adoption of a rule.

Reasons for this finding: Governor Inslee declared a State of Emergency via Proclamation 20-05 in response to coronavirus/COVID-19. To minimize the risk of introducing vectors of exposure onto a vessel or to pilot trainees, the Board may suspend or adjust the pilot training program. Trainees will be allowed to resume regular training at a time determined by the Board. Trainees will continue to receive the maximum stipend during this training program suspension or adjustment. The Board may also consider additional training opportunities for pilot trainees, such as distance learning or completion if they are nearing the end of their program, as determined by the Trainee Evaluation Committee (TEC).

**Note: If any category is left blank, it will be calculated as zero.
 No descriptive text.**

**Count by whole WAC sections only, from the WAC number through the history note.
 A section may be counted in more than one category.**

The number of sections adopted in order to comply with:

Federal statute:	New	___	Amended	___	Repealed	___
Federal rules or standards:	New	___	Amended	___	Repealed	___
Recently enacted state statutes:	New	___	Amended	___	Repealed	___

The number of sections adopted at the request of a nongovernmental entity:

New ____ Amended ____ Repealed ____

The number of sections adopted on the agency's own initiative:

New ____ Amended 1 Repealed ____

The number of sections adopted in order to clarify, streamline, or reform agency procedures:

New ____ Amended ____ Repealed ____

The number of sections adopted using:

Negotiated rule making:	New	____	Amended	____	Repealed	____
Pilot rule making:	New	____	Amended	____	Repealed	____
Other alternative rule making:	New	____	Amended	<u>1</u>	Repealed	____

Date Adopted: January 21, 2021

Name: Jaimie C. Bever

Title: Executive Director

Signature:



WAC 363-116-078 Pilot training program. After passing the written examination and simulator evaluation, pilot candidates pursuing a pilot license are positioned on a list for the applicable pilotage district(s) and must enter and successfully complete a training program specified by the board before consideration for licensure.

(1) Notification. Pilot candidates on a list as described in subsection (2) of this section, waiting to enter a training program shall provide the board with the best address for notification to enter into a training program. In addition, a pilot candidate shall provide the board with other means of contact such as postal mailing or email address, phone number, and/or fax number. The email address with a read receipt request, however, will be considered the primary means of notification by the board. It will be the responsibility of the pilot candidate to ensure the board has current contact information at all times. If a pilot candidate cannot personally receive postal or electronic mail at the address(es) provided to the board for any period of time, another person may be designated in writing as having power of attorney specifically to act in the pilot candidate's behalf regarding such notice. If notice sent to the email address provided by the pilot candidate is not acknowledged after three attempts or if notice sent via certified mail is returned after three attempts to deliver, that pilot candidate will be skipped and the next pilot candidate on the list will be contacted for entry into a training program. A person so skipped will remain next on the list. A pilot candidate or his/her designated attorney-in-fact shall respond within fifteen calendar days of receipt of notification to accept, refuse, or request a delayed entry into a training program.

(2) Entry. At such time that the board chooses to start a pilot candidate or candidates in a training program for either pilotage district, notification shall be given as provided in subsection (1) of this section. Pilot candidates shall be ranked in accordance with a point system established by the board based on overall performance on the written examination and simulator evaluation. Candidates shall be eligible to enter a training program for a pilotage district in the order of such rankings or as otherwise may be determined by the board. A pilot candidate who refuses entry into a program will be removed from the waiting list with no further obligation by the board to offer a position in that district's training program to such pilot candidate. If the pilot candidate indicated interest in the other pilotage district on the application for the written examination, the candidate shall remain available for that other district's training program in accordance with his/her position on that list.

(a) A pilot candidate who is not able to start a training program within two months of the board's specified entry date may, with written consent of the board, delay entry into that training program. When a pilot candidate delays entry into a training program by more than two months, the board gives notice to the next pilot candidate on the list for that pilotage district to enter a training program. The pilot candidate who delays entry shall remain eligible for the next position in that district provided that the next position becomes available within the earlier of:

(i) Four years from the pilot candidate's taking the written examination; or

(ii) The date scheduled for the next pilotage examination for the district.

(b) A pilot candidate not able to start in a training program within two months of the board's specified entry date and who does not obtain the board's written consent to delay entry into a training program shall no longer be eligible for that district's training program without retaking the examination provided in WAC 363-116-076 and the simulator evaluation provided in WAC 363-116-077.

(3) Training license. Prior to receiving a training license pilot candidates must pass a physical examination by a board-designated physician and in accordance with the requirements of WAC 363-116-120 for initial pilot candidates. A form provided by the board must be completed by the physician and submitted to the board along with a cover letter indicating the physician's findings and recommendations as to the pilot candidate's fitness to pilot. The physical examination must be taken not more than ninety days before issuance of the training license. Holders of a training license will be required to pass a general physical examination annually within ninety days prior to the anniversary date of that training license. Training license physical examinations will be at the expense of the pilot candidate. All training licenses shall be signed by the chairperson or his/her designee and shall have an expiration date. Training licenses shall be surrendered to the board upon completion or termination of the training program.

(4) Development. As soon as practical after receiving notification of eligibility for entry into a training program as set forth in this section, the pilot candidate shall provide a completed experience questionnaire to the trainee evaluation committee (TEC), a committee created per subsection (11) of this section. The training program consists of three phases: Observation trips, training trips, and evaluation trips, and such other forms of learning and instruction that may be designated. The TEC shall recommend a training program for adoption by the board. After adoption by the board, it will be presented to the pilot candidate. If the pilot candidate agrees in writing to the training program, the board shall issue a training license to the pilot candidate, which license shall authorize the pilot candidate to take such actions as are contained in the training program. If the pilot candidate does not agree to the terms of a training program, in writing, within fifteen business days of it being received by certified mail return receipt, or by email read receipt requested, that pilot candidate shall no longer be eligible for entry into that pilotage district's training program and the board may give notice to the next available pilot candidate that he/she is eligible for entry into a training program pursuant to the terms in subsections (1) and (2) of this section.

(5) Initial assigned route.

(a) The TEC shall assign an initial route to each trainee at the beginning of his/her training program between a commonly navigated port or terminal and the seaward boundary of the pilotage district.

(b) Unless an extension of time is granted by the board, within eight months of the beginning of the training program if the trainee is continuously on stipend, plus an additional month for every month a trainee is off stipend (up to a maximum of fifteen months), the trainee must:

(i) Take and pass with a minimum score of eighty percent all conning quizzes provided by the board applicable to the initial assigned route as described in subsection (8) of this section. These quizzes

may be repeated as necessary provided that they may not be taken more than once in any seven-day period, and further provided that they must be successfully passed within the time period specified in (b) of this subsection; and

(ii) Take and pass with a minimum score of eighty-five percent the local knowledge examination(s) provided by the board applicable to the initial assigned route as described in subsection (8) of this section. These examinations can be repeated as necessary provided that they may not be taken more than once in any seven-day period, and further provided that they must be successfully passed before the expiration date time period specified in (b) of this subsection; and

(iii) Possess a first class pilotage endorsement without tonnage or other restrictions on his/her United States Coast Guard license to pilot on the initial assigned route.

(6) Specification of trips. To the extent possible, a training program shall provide a wide variety of assigned requirements in three phases: Observation, training, and evaluation trips. A training program may contain deadlines for achieving full or partial completion of certain necessary actions. Where relevant, it may specify such factors as route, sequence of trips, weather conditions, day or night, stern or bow first, draft, size of ship and any other relevant factors. The board may designate specific trips or specific numbers of trips that shall be made with training pilots or with the pilot members of the TEC or with pilots designated by the TEC. In the Puget Sound pilotage district, pilot trainees shall complete a minimum of one hundred fifty trips. The board shall set from time to time the minimum number of trips for pilot trainees in the Grays Harbor pilotage district. The total number of trips in a training program shall be established by the board based on the recommendation of the TEC. The board will ensure that during a training program the pilot trainee will get significant review by supervising pilots and the pilot members of the TEC or with pilots designated by the TEC.

(7) Length of training program. For the Puget Sound district the length of the program shall not exceed thirty-six months. For the Grays Harbor district the length of the program will be determined at the time the training program is written.

(8) Local knowledge conning quizzes and local knowledge exams. A training program shall provide opportunities for the education of pilot trainees and shall provide for testing of pilot trainees on the local knowledge necessary to become a pilot. It shall be the responsibility of the pilot trainee to obtain the local knowledge necessary to be licensed as a pilot in the pilotage district for which he/she is applying. Each conning quiz will be organized by main channel routes, ports, and approaches. A conning quiz is not intended to replace a local knowledge exam as specified in subsection (5)(b)(ii) of this section, but there will be some overlap of subject matter. A pilot trainee shall pass a conning quiz or quizzes related to the route or harbor area to move from the observation phase to the training phase of his/her training program for that route or harbor area. After a trainee has successfully passed a conning quiz on a main channel route or a port and approach, he/she will be eligible to take the conn on that route or approach unless it is a U.S. flag vessel and the required federal pilotage endorsement has not been obtained. The local knowledge exam for the initial route must be completed within eight months of the training start date if the trainee is taking the stipend. For each month the trainee is off stipend, an additional month is added up to a maximum of fifteen months to successfully pass the appropriate

local knowledge exam. The final local knowledge exam must be completed before consideration for licensing and must be successfully passed before the expiration date of the training program. The conning quizzes and local knowledge exams will be administered at the offices of the board of pilotage commissioners. Eighty percent is the passing grade for conning quizzes, and eighty-five percent is required for the local knowledge exams. If a trainee fails a conning quiz or local knowledge exam, it may be retaken after seven days, but must be passed within the timing deadlines discussed above. The local knowledge required of a pilot trainee and the local knowledge examination(s) may include the following subjects as they pertain to the pilotage district for which the pilot trainee seeks a license:

- (a) Area geography;
- (b) Waterway configurations including channel depths, widths and other characteristics;
- (c) Hydrology and hydraulics of large ships in shallow water and narrow channels;
- (d) Tides and currents;
- (e) Winds and weather;
- (f) Local aids to navigation;
- (g) Bottom composition;
- (h) Local docks, berths and other marine facilities including length, least depths and other characteristics;
- (i) Mooring line procedures;
- (j) Local traffic operations e.g., fishing, recreational, dredging, military and regattas;
- (k) Vessel traffic system;
- (l) Marine VHF usage and phraseology, including bridge-to-bridge communications regulations;
- (m) Air draft and keel clearances;
- (n) Submerged cable and pipeline areas;
- (o) Overhead cable areas and clearances;
- (p) Bridge transit knowledge - Signals, channel width, regulations, and closed periods;
- (q) Lock characteristics, rules and regulations;
- (r) Commonly used anchorage areas;
- (s) Danger zone and restricted area regulations;
- (t) Regulated navigation areas;
- (u) Naval operation area regulations;
- (v) Local ship assist and escort tug characteristics;
- (w) Tanker escort rules - State and federal;
- (x) Use of anchors and knowledge of ground tackle;
- (y) Applicable federal and state marine and environmental safety law requirements;
- (z) Marine security and safety zone concerns;
- (aa) Harbor safety plan and harbor regulations;
- (bb) Chapters 88.16 RCW and 363-116 WAC, and other relevant state and federal regulations in effect on the date the examination notice is published pursuant to WAC 363-116-076; and
- (cc) Courses in degrees true and distances in nautical miles and tenths of miles between points of land, navigational buoys and fixed geographical reference points, and the distance off points of land for such courses as determined by parallel indexing along pilotage routes.

