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**BEFORE THE STATE OF WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,

Complainant,

v.

PUGET SOUND PILOTS,

Respondent.

Docket No. TP-220513

**TESTIMONY OF
Christopher Noble
ON BEHALF OF
PACIFIC MERCHANT SHIPPING ASSOCIATION**

Actuarial Review of PSP Pension Proposal

FEBRUARY 10, 2023

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1 **EXHIBIT LIST**

2

Exhibit No.	Description
3 Exh. CN-2	Christopher Noble Curriculum Vitae
4 Exh. CN-3	Christopher Noble Report with Charts
5 Exh. CN-4	PSP Responses to PMSA's Data Request Nos. 471-545 Pilot Retirement

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1 I. INTRODUCTION

2
3 **Q: Please state your name and business address.**

4 A: Christopher F. Noble, Noble Actuarial Consulting LLC, Port Angeles, WA.

5
6 **Q: Please describe your actuarial experience.**

7 A: I have been engaged in actuarial services for large and mid-sized private
8 defined benefit pension plans since 1997.

9
10 **Q: What is your area of expertise as an actuary?**

11 A: Funding, accounting, compliance, and administration of private defined-
12 benefit pension plans in the U.S.

13
14 **Q: Would you please summarize your educational and professional
15 background both as an actuary and prior to becoming an actuary?**

16 A: I have a Ph.D. in mathematics from Cornell University. I am a Member of
17 the American Academy of Actuaries and a Fellow of the Society of Actuaries.
18 I held the Enrolled Actuary credential from 2001 to 2021. My resume is
19 Exhibit CN-2.

20
21 **Q: Please describe your experience for the Actuarial Standards Board.**

22 A: I was a member of the Pension Committee of the ASB from 2012 through
23 2019 and chaired that committee for the last three years of service. I have
24 been a member of the Actuarial Standards Board since January 2022.

1 **Q: What is the purpose of the Actuarial Standards Board?**

2 A: The Actuarial Standards Board (ASB) sets standards for appropriate
3 actuarial practice in the United States through the development and
4 promulgation of Actuarial Standards of Practice (ASOPs). These ASOPs
5 describe the procedures an actuary should follow when performing actuarial
6 services and identify what the actuary should disclose when communicating
7 the results of those services.

8

9 **Q: Please describe your work in the actuarial field to promote**
10 **actuarial standards of practice and include an identification of any**
11 **formal Actuarial Standards currently in practice that you**
12 **personally participated in drafting.**

13 A: The Pension Committee of the ASB is the drafting committee for standards
14 related to pension practice. The ASB reviews and edits drafts from the
15 drafting committees and has final authority on the language in all ASOPs.
16 In addition to my work on the Pension Committee and the ASB, I have been
17 a frequent speaker on ASOPs at professional meetings of pension actuaries.
18 My work on the ASOPs that may be relevant to creation of a defined-benefit
19 plan for Puget Sound Pilots and review of related testimony includes:

- 20 • ASOP No. 4, *Measuring Pension Obligations and Determining Pension*
21 *Plan Costs or Contributions*: I served as a member of the drafting
22 committee for the version currently effective and chair of the drafting
23 committee for the first two exposure drafts of the version to become
24 effective beginning February 15, 2023.
- 25 • ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension*
26 *Obligations*: I chaired the drafting committee for the two exposure drafts

1 leading to the current version as well as for much of the work in the final
2 version.

- 3 • ASOP No. 35, *Selection of Demographic and Other Noneconomic*
4 *Assumptions for Measuring Pension Obligations*: I chaired the drafting
5 committee for the two exposure drafts leading to the current version as
6 well as for much of the work in the final version.
- 7 • ASOP No. 51, *Assessment and Disclosure of Risk Associated with*
8 *Measuring Pension Obligations and Determining Pension Plan*
9 *Contributions*: I chaired the drafting committee for the final version and
10 was a member of the drafting committee for all exposure drafts.

11 I have served on the drafting committee or as a member of the ASB for
12 other standards as well.

13 Note that any representations that I make about the content of ASOPs
14 are attributable only to me and should not be construed as representing the
15 views of the ASB.

17 II. PURPOSE AND SUMMARY OF TESTIMONY

18
19 **Q: What is the purpose of your testimony?**

20 A: My testimony is limited to actuarial review of the cost and compliance
21 issues of the tax-qualified defined-benefit pension plan proposed in the
22 Puget Sound Pilots rate filing and actuarial review of associated testimony
23 provided by Christopher Wood and Bruce McNeil.

24 **Q: Can you please summarize your testimony?**

25 A: Significant obstacles to the maintenance of a tax-qualified multiple-
26 employer defined benefit pension plan for the Puget Sound Pilots are not

1 adequately addressed in the testimony of Mr. Wood and Mr. McNeil. Those
2 obstacles include application of legislative restrictions that would prevent
3 the plan from providing the same benefits as the current pilots' plan and
4 onerous administrative expenses that are not reflected in the projections
5 provided by Mr. Wood. I have also included a description of an alternative
6 retirement program arrangement that could be considered in this or future
7 rate cases.

