Workers' Compensation Insurance Rating Bureau of California

Report on Glaziers Dual Wage Threshold Study

Excerpt from the WCIRB Classification and Rating Committee Minutes
May 8, 2018

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Glaziers Dual Wage Threshold Study

Summary
In 2016, the WCIRB adopted a modified process to update dual wage thresholds that involves an analytical review of the thresholds using data from unit statistical reports and published governmental sources, supplemented as needed by special wage surveys. At the April 25, 2017 Classification and Rating Committee meeting, staff presented the results of the analytical review of the thresholds for all dual wage classifications with changes to be effective January 1, 2018. Staff noted that the analytic approach produced clear indicated thresholds for all of the dual wage classifications except for Classifications 5467/5470, *Glaziers*. In the report, staff noted that the wage inflation for the *Glaziers* classifications and the loss to payroll ratio differential between the low wage and high wage classifications had been volatile, with the loss to payroll ratio differential sometimes fluctuating below 100%. As a result, staff recommended further study of this classification, including an analysis of information to be obtained from a wage survey of employers in the classification provided by insurer premium auditors and a review of the applicability of the dual wage program to this classification.

Policies from experience rated employers with expiration dates between October 1, 2017 to January 1, 2018 and with nonzero payroll in at least one of the two *Glaziers* dual wage classifications were selected for the wage survey based on the most current unit statistical data. Information from the survey responses was reviewed in conjunction with the corresponding unit statistical report data and updated wage inflation information. In addition, results from the analytic approaches with data updated for an additional year of experience were reviewed.

In summary, the WCIRB finds that the *Glaziers* classifications generally continue to reasonably fit a dual wage classification approach and recommends an increase in the threshold for Classifications 5467/5470, *Glaziers*, from $31 to $32. While the *Glaziers* classifications presently continue to reasonably fit a dual wage classification approach, the data is somewhat volatile over time, due to the smaller size of these classifications resulting in sparse data used in some of the analytical approaches. Staff plans to continue to review these classifications given their unique characteristics, including developing alternative methods in preparation for the study of all dual wage classification thresholds to be conducted in 2019.

Study Results

<u>Applicability of Dual Wage System</u>
Staff conducted a review of the applicability of the dual wage system to Classifications 5467/5470, *Glaziers*.[1] In order for segregation into dual wage classifications to be appropriate, the construction classification under review should show:

1. Significant variation in wages paid by employers
2. Relatively low concentration of employees paid wages near the dual wage threshold
3. Credible experience in both the high and low wage dual classifications
4. Significant differential indicated between the losses per $100 of payroll among employers paying wages below the threshold and those paying wages above the threshold

In late 2017, policies from experience rated employers were selected for the *Glaziers* wage survey that had an October 1, 2017 to January 1, 2018 expiration date and nonzero payroll in at least one of the two *Glaziers* dual wage classifications based on the most current unit statistical data. The first graph in Exhibit 1 shows the survey distribution of employees by hourly wage interval comprising the experience of 116 employers with approximately 1,000 employees that represented 22% of the payroll of the *Glaziers* dual wage classifications for the study period.

[1] Dual wage classifications were created for *Glaziers* in 1992.

The survey data indicates that there is a wide variation of wages paid by glazing employers with wages below (51% of surveyed employees) as well as those above (49% of surveyed employees) the current wage threshold of $31. There is a modest concentration in wages around the current wage threshold with 8% of the total survey distribution of employees within one dollar of the current threshold. The concentration of wages declines significantly as the absolute difference from the current threshold increases.

In the Classification Relativity Review Sheets included in the January 1, 2018 Regulatory Filing, the indemnity and medical credibility are 92% and 72%, respectively, for Classification 5467, *Glaziers – away from shop – employees whose regular hourly wage does not equal or exceed $31.00 per hour,* and 83% and 61%, respectively, for Classification 5470, *Glaziers – away from shop – employees whose regular hourly wage equals or exceeds $31.00 per hour,* based on five years of experience. Credibility levels in these classifications have been relatively consistent over time. While the experience of most other dual wage classifications have 100% credibility for pure premium ratemaking purposes, the WCIRB believes there is a sufficient volume of experience in both the low wage and high wage glazier dual wage classifications to continue to develop credible advisory pure premium rates.

Table 1 shows advisory pure premium rate differentials between the low wage and high wage *Glaziers* classifications over time. Column 3 shows that the rate differentials continue to be significantly higher than 100% and have generally been at higher levels in the last several years. Despite some of the individual year volatility in experience due to the relatively smaller size of the *Glaziers* classifications, the advisory pure premium rate differential, which is based on multi-year comparisons of experience, has been relatively stable over the last three years.

