1. Does the proposed standard provide sufficient and appropriate guidance to actuaries working with models? If not, what suggestions do you recommend for improving the guidance?

There are several areas within the standard that overuse qualifiers when providing guidance. This overuse of qualifiers results in weak guidance that does not provide much direction to actuaries. I suggest removing the following qualifiers:

3.6 **Presentation of Results**: In the second sentence, remove the word ‘should’ from ‘should consider’. Stronger guidance is warranted when it comes to material changes in methodology, key assumptions and parameters.

   If appropriate, the actuary should **consider describe** any material changes in methodology, key assumptions and parameters, and possible model limitations affecting results since the prior communication.

3.6.2 **Discussion of Models**: Remove the word ‘should’ from ‘should consider’. The items listed, the intended purpose of the model, how the model meets the user’s needs and any significant uncertainty of the model, are all necessary and deserve a stronger statement than ‘should consider’ represents.

   In actuarial reports that include information derived from models, the actuary should **consider including explanations of the following**:

   a. the intended purpose of the models and how the intended users’ needs are addressed by those models; and
   b. any significant uncertainty in the model results.

3.6.3 **Comparison to Prior Reports**: There are too many qualifiers in this paragraph, making the guidance unclear and limited. I suggest removing the words ‘consider’ and ‘depending on the type of the model’ from the first sentence, and the words ‘if any’ from the second sentence.

   The actuary should **consider include** in the actuarial report a comparison to corresponding items in a prior actuarial report, as applicable **depending on the type of the model**. Such a comparison, **if any and where reasonably possible**, should include an explanation of assumptions and parameters or methods that have changed materially from that prior actuarial report.

3.8 **Documentation**: In paragraph two, remove the word ‘consider’ as these are all items the actuary should be documenting. Also, all of section 3.6 is appropriate here so replace ‘sections 3.6.1 and 3.6.2’ with ‘section 3.6’.

   If no actuarial report is created, the actuary should **consider documenting** the items mentioned in **section 3.6 sections 3.6.1 and 3.6.2** of this standard, and the actuary may consider documenting other items mentioned in sections 3.1-3.7 that the actuary believes may be helpful to subsequent users.

In some areas, the standard applies ‘where appropriate’ or as ‘applicable’ but it isn’t always clear when it may be appropriate or applicable.
3.5.1.c **Peer Review**: some guidance is needed on when to obtain a peer review. The language states that the actuary *should consider* obtaining a peer review, where *appropriate*. The use of the words ‘should consider’ and ‘where appropriate’ do not provide much guidance.

3.5.2 **Appropriate Governance and Controls**: appropriate governance and controls are not defined. If this is addressed elsewhere, provide a reference to that guidance here.

3.6.4 **Description of Conservatism or Optimism**: the first sentence says ‘as applicable depending upon the type of model’. Some guidance is needed as to what type of models are applicable.

The following areas could use some clarification or slight modification:

3.5.1.a **Model Integrity**: The last paragraph appears to be circular logic. In a sense it is saying that the degree of reconciliation depends on the level of risk after reconciliation. The level of risk after reconciliation cannot be known before determining the level of reconciliation to perform.

3.6 **Presentation of Results**: I would recommend changing the words ‘possible model limitations’ to ‘any model limitations’ or simply ‘model limitations’.

3.6.4 **Description of Conservatism or Optimism**: Should the actuary address assumed conservatism in assumptions specified in laws as well?

3.7 **Reliance**: in sentence two, remove the first ‘other’.

    When relying on outputs from other models supplied by others...

3. **The scope of the proposed ASOP excludes “simple” models, which are defined in section 2.13. Is this definition appropriate and sufficiently clear?**

    I am not fond of the use of the term Simple Model. I understand the reason for adding this definition, but defining and referencing ‘simple models’ seems to diminish the credibility of the ASOP. I think it would be better to identify what models are covered by this ASOP rather than create a term to define those models not covered by the ASOP. The term ‘simple model’ is only used in three places within the ASOP and that text could be modified as follows:

    1.2 **Scope**: The scope could be modified by removing the reference to ‘simple models’ in the first paragraph and adding a third paragraph to remove the ‘simple’ models from the scope.

        Scope: This ASOP applies to actuaries in all practice areas performing actuarial services when selecting, designing, building, modifying, developing, using, reviewing, or evaluating all types of models *that are not simple models*.

        If the model results are not heavily relied upon by the intended user, or do not have material financial effect, the requirements of this ASOP are limited to certain disclosure requirements in section 3.1.

        *If the model results are transparent and can be predicted without an actual model run or are readily obtained from an external source that is not another model, the requirements of this ASOP do not apply.*

    2.12 **Simple Model**: Remove the definition of a Simple Model:
3.1 Application of ASOP Guidance: The first paragraph would actually work well without referring to ‘Simple Models’. The first sentence could simply say:

The guidance in this ASOP applies to actuarial practice regarding models that are not simple models when, in the actuary's professional judgment, intended users of the model rely heavily on the results, and the use of the results of the model has a material financial effect for the intended user.

Another paragraph or sentence could be added to exclude the ‘simple’ models:

In modeling situations where the model results are transparent and can be predicted without an actual model run or are readily obtained from an external source that is not another model, the requirements of this ASOP do not apply.