8
9 **III. REVIEW OF PSP'S ACTUARIAL 50-YEAR COST PROJECTIONS**

10
11 **Q: Were you able to review the testimony of Christopher Wood, the**
12 **actuary consulting with the Puget Sound Pilots, at Exhibit CRW-**
13 **01T?**

14 A: I was able to review the information in Exhibit CRW-01T, including review
15 of the projections in Exhibit CRW-05 for reasonableness, subject to the
16 limitations on that exhibit and the limitations of the data in Exhibit CRW-
17 03-06-29-22.

18
19 **Q: What is your general impression of the 50-year contribution**
20 **projections offered by Mr. Wood in his testimony?**

21 A: The projections include caveats indicating that compensation and benefit
22 limits under ERISA have been ignored and administrative costs have not
23 been reflected. Subject to those caveats, I find that the pattern and
24 approximate magnitude of the projected costs are reasonably consistent
25 with the data in Exhibit CRW-03 and the assumptions described in Exhibit
26 CRW-04. I also find that the assumptions employed in the projections, other

1 than the assumptions implied by the caveats, are reasonable for the purpose
2 of the projection. However, the caveats are material to decisions about the
3 formation of the plan. In addition, there are significant risks that key
4 assumptions will not be realized and that required contributions for the
5 funded defined benefit (“DB”) plan will exceed the projected contributions.
6

7 **Q: How do the Actuarial Standards of Practice apply to the projections**
8 **in Mr. Wood’s testimony?**

9 A: The projections reflect measurements of pension obligations and
10 determination of pension plan contributions. As such, ASOP No. 4 provides
11 guidance on appropriate methods and information that should be disclosed.
12 ASOP Nos. 27 and 35 provide guidance on the selection of the assumptions
13 used in the projections. If the projections were intended to be used to
14 determine plan contributions, then ASOP No. 51 would also apply and
15 would require an assessment and disclosure of significant risks that
16 projected contributions may be insufficient. ASOP No. 44, *Selection and Use*
17 *of Asset Valuation Methods for Pension Valuations*, is applicable, but the
18 relevant guidance in that ASOP is that the use of fair value of assets in the
19 projection is reasonable. Several ASOPs that apply more broadly than to
20 pension valuations also apply. Those include ASOP No. 1, *Introductory*
21 *Actuarial Standard of Practice*, ASOP No. 17, *Expert Testimony by*
22 *Actuaries*, ASOP No. 23, *Data Quality*, ASOP No. 41, *Actuarial*
23 *Communications*, and ASOP No. 56, *Modeling*.
24
25
26

1 **Q: How did you apply these Actuarial Standards of Practice when**
2 **reviewing Mr. Wood's 50-year cost projections?**

3 A: I find that the actuarial methods employed in the projections were
4 consistent with the guidance in ASOP No. 4. ASOP Nos. 27 and 35 allow
5 that a range of assumptions may be found to be reasonable. I find that each
6 assumption described in Exhibit CRW-04 is within a range that may be
7 found to be reasonable. However, ASOP Nos. 27 and 35 also require that the
8 actuary disclose the information and analysis used to support the actuary's
9 determination that the assumption is reasonable. I am aware of no such
10 disclosure accompanying Mr. Wood's testimony.

11

12 **Q: What are some of the assumptions that Mr. Wood made that led you**
13 **to the conclusion that projections are reasonable for the purpose of**
14 **the projection, subject to the caveats on the projection?**

15 A: The discount rates and mortality assumption are reasonably close to the
16 discount rates and mortality assumptions that would be employed in
17 calculating required contributions for a new pension plan under current
18 law. The retirement age assumption is reasonably consistent with the
19 apparent retirement ages of current retirees. Other assumptions are
20 reasonably consistent with assumptions in common use for similar purposes
21 and are not likely to have a significant impact on the pattern and
22 approximate magnitude of the projected amounts.

23

24

25

26

1 **Q: What are the risks associated with the discount rate assumptions**
2 **made by Mr. Wood?**

3 A: Regulatory discount rates in 2023 are slightly lower than the rates used by
4 Milliman¹ as of July 1, 2021. Because the discount rates required to be used
5 for qualified plan minimum required contributions are constrained by long-
6 term average market rates, the required rates are likely to decline further
7 in coming years, especially after 2030 when the legislated floor on rates
8 begins to relax. Lower discount rates would increase the required
9 contributions to the plan. If market rates continue to increase as they have
10 in recent months, the effect of the declining long-term average may be
11 muted, but in the short term, defined benefit plan contributions are likely to
12 be higher than those shown in Milliman's projections due to lower discount
13 rates.

14
15 **Q: What are the risks associated with the expected return assumptions**
16 **made by Mr. Wood?**

17 A: Milliman's structure for the investment return assumption is difficult to
18 analyze in detail, with the rate of return varying over time; but it is
19 equivalent to a long-term rate of approximately 6%. The assumed rates of
20 return may not be unreasonable for a diversified portfolio; but achieving
21 those returns will likely require some allocation to more volatile asset
22 classes, such as stocks, creating significant variation in actual returns. Such
23 variations will create significant deviations (up or down) in required
24 contributions from the projection.

25
26

¹ Mr. Wood's firm at the time of his testimony. Exh. CRW-01T:1.

