



WCIRB GEO STUDY 2024

A REPORT ON CALIFORNIA REGIONAL DIFFERENCES

Table of Contents



Click to jump
to page



Click to jump
to More Info



Click to return the
Table of Contents

About the WCIRB		
Executive Summary: What's New		
Executive Summary: Key Findings		
Interactive Maps		
Basis of Analysis		
Exhibits		
Exhibit 1 – Geographic Regions		
Exhibit 2 – Indemnity Claim Frequency Relative to Statewide		
Exhibit 3 – Limited Incurred Severity on Indemnity Claims Relative to Statewide		
Exhibit 4 – Two-Year Average Ratio of Actual to Expected Indemnity Claims in Excess of \$250,000: RL 5		
Exhibit 5 – Median Injured Worker's Average Weekly Wage		
Exhibit 6 – PY 2021 to PY 2022 Change in Median Injured Worker's Average Weekly Wage		
Exhibit 7 – Permanent Disability Claims as a Share of Indemnity Claims		
Exhibit 8 – Permanent Disability Claims as a Share of Indemnity Claims Relative to Statewide: RL 7		
Exhibit 9 – PY 2021 to PY 2022 Change in Cumulative Injury and Occupational Disease Claims as a Share of Total Claims		
	3	Exhibit 10 – Open Share of Indemnity Claims18
	4	Exhibit 11 – Paid Medical for Medical-Legal as a Share of Total Paid Medical19
	5	Exhibit 12 – Share of Indemnity Claims with a Medical-Legal Report20
	6	Exhibit 13 – Ratio of Limited Losses to Modified Pure Premium Relative to
	7	Statewide21
	8	Exhibit 14 – Ratio of Limited Losses to Modified Pure Premium at RL 7
	9	Relative to Statewide22
	10	Exhibit 15 – Median Paid ALAE on Permanent Disability Claims23
		Exhibit 16 – PY 2021 to PY 2022 Change in Median Paid ALAE on Permanent
	11	Disability Claims24
		Exhibit 17 – Limited Incurred Loss Development RL 1 to RL 7 Relative to
	12	Statewide25
	13	Exhibit 18 – Share of Injured Workers with One Year of Tenure or Less26
		Exhibit 19 – Share of Litigated Indemnity Claims Relative to Statewide27
	14	Technical Appendix28
	15	More Info32
		Notice and Copyright38
	16	
	17	

About the WCIRB



For over 100 years, the Workers' Compensation Insurance Rating Bureau of California (WCIRB) has been California's trusted, objective provider of actuarially based information and research integral to a healthy California workers' compensation system.

As a licensed rating organization and the Insurance Commissioner's designated statistical agent, the WCIRB performs a number of functions, including collection of premium and loss data on every California workers' compensation insurance policy, examination of policy documents, inspection of insured businesses and test audits of insurer payroll audits and claims classifications. This data is used to advise the Insurance Commissioner and other stakeholders of the costs of providing workers' compensation benefits.