(9) Rest. It is the responsibility of the pilot trainee to obtain adequate rest. Pilot trainees shall observe the rest rules for pilots in place by federal or state law or regulation and rules established

in the applicable pilotage district in which they will train, or any other rest requirements contained in a training program.

(10) Stipend.

(a) At the initial meeting with the TEC the pilot trainee shall indicate whether he/she wishes to receive a stipend during their training program. In the Puget Sound pilotage district, as a condition of receiving such stipend, pilot trainees will agree to forego during their training program other full- or part-time employment which prevents them from devoting themselves on a full-time basis to the completion of their training program. With the consent of the TEC, pilot trainees may elect to change from a stipend to nonstipend status, and vice versa, during their training program provided that such change request is provided in writing from the trainee. If the trainee intends to be in nonstipend status more than four consecutive months, his/her particular training program may be constructed to provide re-ency and/or a change in seniority placement prior to resuming the training program. In the Puget Sound pilotage district the stipend paid to pilot trainees shall be a maximum of six thousand dollars per month (or such other amount as may be set by the board from time to time), shall be contingent upon the board's setting of a training surcharge in the tariffs levied pursuant to WAC 363-116-300 sufficient to cover the expense of the stipend, and shall be paid from a pilot training account as directed by the board. In the Grays Harbor pilotage district the stipend paid to pilot trainees shall be determined by the board and shall be contingent upon the board's receipt of funds, from any party collecting the tariff or providing funds, sufficient to cover the expense of the stipend and shall be paid from a pilot training account as directed by the board.

Determinations as to stipend entitlement will be made on a full calendar month basis and documentation of trips will be submitted to the board by the third day of the following month. Proration of the stipend shall be allowed at the rate of two hundred dollars per day (or such other amount as may be set by the board from time to time), under the following circumstances:

(i) For the first and last months of a training program (unless the training program starts on the first or ends on the last day of a month); or

(ii) For a pilot trainee who is deemed unfit for duty by a board-designated physician during a training month.

(b) (i) In the Puget Sound pilotage district a minimum of twelve trips are required each month for eligibility to receive the minimum stipend amount as set by the board, or eighteen trips to receive the maximum stipend amount as set by the board. A trainee may make more than eighteen trips in a calendar month, but no further stipend will be earned for doing so. In the Grays Harbor pilotage district the minimum number of trips each month for eligibility to receive the stipend is seventy percent or such number or percentage of trips that may be set by the board of the total number of vessel movements occurring in this district during that month. Only trips required by the training program can be used to satisfy these minimums. Trips will be documented at the end of each month.

(ii) Whenever the governor issues a proclamation declaring a state of emergency, the board may determine whether there is a threat to trainees, pilots, vessel crews, or members of the public. Notwithstanding the other provisions of this chapter, the board, at its discretion, may suspend or adjust the pilot training program during the pendency of a state of emergency lawfully declared by the governor. If

the board suspends or adjusts the pilot training program, pilot trainees will continue to receive the maximum stipend allowable under this section, as if a trainee had taken eighteen trips per month, until the board determines otherwise. The trainee evaluation committee may further consider additional nonshipboard pilot training including, but not limited to, distance learning.

(c) The TEC will define areas that are considered to be hard-to-get, which many differ for trainees depending on their date of entry. It is the pilot trainee's responsibility to make all available hard-to-get trips, as defined and assigned by the TEC. The board may elect not to pay the stipend if the missing trips were available to the pilot trainee but not taken.

(d) The TEC, with approval by the board may allocate, assign or specify training program trips among multiple pilot trainees. Generally, the pilot trainee who entered his/her training program earlier has the right of first refusal of training program trips provided that the TEC may, with approval by the board, allocate or assign training trips differently as follows:

(i) When it is necessary to accommodate any pilot trainee's initial route;

(ii) When it is necessary to spread hard-to-get trips among pilot trainees so that as many as possible complete required trips on time. If a pilot trainee is deprived of a hard-to-get trip by the TEC, that trip will not be considered "available" under (c) of this subsection. However, the pilot trainee will still be required to complete the minimum number of trips for the month in order to receive a stipend, and the minimum number of trips as required to complete his/her training program;

(e) If a pilot trainee elects to engage in any full-or part-time employment, the terms and conditions of such employment must be submitted to the TEC for prior determination by the board of whether such employment complies with the intent of this section prohibiting employment that "prevents (pilot trainees) from devoting themselves on a full-time basis to the completion of the training program."

(f) If a pilot trainee requests to change to a nonstipend status as provided in this section such change shall be effective for a minimum nonstipend period of thirty days beginning at the beginning of a month, provided that before any change takes effect, a request is made to the TEC in writing. The requirement for designated hard-to-get trips is waived during the time the pilot trainee is authorized to be in nonstipend status.

(g) Any approved pilot association or other organization collecting the pilotage tariff levied by WAC 363-116-185 or 363-116-300 shall transfer the pilot training surcharge receipts to the board at least once a month or otherwise dispose of such funds as directed by the board. In the Grays Harbor pilotage district, if there is no separate training surcharge in the tariff, any organization collecting the pilotage tariff levied by WAC 363-116-185 shall transfer sufficient funds to pay the stipend to the board at least once a month or otherwise dispose of such funds as directed by the board. The board may set different training stipends for different pilotage districts. Receipts from the training surcharge shall not belong to the pilot providing the service to the ship that generated the surcharge or to the pilot association or other organization collecting the surcharge receipts, but shall be disposed of as directed by the board. Pilot associations or other organizations collecting surcharge receipts shall provide an accounting of such funds to the board on a monthly basis or at such

other intervals as may be requested by the board. Any audited financial statements filed by pilot associations or other organizations collecting pilotage tariffs shall include an accounting of the collection and disposition of these surcharges. The board shall direct the disposition of all funds in the account.

(11) Trainee evaluation committee. There is hereby created a trainee evaluation committee (TEC) to which members shall be appointed by the board. The TEC shall include at a minimum: Three active licensed Washington state pilots, who, to the extent possible, shall be from the pilotage district in which the pilot trainee seeks a license and at least one of whom shall be a member of the board; one representative of the marine industry (who may be a board member) who holds, or has held, the minimum U.S. Coast Guard license required by RCW 88.16.090; and one other member of the board who is not a pilot. The TEC may include such other persons as may be appointed by the board. The TEC shall be chaired by a pilot member of the board and shall meet as necessary to complete the tasks accorded it. In the event that the TEC cannot reach consensus with regard to any issue it shall report both majority and minority opinions to the board.

(12) Supervising pilots. The board shall designate as supervising pilots those pilots who are willing to undergo such specialized training as the board may require and provide. Supervising pilots shall receive such training from the board to better enable them to give guidance and training to pilot trainees and to properly evaluate the performance of pilot trainees. The board shall keep a list of supervising pilots available for public inspection at all times. All pilot members TEC shall also be supervising pilots.

(13) Training program trip reports. After each training program trip, the licensed or supervising pilot shall complete a training program trip report form (TPTR) provided by the board. Training program trip report forms prepared by licensed pilots who are supervising pilots shall be used by the TEC and the board for assessing a pilot trainee's progress, providing guidance to the pilot trainee and for making alterations to a training program. Licensed pilots who are not supervising pilots may only have trainees on board for observation trips. All trip report forms shall be delivered or mailed by the licensed or supervising pilot to the board. They shall not be given to the pilot trainee. The licensed or supervising pilot may show the contents of the form to the pilot trainee, but the pilot trainee has no right to see the form until it is filed with the board. The TEC shall review these training program trip report forms from time to time and the chairperson of the TEC shall report the progress of all pilot trainees at each meeting of the board. If it deems it necessary, the TEC may recommend, and the board may make, changes from time to time in the training program requirements applicable to a pilot trainee, including the number of trips in a training program.

(14) Termination of and removal from a training program. A pilot trainee's program may be immediately terminated and the trainee removed from a training program by the board if it finds any of the following:

- (a) Failure to maintain the minimum federal license required by RCW 88.16.090;
- (b) Conviction of an offense involving drugs or involving the personal consumption of alcohol;
- (c) Failure to devote full time to training in the Puget Sound pilotage district while receiving a stipend;
- (d) The pilot trainee is not physically fit to pilot;

(e) Failure to make satisfactory progress toward timely completion of the program or timely meeting of interim performance requirements in a training program;

(f) Inadequate performance on examinations or other actions required by a training program;

(g) Failure to complete the initial route requirements specified in subsection (5) of this section within the time periods specified;

(h) Inadequate, unsafe, or inconsistent performance in a training program and/or on training program trips as determined by the supervising pilots, the TEC and/or the board; or

(i) Violation of a training program requirement, law, regulation or directive of the board.

(15) Completion of a training program shall include the requirements that the pilot trainee:

(a) Successfully complete all requirements set forth in the training program including any addendum(s) to the program;

(b) Possess a valid first class pilotage endorsement without tonnage or other restrictions on his/her United States government license to pilot in all of the waters of the pilotage district in which the pilot candidate seeks a license; and

(c) Complete portable piloting unit (PPU) training as defined by the TEC.



PROPOSED RULE MAKING

CR-102 (December 2017) (Implements RCW 34.05.320)

Do **NOT** use for expedited rule making

Agency: Board of Pilotage Commissioners (BPC)

Original Notice

Supplemental Notice to WSR _____

Continuance of WSR _____

Preproposal Statement of Inquiry was filed as WSR 19-12-071 ; or

Expedited Rule Making--Proposed notice was filed as WSR _____; or

Proposal is exempt under RCW 34.05.310(4) or 34.05.330(1); or

Proposal is exempt under RCW _____.