1 **Q: What are the risks associated with the mortality assumptions made**
2 **by Mr. Wood?**

3 A: The IRS annually updates the required mortality assumption used to
4 determine minimum required contributions. Historically, those updates
5 have tended to increase plan obligations and required contributions.
6 However, the mortality experience used to set the assumption does not yet
7 reflect the effects of the COVID-19 pandemic on life expectancy, so the
8 historical norm might not continue unchecked when experience from 2020
9 and 2021 is included in the development of the prescribed mortality
10 assumption. Milliman's projections have assumed no change in the
11 prescribed mortality assumption, slightly understating required
12 contributions in the short-term and potentially understating long-term
13 contributions for the DB plan if the overall trend in the required assumption
14 is similar to the historical pattern.

15 Furthermore, the Society of Actuaries study of mortality experience,
16 upon which the prescribed tables are based, indicates that on average,
17 highly compensated individuals live longer than the general population.
18 Data used in the actuarial work indicates that the pilots would fall into the
19 highly compensated group, which suggests that in the long-term the plan
20 may experience losses due to payments lasting longer than expected,
21 increasing required contributions to the plan.

22
23 **Q: What are the risks associated with the participant gender**
24 **assumptions made by Mr. Wood?**

25 A: Milliman has assumed that all pilots are male. Because females have longer
26 life expectancy than males, if any pilots are female, the Farebox costs would

1 be slightly higher in the later years. In the DB plan, those higher future
2 expected payments are recognized immediately and would increase required
3 contributions starting in 2022.
4

5 **Q: What are the risks associated with the plan expenses assumptions**
6 **made by Mr. Wood?**

7 A: No plan expenses have been included in the projection. Required
8 contributions in the DB plan would be increased by expected expenses to be
9 paid by the plan, potentially including Pension Benefit Guarantee
10 Corporation (“PBGC”) premiums, administrative costs, actuarial and
11 accounting fees, and investment expenses. The proposed multiple-employer
12 plan is administratively and actuarially complex, with separate actuarial
13 calculations to determine required contributions required for each
14 participating pilot, including retired pilots in the plan. Consequently,
15 expenses for the proposed plan are likely to be disproportionate to its size.
16 Omission of such expenses creates a material understatement of the cost of
17 the proposed defined benefit plan and misrepresents the savings achieved
18 by the accelerated funding in the proposed plan.
19

20 **Q: Does Mr. Wood’s testimony disclose an assessment of significant**
21 **risks that the projected plan contributions may be insufficient?**

22 A: No.
23
24
25
26

1 **Q: In layman's terms, can you please describe what these risks mean to**
2 **Mr. Wood's cost projections and why these risks may be significant?**

3 A: Actuarial projections show a single point in a wide range of feasible
4 outcomes. Adverse experience may significantly change the long-term costs
5 of the plan from those projected. Without an assessment of the risks to plan
6 funding, entities responsible for making required contributions could end up
7 being surprised by contributions significantly exceeding those in the
8 projection.

9

10 **Q: Is it methodologically important to actuaries to evaluate and**
11 **include considerations for these types of risks when estimating 50-**
12 **year cost projections?**

13 A: If the projections are to be relied upon to determine funding for the proposed
14 plan, then ASOP No. 51 requires that they be accompanied by an
15 assessment of the significant risks to the plan's future funded status and
16 contributions that result from experience (such as investment returns,
17 participant retirement ages, and participant longevity) differing from the
18 assumptions used. Even if the projections are not to be relied upon to
19 determine plan funding, making a commitment to fund the plan without an
20 assessment of the range of feasible funding scenarios would be like using a
21 variable rate mortgage to buy a home without considering the possible
22 effects of interest rate increases.

23

24

25

26

1 **Q: Are there provisions in the Actuarial Standards of Practice to test**
2 **these risks with sensitivity tests and stress tests?**

3 A: Yes. ASOP No. 51 provides some guidance about ways to assess funding
4 risks, including sensitivity tests and stress tests.

5

6 **Q: Did Mr. Wood's testimony demonstrate any application of**
7 **sensitivity tests or stress tests?**

8 A: No.

9

10 **Q: Aside from the risks you identified in Mr. Wood's cost projections,**
11 **you found the other assumptions to be reasonable for this purpose?**

12 A: Yes.

13

14 **Q: Does that mean that you are convinced that these are the only**
15 **assumptions that would be reasonable for this analysis and this is**
16 **the only reasonable actuarial projection?**

17 A: No. ASOP Nos. 27 and 35, which provide guidance on selecting assumptions
18 for measuring pension obligations, indicate that a range of assumptions may
19 be reasonable for this purpose. Changing any assumptions would change
20 the projection.

21

22 **Q: So, in layman's terms, sensitivity tests would help illustrate the**
23 **range of alternative 50-year contribution projections that are**
24 **reasonable estimates?**

25 A: Yes

26

1 **Q: Please explain what some potential alternative assumptions in a**
2 **sensitivity adjustment might include.**

3 A: A lower discount rate would better reflect actual rates that are required to
4 be used and would provide a less optimistic view of the cost of the plan. A
5 lower expected return on invested assets would significantly reduce the
6 apparent savings from pre-funding benefits. A more conservative mortality
7 assumption may better reflect the expected trajectory of regulatory
8 mortality assumptions or capture the anticipated effect of the longevity of
9 highly compensated individuals. Variations in the number of active pilots in
10 the future would also have a potentially significant impact on the projected
11 contributions.

