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WAC 363-116-065 Setting the Number of Pilots in the Puget Sound Pilotage District

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Commissioner and Interested Party Q&A Transcript

Puget Sound Pilots (PSP) Submittal Dated May 6, 2019

PSP Representative: Blair Fassburg, Williams Kastner LLC

Chair Tonn: *I spent a fair amount of time reading the portion on the linear progression pages 39-42, and there is a huge leap between the models and table 8 on page 42. I cannot get from the models to page 42.*

B. Fassburg: *Dr. Flynn-Evans can explain better, but I think I understand what happened. I expect that like some of the folks from the pilots that received the information, there is a question of what is a linear progression analysis and I expect that you know based on how you asked the question. And I will attempt to answer on a very high level. Basically, these are statistical analyses and data sets and what they do is they look at relationships between data sets to see if there is a sufficient correlation between them, that you can use one to predict the other. When you compile multiple data sets and compare relationships between data sets, you can build a model that helps predict an outcome based on one of those variables.*

So here what they attempted to do was answer how many pilots are needed to meet the number of vessel movements, the number of trainings, repositionings, comp days used, and meetings based on the 2018 data. When they did that they come up with in this table the scientific figures and data coefficients and those tell how strong a predictor each category is. And when they compile them, they end up with a range. That range is high to low. High is based on a high traffic day and the low is based on a low traffic day. So, you see on table 7 there are 3 numbers in the totals. The number on the far left is the prediction estimate the number that comes up when they enter all the inputs that they're trying to hold steady based on the 2018 data to get the answer for the variable they're trying to answer, the number of pilots. This is how many pilots it takes on duty to serve vessels on one day. Not the answer to how many pilots you need. And then the lower end of the range is that 95% confidence interval. "Estimate Lower" is what the column heading is. That is on your lowest traffic day. How many pilots do you need on that day. And then the upper estimate in on your highest traffic day. How many pilots do you need on duty for that day. And so using those three they have both a range and a number they're going to use for pilots on duty, 26.33. They essentially double that plus a little bit more. If you look on the sentence right below the explanation for table 8, it says the total number of pilots needed including earned time off is 63, which is the amount

that is table 7 plus a little bit more. What's in table 7 is basically a doubling of what's in the linear regression model, 53, plus conditional numbers. I'll explain those. The compensation day coverage 4 is a number they are recommending in order to manage call-backs. They recognize the number of pilots needed to cover vessel assignments does not do anything to draw down the huge number of call-backs, which are over 3,000 right now. What they're suggesting is that in order to reduce that huge number of call-backs you need additional licensed pilots. That way pilots who have earned call-backs can burn them without risking having no pilots available to cover assignments. So that 4 is that cushion to help burn accumulated call-backs. And 2 additional work coverage I believe, is the number they came up with, in order to cover the rest rule change. Because if you read this the way I have, what they explain was when they did their linear regression modeling, it didn't work to address the 10-hour rest rule change because there wasn't enough data. What they've estimated based on the hours of rest the pilots had versus the amount of rest the pilots need, is 2 additional pilots to cover just that change. Then you add 1 for the president, it comes to the total of 60. And then they have to add for the fact that doubling the pilots you need on a single day on watch isn't the number of pilots you need on the roster to have that number on that day. Because, as I explained during my calendar presentation, during each calendar cycle you have approximately 1/11 of the pilots on their earned time off. So rather than 1/2 of the pilots doubling to get to the number you need, you actually have 5/11 of the pilots working on any given day.

Chair Tonn: So, if you look at page 41 on Table 7 under totals, the prediction estimate at 26.33 is doubled and then rounded up to 53.

B. Fassburg: Correct.

Chair Tonn: Okay, then the comp day average on page 42 on Table 8 is to reduce the number of comp days to begin to take down the number of comp days. What's the rate of taking them down?

B. Fassburg: It depends on whether you add 2 or 4, but she actually, I believe, addresses that on page 38. I don't know that she expressed the actual burn rate, but I believe what she said is that if you use 4 there is a period of time in which you'd burn, and frankly I don't have the answer as to how long it is, but I know it's still quite a few years.

Comm. Kirtley: It looks like on figure 20, correct me if this interpretation is not right, the light gray line was the scenario of 4 additional pilots...

B. Fassburg: I believe that's correct.

Comm. Kirtley: So, a decline basically would show the two years between 2019-2021 they're be a steep decline in that faint comp days to even below that.

B. Fassburg: Correct.

Comm. Krombeen: So, just a silly question here, there is a declining amount of shipping, right? And an increasing number of pilots. How are we going to compensate for that?

B. Fassburg: Well, that isn't actually part of this process. That's something for the UTC to answer.

Comm. Krombeen: I know, but it's part of my process.

Comm. Scragg: *Isn't there a Target Assignment Level number in here that would reflect the number of assignments in a year?*

B. Fassburg: *Sure. One of the ways we look at it is, the most helpful piece of info in here isn't just the number of pilots that would be needed to handle the assignment load safely and without risking an accident as a result of fatigue, is that by taking that and looking at the current pilot roster we can come up, or I'm sorry, the number of projected pilots needed and the 2018 workload, we know what the number of assignments per pilot would have been required. So in the future if we use that number as an assignment level, should the vessel traffic decline below the level used in this model, then we would reduce the number of pilots needed based on the TAL. They recommended, based on the number of pilots projected minus the president that level be at 118. Obviously, that's a decrease from the current 145, but historically the pilot numbers have been set tied to the TAL, more or less. And so by adopting an assignment level that same raising and lowering based on vessel traffic could be done in the future.*

Chair Tonn: *Going back to my question, I wasn't quite done. So, this model on figure 20 assumes 47 pilots as compared to our authorized number of 52 or on average the last year, 50. How do we get from the number 50 that was in the audit to this number of 47? Page 38. It seems like we have a 3-pilot discrepancy right there.*

B. Fassburg: *I believe what they were saying was we only had the equivalent of 47 pilots working last year as a result of injuries and retirements. So, I believe they modeled this based on how many people were actually working.*