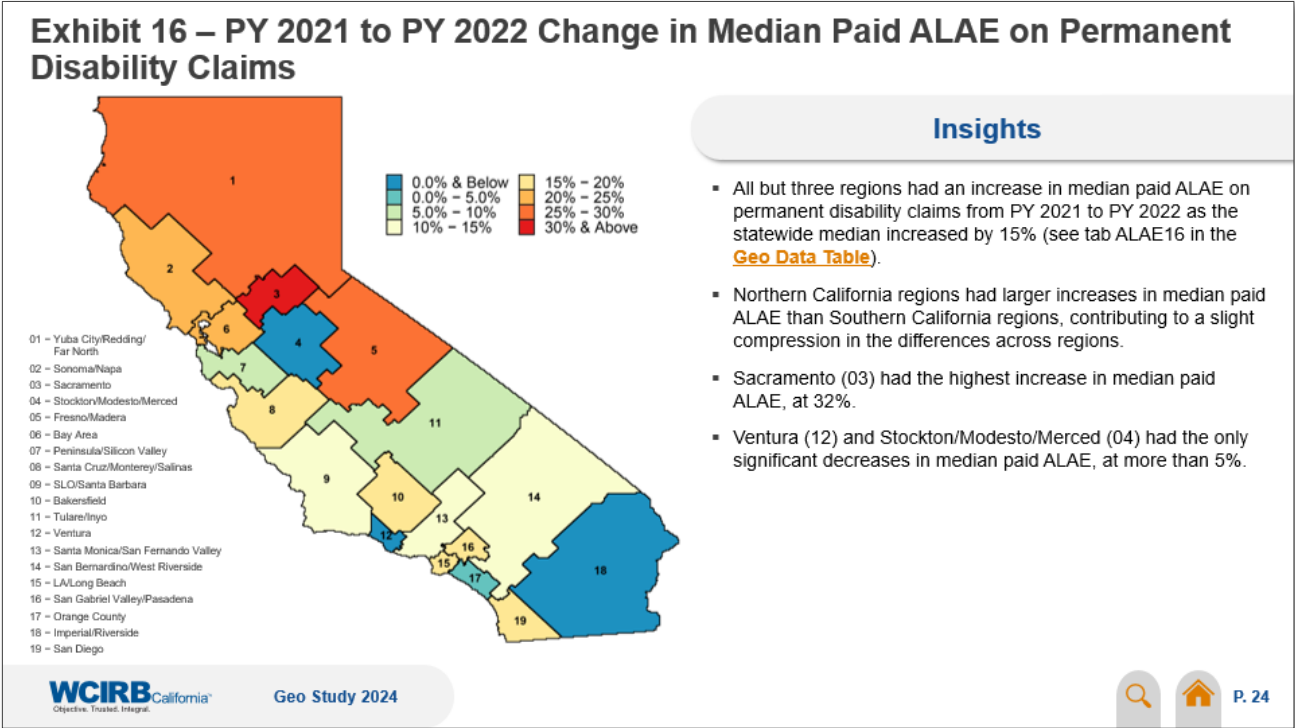
The WCIRB is a California unincorporated, private, nonprofit association comprised of all insurers licensed to transact workers' compensation insurance in California and has over 400 members. No public money is used to fund its operations.

For more information, please visit [wcirb.com](https://www.wcirb.com).

Let us know what you think by emailing us at ActuarialResearch@wcirb.com.

Executive Summary: What's New

This year's study includes a new map that demonstrates the changes in median paid allocated loss adjustment expenses (ALAE) on permanent disability claims by region.



A [mapping of nine-digit zip codes](#) and regional wage differentials to the study regions shown in [Exhibit 1](#) is available on the [WCIRB Geo Study](#) page on [wcirb.com](#). More information about the development of the maps and the data underlying the maps is included in the [Technical Appendix](#) to this report.

Executive Summary: Key Findings

The California workers' compensation system is established, administered and interpreted on a statewide basis. Nevertheless, there are sharp differences in cost characteristics across regions of the state. This report highlights those differences.



Even after controlling for regional differences in wages and industry mix, indemnity claim frequency remains significantly higher in the Los Angeles (LA) Basin and significantly lower in the San Francisco Bay Area, a pattern that has remained consistent over the last several years.



ALAE spend has increased in all regions from policy year (PY) 2021 to PY 2022, with a particularly pronounced increase in Northern California regions. The regions around the LA Basin continued to have the highest ALAE spend, which is driven by high rates of litigation.



The share of indemnity claims with permanent disability increased slightly from PY 2021 to PY 2022 with increases somewhat more common in Southern California.