12

13 **Q: Have you prepared alternative 50-year cost projections based on**
14 **what some of these potential alternative assumptions would look**
15 **like for changes in the discount rate and changes in the number of**
16 **pilots?**

17 A: Yes. At the request of Pacific Merchant Shipping Association, I provided
18 estimated 50-year projections for the following changes in assumptions:

19 (1) Reduce discount rate and expected return on assets by 100 basis points.

20 Under current law, the discount rates will never fall below 3.75%.

21 Therefore, while this scenario is not a worst case, it is reasonably
22 conservative relative to the range of likely discount rates. For simplicity,
23 the reduced discount rates are assumed to apply in all years, even
24 though it would take several years before the actual required rates could
25 possibly get that low.

26

1 (2) Retain Milliman's assumed discount rate and reduce active pilot count to
2 44 pilots. Milliman indicates that their projections reflect a steady count
3 of 52 active pilots. My adjustment allows the count to drop to 44 through
4 normal attrition before new pilots are brought into the plan to keep the
5 count at that level.

6
7 **Q: Have you provided charts that show how these projected**
8 **adjustments would impact projected contributions?**

9 A: Yes. They are included in the attached report, which is Exhibit CN-3.

10
11 **Q: Are there any disclaimers that you would like to make with respect**
12 **to these projections?**

13 A: Yes, in order to provide comparability, these additional projections are
14 based on estimates of the sensitivity of Milliman's projections to the
15 discount rate and active pilot count. They rely on the Milliman projection
16 and were not developed independently from Milliman's projections. Our
17 sensitivities are intended only to provide an estimate of the impact on
18 Milliman's projections of changes in key assumptions. In light of Milliman's
19 caveats on the use of their projections, and on the issues with the
20 underlying assumptions discussed above, these additional projections
21 should not be used for any purpose other than understanding the impact of
22 changes in these key assumptions.

1 **Q: Acknowledging these caveats, what do these alternative cost**
2 **projections show?**

3 A: Decreasing the discount rate and rate of return on invested assets does not
4 change the projected cost of the current Farebox plan, but significantly
5 increases the cost of the proposed plan. Decreasing the projected number of
6 participating pilots reduces the cost of both the Farebox plan and the
7 proposed plan.

8

9 **Q: In a description to a layman, how did changing these variables**
10 **result in these different outcomes than in Mr. Wood's cost-**
11 **projection?**

12 A: Reducing the discount rate and rate of investment return has no impact on
13 the benefits to be paid by the current Farebox plan. However, reducing the
14 discount rate increases the measure of the pension obligation, which
15 increases required contributions. Reducing the expected return on plan
16 assets reduces the income generated by investments that is used to pay
17 benefits, so larger contributions are required to make those benefit
18 payments.

19 Reducing the projected number of active pilots reduces the amount of
20 retirement benefits to be paid in both the current plan and proposed plan,
21 reducing costs in both.

22

23 **Q: Does that make Mr. Wood's actuarial projections wrong or less**
24 **accurate?**

25 A: The fact that different assumptions produce different projections is
26 expected, and different estimates may both be reasonable. I would not

1 conclude that Mr. Wood's projections are wrong or less accurate than
2 alternatives using different reasonable assumptions.

3
4 **Q: Again, can you please describe in layman's terms why it is**
5 **important to test alternative and multiple scenarios when**
6 **considering estimated 50-year cost projections?**

7 A: Reality is not going to match any particular projection. Multiple scenarios
8 can help to illustrate the range of likely outcomes.

9
10 **Q: Did Mr. Wood's testimony provide any evidence of his consideration**
11 **of a range of reasonable assumptions in his 50-year cost study?**

12 A: I found no such evidence in his testimony, but in separate communications
13 Mr. Wood conveyed to me that "for purposes of providing estimated plan
14 funding requirements upon which budgeting expectations could be
15 developed, especially in the context of the changed economic environment
16 that has emerged recently as well as changes to plan funding requirements
17 being discussed in Congress, we would expect to develop more detailed
18 assumptions, collect full demographic data, and run projections using a
19 range of assumptions in order to communicate to stakeholders expected
20 costs as well as the sensitivity of costs to economic and demographic
21 factors."

22 **Q: Are there other portions of Mr. Wood's cost projections that stand**
23 **out to you as significant?**

24 A: The projections show that total contributions are reduced when benefits are
25 moved into a qualified defined benefit plan. This reduction is entirely
26

1 attributable to use of the earnings on invested assets to help pay the
2 benefits.

3
4 **Q: Why is this significant or important to consider?**

5 A: The proposed defined benefit plan is not required to achieve the apparent
6 cost savings. The same savings can be achieved by investing the
7 contributions shown in any tax-advantaged vehicles, for example in
8 participant IRA's or other defined contribution plans. Because defined
9 contribution plans do not pool participants' mortality experience, if benefits
10 were provided through defined contribution plans, then long-lived
11 participants would need to rely on additional sources of savings to achieve
12 the same lifetime income while short-lived participants would leave a larger
13 inheritance to their heirs. But the benefits provided by the defined
14 contribution plan would average the same as the benefits provided by the
15 defined benefit plan if assets were invested in the same way and expenses
16 were the same between the plans.