Chair Tonn: *Right. But with 50 actually working through the year according to the audit, how do the 47 and the 50 tie out to each other? And then, moving forward, is this model based on 47 pilots or how many is it based on?*

B. Fassburg: *Sure, so what they did is when they came up with how many pilots would be needed, they had to base their results on the actual results of 2018, so what they looked at was work being performed by the pilots that were actually working. And what they're saying is that's how many, based on this data on average, were actually working. So that just explains their analysis, not how many are actually needed. So they're not saying that in this year you should do anything based on the number 47. They're just explaining they number that they believe would have been required in order to do this work under new rest rules, reducing call-backs, and adopting some of these additional fatigue counter measures they recommend.*

J. Bever: *So, if I can clarify what you're asking, the audit presentation said 50.3...*

Chair Tonn: *Right.*

J. Bever: *And so you're wondering why the audit says 50.3 and the report says 47?*

B. Fassburg: *So if you're referring to the audit for financials, that's how many pilots received distribution. Pilots who were on major medical received distribution but they were not piloting vessels.*

Chair Tonn: *So, can we verify that there were 47 on average for the year versus the 50?*

B. Fassburg: *Well, I can tell you that I've actually looked at the numbers that came from BPC data. And I believe there's a spreadsheet that is attached as Exhibit 3. There is a set of rows that shows the data that were used to compile a graph. It says available pilots. And this is just using BPC data. The annual average for 2018 was 47.86.*

Chair Tonn: *Right. That rounds to 48.*

B. Fassburg: *Sure. And they maybe have...this is probably a better question for Dr. Flynn-Evans. But, they looked at two kinds of years: one was a 2018 as a calendar year and one was a trailing 12 period when they first started. It was October 2017 to October 2018...*

Chair Tonn: *Which would make the average higher because it was in the 50's during 2017.*

B. Fassburg: *That may be the case. But, I think if you're looking for clarification on that discrepancy, that's probably a better reserved for her.*

Chair Tonn: *I think it would be really good if she goes through this model when she does her presentation in July.*

J. Bever: *I want to remind everyone that if you're trying to compare the numbers in our reports to this report, we put everything in calendar year, not trailing 12. So, they're not going to match up.*

Comm. Krombeen: *Is there a reason why it's only 47.8? Do we know that? What is it compared to other years?*

B. Fassburg: *Well, you have some people who retired and some on major medical, and we had some new pilots. So when you're looking at how many pilots were available to pilot, not injured, not retired.*

Comm. Farrell: *So I have a quick question on this...on page 17 of your summary, you're saying the recommendation is for 2 additional pilots to reduce the call-back days, the comp days, and a total of 63 pilots. On the table you reference later in the document, the 63 includes 4 pilots to reduce the call-backs.*

B. Fassburg: *That was a misstatement on my part.*

Comm. Farrell: *So which one?*

B. Fassburg: *Their recommendation is 4. My narrative was a mistake.*

Comm. Farrell: *So you're recommending 4 as well?*

B. Fassburg: *Correct.*

Comm. Kirtley: *So the 2, I thought I heard you say, was tied to the additional work hour reduction coverage. Is that the difference between the 8 hour rest rule and the 10 hour rest rule?*

B. Fassburg: *Right. They explained that it couldn't be modeled in the linear progression model because it just didn't work, they didn't have enough data. They only had less than 3 months of dispatch data that covered the 10 hour rule because the switch was in October of 2018.*

Comm. Kirtley: *What was most confusing for me was references to adjustments made based on fatigue risk management recommendations. So that the modelers took it upon themselves to make adjustments on the data, whether you want to call it forecasting or prediction based on these recommendations, I interpreted that recommendations coming from section 6 (recorder battery replacement needed. Lost audio briefly.)*

B. Fassburg: *My understanding is that what they ultimately did was they used two figures on page 41, Table 7, found at the bottom. There are three rows where it says > 60 h work/week, >12 h work/day and MHS (multiple harbor shifts) >13 h. I believe that is how the linear regression model treated recommendations. There's an input of greater than 0 for each of these per day that's saying in the future that's how many pilots you need avoid exceeding 60 hours in a work week of on duty working time. And this is 0, the number of pilots needed to avoid exceeding 12 hour work days, which is all know was one of the recommendations and then 0 is the number of times a MHS pilot would exceed 13 hours, which is the new statutory path.*

Comm. Kirtley: *So, in Table 5, those bottom 3 rows are not all 0's. So, then you bump up your number of calls, pilots on duty taking comp days to go from table 5 to table 6 and that helps 0 out those bottom 3 rows, which was the objective in the modeling, to reach a consistent...*

B. Fassburg: *Right. So what they wanted to do, because they recommend we reduce the number of call-backs which are contrary to fatigue counter measures, they want to reduce those. In order to reduce those, they have to be included in the vessel movements. So, what they've done is shifting them from call-back's to vessel movements, which increases the number of on-duty pilots needed. As I discussed, I believe at some length in our submission, the call-back system was created to fill in for having enough pilots. It was designed to (audio muffled). To manage that they want to reduce it from call-back's to on duty pilots, that's covered by one thing. And then these additional fatigue related issues like 60 hours in a week, 13 MHS, and 12 hours in a day are all covered in separate lines. But yes, by zeroing them in these first iterations, Tables 5 and 6, you see different movements of the input and then the final table 7 it shows what they are really recommending. They say 1 call-back every other day is, I believe, the recommendation. And then these other 3 recommendations at the bottom are all treated by putting in an input for a particular number, which in the model then reflects the number of pilots, which is a higher number. Did I answer your question?*

Comm. Kirtley: *We're making progress.*

Comm. Krombeen: *So this is based on days on duty? Being available 24/7? Or is this based on the need for a rest period first? What I'm saying is, if a pilot is called and starts traveling, that takes a certain amount of hours. Or is this based on jobs?*