Title of rule and other identifying information: (describe subject) WAC 363-116-081 Rest Period

Hearing location(s):

Date:

Time:

Location: (be specific)

Comment:

March 18, 2021

10:00am

Virtual Public Meeting via
Microsoft Teams

Please contact BeverJ@wsdot.wa.gov
or (206) 515-3887 to request a link

Date of intended adoption: March 18, 2021 (Note: This is **NOT** the **effective** date)

Submit written comments to:

Name: Sheri J. Tonn

Address: 2901 3rd Avenue, Suite 500, Seattle, WA 98121

Email: BeverJ@wsdot.wa.gov

Fax: (206) 515-3906

Other:

By (date) March 10, 2021

Assistance for persons with disabilities:

Contact Jolene Hamel

Phone: (206) 515-3904

Fax: (206) 515-3906

TTY:

Email: HamelJ@wsdot.wa.gov

Other:

By (date) March 15, 2021

Purpose of the proposal and its anticipated effects, including any changes in existing rules: The proposed changes to this rule regarding mandatory rest periods for pilots is necessary due to the passage of House Bill 1647 during the 2019 Regular Legislative Session, which amended RCW 88.16.103 Mandatory Rest Periods for Pilots and became effective July 28, 2019. The existing rule refers to RCW 88.16.103 for explanation of the BPC's regulations regarding rest rules. This new rule will codify that pilots have a mandatory rest period of at least ten hours with an opportunity for eight hours of uninterrupted sleep after the completion of an assignment. In addition, this rule defines multiple assignments within a harbor area. The rule also codifies and defines the existing practice of Puget Sound Pilots to receive a mandatory rest period after three consecutive night assignments.

Reasons supporting proposal: It is the intent of the Board of Pilotage Commissioners to align the language of the rule with that of the statute and to further define terms in the statute per the recommendation of the BPC's Pilot Safety Committee.

Statutory authority for adoption: Chapter 88.16 RCW

Statute being implemented: Chapter 88.16 RCW

Is rule necessary because of a:

Federal Law? Yes No
Federal Court Decision? Yes No
State Court Decision? Yes No

If yes, CITATION:

Agency comments or recommendations, if any, as to statutory language, implementation, enforcement, and fiscal matters: The BPC's Fatigue Management Committee and Pilot Safety Committee, both comprised of pilots and industry stakeholders, as well as BPC members, provided recommendations for both the Agency Request Legislation that led to the adoption of HB1647 and the recommendations for the rule language.

Name of proponent: (person or organization) Board of Pilotage Commissioners Private
 Public
 Governmental

Name of agency personnel responsible for:

	Name	Office Location	Phone
Drafting:	Jaimie C. Bever	2901 3 rd Avenue, Seattle, WA 98121	(206) 515-3887
Implementation:	Board of Pilotage Comm.	2901 3 rd Avenue, Seattle, WA 98121	(206) 515-3904
Enforcement:	Board of Pilotage Comm.	2901 3 rd Avenue, Seattle, WA 98121	(206) 515-3904

Is a school district fiscal impact statement required under RCW 28A.305.135? Yes No

If yes, insert statement here:

The public may obtain a copy of the school district fiscal impact statement by contacting:

Name:
Address:
Phone:
Fax:
TTY:
Email:
Other:

Is a cost-benefit analysis required under RCW 34.05.328?

Yes: A preliminary cost-benefit analysis may be obtained by contacting:

Name:
Address:
Phone:
Fax:
TTY:
Email:
Other:

No: Please explain: RCW 34.05.328 does not apply to the adoption of these rules. The Board of Pilotage Commissioners is not a listed agency in RCW 34.05.328(5)(a)(i).

Regulatory Fairness Act Cost Considerations for a Small Business Economic Impact Statement:

This rule proposal, or portions of the proposal, **may be exempt** from requirements of the Regulatory Fairness Act (see chapter 19.85 RCW). Please check the box for any applicable exemption(s):

This rule proposal, or portions of the proposal, is exempt under RCW 19.85.061 because this rule making is being adopted solely to conform and/or comply with federal statute or regulations. Please cite the specific federal statute or regulation this rule is being adopted to conform or comply with, and describe the consequences to the state if the rule is not adopted.

Citation and description:

This rule proposal, or portions of the proposal, is exempt because the agency has completed the pilot rule process defined by RCW 34.05.313 before filing the notice of this proposed rule.

This rule proposal, or portions of the proposal, is exempt under the provisions of RCW 15.65.570(2) because it was adopted by a referendum.

This rule proposal, or portions of the proposal, is exempt under RCW 19.85.025(3). Check all that apply:

- | | |
|---|--|
| <input type="checkbox"/> RCW 34.05.310 (4)(b)
(Internal government operations) | <input checked="" type="checkbox"/> RCW 34.05.310 (4)(e)
(Dictated by statute) |
| <input type="checkbox"/> RCW 34.05.310 (4)(c)
(Incorporation by reference) | <input type="checkbox"/> RCW 34.05.310 (4)(f)
(Set or adjust fees) |
| <input type="checkbox"/> RCW 34.05.310 (4)(d)
(Correct or clarify language) | <input type="checkbox"/> RCW 34.05.310 (4)(g)
((i) Relating to agency hearings; or (ii) process requirements for applying to an agency for a license or permit) |

This rule proposal, or portions of the proposal, is exempt under RCW ____.

Explanation of exemptions, if necessary:

COMPLETE THIS SECTION ONLY IF NO EXEMPTION APPLIES

If the proposed rule is **not exempt**, does it impose more-than-minor costs (as defined by RCW 19.85.020(2)) on businesses?

- No Briefly summarize the agency's analysis showing how costs were calculated. _____
- Yes Calculations show the rule proposal likely imposes more-than-minor cost to businesses, and a small business economic impact statement is required. Insert statement here:

The public may obtain a copy of the small business economic impact statement or the detailed cost calculations by contacting:

- Name:
- Address:
- Phone:
- Fax:
- TTY:
- Email:
- Other:

Date:	Signature: Place signature here
Name: Jaimie C. Bever	
Title: Executive Director	

Draft Amendment to WAC 363-116-081

Rest period.

- 1) Pilots shall observe rest period requirements as set out in RCW [88.16.103](#) as now or hereafter amended. Pilots shall have a mandatory rest period of at least ten hours with an opportunity for eight hours of uninterrupted sleep after completion of an assignment; excluding multiple assignments within a harbor area, provided the combined total duration of assignment time does not exceed thirteen hours.
- 2) ~~For purposes of applying this rule an~~ An assignment shall begin at the pilot's dispatched departure time if the pilot is on board, regardless of when the ship actually sails. The assignment ends when the pilot leaves the vessel. ~~Travel time shall not be included in an assignment~~ is a billable pilotage service, including cancellations and ship movements, regardless of duration.
- 3) An assignment begins at “Call Time” and ends at “Check-in time”, and includes preparation time and travel time to and from the ship in addition to bridge time. “Call Time” allows 1 to 2 hours of preparation before the start of travel time to the ship. “Check-in time” occurs when travel time from the ship is completed. In the Puget Sound District travel times are documented in the Puget Sound Pilots Operating Rules and may be reviewed by the Board from time to time.
- 4) When there are multiple assignments within a harbor area (multiple harbor shifts), “Call Time” is before the first harbor shift and “Check-in time” occurs when the travel time has been completed after the final harbor shift. Harbor area geographic definitions outlined by the Utilities and Transportation Commission are used to distinguish harbor shifts from other ship moves.
- 5) Pilots shall not complete more than three consecutive night assignments, a night assignment being one in which any part occurs between 0100 and 0459. After three consecutive night assignments, pilots shall have a mandatory rest period of at least 12 hours, including at least one period between 2000 and 0800.

Synopsis of Changing Vessel Traffic Trends

Scope of Work

Background: ESHB 1578 requires vessel trends synopsis

ESHB 1578 requires tug escorts for laden tankers between 5,000 – 40,000 DWT, and laden ATBs and oil barges greater than 5,000 DWT operating in Rosario Strait and connected waters to the east, starting September 1, 2020.

ESHB 1578 Section 3(ii) requires that “By December 31, 2021, [the Board of Pilotage Commissioners] complete a synopsis of changing vessel trends.” The intent of the synopsis is to look at how vessel traffic patterns change following the implementation of the Rosario tug escort requirement.

BPC and Ecology roles and responsibilities

BPC and Ecology signed an interagency agreement (IAA) for work related to ESHB 1578. For the vessel trends synopsis, the IAA includes the following responsibilities:

- BPC Staff will develop the scope.
- Ecology will provide technical assistance to BPC by producing a draft of the scope.
- BPC Board will vote to approve the scope.
- Ecology will draft the synopsis.
- BPC Board will review and approve the synopsis.
- BPC Staff will submit the final synopsis to the legislature.

Purpose

The intent of the synopsis is to review vessel transits pre- and post-bill implementation to identify changes after Section 2 of the bill is implemented. The synopsis will report on vessel trends for Washington waters east of a line extending from Discovery Island light south to New Dungeness light. It will also include vessel trends for the transboundary waters of Haro Strait, Boundary Pass, and the southern Strait of Georgia.

Research questions

- What changing vessel traffic trends do we see for vessels that newly fall under an escort requirement?
- What changing vessel traffic trends do we see for deep draft and tug traffic that have no additional escort requirements?
- What changing vessel traffic trends do we see for tug escorts?
- How does the overall number of transits (by vessel type) change pre- and post-bill implementation?

Methods

- Use Geographic Information System analysis of Automatic Identification System (AIS) data to determine the routes and number of transits of vessels.
- Combine Advance Notice of Transfer (ANT) reports, AIS data, and known tug-barge pairings to estimate the routes and number of transits of laden tank vessels (towed oil barges, Articulated Tug Barges, and tank ships).
- Compare number of vessels acting as escort tugs pre-and post-bill implementation.