17
18 **Q: Are the proposed future defined benefits plans analyzed by Mr.**
19 **Wood to be administered subject to the federal Employee**
20 **Retirement Income Security Act of 1974, otherwise known as**
21 **ERISA?**

22 A: That is my understanding.
23
24
25
26

1 **Q: Can you explain what rules are applicable when analyzing the**
2 **limitations imposed by ERISA on defined benefit plans?**

3 A: Defined benefit pension plans under ERISA are subject to limitations under
4 IRC 401(a)(17) on the participant compensation that can be taken into
5 account in determining benefit amounts. That limit is \$330,000 for
6 compensation in 2023. In contrast, the assumed compensation of pilots used
7 to determine benefits in the projection is approximately \$400,000 in 2023.
8 IRC 415(b) imposes limitations on the benefits that can be paid from ERISA
9 pension plans. Further analysis would be required to determine when those
10 limits might apply to pilots in the proposed plan. Finally, IRC 436(c)
11 imposes restrictions on benefit accruals in underfunded plans. Such
12 restrictions would likely apply to some participants if plan benefits reflect
13 pilots' years of service prior to the formation of the plan.

14

15 **Q: Do Mr. Wood's projections include any assumptions for**
16 **compensation and benefit limitations under ERISA?**

17 A: The notes on CRW-04 indicate that the limitations under 401(a)(17) and
18 415(b) have been ignored. My understanding is that restrictions under
19 436(c) have also not been reflected in the projections.

20

21 **Q: In layman's terms, what changes to the 50-year cost projections**
22 **would you expect from reflecting these statutory restrictions?**

23 A: The effect of each of these statutory restrictions would be to reduce the
24 benefits that could be provided in the tax-qualified plan. That reduction
25 would reduce the required contributions to the plan, reducing the
26 prefunding of benefits and the total investment return. In summary, the

1 effect would be to reduce the apparent savings in the plan. I expect that the
2 magnitude of the effect would be significant.

3
4 **Q: In this regard, do you agree with Mr. Wood's disclaimer that his**
5 **projections were prepared only to estimate the relative impact on**
6 **plan funding requirements of the three scenarios outlined by PSP**
7 **in its petition here?**

8 A: I believe that Mr. Wood's cautions against the use of his cost-projections for
9 any purpose other than to estimate their relative impact on plan funding
10 requirements under the three scenarios outlined by PSP is a prudent
11 disclaimer. However, omitting administrative costs and ignoring legislative
12 limitations distort the comparison of the current Farebox plan to the other
13 scenarios.

14
15 **Q: Did Mr. Wood's testimony provide any evidence that he was**
16 **directed to use these assumptions and only these assumptions by**
17 **his client PSP?**

18 A: The exhibits CRW-03 and CRW-04 attached to Mr. Wood's testimony
19 provide no indication that the assumptions were selected by his client.
20 Under ASOP Nos. 27, 35, and 41, the absence of such disclaimer means that
21 Mr. Wood takes responsibility for the selection of the assumptions. ASOP
22 No. 17 makes clear that disclosure of the use of assumptions not selected by
23 the actuary applies to Mr. Wood's testimony.

1 **Q: What are the Actuarial Standards for maintaining accuracy and**
2 **disclosure when an actuary is being directed to use assumptions by**
3 **a client versus selecting assumptions the actuary believes are**
4 **reasonable?**

5 A: Under ASOP Nos. 27 and 35, if assumptions are prescribed by another party
6 (such as a client), the actuary is required to disclose that fact and to either
7 (1) indicate that the assumption significantly conflicts with what the
8 actuary believes to be reasonable for the purpose, (2) indicate that the
9 actuary was unable to determine if the assumption is reasonable, or
10 (3) provide rationale for the actuary's determination that the assumption
11 does not significantly conflict with what the actuary believes to be
12 reasonable. In addition, if it were material to his testimony, ASOP No. 17
13 would require Mr. Wood to disclose whether the projections were consistent
14 with projections resulting from assumptions that he would have selected.

15
16 **Q: Does Mr. Wood's cautions against the use of these cost-projections**
17 **for any purpose other than to estimate the relative impact on plan**
18 **funding requirements amongst these three scenarios suffice for this**
19 **purpose?**

20 A: ASOP No. 4 requires an actuary to disclose the purpose of the measurement
21 and to disclose that the measurement may not be applicable for other
22 purposes. I believe that this caution is appropriate in these circumstances.
23 However, under this ASOP, the cautions should have been provided to all
24 intended users of the measurement, so I would have expected that
25 statement to be included in his testimony or attached to the exhibits.