B. Fassburg: *I'm not sure I understand your question. What I can tell you is, in terms of travel and its impact on this, they made a recommendation that repositioning, I don't think travel other than repositioning is quite the same duration in time, but what they said is that repositioning has not been treated as assignment time for purposes of rest intervals should be treated as such. So, if you're going to exceed 12 hours in a day as a result of repositioning for followed by an assignment, you shouldn't do that. You should do repositioning and then a rest interval and do an assignment at a later time. Because, what could happen is, and frankly has happened historically, without it being rest rule violation because the rules are written in a way that repositioning is an assignment, a pilot will reposition from Seattle to Port Angeles and then take an assignment. And if that assignment is 6 hours long and they've just traveled 4, now they've worked 10 hours. And if they're assignment is actually 4 hours after their arrival at Port Angeles, now they've worked 14 hours. So, NASA is recommending against that. How that's handled in here, unfortunately, I can't answer.*

Comm. Farrell: *In this analysis, is the only variable in the analysis the number of pilots? Or are there other variables such as number of days on duty as a factor?*

B. Fassburg: *That is not a variable in here but obviously that is something that is within the data set. So, in the 2018 calendar year, the pilots tried to follow their watch schedule. Obviously that's impossible when you don't enough pilots and you have these number of call-backs that they routinely do have to use in order to perform their jobs. But that is in the data set. It isn't a variable.*

Comm. Farrell: *Were there enough pilots in prior years?*

B. Fassburg: *In my opinion, no. We've been accumulating call-back's for a very long time.*

Comm. Farrell: *What was the last year there was enough pilots?*

B. Fassburg: *That's a good questions. I'm sure there have been years where there have been enough pilots historically. The data we've looked at has had an increase in call-backs since 2008. So, it's been longer than that since we've had enough pilots to avoid an accumulation of call-backs.*

Comm. Farrell: *Are you talking about net?*

B. Fassburg: *Net. Now what I will say about that, sometimes the pilots have done that to themselves. When you have fewer pilots but you feel like you can do that job, the revenue goes up. And that was decision that may have been made, I know in the past they sometimes requested the number to go down. But that was before Dr. Czeisler's recommendations. I bet you there are individual pilots who are still resistant to this idea. They think we're tough, we can keep working. We don't need that additional rest. But that's how people have fatigue related accidents. They don't know about their own fatigue. People are not individually well-suited at judging their own fatigue.*

Comm. Anthony: *What was a fair number of pilots in the past has changed dramatically because of two rules that were implementing since that time.*

Comm. Scragg: *It was 6 on the Seattle side, 7 on the PA side up until a couple of years ago.*

Comm. Farrell: *What does that mean?*

Comm. Scragg: *It means you had to have 6 hours of rest between assignments on this side. So, if I came from PA on a ship to Seattle and had 6 hours of rest, I could be called again. We changed that to 8, independently, PSP did. And now, it's been recognized that 10 is the number that should used.*

Comm. Farrell: *What's the difference between the two sides. I didn't get that part?*

Comm. Scragg: *Oh, the other side, because it's Port Angeles, there's no travel involved, you're right there at the station.*

Comm. Farrell: *So if you waited there for your next assignment, it would be a shorter amount of time?*

Comm. Scragg: *Actually, it was 7.*

Comm. Anthony: *They assumed people got home faster than their check-in time on this side. On that side you're ready to go right back to work...(muffled audio – discussion of the when the 3 and out rule went into place, which was November of 2015).*

Comm. Thompson: *I thought it was interesting when you mentioned the goal of modeling was to bring the call-backs to one every other day...*

B. Fassburg: *I believe that right...*

Comm. Thompson: *Do you know where that standard came from?*

B. Fassburg: *I can't say that there was any precise scientific method to that. If you staffed to the peak so that you literally never generated any callbacks at all, then most of the days you're going to have too many pilots and we don't think that's the best way to do that. If you have a callback every other day and you have enough pilots then you can still have an opportunity to take call-back days on your duty cycle and burn them at a rate hopefully faster than they are being created. And, as I reflected in the chart, it is possible to do that. In fact, in slow months, even in recent history, there's been a significant shortage, in my opinion, of pilots. Even in 2018 they were able to have months with a burn of call-back days on average.*

Comm. Kirtley: *Can we talk about group size?*

B. Fassburg: *The groups of pilots that are on watch?*

Comm. Kirtley: *Yeah.*

B. Fassburg: *Sure.*

Comm. Kirtley: *I get that there's 11 groups: 5 are on duty at once, another 5 are off duty, and the remaining ones are (muffled audio). Is there additional vacation? If you take 52 licenses, subtract a president and divide that by 11, the average is 4.6. And that makes sense. The report, the Puget Sound Pilots report, Blair's report, says that there's 4-5 in a group. And then, in the NASA report, it seemed that there was an understanding that there was 2-3 in a group. And so, that multiplier to account for that extra 11th group is .055 to add in 2 or 3? So maybe you can help me understand the difference between the 4-5 and the 2-3?*

B. Fassburg: *I actually don't understand the difference. I question whether they included enough additional pilots to cover the earned time off. I haven't had the opportunity to ask the question myself so I don't have an answer. But I think if you ask Dr. Flynn-Evans, she can help.*

Comm. Kirtley: *Okay. So yes, I think I would like Dr. Flynn-Evans to help in understanding the estimation of 2-3 in a group, because that seems low. Then very conveniently we have our Activity Report from April. So, we have...okay, so a period is two weeks? For like every 14 days...*

B. Fassburg: *The next group comes on approximately every 14 days.*

Comm. Kirtley: *Yeah, so these dates April 2-April 9, that's one week. I would have expected it to say April 2-April 16 and then April 16-April 30.*

B. Fassburg: *So is your question why is it dated that way on the Activity Report?*

Comm. Kirtley: *Yes. So is there...is this right?*

E. vonBrandenfels: *That is right. That's a week that they get, then it rolls over to the next watch. Then they get their respite and then they go to the following two-week cycle.*

Comm. Kirtley: *So wait, why aren't the starting and end dates 14 days apart?*

E. vonBrandenfels: *They get the 7 days for the 7 days within that time and then they roll to the next watch. That way their watches roll.*

B. Fassburg: *I think her question is a little different, I might be able to answer. I can't tell you why it's dated that way on the Activity Report. The earned time off period, you're correct, is 14 days. And I don't know why internally it would be described differently the Activity Report. But those three pilots (audio unclear) following their duty period of 15 days. They then go into their earned time off as of the 14 days.*