Data sources

- **Advance Notice of Transfer (ANT)**
 - Under WAC 173-184-100, delivering vessels involved in an oil transfer of more than one hundred gallons must provide prior notice of the oil transfer to ecology.
- **Automatic Identification System (AIS) Data**
 - AIS transceivers on vessels transmit basic information like location, course, destination, and other vessel characteristics. The data can be requested from the USCG.
- **Vessel characteristics and deadweight tonnage**
 - Deadweight tonnage is specified in the WAC to be “the maximum summer deadweight tonnage that was assigned to the vessel at the time of construction as reported in Lloyd's Register of Ships.” WAC 363-116-500
 - For some vessels and barges deadweight tonnage can be identified using commercially available databases. Deadweight tonnage may be available from vessel operating companies. Where deadweight tonnage data is not available, Ecology will attempt to determine whether vessels require escorts based on information such as gross tonnage, ANT data, and observations of vessel transits (i.e., did the vessel travel with an escort?).
- **Marine Exchange Crossing Line Data**
 - The Marine Exchange compiles data on vessel counts for specific crossing lines, organized by vessel type, for the passage of vessels past a series of geographic “gates.” Ecology will consider whether this data could inform the synopsis.

Data Challenges

- ANTs use barge names and AIS uses vessel names.
- Towed oil barges are not always towed by the same vessel.
- Linking vessel routes to ANTs could be prohibitively time consuming if not automated.
- Marine Exchange crossing line data does not provide route information, or information on laden or unladen status.

Data Timeline

- The synopsis will compare a year of pre-bill implementation data (September 1, 2019 – August 31, 2020) to a year of post-bill implementation data (September 1, 2020 – August 31, 2021).

Deliverables

The synopsis will comprise a report describing:

- Route selection and number of vessel transits for pre-and post-bill implementation for the following vessel types. Ecology will explore ways to compare transits on a common scale.
 - vessels that newly fall under an escort requirement
 - deep draft and tug traffic that have no additional escort requirement
 - vessels that are providing bunkering or refueling services
- Routes compared will include, but will not be limited to transits of Rosario Strait and Haro Strait/Boundary Pass.
- Review of tugs engaged in escorting tank vessels in Rosario and connected waters east, including but not limited to number of transits, names of vessels, and operating companies.
- Number of oil transfers per terminal and per anchorage pre- and post-bill implementation.
- A review of the last 5 years of existing vessel transit data, to provide context as to the overall trend in vessel movements, based on vessel types. Determining the laden/unladen status of tank vessels, deadweight tonnage of vessels, and details on vessel occupation (i.e., bunkering) would require a manual evaluation of each transit, and is outside the scope of this review.

Opportunities for Review and Comment

Ecology will be available to provide updates to the BPC as requested. Potential updates include:

- Progress report after 6 months of post implementation data collection
- Presentation after post implementation data collection is complete

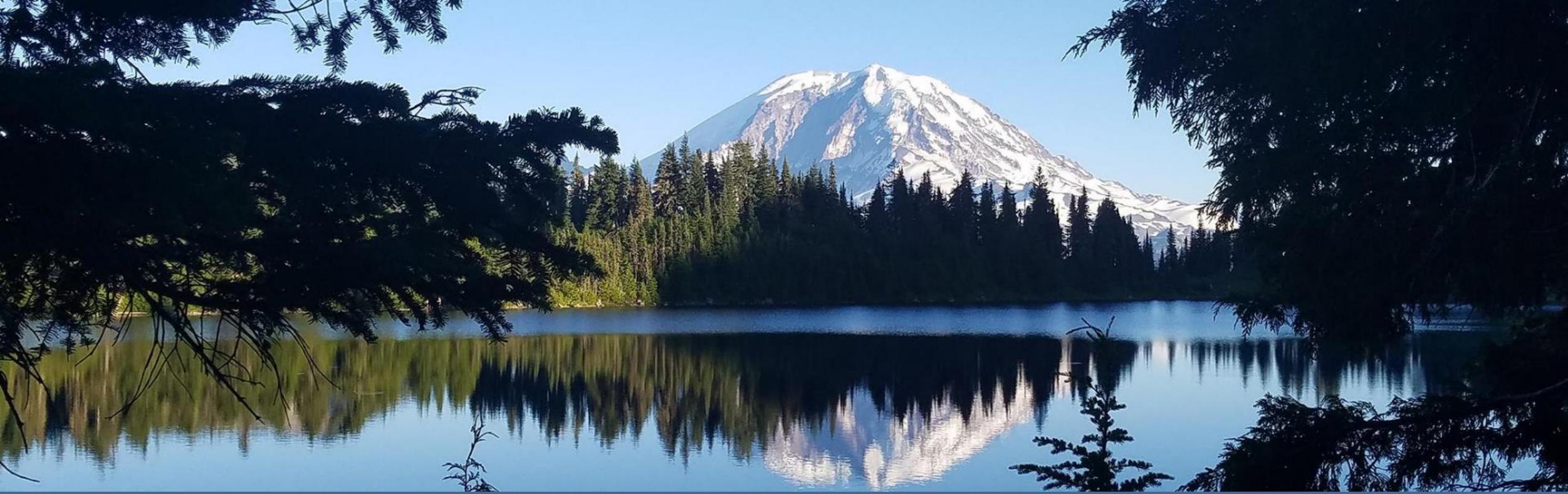
Ecology will address one set of comments from the BPC after submitting the draft report. Comments will be incorporated to the extent possible and will be included in the final report to the Board. No new data collection or analysis will result from review comments.

Amendments

The BPC board must approve by vote any additions or other changes to this scope of work. Any changes approved by the BPC will be attached to this scope of work.

Timeline

- September 1, 2019 Start of pre-implementation data collection timeframe
- August 31, 2020 End of pre-implementation data collection timeframe
- September 1, 2020 Implementation of new tug escort requirements
- September 1, 2020 Start of post-implementation data collection timeframe
- August 31, 2021 Data collection complete
- October 14, 2021 Submitted for internal Spills Program review
- November 4, 2021 Ecology delivers initial draft synopsis to BPC
- November 11, 2021 BPC Board Meeting
- December 2, 2021 Ecology delivers final draft to BPC
- December 9, 2021 BPC Board Meeting
- December 31, 2021 BPC publishes the Synopsis and submits to the legislature



Oil Spill Risk Model Development

Washington State Board of Pilotage Commissions Meeting -- January 21st, 2021

JD Ross Leahy



Legislative background

- ESHB 1578 was passed in 2019 to reduce the risk of oil spills, and protect Southern Resident Killer Whales
- Ecology's Spills Program tasked to undertake or assist with multiple policy initiatives in the bill, including the development of an oil spill risk model



Modeling Approach

Vessel Movement Module



Encounter Module



Accident Module



Oil Outflow Module

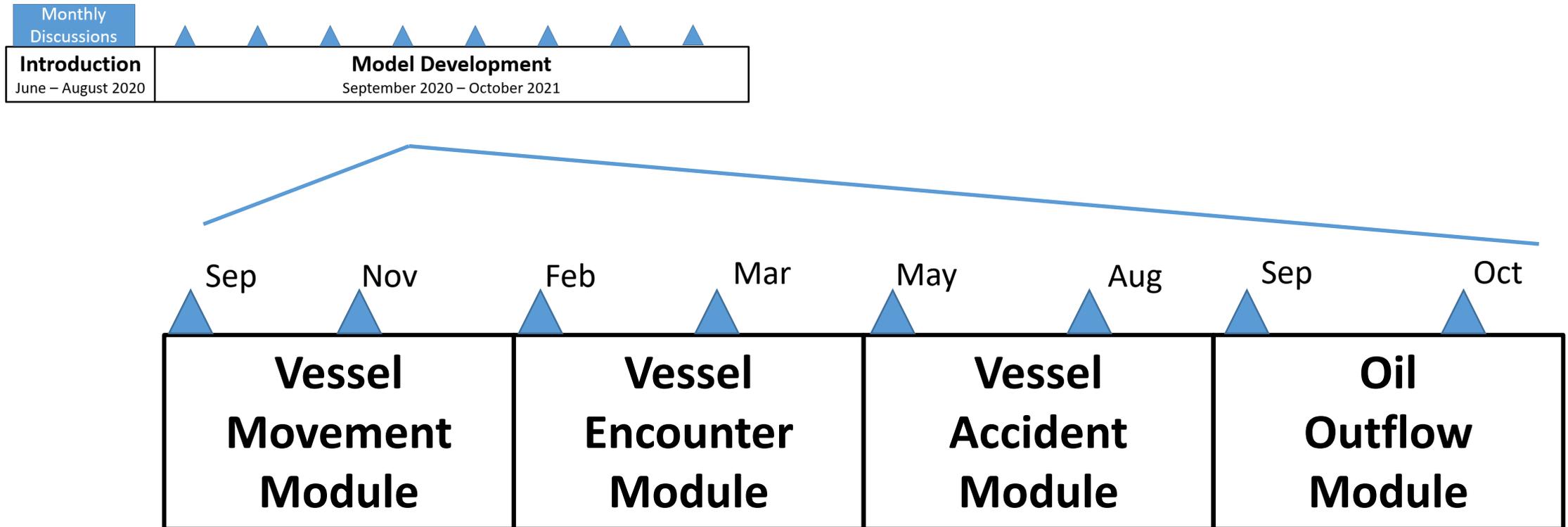
Vessels move in the system according to their empirical distribution

Measures and evaluates relationship of each vessel to the shore and other vessels