1 **IV. ISSUES REGARDING THE MULTIPLE-EMPLOYER DEFINED**
2 **BENEFIT PLAN PROPOSED BY PSP**

3 **Q: In addition to the testimony of Christopher Wood at Exhibit CRW-**
4 **01T, were you able to review the testimony of Bruce McNeil,**
5 **pension attorney retained by PSP, at Exhibit BJM-01T?**

6 A: Yes. I was able to review Mr. McNeil's testimony from the perspective of a
7 pension actuary. My review should not be construed as legal advice, which I
8 am not qualified to provide.

9
10 **Q: Did Mr. McNeil include in his testimony a legal review of the**
11 **requirements of a defined benefit pension plan qualified under**
12 **sections 401(a)(17) or 415(b) of the Internal Revenue Code?**

13 A: No.

14
15 **Q: Why is the provision of such a legal review of these sections of the**
16 **Internal Revenue Code advisable in your experience?**

17 A: There are several qualification issues for the proposed plan that have not
18 been addressed in testimony. Participant compensation that may be used in
19 the determination of benefits in a qualified defined benefit pension plan is
20 limited by IRC 401(a)(17). That limit is adjusted annually for inflation and
21 is \$330,000 in 2023. It is unclear how the benefit formula in the current
22 Farebox plan could be used in a tax-qualified plan without applying this
23 compensation limit and reducing benefits. Benefits provided by a tax-
24 qualified defined benefit plan are limited by IRC 415(b) and accruals of
25 those benefits may be restricted by IRC 436(c). In addition, IRC 413(c)
26 imposes additional requirements on the funding of multiple-employer

1 defined benefit plans with which it may be onerous to comply. In particular,
2 such plans require that a minimum required contribution be calculated
3 separately for each participating employer (each pilot), creating additional
4 actuarial and auditing expenses and likely requiring contributions from
5 retired pilots.

6
7 **Q: Could the reduction in benefits due to sections 401(a)(17), 415(b),**
8 **and 436(c) be made up by PSP internally after applying this**
9 **compensation limit?**

10 A: Yes. PSP could also maintain a non-qualified, unfunded excess plan to pay
11 benefits that cannot be paid in the qualified plan, but that would require
12 additional calculations and increase administrative complexity and cost.

13
14 **Q: Are those calculations addressed in PSP's proposed defined benefit**
15 **plan?**

16 A: No. The testimony does not address the need for a nonqualified, unfunded
17 excess plan.

18
19 **Q: Are the increased aspects of administrative complexity addressed**
20 **in PSP's proposed defined benefit plan?**

21 A: No. The testimony does not address the administrative burden of either the
22 proposed qualified plan or of the excess plan that would be required to
23 provide the full amount of the benefits in the current Farebox plan.

1 **Q: What are the types of risks that often face a defined benefit plan**
2 **like the one proposed by PSP?**

3 A: The most prevalent risk to these plans is difficulty meeting funding
4 requirements.

5

6 **Q: What are the funding risks associated with the creation of a defined**
7 **benefit plan?**

8 A: Qualified defined benefit pension plans are required to pre-fund benefits.
9 Consequently, conversion of any part of the current Farebox plan to a
10 qualified DB plan will accelerate the need for contributions. Minimum
11 contribution amounts are determined under IRC 430 and reflect the value of
12 benefits accruing, amortization of unfunded past accruals, and amortization
13 of changes in the plan's funded status (positive or negative) other than by
14 required contributions. Decreasing discount rates and adverse plan
15 experience (such as worse-than-expected investment performance, earlier-
16 than expected retirements or larger-than-expected increases in the
17 retirement base) may create unanticipated spikes in required contributions.
18 Such unanticipated increases in required contributions can be difficult to
19 manage for some plan sponsors.

20

21 **Q: Are these funding risks associated with the creation of the PSP**
22 **plan adequately addressed by Mr. McNeil's testimony in your**
23 **experience?**

24 A: No. Calculation of required contributions and analysis of the factors that
25 affect those calculations are actuarial in nature. I would not expect someone
26 who is not an actuary to address those risks.

1 **Q: In your experience are there other areas of practical considerations**
2 **and issues in the establishment of defined benefit plans that you**
3 **believe are unaddressed in Mr. McNeil’s testimony?**

4 A: Yes. Mr. McNeil’s assertions that PSP would “perform the actuarial analysis
5 for one plan in a single report” and “satisfy the funding requirements under
6 sections 412 and 430 of the Code for one plan” are factually correct because
7 it would be one plan, but the testimony does not reflect the rules in IRC
8 section 413(c) for multiple-employer defined benefit plans. That code
9 section, together with the instructions for the annual Form 5500 for the
10 plan, require that minimum required contributions be calculated and made
11 separately for each participating employer. In this plan, those contributions
12 would vary widely between pilots. In the scenario in which past service is
13 included in plan benefits, some participants would have required
14 contributions approaching their full compensation for the year. In addition,
15 some pilots who retired with benefits in the plan would likely have required
16 contributions after retirement. Failure of any pilot to make the required
17 contributions would have the same implications for the plan that Mr.
18 McNeil describes for separate defined benefit pension plans for each pilot,
19 but some of the potential consequences of failure to make required
20 contributions could apply to the entire plan.

21 Mr. McNeil’s testimony also does not address the considerable
22 administrative complications of a tax-qualified defined benefit plan and
23 associated costs, the burden of investment management, the complications
24 associated with poor funded status of the plan, or nondiscrimination issues.