Comm. Krombeen: *I would still like to get a better explanation of the model. I am going through a quick calculation myself: we have 50 pilots, they do 2 weeks per month, they do 7400 movements a year. If each does just one movement a day that they are on, they are above that already. Even if you take 11 months, because they can take two week off of vacation, on duty time then the whole month is wasted, there's still enough for one assignment per day for 2 weeks. So there must be another way to get to this because there isn't. Even with the current rest periods, you must be able to do one assignment per day?*

Comm. Scragg: *No.*

Comm. Anthony: *In a perfect world yes and a perfect dispatch you'd role right out after rest to an assignment, but there's not always an assignment available.*

Comm. Krombeen: *We are very rigid...*

Comm. Anthony: *You as a cruise ship are...*

Comm. Krombeen: *No, 15/13, that's what I hear. There's never been a look at hey, we have this cruise season coming up. Maybe we should try to accommodate that.*

Comm. Anthony: *We did accommodate that with the PPW where we work an extra weekend each to cover that. All of us work 3 extra days to cover cruise season.*

Comm. Scragg: *Is this a question for the report?*

Comm. Krombeen: *Well explain that to me because I see almost 8,000 assignments with one month completely off, 50 pilots, and we are at 7,400. And now we're saying we need more pilots because we are compensating for all kinds of irregularities. And I don't understand 100% yet.*

B. Fassburg: *I'd like to answer your question, but I'd have to understand your point first. I haven't broken down the math to be able to address and present to you say this number of assignments should be one per day. But what I do know is the vessels don't line up to the pilots schedule. The pilots are doing their best to line up for the vessel's schedule. For the cruise ships for the most part they're on time. But I think we know, even in Captain Moore's submission, some of the survey answers indicated that those scheduled ships have a buffer time and they have frequent delays, some 2 hours each. When you try to look at what pilot is going to take that next assignment and try to line them up in advance as neatly and efficiently as you can, it doesn't always work because if they are delayed by 2 hours that pilot is going to take their assignment 2 hours later than they would have. Now their rest interval ends 2 hours later than it otherwise would have and if you were planning on using them for another vessel that was going to arrive the next time, now they're not going to make that. Now you need a different pilot to cover that. Well that pilot may have been in the dispatch, thought of being a pilot for a*

different vessel and now he or she's not available for that. It cascades in dominos constantly.

Comm. Krombeen: *I understand that. I've been long enough in the business to realize that ETA can be varied. I don't buy that more than 25% in this day and age is that way. We have container ships that are liners, we have grain ships that are liners, we have cruise ships that are liners, and they come pretty close to the ETA and leave close to the ETD because otherwise the company doesn't make money. Right? So, I would like to understand where the big differences are before I can make an educated decision. Because honestly, the numbers still don't add up for me.*

B. Fassburg: *With respect to your comment about they're pretty close, my understanding is that there were 15,000 order time changes in 2018. So if they're coming pretty close with 7,000 vessels, that's 2 per assignment, so for every assignment there was an order change twice.*

Comm. Krombeen: *Do we have the data, do we have a graph of that to learn another perspective?*

B. Fassburg: *I think we can present that. It has not yet been presented.*

Comm. Krombeen: *That would be helpful.*

E. vonBrandenfels: *We'd be happy to.*

Chair Tonn: *Are there other questions right now for PSP?*

Comm. Farrell: *Yeah. One of the issues that you raised is about vessel delays and I had some questions about those. How much notification is given to a vessel when a delay is anticipated? In other words, we know you've got a crunch with a number of pilots available. Are you then proactively contacting that vessel and saying hey, we're going to be 2 hours late?*

B. Fassburg: *So, my understanding on that is that the dispatchers are actually monitoring the vessels in real time and they're trying to track them. And they do have a little bit of advanced notice on that. But when you have more vessel assignments than you have pilots on duty, especially, then it becomes tricky because then they're going into their off-duty pilot roster, some of whom are not available due to rest rules because they just came off watch, some who may have said they're not available for piloting off-duty, and then you have to see which pilot is willing to come back and take that job. It creates complications especially during times of a surge. Yes they monitor that constantly.*

Comm. Farrell: *So from the time that...you've got a bunch of vessels to serve and pilots to match up, how much advanced warning do you have that you're not going to match up?*

B. Fassburg: *Well that's a good question for the dispatchers. I don't have the answer to how much time they have.*

E. vonBrandenfels: *It's usually about 24 hours that they can see. Like right now we're in the middle of a surge today and there's probably 8 call-backs for this 24 hour period. So real need for tomorrow, addressing what possible delays might be incurred tomorrow are what we're looking at and what those dispatchers are now communicating with the shipping agents about, saying you know, what's your next port, are you going to anchor, they're trying to sorta come up with the least affected bulker going to anchor or waiting, or going to sea so that they're able to make up that time, if it's that sensitive. So there's a lot of consideration that goes into it. It's usually done, probably in 24 hours.*

Comm. Farrell: *So the 24 hour window is the time that they are trying to find someone to call-back, so when they get that done then you know whether or not you're going to have a delay...*

E. vonBrandenfels: *It's always pretty fluid so that's probably a pretty good guess. It isn't usually the day of the assignment, the day of the 34 jobs or the 30 jobs. It's usually the next day that's followed by 18 or 25 that just don't hit right because there were assignments that needed to be covered by people who were in the rotation who were resting as a part of their rotation or they can't because they just got off a call-back job and they can't because of their rest. We've had pilots basically go 3 and out with call-back assignments because they worked 3 nights in a row. Those pilots can't be called back so they're unavailable.*

Comm. Farrell: *So when you have a...if you can give notification to a non-scheduled vessel, a bulker for example, how much time would they need to accommodate? In other words, say hey look we know we're going to be delayed by 2 hours or 4 hours. We're just going to slow down and save some fuel. Is there enough time to do that?*

