PENNSYLVANIA COMPENSATION RATING BUREAU
F CLASS FILING

RATE FORMULAE

The experience used for classification relativities for the April 1, 2021 F Class revision will include all available risks. It is proposed that individual claims and catastrophes be limited in accordance with the procedure previously employed in other PCRB filings. The experience period will be five (5) years for all classifications regardless of whether a classification might meet the full credibility requirements with less than five years of data. Credibility will be based on reported payrolls for each classification. All occupational disease losses will be included in the exhibit of experience, the total amount of such losses by type of injury being shown on a separate line on the classification rate sheets.

The calculation of classification rates will be made in accordance with the following procedure:

(1)     Determine the pure premiums underlying present Manual Rates by category (serious, non-serious, medical only and total) for each classification.

(2)     Adjust the present pure premiums by category (serious, non-serious, medical only and total) to the April 1, 2021 rate level to obtain present on-rate-level pure premiums.

(3)     Determine Expected Losses (serious, non-serious, medical only and total) for each classification by multiplying the payrolls of the experience period by the pure premiums underlying present Manual Rates.

(4)     Determine the indicated pure premiums (serious, non-serious, medical only and total) from the payrolls and losses of the experience period.

(5)     Test the indicated total pure premiums by multiplying by the payrolls of the latest five years for each classification and obtaining the total Actual Losses for all classifications combined.

(6)     Calculate the Expected Losses by multiplying the pure premiums underlying present Manual Rates by the payrolls of the latest five years for each classification and by the overall average rate change.

(7)     Obtain correction factors by category of loss (serious, non-serious and medical only) by dividing the Expected Losses derived in (6) above by the Actual Losses derived in (5) above.

(8)     Apply the correction factor obtained in (7) above to the indicated (pre-test) pure premium from (4) above to obtain the indicated (post-test) pure premiums.

(9)     Determine "formula" pure premiums from (2) and (8) above for each category of loss, with credibility corresponding to the amount of payroll, for each category, to be assigned to the indicated pure premiums. Credibility weights will be taken from the exhibit appearing in the Classification Book. The complement of such credibility is to be assigned to the present on-rate-level pure premiums for each category of loss.

(10)    Select proposed total pure premiums for each classification, such pure premiums being the middle pure premium of the total pure premiums of (2), (8) and (9) above. If the proposed pure premium is other than the formula pure premium in (9) above, partial pure premiums are to be allocated between categories (serious, non-serious and medical only) in the same proportion as the partial pure premiums comprising the formula pure premium.

(11)    Test the proposed total pure premiums in (10) by multiplying by the payrolls of the latest two years for each classification and obtaining the total Expected Losses for all classifications combined.

(12)    Obtain a correction factor by dividing the Expected Losses derived in (6) above by the Expected Losses derived in (11) above.

(13)    Calculate the composite pure premium multipliers, which will be the product of the following items:

   (a) The pure premium correction factor determined in (12) above.

   (b) The proposed experience rating plan off-balance factor (Collectible Premium Ratio).

   (c) The expense provision factor as calculated by taking the inverse of the permissible loss and loss adjustment ratio.

   (d) The rate test correction factor, as described in (17) below.

(14)    Apply the composite multiplier obtained in (13) above to the proposed total pure premiums to obtain Manual Rates.

(15)    Test to assure that the maximum departure of the proposed Manual Rates from the current is in accordance with the following formulae:

   Maximum Changes in Rates:
         Upward: Overall change plus 25% rounded to the nearest 1%.
         Downward: Overall change minus 25% rounded to the nearest 1%.

(16)    Manual Rates are to be rounded to the nearest $.01.

(17)    Test the Manual Rates derived in (16) above to determine if balance has been achieved within 0.005 of the indicated change in rate level. If such balance has not been achieved, calculate the necessary rate test correction factors to adjust the composite pure premium multipliers derived in (13) above to achieve the necessary balance. Perform steps (14) through (17) iteratively until the desired balance is achieved.