Evaluates situations for their potential to lead to accidents

Estimates the size of oil spills that result from accidents

Model Development and Outreach



Vessel Movement Module Review

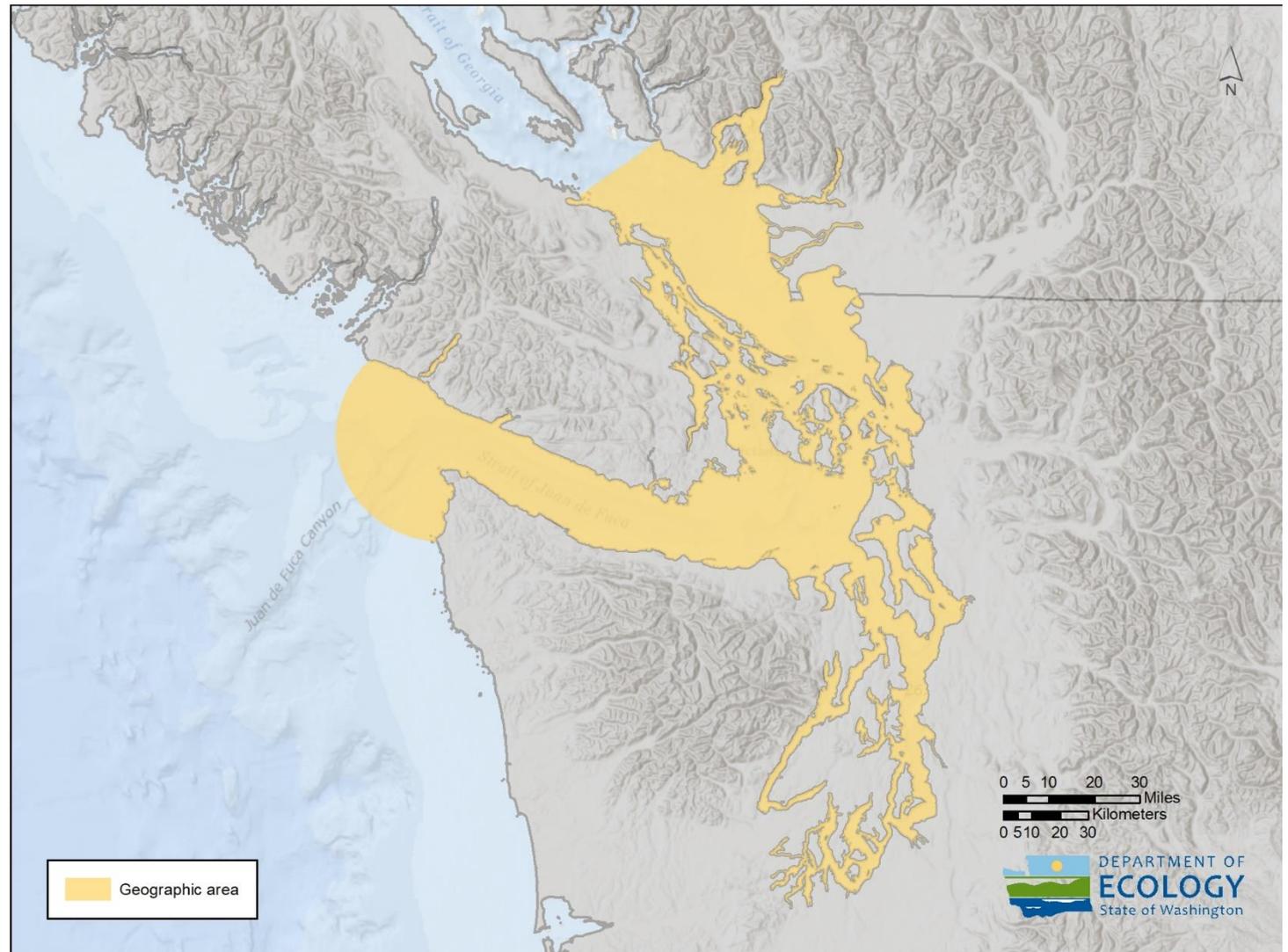
Identify vessel tracks

Collect tracks into routes

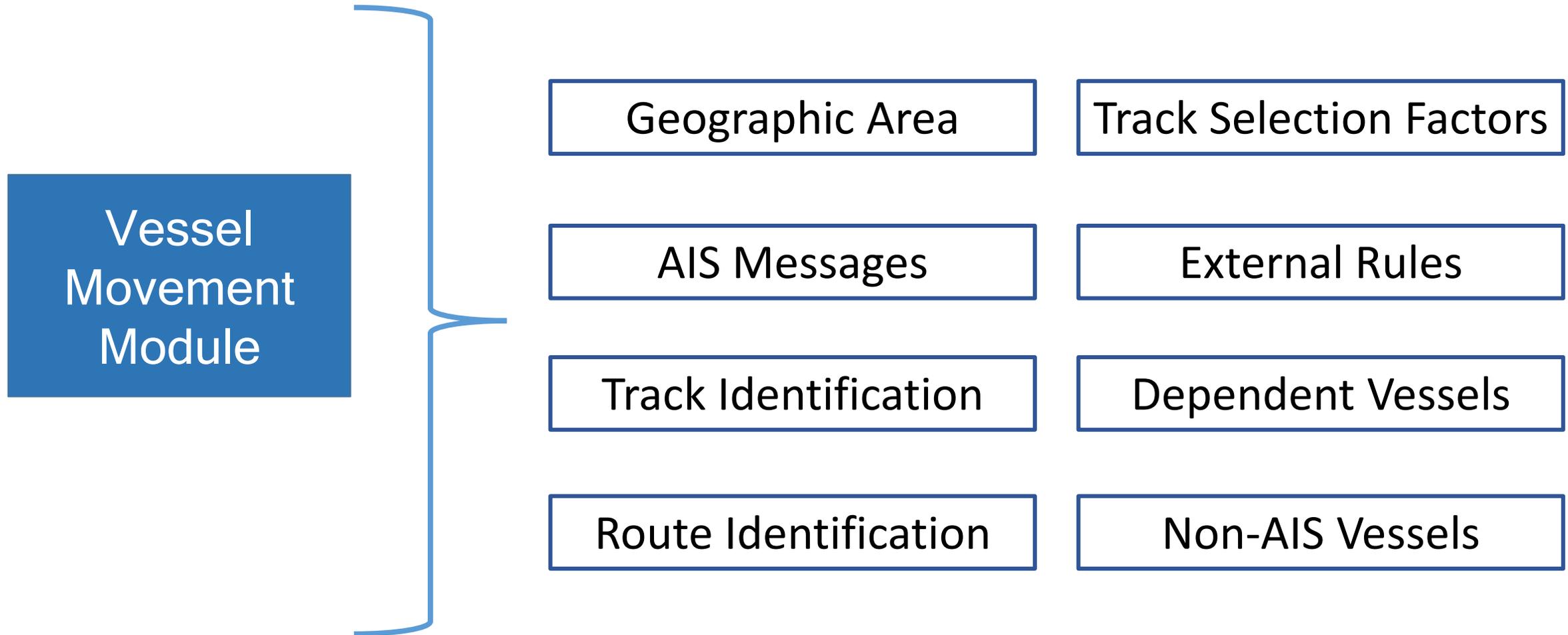
Statistical analysis of factors that could affect vessel distribution on tracks

Simulate vessels on tracks based on distribution

Simulate additional rules and non route based vessels



Vessel Movement Module: Components



Track Selection Factors: Vessel Type

List of vessel types for track selection

Assist/Escort Tug	Large Rec. Vessel/Yacht (>40m)	Smaller Harbor Tug
ATB (Articulated Tug and Barge)	Liquefied Gas Tanker	Sport Fishing Vessel
Bulk Carrier	Mono-hull Passenger Ferries	Tanker/Chemical Tanker
Car Ferries	Other/Unassigned	Tour Vessel
Container Ship	Other tugboats and workboats	Towing Vessel (Non-Oil)
Crude Tanker	Pilot Boat	Towing Vessel (Oil)
Cruise Ships	Pocket Cruise Ship (>40m)	Towing Vessel (Oil) – Bunkering
Fast Passenger Ferries	Product Tanker	Tribal Fishing Vessel
Fishing Vessel (<40m)	Product Tanker – Bunkering	Military/USCG Vessels (>40m)
General/Other Cargo Ship	Rec. Vessel/ Yacht (<40m)	Vehicle Carrier
General/Other Cargo Vessel (<40m)	Research Vessel	Whale Watching Vessels
Large Fishing Vessel (>40m)	Search/Mil/USCG (<40m)	



Track Selection Factors: Others

List of factors

- Current/tide
- Wind
- Sea state
- Time of day
- Visibility
- Presence of a fishing opener
- Presence of a tug escort
- Day of the week
- Domestic vs International Flag

Spill Prevention, Preparedness, and Response Program

DEPARTMENT OF
ECOLOGY
State of Washington

Developing the Vessel Movement Module: Factors associated with track selection



More information
[Visit our webpage](#)

How you can help:
We are looking for feedback on factors that affect vessel tracks within our model area. Potential factors include:

- Vessel types
- Environmental conditions

Contact information
JD Ross Leahy
425-410-9806
jd.leahy@ecy.wa.gov

Special accommodations
To request ADA accommodation including materials in a format for the visually impaired, call Ecology at 360-407-7668 or visit <http://ecology.wa.gov/accessibility>. People with impaired hearing may call Washington Relay Service at 711. People with speech disability may call TTY at 877-833-6341.

Introduction
We have created this document to help support robust discussion around track selection factors, an important component of the first module we are developing as part of our Oil Spill Risk Model Development Project.

To learn more about the model we are building, and how track selection factors relate to the Vessel Movement Module (VMM) please review our Modeling Approach Focus Sheet.

Input on Track Selection Factors
We need your input on factors that influence the tracks vessels follow within the model area. A track is a series of sequential AIS messages with a start and end point, which represents the path that a vessel navigates. You can provide feedback by providing comments through our [eComment system](#). We are also hosting a [technical discussion of track selection factors October 21, 2020](#).

The VMM will generate simulated vessel data based on historical Automatic Identification System (AIS) data. We know vessel tracks vary – vessels do not always follow identical paths from an origin to a destination. We want to understand the factors that we can model that are important to this variation in tracks.

Factors that could influence track selection include the types of vessels, and other conditions such as wind, tide, current, and visibility.

Publication 20-08-014 November 2020 Page 1

Dependent Vessels

List of dependent vessels

- Vessels providing bunkers
- Escort tugs
- Assist tugs
- Pilot boats
- Crew boats
- Submarine escorts

Developing the Vessel Movement Module: Movements associated with other vessels



More information
[Visit our webpage](#)

How you can help:

We are looking for feedback on this draft approach from tribes and stakeholders, especially those with expertise and interest in the operational patterns for vessels that provide services to other vessels, such as:

- Bunkering
- Escort tugs
- Assist tugs
- Pilot boats

Contact information

JD Ross Leahy
425-410-9806
jd.leahy@ecy.wa.gov

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Introduction

This focus sheet describes our approach to modeling vessel movements that are associated with the movements of other vessels. We are seeking your input on this draft approach.

Our draft list of vessel types whose movements are linked to other vessels is shown on the left. On page 2, we have included questions that may help you provide your thoughts.

You can provide feedback using our [eComment system](#). We are also hosting a [technical discussion of rules affecting vessel movements October 29, 2020](#).

To learn more about the model we are building, and how these types of vessel movements relate to the Vessel Movement Module (VMM) please review our [Modeling Approach focus sheet](#).

Vessel movements associated with other vessels

As part of our development of the Vessel Movement Module, we need to determine how to represent vessels whose movements are dependent on the behavior of other vessels. For instance, escort tugs only run out to escort a tanker if a tanker is arriving, and bunkers are only delivered to anchorages that are occupied by vessels in need of bunkers.