E. vonBrandenfels: *We tend to delay the outbound assignments more often. They're the ones who more often than not delay us. Their estimated departure times are usually jumping around quite a bit anyway and sometimes they'll land on other departure times that don't allow them to make that departure anyway because they're both trying to use the same limited amount of tugs or the same waterway. So, generally the inbound jobs aren't delayed as much as the outbound jobs. That's how it's easier to get that number 17 ½ hours because we can say well we want to leave at 1800 but we ended up leaving at 1930 because that was the next available rested pilot. Whereas on an inbound job it's less effect on the change (sound muffled).*

Comm. Farrell: *So if it's a lesser effect on the inbound why wouldn't you push the delays that way?*

E. vonBrandenfels: *I think they push them wherever they can. A lot of times we'll get...there isn't a 96 hour notice of arrival time for coming down from Canada. And a lot of those jobs are ordered and then they don't happen. A lot of times we'll have a number of pilots out there waiting to bring in jobs that don't happen that dilute the pilot assets on the Seattle side. That's another reason the outbound jobs get delayed more often. There's no real exact science to it because sometimes the delays, they think are going to happen, and then they delay themselves for another reason*

Comm. Morrell: *But isn't there a minimum of 24-hours' notice?*

E. vonBrandenfels: *It's 12. For us, for ordering time it's 12.*

M. Moore: *It's 24 for the NOA.*

(multiple brief conversations occurred regarding 12 vs. 24)

Comm. Morrell: *Why is the study limited to 2018 when it was such a strange year?*

B. Fassburg: *Well, the legality is that it was in part a recommendation from Dave and I because we practice law at the UTC and the UTC typically tries to project forward based on the most recent year. They will use an uneven year, the trailing 12 as you like to call it, if they need to. But in this instance, the most relative data was actually calendar year. If you recall they started earlier with the trailing 12 period and we asked them to update to a calendar year, 2018.*

Comm. Morrell: *But it just seemed like it was an odd year in terms of call-backs, retirees, and unfit for duties. So, it just sort of lined itself up for your study.*

B. Fassburg: *Sure, but the linear progression analysis considers those things. What's worth looking at is the relationship between the available people and vessel assignments. The correlations don't change necessarily based on an odd year versus a different year. It's the relationships that predict how many pilots you need.*

Comm. Morrell: *Okay. Did they consider any other strategy other than just adding pilots to managing fatigue?*

B. Fassburg: *Managing fatigue? Well I don't think that they considered that because we didn't ask them to recommend for example an appointment system. I think they would probably prefer we use an appointment system. I don't think anyone else would.*

Comm. Farrell: *Why is that?*

B. Fassburg: *Well, I'm sure the shippers could tell you as well as I could, but my understanding is that if we used an appointment system they will have, on their end, never ending delays. Under an appointment system, the pilot will always be on time for the order, but their order will be based on the time that the pilot is available not when a ship needs a pilot. So if the vessels, let's just use Port Angeles for example, if we had an appointment system and all the vessels were lined up in slots, we had an 1000, an 1100, a noon and so on, slot for pilot availability, we have vessels that arrive more clustered than that and each of them would have to wait their turn. If we had 3 ships arrive in a relatively short span and we had a 1 hour gap in our appointments, the 2nd vessel would probably be delayed by 30 minutes, the 2nd one an hour and a half, and so on. And it would cascade. They'd be in line and that'd be no time at all, pilots would be on time for a vessel that had been waiting for 2 days.*

J. Bever: *VTS has explained that they are not interested in having that system.*

Comm. Morrell: *So, the study was more or less done around today's inefficiencies and not with the thought of process improvement of how we can get better at dispatching and scheduling? It was just designed around how it is today?*

B. Fassburg: *So they are not dispatch experts for the first part. The other part of this is there is a difference between regulation and micromanagement. And I don't think anyone is asking for micromanagement. The regulations that exist, the statutes that exist provide the regulatory authority to determine the number of pilots. What isn't authorized is for that overreach into pilots dispatch office to tell them how to dispatch. They are professional dispatchers. I assure you they are not intentionally inserting inefficiency into their job. They have a tough enough time as it is finding available pilots to cover these assignments.*

Chair Tonn: *One of the things I've heard when I've talked to aspirants who are considering pilots districts is they really like the idea of going to SE Alaska and working the cruise ships because then their winters are more free. And in San Francisco there are now a lot moving to 1 week on, 1 week off as compared to 2 and 2. Would there be any improved efficiencies if we were to look at either one or both of those, you know, both seasonal pilots as well as change from the 2 and 2 kind of schedule?*

B. Fassburg: *As long we're maintaining day for day, there are other options that can be maintained. But these different places that you're talking about maintain the day for day system. SF is primarily 1 week on 1 week off. There are some that are 2 weeks on 2 week off. And then there's other factors that don't translate well from other districts that*

are really hard for us to tackle because it takes so much work. Eric volunteered to go visit with some of these groups to get the data and present it in a way that people would understand, but I really discouraged him from doing that because it's so time intensive. We're talking about mapping the geography of SF bay and the assignments they perform there and comparing that to Puget Sound and the Columbia River and SE Alaska. That kind of labor, I don't think, adds a lot of understanding to the differences and would be incredibly time intensive to do.

Comm. Morrell: So we never saw the scope for what NASA was supposed to do. So, did you edit or change anything to make the report different from what was initially issued?

B. Fassburg: We don't have the ability to edit NASA's report. I'll tell you we had an opportunity to preview and to correct some reading type of mistakes. There were some concepts, definitions for example, that I think they had used from their SF report that didn't quite fit the descriptions or names that are used in this pilotage district. We don't have the kind of sway, I don't know who does, to tell NASA to change their report.

Comm. Kirtley: There was one inconsistency that I'm hopefully not too bold in calling it an inconsistency. They said Puget Sound Pilots may consider a limit on the number of call-backs that an individual pilot is required to perform.

B. Fassburg: That would be an inconsistency or mistake because we can't require pilots to perform call-backs.

Comm. Kirtley: Okay, yeah. That was my understanding that like earlier in the Puget Sound Pilots report it said we tried a cap and it didn't work. It just generated more call-backs.