Table 1 – *Glaziers* Advisory Pure Premium Rates and Rate Relativities

Effective Date (January 1)	(1) **Classification 5467**	(2) **Classification 5470**	(3) = (1)/(2) **Low Wage/High Wage Rate Differential**
2011	$8.34	$5.93	141%
2012	$11.73	$7.19	163%
2013	$12.00	$8.02	150%
2014	$14.35	$7.67	187%
2015	$14.64	$7.24	202%
2016	$13.53	$5.31	255%
2017	$10.84	$4.62	235%
2018	$10.34	$4.11	252%

In summary, the WCIRB's review of the applicability of the dual wage system to glaziers shows: (1) there continues to be significant variation in wages paid by employers, (2) there is not a significant concentration of employees' paid wages near the dual wage threshold, (3) there continues to be reasonably credible experience in both the low wage and high wage glazier dual wage classifications, and (4) the loss to payroll differential between the low wage and high wage classifications are very significant. As a result, the WCIRB recommends that the dual wage classifications for *Glaziers* be maintained.

<u>Consideration of Segregation of Glazier Classification Based on Operations</u>

The WCIRB reviewed whether segregating glaziers based on operations rather than wage level would be more appropriate to the extent that different types of glazing work was highly correlated with different wage levels. Glazing employers in Classifications 5467 and 5470 are typically engaged in glazing work involving commercial new construction, tenant improvement work, or broken glass or window repair. The WCIRB evaluated whether employers engaged in commercial new construction and tenant improvement work paid higher wages and if some of the differences in the experience of the *Glaziers* dual wage classifications were based on operational differences rather than wage level differences.

To obtain information by these operational distinctions, the WCIRB augmented the *Glaziers* wage survey to determine the primary operational type of glazing engaged by the employer. The operational types were defined as: Type 1 – Glazing for Commercial New Construction, Type 2 – Glazing for Tenant Improvement Work, Type 3 – Glazing for Broken Glass/Window Repair, and Type 4 – Other Glazing Operations. The WCIRB evaluated whether the dual wage bifurcation is a proxy for the operational segregation of Types 1 and 2 employers (potentially mostly high wage paying employers) versus Type 3 employers (potentially mostly lower wage paying employees). The survey results combined with the latest five years of unit statistical data for the surveyed employers showed that the loss to payroll ratios of Type 3 employers and Types 1 and 2 employers are approximately the same (within 5%). Additionally, the Type 3 surveyed employers had only 15% of the payroll from the Types 1, 2 and 3 surveyed employers, indicating the Type 3 employers would likely not have sufficiently credible data to warrant a distinct classification. As such, the WCIRB does not recommend segregating glazier employers by these operational distinctions.

Indicated Glaziers Dual Wage Threshold

In determining the indicated 2019 threshold for the *Glaziers* dual wage classifications, the WCIRB relied primarily on the recent wage survey data supplemented by the analytical approaches used in the 2017 WCIRB study of dual wage classification thresholds, with information updated with an additional year of experience.

Similar to the survey method used in pre-2017 WCIRB studies of dual wage thresholds, the employers' survey data was linked to the corresponding payroll and loss data from WCIRB unit statistical reports for policy years 2012 to 2015.[2] In prior studies, each surveyed employer was mapped to a single hourly wage, which was based on the average of their employees' hourly wages from the survey. As a result, all the employees' wages would be set equal to the average wage of the employer in the analysis. In practice, however, an employer typically has a number of employees at different hourly wage rates. As a result, staff enhanced the dual wage survey analysis performed as part of this review by distributing the employer's inflation-adjusted unit statistical payroll into wage intervals based on the wage distribution of the employer from the employer's survey data. The losses[3] of each unit statistical claim were allocated to wage intervals based on the claim's reported average weekly wage, adjusted for wage inflation. In this way, the impact of the dual wage threshold on the employer was reviewed based on that employer's actual wage distribution rather than assigning it a single average wage level for the employer.

Changes in the threshold were analyzed by assigning the payroll and losses that are mapped to each wage interval to the low or high wage classifications based on the specific threshold wage being reviewed. Each alternative threshold was reviewed based on the impact that threshold would have on (a) the proportion of data in the low and high wage classifications, (b) the loss to payroll differential between the low and high wage classifications, and (c) the approximate concentration of wages at the threshold. The survey method results evaluated at various alternative thresholds are shown in Exhibit 1. Based on the analysis, the peak loss to payroll differential is 201% at the $32 threshold for 2019.

During the survey method review, the WCIRB noticed several characteristics of the *Glaziers* dual wage classifications. As shown in the first graph in Exhibit 1, there is a large concentration of wages greater than or equal to $40 per hour. The WCIRB conducted a thorough investigation of the underlying data and noticed that this large wage concentration is a phenomenon that occurs across operational types and many individual employers. As a result, as various alternative thresholds were being tested, the high

[2] The survey method typically used two years of unit statistical experience; however, as the *Glaziers* dual wage classification is among the least credible dual wage classifications, four years of unit statistical experience was used in this study.

