OEIS Data Request 10.3

Regarding wildfire consequence and risk calculations: In response to an Energy Safety data request (OEIS-P-WMP_2023-PC-007), PacifiCorp provided an explanation of how it uses percentiles within its wildfire consequence calculation. PacifiCorp stated that the 95th percentile was used to determine the severity of weather days for its wildfire simulation (higher percentile = worse weather). PacifiCorp also stated that out of 5,400 possible weather days, 300 were selected for the risk model calculation.

i. Does PacifiCorp currently use the process described above and in PacifiCorp's data request response in its methodology for calculating wildfire consequence and/or risk scores?

   (1) If so, when (what date) was this process implemented?

ii. How is the 95th percentile used to select the 300 days?

   (1) Provided a numerical example which includes the order of operations.

iii. How are the 300 days used to calculate risk scores? Please provide a numerical example.

   (1) Are 95th percentiles applied in any other parts of the formula to calculate risk scores? If so, provide a numerical example which includes the order of operations.

iv. How are the risk scores aggregated.

Response to OEIS Data Request 10.3

The Company assumes that the reference to "response to an Energy Safety data request (OEIS-P-WMP_2023-PC-007)" is intended to be a reference to OEIS Data Request 7.1. Based on the foregoing assumption, the Company responds as follows:

i. PacifiCorp implemented the methodology described in its revised 2023 Wildfire Mitigation Plan (WMP) and its response to OEIS Data Request 7.1 in August 2023.

ii. The 95th percentile is not applied directly to the selection of weather days for use in wildfire risk models. Weather days are separated into geographic regions to account for weather patterns associated with elevated fire risk differing across PacifiCorp's service territory. For example, hot and dry winds from the west may be a risk factor in one area, but winds from the east may be a factor in a different location.

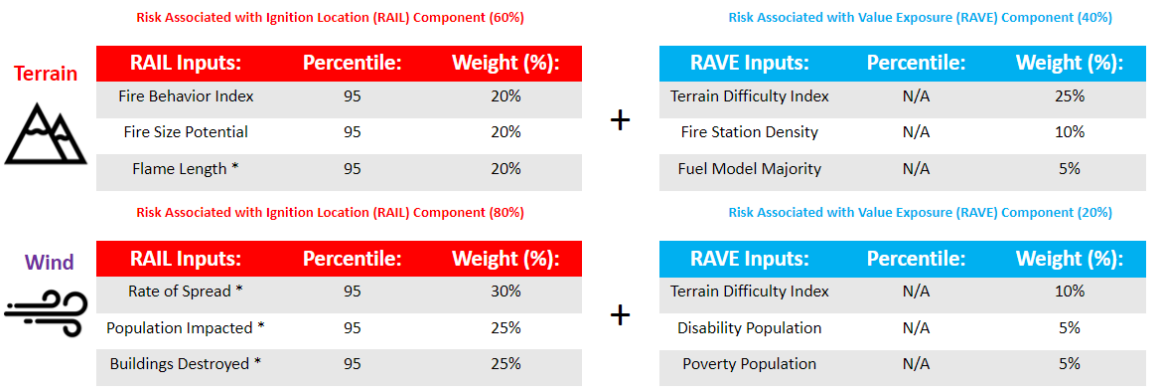
   For each area, the worst weather days are selected based on the following data:

- The Hot Dry Windy (HDW) Index.
- Energy Release Component (ERC) for fuel conditions.
- Wind Gusts Percentile (Gust).

The weather days are aggregated for each area using the exposure metrics ERC, HDW and Gust. Days below 70th percentile ERC are removed as large fire activity is not typically observed below that value. Days that have both HDW and Gust below 50th percentile are also removed as those days have lower outage potential and fire weather risk. Weather days are then clustered to identify days with similar weather exposures to elevated fire conditions. Finally, stratified sampling from each cluster (taking the worst ones first) produces the final weather day selection for an area. This process is repeated in each area. PacifiCorp selects days that meet all three criteria and days that meet only two dimensions of risk. The reduces the possibility of missing a day that is not at the highest risk based on all three dimensions but still presents a high potential for wildfire.

iii. The 300 weather days define the meteorological and fuel parameters used as inputs to wildfire simulations that calculate ignition risk probability and consequence. Consequently, PacifiCorp cannot provide a numerical example illustrating the use of weather days to calculate wildfire risk since the weather days are a set of inputs into the overall wildfire risk model.