B. Fassburg: It could be perhaps a person who drafted it didn't quite understand how it worked. That's the kind of edits that I'm talking about. That one was obviously missed because when we saw some that some weren't quite accurate with how things work, I'll tell you we called it out. And I'll tell you, they didn't adopt all of our edits. We said hey that might be a little off. They're professionals but they're also a government agency. They drafted the report (audio muffled) in the end.

Comm. Kirtley: Is there anything else you want to give us a heads-up on?

B. Fassburg: If I could point out every typo and have them fix it, I'd love that. I can't think of more. I know there was "vessel" missing a "v" somewhere.

Comm. Anthony: Phil, you said that you didn't see the scope of the work. But correct me if I'm wrong, but the scope of work came from a letter from Sheri last August, correct?

B. Fassburg: I'm sorry to interject. I think he means the formal document. We actually shared, I believe it was the bulk majority of the scope. But there are some find details that weren't shared and I think the reason for that is there's some issues of privacy we wanted to protect. But verbatim the first page of the scope was provided.

Comm. Farrell: I have another question, as one of the new guys. I've been here since January. It's a question I haven't asked yet. I've heard from day one the notion of day for day, 1 day on 1 day off. That's sort of what a mariner signs up for at the beginning of their career. Am I understanding that right? Am I paraphrasing that right? Is that something that applies to a mariner like a captain on Tote? Or a captain on a US flagged vessel?

Comm. Anthony: Absolutely.

Comm. Krombeen: *If you start with 5 on 3 off, 4 on 2 off, eventually it goes 3 months on 3 months off.*

Comm. Farrell: *So it's the same of tug boats, 2 weeks on 2 weeks off. Okay. And so those are all jobs where folks are at sea. They don't have an opportunity to go home between jobs. So, should that factor also apply to pilots who don't have that same hardship?*

Comm. Anthony: *While we're not at sea, we're on call. And I don't even know when I'm off the ship, I check in, when my next job is. I know it can't be any sooner than 10 hours. But if you look at the board, actually if you look at tab 2, it should all the delays and cancellations, so our job changes every 5 minutes. So yes, while we're at home, we're still on dispatch, on call, and still need to try and plan our sleep around it. You can't get any big projects going because you might have to go to work in 10 minutes.*

Comm. Morrell: *Well I know I can't speak for Rik, but I'm on call 24 hours a day, 7 days a week.*

Comm. Farrell: *That one strikes me as something that is worth...it's a sacred cow, I get it, but I think it's something to talk about because the character of this work is different from the character of work for someone doing an Alaska run or a transpacific run.*

Comm. Anthony: *Actually, some of those runs are better because, like Tote for example, they get the opportunity to have a regular watch basis. So they actually work either 12 hours a day or 8 hours a day and they know when they're going to have get back up except for when they're at dock. So in a way they have a better schedule than we do.*

Comm. Farrell: *In a way they do, but also they're not home.*

Comm. Anthony: *Well, home, or we're talking about safety and fatigue here. And their fatigue levels are much safer than our fatigue levels because they know exactly when they're waking up and going to sleep. Were we don't.*

Comm. Krombeen: *Well there's a discussion going on around that because I can tell you I'm happy I'm not 3 months aboard anymore. I'd take the 24/7 365 days happily now. Our captains, first of all, take all the responsibility. They're on 3 months, 24/7, non-stop on duty and they get maybe half the benefits that a pilot gets here. Do you know what I'm saying? That's a whole different ballgame.*

Chair Tonn: *Are there other questions? Yes.*

Comm. Kirtley: *Around the examples of delays there's commentary, how does an upgrade trip for an off-duty pilot reduce the number of pilots?*

B. Fassburg: *They aren't available to take a call-back. And so what we wanted to do was give you a picture of who's available. Not just who's available on duty, but who's available period. So, when you have a delay, it's because you couldn't find anyone to take that vessel assignment. Not because it wasn't an on-duty. They don't delay vessels because there is a lack of on-duty and rested pilots. It's because there are no available pilots.*

Comm. Kirtley: *Okay, got it. And then what about a cancellation. How would that reduce the number of available pilots?*

B. Fassburg: *So the pilot doesn't know a vessel's been cancelled. They are waiting on it and eventually it's cancelled. It's not an advanced cancellation. So, when we talk about cancellations, we're talking about a pilot who lined up for that vessel and then eventually, I think it's 6 hours...*

E. vonBrandenfels: *They might even get to the vessel and get on it and then it cancels.*

Comm. Kirtley: *So they're unavailable while they are assigned to the vessel before the vessel is cancelled...*

B. Fassburg: *And if it's been long enough then they have to take a rest period before they can take the next assignment.*

Comm. Kirtley: *And were the 161 cancelled movements in 2018 included in the 7,324 assignments?*

E. vonBrandenfels: *I believe they are, yes.*

Comm. Farrell: *Can you characterize the cancellations for us? In other words, are they inbound, are they outbound?*

E. vonBrandenfels: *Either one. You'll have a job assignment in Port Angeles for a vessel coming down from Vancouver. It won't leave Vancouver when you're out there waiting. You won't be at home. You'll be out there waiting in Port Angeles sometimes for more than 30 hours, just waiting on that ship and it doesn't show up. That's a cancellation.*

Comm. Farrell: *So if you had somebody waiting in Port Angeles, you'd let them wait for 30 hours even if there was other traffic coming through?*

E. vonBrandenfels: *The imbalance of traffic, it's something the dispatchers are really good at. They figure if they're going to have enough outbound assignments that match the inbound assignments then they match up. If they don't then some people are going to have to remain out there and then they'll have to just wait because it doesn't make sense to send somebody back if there's not work on this side. It's not uncommon to be out there for over 30 hours. It's just the way that the vessel traffic works. On this side they'll get an assignment and go down to the ship and they'll be some kind of cargo delay and they're not going for another 12 or 18 hours. They make up their mind whether they want to keep you on board or cancel the job. So those are all cancellations.*

Comm. Farrell: *When they do a cancellation, are there any limits on how soon they can call you back? Can they cancel and then 5 minutes later say eh, we changed our mind?*

E. vonBrandenfels: *They'd have to go back...we've talked about that with the dispatchers. They'd have to go through the old, the routine of ordering.*

Comm. Anthony: (audio unclear)... it's a couple of hours and they know it. But they don't always know it. If something breaks down, they don't know how long it's going to be so then they cancel it.