[3] For consistency of comparison across years, the losses were developed to a second unit statistical report level and adjusted to a common policy year 2018 benefit level, whereas the payroll was adjusted to a common policy year 2019 wage level. Individual claims were capped at a $100,000 loss limit to mitigate the impact of large claims in the analysis.

concentration of employees at this very high wage level did not materially impact or skew the results. Additionally, the presence of this large concentration of wages at a high wage level indicates that these classifications are not highly sensitive to small changes in the dual wage threshold.

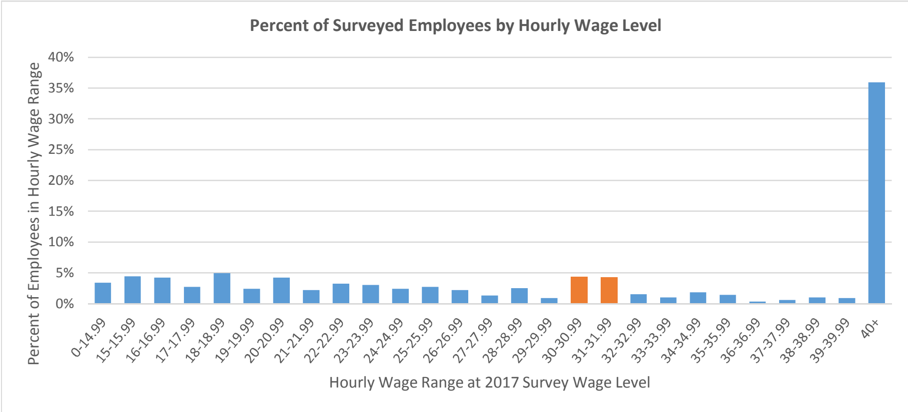
Staff augmented the survey results by also reviewing glaziers' wage inflation data using the Occupational Employment Statistics (OES), the basis for the primary inflation method used in the analytical approach used in the 2017 study. Using this approach, staff determined the approximate OES wage percentile corresponding to the $31 dual wage threshold, which became effective in 2016, to be 67% based on the OES wage distribution in 2016. Wage inflation for Classifications 5467/5470 workers with wages approximated at the threshold level from policy year 2016 to policy year 2019 is estimated to be -4.7%. Some of this perceived negative inflation may be related to structural changes within the glazing industry rather than real wage deflation. Since there is no positive wage inflation at the threshold level, this method does not indicate an increase to the current threshold of $31. Nevertheless, given the results of the survey analysis, the WCIRB recommends an increase in the dual wage threshold for Classifications 5467/5470, *Glaziers*, from $31 to $32.

<u>Future Review</u>
The thresholds for all dual wage classifications, including *Glaziers*, is scheduled to be reviewed again in 2019. To ensure the success of analytical methods in future dual wage studies, given the unique characteristics of the *Glaziers* classifications, the WCIRB plans to enhance the analytical methods to (a) examine alternative sources of wage inflation to address the negative inflation observed in the *Glaziers* classifications, (b) include additional years in the analysis to address the lower volume of data from the *Glaziers* classifications as well as volatility in the data for other dual wage classifications, and (c) focus more heavily on employers with employees near the dual wage threshold who would be most affected by a threshold change.

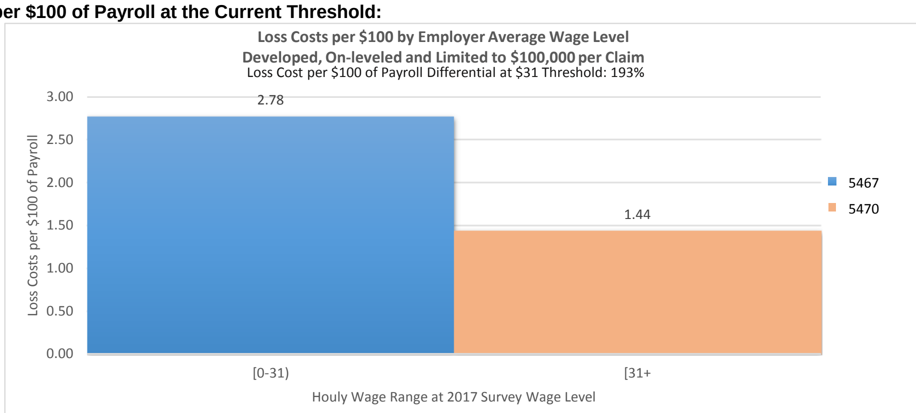
Classification 5467/5470, Glaziers
Survey Method

Current Dual Wage Threshold: **$31**

Distribution of Surveyed Employees by Hourly Wage Level:



Loss Costs per $100 of Payroll at the Current Threshold:



	Threshold Decreased by $5	Threshold Decreased by $4	Threshold Decreased by $3	Threshold Decreased by $2	Threshold Decreased by $1	Current Threshold
Threshold at 2017 Survey Level	$26	$27	$28	$29	$30	$31
Number of Surveyed Employees - Low Wage Class	397	419	432	457	466	510
Number of Surveyed Employees - High Wage Class	599	577	564	539	530	486
% of Surveyed Employees Below the Selected Threshold	40%	42%	43%	46%	47%	51%
Low Wage Payroll Share for the Surveyed Employers	25%	27%	29%	32%	32%	35%
Low Wage/High Wage Loss to Payroll Differential	197%	185%	169%	177%	171%	193%
Inflation Factor (PY2017 to PY2019)[1]	1.000	1.000	1.000	1.000	1.000	1.000
Threshold at PY2019 Level	$26	$27	$28	$29	$30	$31

	Threshold Increased by $1	Threshold Increased by $2	Threshold Increased by $3	Threshold Increased by $4	Threshold Increased by $5
Threshold at 2017 Survey Level	**$32**	$33	$34	$35	$36
Number of Surveyed Employees - Low Wage Class	**553**	568	578	596	610
Number of Surveyed Employees - High Wage Class	**443**	428	418	400	386
% of Surveyed Employees Below the Selected Threshold	**56%**	57%	58%	60%	61%
Low Wage Payroll Share for the Surveyed Employers	**40%**	42%	43%	46%	48%
Low Wage/High Wage Loss to Payroll Differential	**201%**	186%	182%	164%	169%
Inflation Factor (PY2017 to PY2019)[1]	**1.000**	1.000	1.000	1.000	1.000
Threshold at PY2019 Level	**$32**	$33	$34	$35	$36

[1] Inasmuch as no wage growth was observed in 2016 and 2017 for this classification, no future wage inflation after 2017 is projected.

Recommendation

Amend Classifications 5467/5470, *Glaziers,* to increase the hourly wage threshold from $31.00 per hour to $32.00 per hour to reflect wage inflation since the threshold was last amended in 2016.

PROPOSED

GLAZIERS – away from shop – employees whose regular hourly wage does not equal or exceed $~~31.00~~32.00 per hour **5467**

This classification applies to the installation of glass panes or insulated glass units within framework in connection with residential or commercial buildings. This classification includes the incidental installation of framework and glass cutting at the job site.

The installation of doors, door frames and pre-glazed windows within residential or commercial buildings shall be classified as 5107, *Door, Door Frame or Pre-Glazed Window Installation,* provided such operations are not performed in connection with structures framed by the employer at the same job or location. If the employer is engaged in wood or light gauge steel framing, the installation of doors, door frames and pre-glazed windows at such job or location shall be classified as 5403/5432, *Carpentry*, or 5632/5633, *Steel Framing*.

The installation of tub and shower enclosures, mirrors, mirrored wardrobe doors and window screens shall be separately classified as 5146(1), *Cabinet or Fixtures.*

The repair or replacement of automobile or truck glass shall be separately classified as 8389, *Automobile or Truck Repair Facilities*.

The application of window film and glass tinting shall be classified as 9507(1), *Sign Painting or Lettering*.

The shop cutting of glass shall be classified as 4130, *Glass Merchants.*

GLAZIERS – away from shop – employees whose regular hourly wage equals or exceeds $~~31.00~~32.00 per hour **5470**

Assignment of this classification is subject to verification at the time of final audit that the employee's regular hourly wage equals or exceeds $~~31.00~~32.00 per hour. The payroll of an employee whose regular hourly wage is not shown to equal or exceed $~~31.00~~32.00 per hour shall be classified as 5467, *Glaziers.*

This classification applies to the installation of glass panes or insulated glass units within framework in connection with residential or commercial buildings. This classification includes the incidental installation of framework and glass cutting at the job site.

The installation of doors, door frames and pre-glazed windows within residential or commercial buildings shall be classified as 5107, *Door, Door Frame or Pre-Glazed Window Installation*, provided such operations are not performed in connection with structures framed by the employer at the same job or location. If the employer is engaged in wood or light gauge steel framing, the installation of doors, door frames and pre-glazed windows at such job or location shall be classified as 5403/5432, *Carpentry*, or 5632/5633, *Steel Framing*.

The installation of tub and shower enclosures, mirrors, mirrored wardrobe doors and window screens shall be separately classified as 5146(1), *Cabinet or Fixtures*.

The repair or replacement of automobile or truck glass shall be separately classified as 8389, *Automobile or Truck Repair Facilities*.

The application of window film and glass tinting shall be classified as 9507(1), *Sign Painting or Lettering.*

The shop cutting of glass shall be classified as 4130, *Glass Merchants*.

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