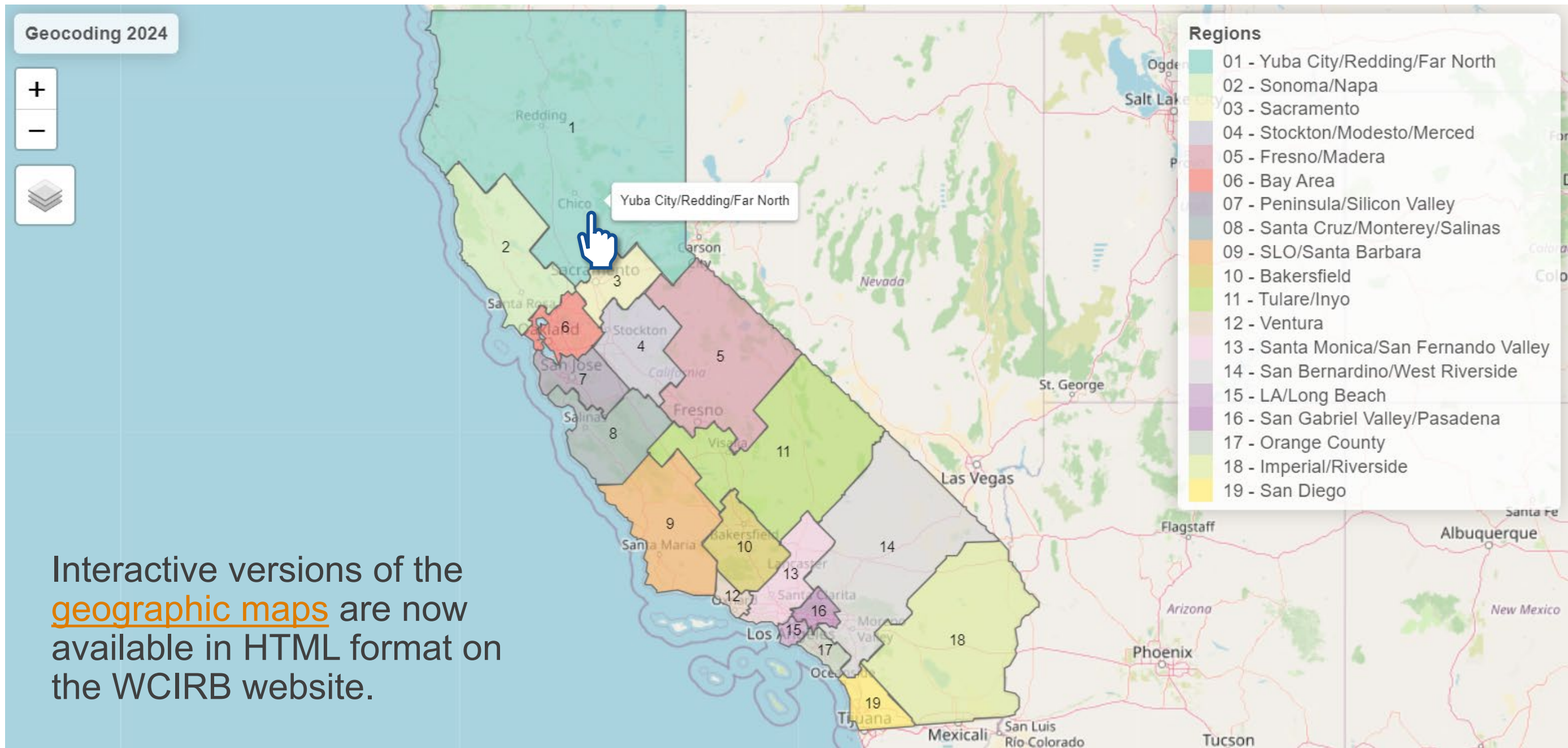


Medical-legal costs increased in nearly all regions from PY 2021 to PY 2022. Medical-legal costs remained highest in the regions surrounding the LA Basin.




The share of larger indemnity claims (those with incurred costs greater than \$250,000) at fifth report level (RL) tends to be higher in regions that have lower indemnity frequency. Northern California regions, including the Bay Area and Peninsula/Silicon Valley, tend to have higher shares of larger indemnity claims.

Interactive Maps



Interactive versions of the [geographic maps](#) are now available in HTML format on the WCIRB website.

Basis of Analysis



Datasets

WCIRB staff have developed a dataset that provides estimates of the incidence of exposures and claims by classification and region. The dataset was developed by linking WCIRB's unit statistical report (USR) data with medical transaction and Dun and Bradstreet Hoovers (D&B Hoovers) data. The D&B Hoovers data was used to geolocate exposures by classification.

External data was used to control for regional wage differentials, industry mix and the number of workers at each location. WCIRB staff developed geographic regions that reflect high degrees of medical provider commonality while at the same time being robust, credible and independent of the claim cost measures under study. The [Technical Appendix](#) describes the methodologies used in the study in greater detail.

This enriched dataset comprises ten policy years of data. For this study, the WCIRB used the experience of policy years 2013 to 2022, which covers policies incepting between January 1, 2013 and December 31, 2022, and includes injuries occurring on those policies. Claims arising out of a diagnosis of COVID-19 were excluded from exhibits.



Results

Unless otherwise specified, this study is based on first report level USR data for policy year 2022.

Additional USR data from the third report level for policy years 2013 through 2020, fifth report level for policy years 2013 through 2018 and seventh report level for policy years 2013 through 2016 underlies some exhibits and supplementary data tables. Exhibits based on medical transaction data are evaluated at the same evaluation as the associated USR data.

The WCIRB's medical transaction data was used to geolocate claims. The WCIRB's indemnity transaction data was used to study claims from accident years 2020 through 2023. The methods used in this study are discussed in greater detail in the [Technical Appendix](#).