To represent this type of dependent vessel movement, we cannot solely rely on AIS data. We need to produce a series of rules that outline which vessels need escorts, pilots, and bunkers, where they need them, and when. In addition, we have to come up with a strategy for representing the movements of the dependent vessels before and after they provide their service – where did they come from and where are they going.

Vessels Not Represented in AIS

List of non-AIS Vessels

- Recreational vessels
- Commercial fishing vessels
- Small workboats/tugs
- Navy and other military vessels
- Tribal fishing vessels
- Sport fishing vessels

Spill Prevention, Preparedness, and Response Program

DEPARTMENT OF
ECOLOGY
State of Washington

Developing the Vessel Movement Module: Vessels that do not transmit AIS data



More information
[Visit our webpage.](#)

How you can help:
We are looking for feedback on this draft approach from tribes and stakeholders, especially those with expertise and interest in the operational patterns for vessels do not regularly transmit data via AIS, such as:

- Recreational vessels
- Commercial fishing vessels
- Tribal fishing vessels
- Smaller workboats/tugs
- Others

Contact information
JD Ross Leahy
425-410-9806
jd.leahy@ecw.wa.gov

Special accommodations
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Introduction
This focus sheet describes the challenge of modeling vessels that do not regularly transmit their location data via Automatic Identification System (AIS). We are seeking your input on how to approach this challenge.

Our draft list of vessel types that do not regularly transmit AIS includes recreational vessels, fishing vessels, and small workboats and tugs. We have included questions on page 2 that may help you provide your thoughts.

You can provide feedback using our [eComment system](#). We are also hosting a [technical discussion on this topic on November 4, 2020](#).

To learn more about the model we are building, and how the modeling of these vessels relates to the Vessel Movement Module please review our [Modeling Approach focus sheet](#).

Basic Operating Information needed for vessels that do not regularly transmit data via AIS

To build the Vessel Movement Module we are relying heavily on historical AIS data. Larger commercial vessels are required to transmit their navigational information via AIS, but this requirement does not extend to all vessels. For example, most non-towing vessels under 65 feet long, and towing vessels under 26 feet long do not have to transmit AIS information. As a result, some recreational vessels, fishing vessels, and smaller workboats and tugs may operate without transmitting AIS.

In the context of quantifying oil spill risk, these smaller vessels play an important role in the larger functioning of the vessel traffic system.

To appropriately represent these vessels in our model, we will need to

Publication 20-08-019 October 2020 Page 1

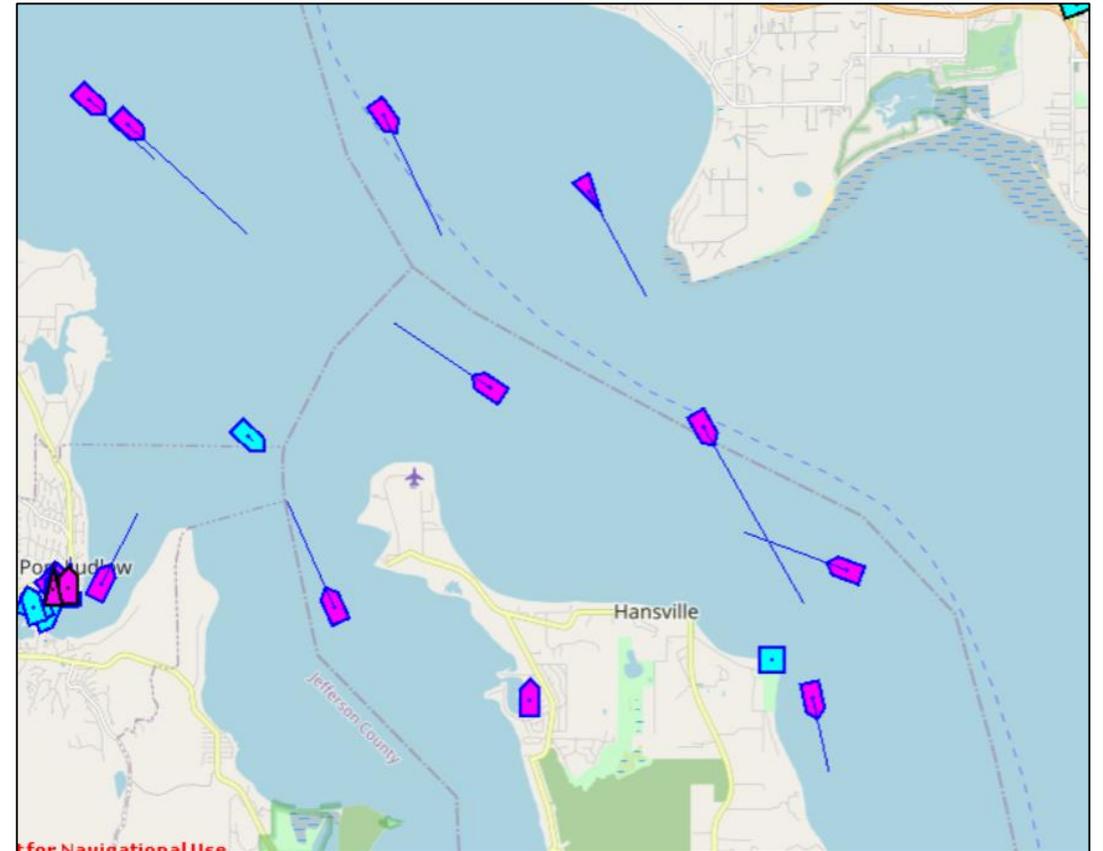
Next Steps: Vessel Encounter Module

Function

- To measure and evaluate relationships between each vessel and shore and other vessels

Purpose

- To identify how nearby is nearby enough to represent possibility of a collision.
- To examine situations that could lead to collisions and powered groundings.



Upcoming events



- February 10th, 2021 -- 1 pm to 3 pm**
- Presentation on Vessel Encounter Module

Contact Info

JD Ross Leahy

Maritime Risk Modeling Specialist
Prevention Section

Spill Prevention, Preparedness, and
Response Program

jd.leahy@ecy.wa.gov

Work Cell: 425-410-9806





Vessel Trend Synopsis Update

Sara Thompson

January 2021



Contents

1

Background Information

2

Methods Overview

3

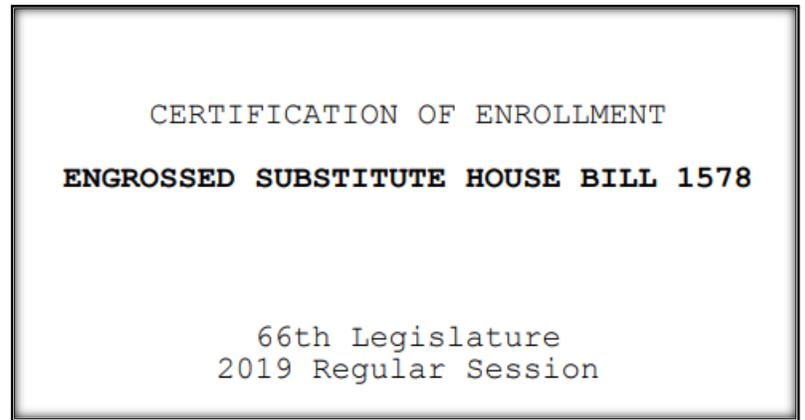
Manual Method Example

4

Next Steps

Background Information

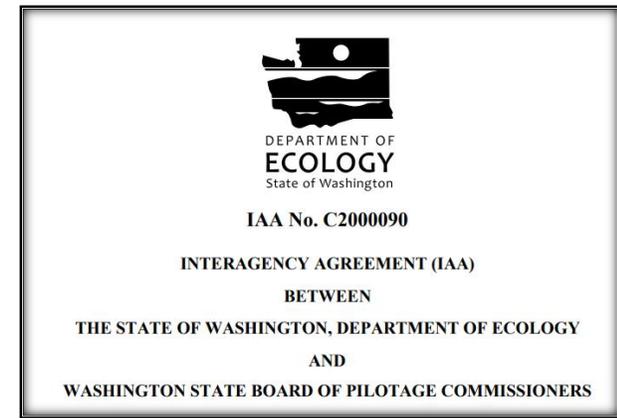
ESHB 1578



- ESHB 1578 Section 3 (1)(d)(ii): “By December 31, 2021, complete a synopsis of changing vessel traffic trends”
- Synopsis will compare a year of pre-bill implementation data to a year of post-bill implementation data

Background Information

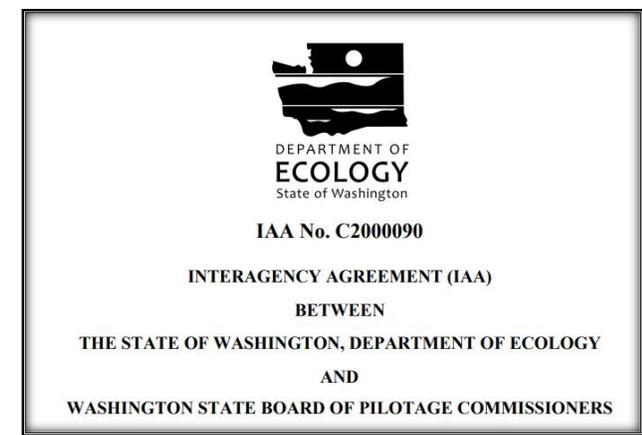
ECY/ BPC Interagency Agreement



- BPC and Ecology signed an Interagency Agreement in 2019 to establish roles, and responsibilities for implementation of ESHB 1578
- IAA addresses roles for the following:
 - Rosario Tug Escort Implementation & Geographic waterway zones identification
 - Risk model development and maintenance
 - Quantitative assessment of the Emergency Response Towing Vessel
 - Analysis of tug escorts
 - Synopsis of changing vessel traffic trends
 - Tug escort rulemaking

Background Information

ECY/ BPC Interagency Agreement



Trend Synopsis Roles:

- **BPC:** Develop scope of changing vessel traffic trends synopsis and submit final synopsis to the legislature.
- **ECOLOGY:** Provide technical assistance to BPC in the development of the scope. Develop report of Synopsis of changing vessel traffic trends.
- **Board:** Vote to approve scope. Review and approve the Synopsis of changing vessel traffic trends.