1 **Q: What are the issues outstanding regarding potential administrative**
2 **complications?**

3 A: Qualified defined benefit plans are required to offer participants some
4 alternative forms of payment (e.g., a form in which the surviving spouse
5 receives a percentage of the initial benefit amount other than the 50%
6 provided in the current plan). Procedures would need to be established to
7 determine the amount of such alternative forms of payment, provide
8 participants an election opportunity and appropriate information and
9 disclosures, and implement payment of the elected form. Furthermore,
10 qualified defined benefit plans are required to accept Qualified Domestic
11 Relations Orders (QDROs) that meet appropriate criteria. A QDRO would
12 assign a portion of the participant's benefit to another party. The plan
13 would need to have procedures in place to review and implement such
14 orders. Tax-qualified pension plans generally use actuaries and ERISA legal
15 counsel to establish appropriate administrative procedures and forms.

16
17 **Q: What are the issues outstanding regarding potential investment**
18 **considerations?**

19 A: A qualified DB plan must have processes in place for prudent management
20 of invested funds. Failure to maintain prudent processes could result in
21 unnecessary funding issues and potential penalties imposed by the IRS.

22
23 **Q: What are the issues outstanding regarding potential funded status**
24 **considerations?**

25 A: When plan asset values fall below certain critical threshold percentages of
26 the funding target (present value of accrued benefits), restrictions on the

1 operation of the plan are imposed under IRC section 436. If service prior to
2 plan formulation is included in the qualified DB plan, the likelihood of
3 encountering those restrictions will be high until those past accrued benefits
4 have been funded. Although these restrictions do not apply for a new plan's
5 first five years, when past service is included in the plan, the restrictions
6 are likely to apply to some of the participants starting in year six unless
7 contributions in excess of the minimum required contributions are made to
8 accelerate the funding for long-service participants.

9
10 **Q: Does any of the testimony submitted by either Mr. McNeil or Mr.**
11 **Wood examine the question of whether the proposed multiple**
12 **employer plan by PSP would encounter nondiscrimination issues?**

13 A: No.

14
15 **Q: What are the issues outstanding regarding potential**
16 **nondiscrimination issues?**

17 A: If any of the sponsors of the multiple employer plan has employees other
18 than the covered pilot, the plan may be required to include some or all of
19 those additional employees under IRC sections 401(a)(4), 401(a)(26) or
20 410(b).

21
22 **Q: What are the issues outstanding regarding potential additional**
23 **administrative expenses?**

24 A: Qualified pension plans must pay annual premiums to the PBGC.
25 Premiums in the first year could range from approximately \$5,000 if the
26 plan provides benefits only for future service to approximately \$80,000 if

1 benefits for past service are included in the plan. In addition, services of an
2 Enrolled Actuary would be required annually for the PBGC premium filing
3 and the Form 5500 filed with the IRS, and services of an accountant would
4 be required to audit the financial statements of the plan when the number
5 of participants in the plan, including retired participants, exceeds 100 and
6 any other time that the plan sponsor elected such an audit out of prudence.

7 Mr. McNeil estimated the cost of establishing the plan would be
8 approximately \$55,000. I believe that the annual cost of maintaining the
9 plan would be far greater.

10
11 **Q: Does any of the testimony submitted by either Mr. McNeil or Mr.**
12 **Wood propose a plan where individual pilots would make any level**
13 **of contributions to underwrite their own future retirement benefits**
14 **under the proposed plan?**

15 A: No.

16
17 **Q: Does any of the testimony submitted by either Mr. McNeil or Mr.**
18 **Wood demonstrate that they examined or considered the question**
19 **of whether individual pilots would make contributions to**
20 **underwrite their own future retirement benefits under the**
21 **proposed plan?**

22 A: No.

1 **Q: In addition to your review of the testimony of actuary Mr. Wood at**
2 **Exhibit CRW-01T and pension attorney Mr. McNeil at Exhibit BJM-**
3 **01T, did you work with PMSA on the development of questions and**
4 **requests for additional information that were ultimately presented**
5 **to PSP as formal data requests in this case?**

6 A: I assisted with the development of questions. It is my understanding that
7 the questions were presented to PSP. I am not aware of whether they were
8 ultimately presented to Mr. Wood and Mr. McNeil by PSP, but I would have
9 expected PSP to rely on its experts to respond to those questions.

10
11 **Q: After the preparation of these questions submitted as formal data**
12 **requests to PSP, were you able to review any substantive responses**
13 **from Mr. Wood or Mr. McNeil in the preparation of your testimony**
14 **in this case?**

15 A: No, I was not able to review responses to the formal data requests.
16 Previously, in June 2022, Mr. Wood provided helpful clarifications
17 concerning the data and actuarial methods and assumptions used in his 50-
18 year projections in response to my questions to him. But after the
19 preparation and submission of the more recent questions submitted as
20 formal data requests in this case, I have not been able to review any
21 substantive responses.