Exhibits

Exhibit 1 – Geographic Regions

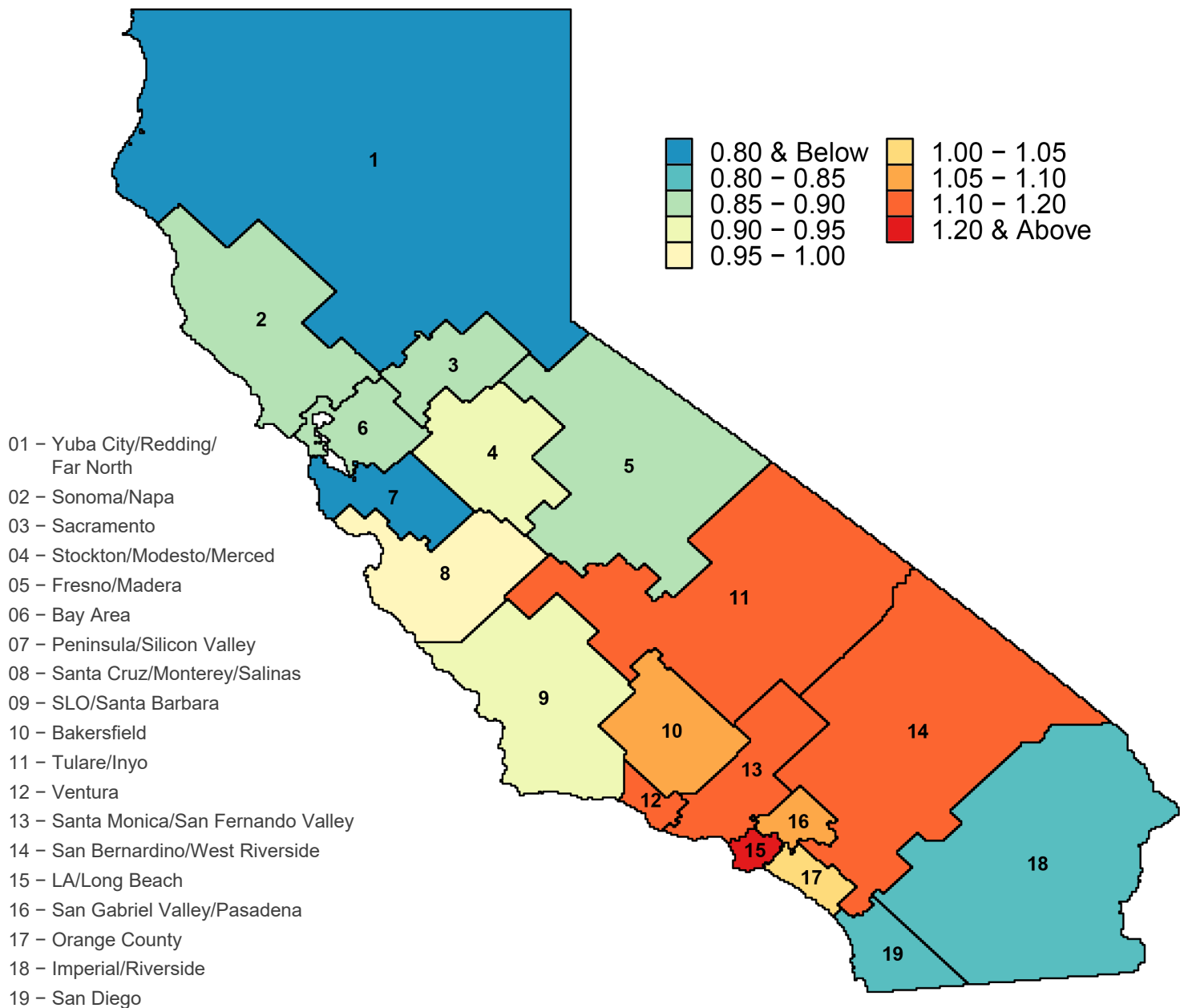


This map of the regions was developed by WCIRB staff. The [Technical Appendix](#) provides additional details about the methodology for constructing the 19 regions.

A mapping of nine-digit zip codes to the study regions is available on the [WCIRB Geo Study](#) page on the WCIRB website.

The mapping also provides the regional wage relativities used to normalize payrolls across regions.