Chair Tonn: *Okay, are there any other questions for PSP?*

Comm. Kirtley: *Is the cycle 2 watch periods or are there...can you define cycle?*

B. Fassburg: *So, in the calendar it's really 11. I don't know how the pilots define it, but if you want to look at the calendar for how it works you're really cycling through 5 periods that are basically 10 weeks before you get to 11 and that's...I'm sorry, I'm not explaining this very well, but it's uh, you go through 5 periods on duty and 5 periods off before you*

get to your final earned time off cycle. So really, that's working through the cycles. It's 22 weeks, 11 duty cycles. A duty cycle is 15 on 13 off.

Comm. Kirtley: *That's clear. What wasn't clear on page 19 is if 10 cycles was 150 days on and 130 days off or if 10 cycles should be 75 days and 65 days off. There was the use of the term cycle and use of watch period...*

B. Fassburg: *So if you're talking about the number of duty days and how to determine that, there are 75 during those 5 cycles that you're on before you have your earned time off. So, did that help clarify?*

Comm. Kirtley: *Yes.*

B. Fassburg: *To make this more clear, because I think there was a mistake in the PMSA's submission of how many duty days there are, on July 18th I think what I will do is walk through the calculation on a PowerPoint so you can see it. It actually makes a lot of sense when you see the math. It's harder to understand in the abstract through a calendar.*

Chair Tonn: *Okay, moving on PMSA...*

Comm. Scragg: *Just a quick one on the on-demand comment, I think my understanding of on-demand means that when an agent calls to order a pilot for 10 o'clock in the morning, the pilot is available at 10 o'clock in the morning. Is that your understanding?*

MMoore: *I think the understanding is that they have to comply with the ordering rules and none of them said they don't do that. And so you have your ordering rules of 24 hours or 4 hours departure from Seattle...and in their procedures and processes they comply with that. But a lot of them go ahead of that, well cruise ships sometimes, for example, they make their orders a long time ahead of time, but most of the rest of them I talked to try to get ahead piloting order rules.*

Comm. Scragg: *But I mean, my understanding of on-demand means that when they order a pilot whether they order 24 hours ahead or 12 hours ahead for 10 o'clock in the morning, the on-demand means that the pilot is available at 10 o'clock in the morning.*

M. Moore: *According to the pilot ordering rules, but we've heard two descriptions of pilot on-demand and pilot on-arrival. And they didn't understand that because a pilot on-arrival from sea 24 hours ahead of time, you've got your lead time from Vancouver so, it may be semantics, it may be definitions, but they feel that the pilot ordering are necessary and they have to comply with them.*

Comm. Scragg: *Okay.*

Comm. Anthony: *In the PMSA submission, was there any specific methodology used, not only for today's climate, but later on if shipping increases or decreases? NASA kind of offered up a mechanism for looking at it based on numbers. Did you do anything on that?*

M. Moore: *Yeah, we've done that in the past. And even done it in conjunction with PSP where we looked at the activity levels and the number of pilots and the number of call-backs and we've sat down and had two-way conversations about that whole thing...*

Comm. Anthony: *But I mean in your current submission today?*

M. Moore: *Well, we didn't know that the NASA report was just going to be based on 2018. Had I known it was only going to be based on 2018 I would have had a couple of pages as to why 2018 was an anomaly year compared to 2009 and 2011 and 2014, I could list the ones that I pulled PSPs submissions from that show that we had no problems, no problem meeting peak days with 300 call-backs. A particular year had 149 or 156 assignments per pilot. So, what is radically different now?*

Comm. Anthony: *Next question, did you consider the current rest and 3 and out rules?*

M. Moore: *I did because we've heard here the 3 and out rule has been in place 3 years and is working really well. I think it's a very good safety measure. So, we know you have 3*

years of experience at it because Eric's talked about it a couple of times. (57:01) So, with the 8 moving to the 10 we don't have the data, but Ivan said around 500 assignments would be affected. And I questioned him right here, in this Board meeting, so how many would be affected. Well between 1 minute and 59 minutes per assignment. And I said so an average of an hour? And he said most of them are more likely in the 10-20 minute range. I took the hour, which is much higher than what he said. So 500 hour more rest per year with 50 pilots is 10 hours more rest per year, which is about 50 minutes per month.

Comm. Farrell: *Can I follow up on that one? So you walked through some math that you just summarized, and we have presumably we have some data from the pre-2015 addition of the 8-hour rest and the 3 and out. So we have data on both sides of that policy change. Did you analyze the actual data to look at what the actual impact was or just project based on going from 8 to 10?*

M. Moore: *So the 8 to 10, I just looked at how many assignments would be affected, but again, I don't have that data, but Ivan mentioned it was about 500 assignments where someone wouldn't have 10 hour rest but would have 8. And so you move 8 to 10, 500 assignments would be affected, we did an analysis based on his numbers. With respect to your question about prior to 2015, again, we can put together a list with the staff and what have you, but there's a lot of work that goes in to setting the number of pilots submissions in the past that has a lot of this stuff in it: comp days, call-backs, comp day accrual, delays, cancellations and things like cancellations, there's about 50 more cancellations now than there were before, I don't know. But you look at all this data and you have these trends. And the only difference that I can tell is the 3 and our rule, which we've had for 3 years now, going 8 to 10 with only 2 months of it in effect in 2018, this anomaly year, and lifestyle pilots. We've never heard that before. Pilots who don't take call-backs and don't want to take call-backs. I don't know how many there are. It's just something we heard PSP discuss when they were here. The only other thing that you can think about is stacking up. When you have not-fit-for duty folks and you have less pilots available than I have ever seen in past years going back to 2006, and we had some peak years and we had some down years. We've had 8700 assignments. We've had 7200 assignments. That's the range you have over this timeframe. You go back and look even in the 90's and you get some pretty powerful trends that emerge. So, what's different now? I can't really say other than taking comp days and vacation and having 2 or 3 or 4 pilots not-fit-for duty, if you stack those up on each other on X amount of days I think you're going to produce X amount of call-backs.*