1 **Q: Why were you unable to review any substantive responses to the**
2 **formal data requests regarding PSP’s proposed retirement plan**
3 **transition and the actuarial review underlying it?**

4 A: PSP did not provide substantive answers to any of the formal data requests
5 that were submitted regarding its proposed retirement plan and its
6 actuarial study or the testimony of Mr. Wood and Mr. McNeil. I’ve attached
7 a copy of “PSP Responses to PMSA’s DRs 471-545 PILOT RETIREMENT” to
8 this testimony as Exh. CN-4.

9
10 **Q: Does the lack of substantive responses by Mr. Wood and Mr. McNeil**
11 **to the questions that you helped to develop and that were posed in**
12 **PMSA’s Data Requests 471-545 impact your ability to fully analyze,**
13 **review, and provide advice regarding the proposed retirement**
14 **plan?**

15 A: Yes. Some of the questions that I helped develop were intended to build a
16 common understanding of how the proposed plan would operate and how
17 much it would cost. In the absence of constructive answers to those
18 questions, it seems that the proposed plan would be an inefficient and
19 possibly ineffective tool for providing pilots with the retirement income they
20 would expect from the current Farebox plan because the cost of
21 administering the plan would be disproportionate to its size and restrictions
22 on benefits would prevent the plan from providing the same benefits as the
23 current Farebox plan.

1 **V. CONSIDERATION OF ALTERNATIVES TO THE RETIREMENT**
2 **PLAN PROPOSED BY PSP**

3 **Q: Are there viable options and alternatives available to PSP that**
4 **could be considered at a future rate case aside from a Multiple**
5 **Employer Defined Benefit Plan such as the one proposed by PSP?**

6 A: Yes.

7
8 **Q: Please describe some alternative program arrangements that might**
9 **be considered as a substitute for the existing PSP retirement plan**
10 **in addition to the PSP-proposed Multiple Employer Defined Benefit**
11 **Plan.**

12 A: The current plan is an unfunded defined benefit plan. As such, it can
13 operate without the cost of compliance with the legal requirements of a tax-
14 qualified plan. However, because benefits are not funded when earned, the
15 plan imposes costs for current services on future rate payers, and it depends
16 entirely on those payments from future rate payers for the security of
17 retirement benefits earned in the plan.

18 For several decades, corporate sponsors of defined benefit plans have
19 been transitioning away from those plans to defined contribution retirement
20 plans. Nearly all new defined benefit plans during that period have been
21 small plans intended primarily to provide tax-deferral for highly
22 compensated professionals, such as dentists and lawyers. Few new plans
23 have been created for the primary purpose of providing secure retirement
24 income. Defined benefit retirement plans have fallen out of favor with
25 corporate sponsors largely because of the volatility and unpredictability of
26 the cost and required contributions for those plans. In contrast, defined

1 contribution plans relieve the entity responsible for funding the plan from
2 significant uncertainties about the magnitude of future contributions.

3 Typically, when corporate sponsors transition from a defined benefit
4 retirement plan to a defined contribution retirement plan, they will consider
5 measures that would diminish or eliminate adverse financial impacts on the
6 plan participants. Also, the transition is done gradually, without changing
7 benefits previously earned because previously earned benefits are protected
8 under ERISA. I believe that such an approach could improve the security of
9 retirement benefits for Puget Sound Pilots without increasing burdens on
10 future rate payers for past pilot services.

11 To gradually increase the security of retirement benefits, future Farebox
12 plan accruals could be replaced by SEP-IRA contributions for all future
13 pilots and current pilots below a threshold age. To protect the most senior
14 pilots from adverse financial consequences of the transition, the threshold
15 age would be the age below which the accumulated value of future
16 maximum SEP-IRA contributions would be expected to exceed the value of
17 future Farebox accruals. The exact threshold age would depend on
18 longevity, investment return, and inflation assumptions, but would be
19 approximately age 58 using the assumptions in Mr. Wood's projections. In
20 this scenario, current retirees and current pilots over age 58 would continue
21 to receive benefits under the current Farebox plan. Pilots currently younger
22 than age 58 and all future pilots would receive Farebox benefits for past
23 service but would receive SEP-IRA contributions in lieu of Farebox benefits
24 for future service.

25 Funding of the SEP-IRA contributions can be a combination of
26 contractual contributions and individual pilot contributions, with the

1 contractual amount to be negotiated. The contractual amount might be
2 different for future pilots. Because the value of Farebox accruals is a
3 function of the pilot's age, contractual SEP-IRA contributions could also
4 vary depending on the pilot's age.

5 The advantages of a gradual conversion from the Farebox plan to a
6 defined contribution retirement program include increased security of
7 benefits, increased portability of benefits for pilots changing careers,
8 minimal overhead cost compared to a tax-qualified defined benefit plan, and
9 greater predictability of cost. The greater predictability of cost would also
10 improve the transparency of future rate cases and better align the timing of
11 pilot services with the payments for those services.

12 It needs to be noted that tax-qualified defined benefit plans are very
13 difficult to unwind. Establishing such a plan would create a permanent
14 burden on future rate cases and rate payers. In contrast, future
15 contributions to tax-qualified defined contribution plans can be altered or
16 eliminated at any time.

17 18 VI. CONCLUSION

19
20 **Q: Does this conclude your testimony?**

21 **A:** Yes.
22
23
24
25
26