Background Information

SOW Deliverables

Synopsis of Changing Vessel Traffic Trends

Scope of Work

1. Route selection (Rosario and Haro) and number of vessel transits pre-and post-bill implementation for the following vessel types.
 - a) vessels that newly fall under an escort requirement
 - b) deep draft and tug traffic that have no additional escort requirement
 - c) vessels that are providing bunkering or refueling services
2. Review of tugs engaged in escorting including number of transits, names of vessels, and operating companies.
3. Number of oil transfers per terminal and per anchorage pre- and post-bill implementation.
4. A review of the last 5 years of existing vessel transit data,



Background Information

SOW Timeline: 2021

Synopsis of Changing Vessel Traffic Trends

Scope of Work

- **November 4:** Ecology delivers initial draft synopsis to BPC
- **December 2:** Ecology delivers final draft to BPC
- **December 31:** BPC publishes the Synopsis and submits to the legislature



Deliverables, Methods, and Data Sources

SOW Deliverable	Method	Data Source
Routes for bunkering vessels <ul style="list-style-type: none"> Oil carrying tug/barges over 5,000 DWT that meet the definition of engaged in bunkering 	Manual Method	<ul style="list-style-type: none"> Ecology ANT data Siitech AIS history reviews Common tug and barge pairing spreadsheet List of oil carrying tug/barges over 5,000 DWT
Routes for vessels newly under escort requirement <ul style="list-style-type: none"> ATB over 5,000 DWT Oil carrying tug/barges over 5,000 DWT tankers under 40,000 DWT 		<ul style="list-style-type: none"> Ecology ANT data Siitech AIS history reviews SPIIS arrival and shift data populated by Marine and Merchant Exchange data List of ATBs, oil carrying tug/barges over 5,000 DWT, and tankers <40,000 Common tug and barge pairing spreadsheet
Routes for tug traffic without additional escort requirements <ul style="list-style-type: none"> Oil carrying tug/barges under 5,000 DWT 		<ul style="list-style-type: none"> Ecology ANT data Siitech AIS history reviews List of oil carrying tug/barge under 5,000 DWT Common tug and barge pairing spreadsheet

Deliverables, Methods, and Data Sources

SOW Deliverable	Method	Data Source
Escort tug patterns of activity	Siitech Crossing line method	<ul style="list-style-type: none">List of escort tugs of interestCrossing lines transit counts evaluated using Siitech
Routes for deep draft vessels (tankers >40,000) without additional escort requirements		<ul style="list-style-type: none">Vessels showing as tankers on AIS minus the list of tankers under 40,000 DWTCrossing lines transit counts evaluated using Siitech

Deliverables, Methods, and Data Sources

SOW Deliverable	Method	Data Source
List of tugs engaged in escort activities	Manual Siitech review of escort tugs	<ul style="list-style-type: none">Siitech daily/weekly history review used to create a list of tugs observed conducting escorts
Oil transfers per terminal and per anchorage	ANT data review	<ul style="list-style-type: none">Ecology ANT data
Review of the last 5 years of existing vessel transit data	VEAT data	<ul style="list-style-type: none">Ecology VEAT reports

Manual Method –Barge >5,000 DWT example

1. Review list of oil carrying tug/barges over 5,000 DWT
2. Export ANT history for barge of interest (both as deliverer and receiver)–
Add to Spreadsheet
3. Sort Spreadsheet by date and scrub data of duplicates
4. Identify potential data gaps and use Siitech AIS history to fill gaps – add
AIS data to Spreadsheet
5. Analyze Spreadsheet to determine routes, transit origin and destination,
and bunkering activity. - add columns to document this information



Barge >5,000 DWT example

Step 1 – Review oil carrying tug/barges > 5,000 DWT



BARGE NAME	Company	Deadweight	Barge Official # / IMO
65 ROSES	CENTERLINE	13,368	1223665
ALSEA BAY	Sause	15,242	1234567
ANTARES	Kirby	11,934	1153165
ANTRIL S.	Cook Inlet Tug and Barge (Foss)	10,207	1268451
BETSY ARNTZ	CENTERLINE	5,304	1235165
CAPELLA	Kirby	11,434	D1129491
CASCADES	Kirby	9,995	D990194
COMMENCEMENT BAY	Sause	13,454	1127878
DBL 54	Kirby	9,167	1221438
DBL 55	Kirby	9,167	1229343
DBL 77	Kirby	11,447	1209866
DBL 78	Kirby	12,525	1102126
DBL 79	Kirby	12,102	1209849
DENEB	Kirby	11,931	1179418
DOTTIE	CENTERLINE	7,417	1109007
Double Skin 311 (DS 311)	Vane Brothers	5,752	1252170



Search Vessel Transfer

ANT #:

Company:

Transfer Date: To:

Region:

Street Address:

City of Transfer:

Deliverer:

Receiver:

Barge >5,000 DWT example

Step 2 – Export ANT history for each vessel

DEPARTMENT OF ECOLOGY
State of Washington

Advance Notice of Oil Transfer

Home Vessel Rail Help Logout

Search Vessel Transfer

Search found: 40 records

ANT#	Company	Start Date Time	Duration	Transfer City	Location	Deliverer	Receiver
205891	CLEAN HARBORS	06/30/2020 07:00	14.00	SEATTLE	SEATTLE TERMINAL 46	ANTRIL S	Clean Harbors Inc.
205888	DELTA WESTERN	06/28/2020 22:00	8.00	TACOMA	TACOMA SEAPORT SOUND TERMINAL	ANTRIL S	SeaPort Sound Terminal
204395	DELTA WESTERN	05/12/2020 21:00	12.00	SEATTLE	SEATTLE MAXUM PETROLEUM (PIER 15, EX RAINIER)	ANTRIL S	CASCADES
204028	Clean Harbors Inc.	04/27/2020 14:00	10.00	TACOMA	TACOMA WEYERHAEUSER LOG DOCK	ANTRIL S	Clean Harbors Inc.
203976	Clean Harbors Inc.	04/24/2020 08:00	14.00	TACOMA	TACOMA WEYERHAEUSER LOG DOCK	ANTRIL S	Clean Harbors Inc.
203206	DELTA WESTERN	03/25/2020 22:00	6.00	TACOMA	TACOMA SEAPORT SOUND TERMINAL	ANTRIL S	SeaPort Sound Terminal
201904	TIDEWATER TRANSPORTATION AND TERMINALS	02/13/2020 06:00	8.00	VANCOUVER	VANCOUVER TIDEWATER INDUSTRIAL CENTER	ANTRIL S	TRI-CITIES VOYAGER
201662	COOK INLET TUG AND BARGE	02/05/2020 15:00	3.00	PORT ANGELES	Anchor - PORT ANGELES	ANTRIL S	Earl W Redd



Barge >5,000 DWT example

Step 2 – Export ANT history for each vessel



ANT#	Reporting	Company	Start Date Time	Duration	Transfer C	StreetAddr	Location	Deliverer T	Deliverer	Receiver T	Receiver	Transfer T	Product	Quantity(C
205891	Derek Hen	CLEAN HA	6/30/2020 7:00	14	SEATTLE	401 Alaska	SEATTLE T	Vessel	ANTRIL S	Mobile	Clean Hark	Vacuum	GASOLINE	10000
205888	Rebecca A	DELTA WE	6/28/2020 22:00	8	TACOMA	2628 Mari	TACOMA S	Vessel	ANTRIL S	Facility	SeaPort Sc	Cargo	DIESEL LO	1680000
204395	Rebecca A	DELTA WE	5/12/2020 21:00	12	SEATTLE	1711 13TH	SEATTLE M	Vessel	ANTRIL S	Vessel	CASCADES	Cargo	JET FUEL/H	2520000
204028	Derek Hen	Clean Hark	4/27/2020 14:00	10	TACOMA	3401 Taylc	TACOMA V	Vessel	ANTRIL S	Facility	Clean Hark	Vacuum	GASOLINE	3000
203976	Derek Hen	Clean Hark	4/24/2020 8:00	14	TACOMA	3401 Taylc	TACOMA V	Vessel	ANTRIL S	Facility	Clean Hark	Vacuum	GASOLINE	6000
203206	Rebecca A	DELTA WE	3/25/2020 22:00	6	TACOMA	2628 Mari	TACOMA S	Vessel	ANTRIL S	Facility	SeaPort Sc	Cargo	DIESEL LO	924000
201904	Tidewater	TIDEWATE	2/13/2020 6:00	8	VANCOUV	6305 NW I	VANCOUV	Vessel	ANTRIL S	Vessel	TRI-CITIES	Lightering	DIESEL LO	420000
201662	Rebecca A	COOK INLE	2/5/2020 15:00	3	PORT ANGELES		Anchor - P	Vessel	ANTRIL S	Vessel	Earl W Rec	Fueling	DIESEL LO	50000
198272	Rebecca A	DELTA WE	10/17/2019 22:00	14	TACOMA	2628 Mari	TACOMA S	Vessel	ANTRIL S	Facility	SeaPort Sc	Cargo	DIESEL LO	1344000
198221	Shane Irey	U.S. Oil &	10/17/2019 4:00	15	TACOMA	3001 Mars	TACOMA U	Vessel	ANTRIL S	Facility	U.S. Oil &	Cargo	DIESEL LO	1470000
197191	Rebecca A	DELTA WE	9/18/2019 5:00	5	TACOMA	2628 Mari	TACOMA S	Vessel	ANTRIL S	Facility	SeaPort Sc	Cargo	DIESEL LO	630000
193988	Shane Irey	U.S. Oil &	7/8/2019 10:00	2	TACOMA	3001 Mars	TACOMA U	Vessel	ANTRIL S	Facility	U.S. Oil &	Cargo	WASTE OIL	3000
193986	Shane Irey	U.S. Oil &	7/7/2019 18:00	14	TACOMA	3001 Mars	TACOMA U	Vessel	ANTRIL S	Facility	U.S. Oil &	Cargo	DIESEL/M/	1050000
194051	Rebecca A	DELTA WE	7/6/2019 23:59	16	TACOMA	2628 Mari	TACOMA S	Vessel	ANTRIL S	Facility	SeaPort Sc	Cargo	DIESEL LO	1680000