(1) The 95th percentile is applied to the selection of FireSight (formerly Wildfire Risk Reduction Model (WRRM)) output values used as inputs in the ignition risk score as shown in the figure below.



These model outputs are used to calculate the ignition risk score as shown in the illustrative example below for one segment (Figure 1a through Figure 1c):

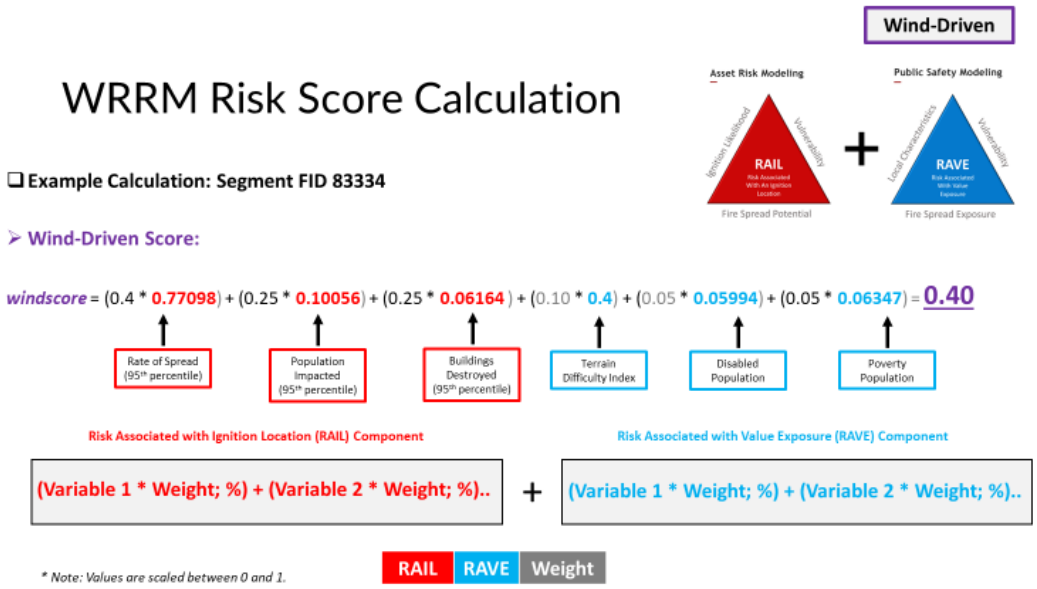


Figure 1a:
Overview using real data to calculate the wind-driven score (variables are noted with weights).