Comm. Farrell: *So you were just talking about trending. Is there a bend in the curve when the 8 hours and the 3 and out rules came into play?*

M. Moore: *I can't detect that in November or December because you had 3 years of 3 and out. And I couldn't detect anything there.*

Comm. Farrell: *I don't mean going from 8 to 10. I mean going from whatever was before 8 hours to 8 hours. Hey Lou, can I ask you a question before you leave?*

M. Moore: *You mean 7 to 8. So I'll be corrected here, but in the past Walt would always talk about they had an interim policy of 8 even though the RCW had 7. And so if you're talking about dispatch rules, he said they employed 8 internally but the actual RCW had 7.*

So you've changed the 7 to 10 now. Otherwise, you had this strange disparity that pilots did 8 and the RCW said 7.

Comm. Farrell: *Okay, thanks. Quick question for Lou. Do you guys still do your cargo forecast annually, the things that the marketing people used to do?*

L. Paulsen: *I don't believe we do them as we did them (audio unclear). Primarily based on vessel (audio unclear) and the number of calls. In general we have a pretty good sense between April (audio unclear). There may be some changes in vessel strings. Most of them occur in the April timeframe. And they're announced between January and April and then they actually come into play in May.*

Comm. Farrell: *April year 1 to April year 5, all bets are off? Or do you have a pretty good sense?*

L. Paulsen: *We have a pretty good sense from where we stand today through about the end of the year.*

Comm. Farrell: *And what about after that?*

L. Paulsen: *After that it gets a little fuzzy as the (audio unclear)...that's contingent upon all the alliances staying as they are today, which is...*

Comm. Farrell: *But all the lines are going to be here, right? The cargo that's coming through the gateway is largely going to be here regardless of who carries it, right?*

L. Paulsen: *Correct, yes.*

Comm. Farrell: *So the big variable is going to be the number of strings and the size of the vessels.*

L. Paulsen: *So let me offer that, in general, we might anticipate a 2-3% growth on average of cargo volume without a change in the number of vessels. And at this point in time, apart from what I announced last month in terms of service strings we're not seeing anything coming between now and year end in terms of new strings or changes in strings. There may be some vessel upsizes that occur now and then, but nothing significant.*

M. Moore: *And an offer to you is that given those (audio unclear)... you didn't ask for formal type of forecast this time but would be happy to try to still our forecast into a page or two. We could do that. It doesn't give you a 5-year lookout, but it gives you an okay lookout for 5 or 8 months.*

L. Paulsen: *And one of the things that's been rather apparent in this awkward tariff on and off season is how divergent the numbers of box count are relative to the vessels. Vessels can be relatively stable in terms of numbers or be declining and then we see pretty wild spreads in terms of volume, which is an indication that vessels are arriving partly (audio unclear).*

Chair Tonn: *Of course we have no idea what the tariff is going to do in the long haul.*

Comm. Anthony: *Would PMSA prefer us moving to an appointment system so that PSP could be more efficient?*

M. Moore: *So, I think we've talked about that quite a bit and I think we all know how shipping works. I've talked to BC pilotage authority last Friday while I was up there. BC pilots and the pilotage authority separately. They're going through a big reform up there where oversight of the pilots is going to shift to Transport Canada here in the next year. When I asked them about their appointment system it was largely most comparable to just ordering lead times. So the Pacific Pilotage Authority does the dispatch and operates the pilot boat and collects the revenue and distributes it and requires lead times on orders. And that didn't sound dissimilar from what we have. And so the appointment system you're talking about is different.*

Comm. Anthony: *I'm talking about applying the system not just on the pilot station side but also on the shore side. We could be very efficient if we had an appointment system. And the appointment system at the pilot station is not like that. We'll board on arrival or whenever they get there, two ships at the same time. The ships are milling around out there for hours waiting for their slot and they're not allowed to come in one minute early. We don't have that at all. But if we had that, and especially if we had it on the shore side we'd be extremely efficient. Would you prefer us to do that?*

M. Moore: *So, I think that's a little bit of a trap question and I think you know how the industry operates. There's oil industry who I do not represent. There's car carriers that operate differently than the container ship and grain carriers who are much different from that. So you have cruise ships and container ships and so on. I think they have sufficient lead time. I think there's a lot more predictability to the system than you guys are conveying and we can certainly convey that in our rebuttal. We've looked at it from AIS tracking and so forth and it's a lot closer schedule and ship calls than what I hear here, which is all chaos and everyone shows up at their own time. It's not what we're finding when we look at the data. I'll be presenting that in the rebuttal.*

L. Paulsen: *Shore side, the shifts start at 8am, 6pm and 3am. And so you take the vessel arrival at the berths available, back off the time they're going clearing customs, and that is effectively the slot, the length of time for that vessel to arrive. The labor order for something that would be for say 8:00 tomorrow morning occurs at 2:00 this afternoon. so there is substantial intelligence within the system already in terms of when those vessels are coming in. And I'm not surprised at all that vessels bunch in Port Angeles because those are bound to arrive for an 8:00 start. They're wanting to be on the berth between 5 and 7 o'clock in the morning so they are coming through in that timeframe.*

Comm. Anthony: *Well and Lou isn't the aim for the Blair really not to become like that in the west and east waterway. I mean, an appointment system with having a so-called harbormaster or something like that, you remember a couple of years ago how long the delays were just to get out of the harbor because of traffic and lack of tonnage, and stuff like that. So if you had more of an appointment system, working together that could make us a lot more efficient.*

L. Paulsen: *And I would offer that the appointment system exists already by virtue of the work rules for the national (audio unclear) union and the dispatching rules that are a*

combination of the PMA... (audio unclear). So you'll know what's being ordered for the following day and when that has to start.

Chair Tonn: *Okay, any more questions from the Board let's try to get them in writing and we'll get them to PSP and PMSA.*