Barge >5,000 DWT example

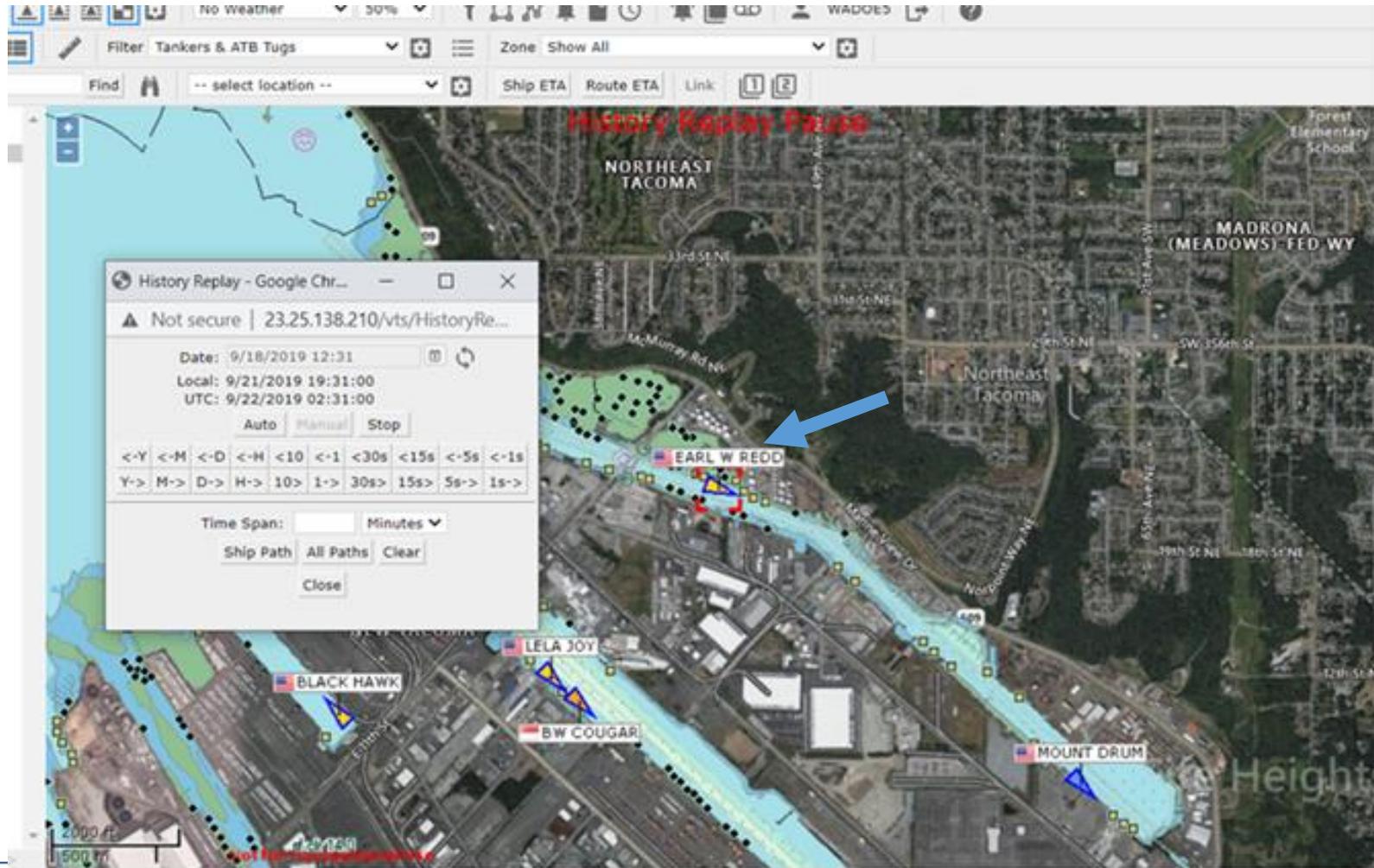
Step 3 – Sort data by date

INFO source	Barge/Tug	Date	Transfer Receiver	Transfer Type	Product Transferred	Quantity Transferred (Gallons)
ANT	ANTRIL S/EARL W REDD	9/18/2019	SeaPort Sound Terminal	Cargo	DIESEL LOW SULPHUR (ULSD)	630,900
ANT	ANTRIL S/EARL W REDD	9/23/2019	ANTRIL S	Cargo	JET FUEL/KEROSENE	1,261,800
ANT	ANTRIL S/EARL W REDD	10/17/2019	U.S. Oil & Refining	Cargo	DIESEL LOW SULPHUR (ULSD)	1,472,100
ANT	ANTRIL S/EARL W REDD	10/17/2019	SeaPort Sound Terminal	Cargo	DIESEL LOW SULPHUR (ULSD)	1,345,920
ANT	ANTRIL S/EARL W REDD	10/29/2019	ANTRIL S	Cargo	JET FUEL/KEROSENE	420,600



Barge >5,000 DWT example

Step 4– ID gaps & use Siitech AIS history to fill



Barge >5,000 DWT example

Step 5 – Analyze Spreadsheet

- Visual is a sample only and is not vetted results -

INFO source	Tug/Barge	Date	Transit ORIGIN	Transit DESTINATION	ROSARIO Transit	HARO Transit	Transfer Deliverer
AIS	ANTRIL S/EARL W REDD	9/12/2019	VAN BC	OCEAN	0	1	Transit/No Transfer
AIS	ANTRIL S/EARL W REDD	9/17/2019	OCEAN	VAN BC	0	1	Transit/No Transfer
AIS	ANTRIL S/EARL W REDD	9/18/2019	VAN BC	TACOMA	1	0	Transit/No Transfer
ANT	ANTRIL S/EARL W REDD	9/18/2019	TACOMA	TACOMA	0	0	ANTRIL S
AIS	ANTRIL S/EARL W REDD	9/23/2019	TACOMA	ANACORTES	1	0	Transit/No Transfer
ANT	ANTRIL S/EARL W REDD	9/23/2019	ANACORTES	ANACORTES	0	0	Shell Puget Sound Refinery
AIS	ANTRIL S/EARL W REDD	9/24/2019	ANACORTES	ANCHOR VENDОВI	0	0	Transit/No Transfer
AIS	ANTRIL S/EARL W REDD	9/25/2019	ANCHOR VENDОВI	ALASKA	0	0	Transit/No Transfer
AIS	ANTRIL S/EARL W REDD	10/14/2019	ALASKA	VAN BC	0	0	Transit/No Transfer
AIS	ANTRIL S/EARL W REDD	10/17/2019	VAN BC	TACOMA	1	0	Transit/No Transfer
ANT	ANTRIL S/EARL W REDD	10/17/2019	TACOMA	TACOMA	0	0	ANTRIL S
ANT	ANTRIL S/EARL W REDD	10/17/2019	TACOMA	TACOMA	0	0	ANTRIL S
AIS	ANTRIL S/EARL W REDD	10/19/2019	TACOMA	VAN BC	1	0	Transit/No Transfer
AIS	ANTRIL S/EARL W REDD	10/23/2019	VAN BC	OCEAN	0	1	Transit/No Transfer
AIS	ANTRIL S/EARL W REDD	10/28/2019	OCEAN	ANCHOR VENDОВI	1	0	Transit/No Transfer
AIS	ANTRIL S/EARL W REDD	10/29/2019	ANCHOR VENDОВI	ANACORTES	0	0	Transit/No Transfer
ANT	ANTRIL S/EARL W REDD	10/29/2019	ANACORTES	ANACORTES	0	0	Shell Puget Sound Refinery



Next Steps

- **Manual Method tasks:**
 - Continue quality review of Year 1 data
 - Begin processing Year 2 data
 - Develop preliminary results charts for next BPC meeting

- **Crossing Line tasks:**
 - Develop and test Siitech crossing line method
 - Select crossing lines of interest
 - Run crossing line analysis for Year 1 for deep draft vessels and escort tugs

- **Other tasks:**
 - Begin developing gathering and processing information on tugs engaged in escorts, oil transfer trends, and 5 years of vessel transit data

SOW Deliverable	Method
Routes for bunkering vessels <ul style="list-style-type: none"> • Oil carrying tug/barges over 5,000 DWT engaged in bunkering 	Manual Method
Routes for vessels newly under escort <ul style="list-style-type: none"> • ATB> 5,000 DWT • Oil carrying tug/barges > 5,000 DWT • tankers under 40,000 DWT 	
Routes for tug traffic without additional escort requirements <ul style="list-style-type: none"> • Oil carrying tug/barges < 5,000 DWT 	
Escort tug patterns of activity	Siitech Crossing line method
Routes for deep draft vessels (tankers >40,000) without additional escort requirements	
List of tugs engaged in escort activities	Manual Siitech Review of escort tugs
Oil transfers per terminal and per anchorage	ANT data review
Review of the last 5 years of existing vessel transit data	VEAT data



Vessel Trend Synopsis: Deliverables, Methods, and Data Sources

SOW Deliverable	Method	Data Source
Routes for bunkering vessels <ul style="list-style-type: none"> Oil carrying tug/barges over 5,000 DWT that meet the definition of engaged in bunkering 	Manual Method	<ul style="list-style-type: none"> Ecology ANT data Siitech AIS history reviews Common tug and barge pairing spreadsheet List of oil carrying tug/barges over 5,000 DWT
Routes for vessels newly under escort requirement <ul style="list-style-type: none"> ATB over 5,000 DWT Oil carrying tug/barges over 5,000 DWT Tankers under 40,000 DWT 		<ul style="list-style-type: none"> Ecology ANT data Siitech AIS history reviews SPIIS arrival and shift data populated by Marine and Merchant Exchange data List of ATBs, oil carrying tug/barges over 5,000 DWT, and Tankers <40,000 DWT Common tug and barge pairing spreadsheet
Routes for tug traffic without additional escort requirements <ul style="list-style-type: none"> Oil carrying tug/barges under 5,000 DWT 		<ul style="list-style-type: none"> Ecology ANT data Siitech AIS history reviews List of oil carrying tug/barge under 5,000 DWT Common tug and barge pairing spreadsheet
Escort tug patterns of activity	Siitech Crossing line method	<ul style="list-style-type: none"> List of escort tugs of interest Crossing lines transit counts evaluated using Siitech
Routes for deep draft vessels (tankers >40,000 DWT) without additional escort requirements		<ul style="list-style-type: none"> Vessels showing as tankers on AIS minus the list of tankers under 40,000 DWT Crossing lines transit counts evaluated using Siitech
List of tugs engaged in escort activities	Manual Siitech review	<ul style="list-style-type: none"> Siitech daily/weekly history review used to create a list of tugs observed conducting escorts
Oil transfers per terminal and per anchorage	ANT data review	<ul style="list-style-type: none"> Ecology ANT data
Review of the last 5 years of existing vessel transit data	VEAT data review	<ul style="list-style-type: none"> Ecology VEAT reports