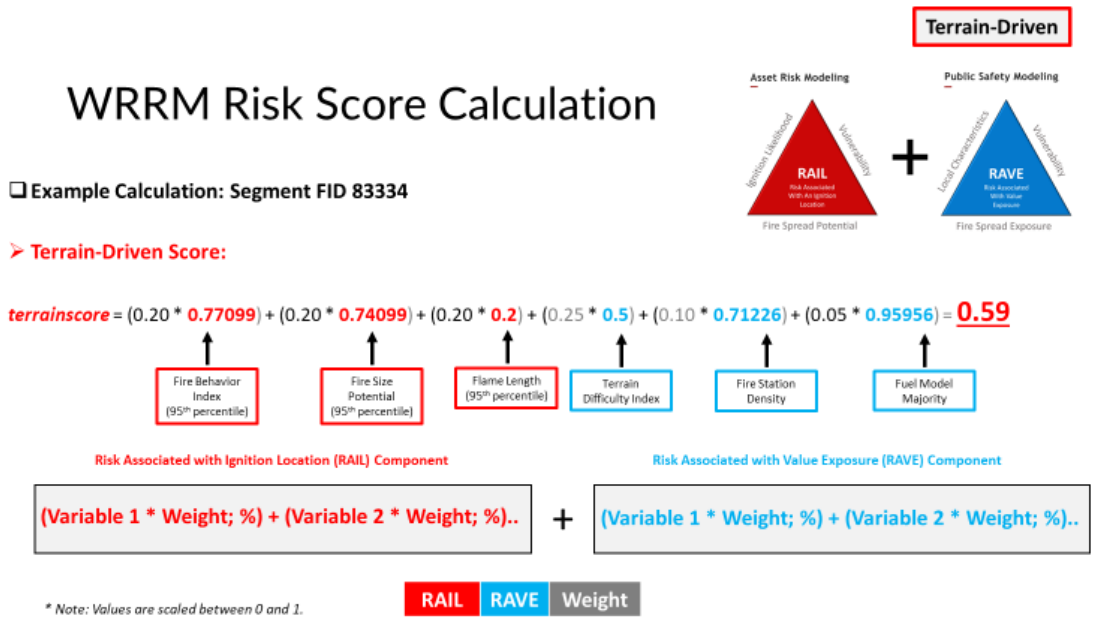


Figure 1b:
Overview using real data to calculate the terrain-driven score (variables are noted with weights).

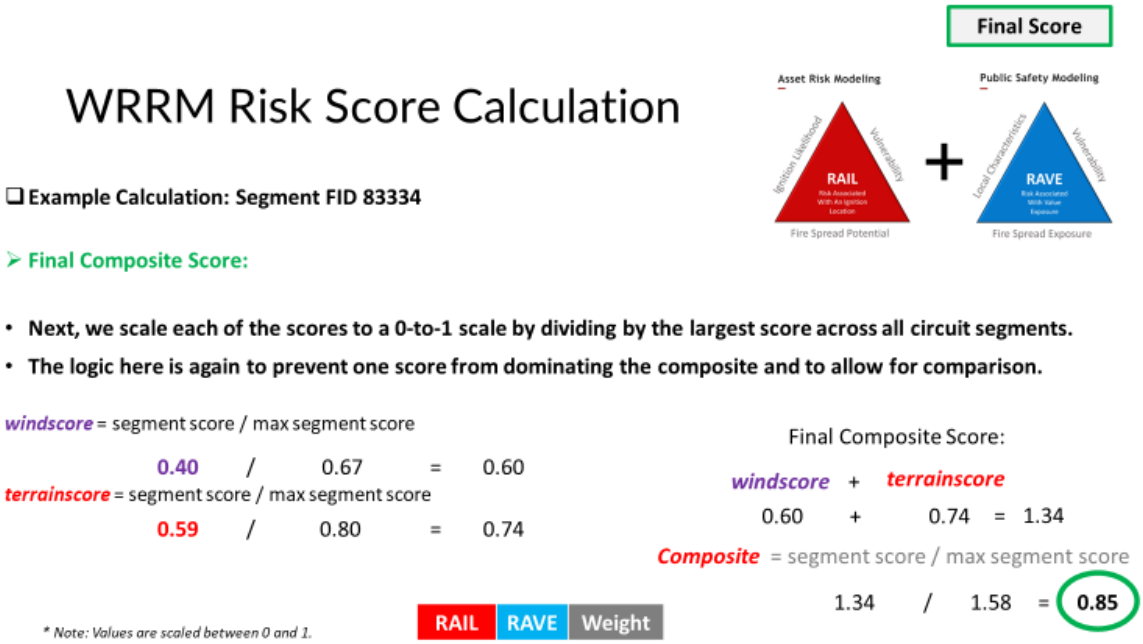


Figure 1c:
Overview using real data to calculate the final composite score (combining wind-driven and terrain-driven scores to get a final composite).

iv. Risk scores are currently applied at the circuit level to identify and prioritize locations for wildfire hardening projects. PacifiCorp uses circuit level risk scores as part of an overall mitigation selection and prioritization decision process, which includes cost and technical assessments and input from additional internal subject matter experts. The circuit level risk scores are aggregated from the underlying subsegment level data by averaging all segments on a particular circuit. These averages are reviewed in conjunction with maximum terrain- and wind-driven risk scores as part of the mitigation selection and prioritization decision-making process.