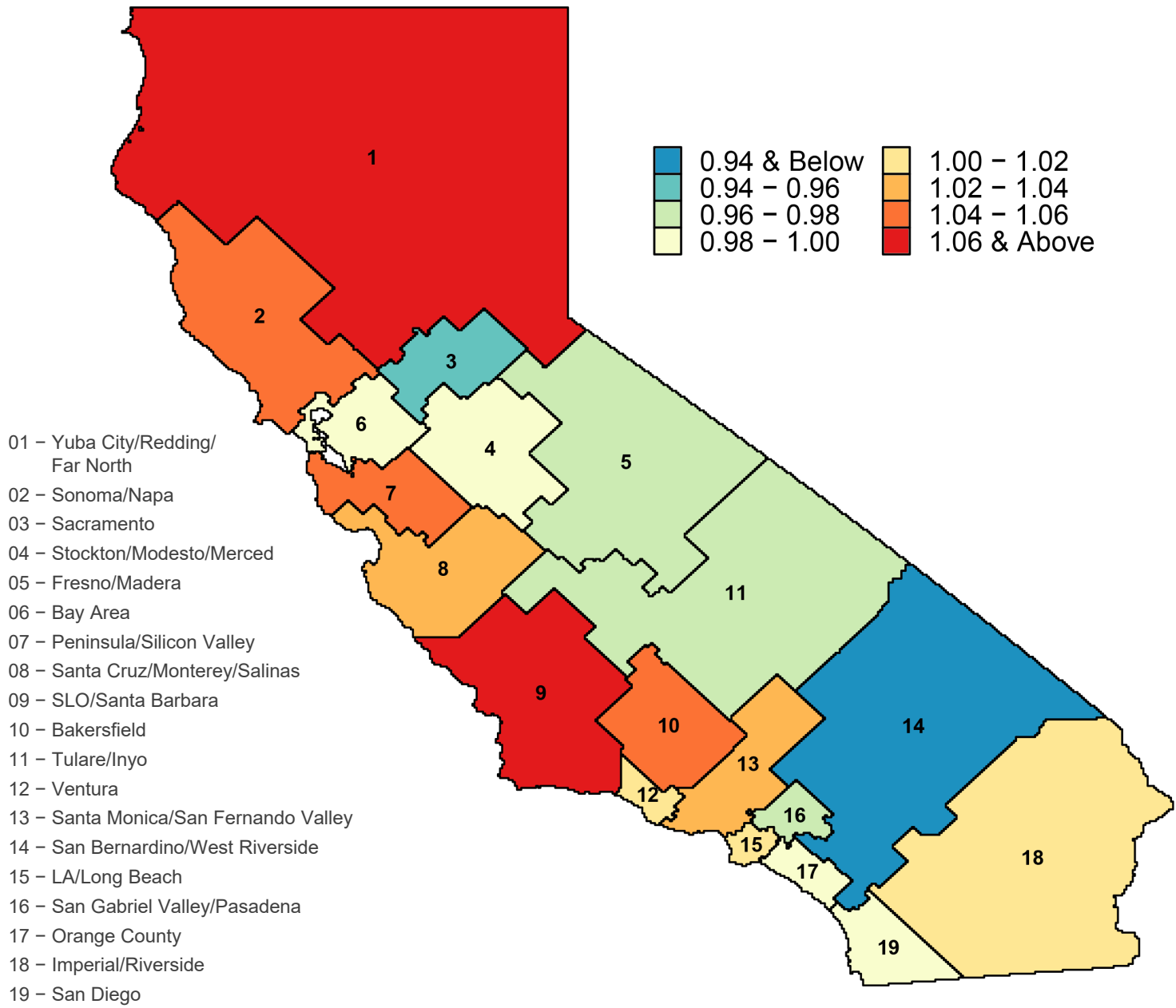
Exhibit 2 – Indemnity Claim Frequency Relative to Statewide



Insights

- Even after controlling for regional differences in wages and industry mix, indemnity claim frequency continues to be significantly higher than the statewide average in the LA Basin and significantly lower than the statewide average in Northern California. This relationship has been fairly consistent over time, although the magnitude of the difference has fluctuated.
- The LA/Long Beach (15) region has the highest claim frequency, more than 35% above the statewide average.
- The Yuba City/Redding/Far North (01) and Peninsula/Silicon Valley (07) regions have the lowest claim frequency, more than 20% below the statewide average.
- Regional frequency patterns are generally true at the industry level, though there is significant volatility (see tabs [FREQ04](#), [FREQ05](#), [FREQ06](#), [FREQ07](#), [FREQ08](#) and [FREQ09](#) in the [Geo Data Table](#)).

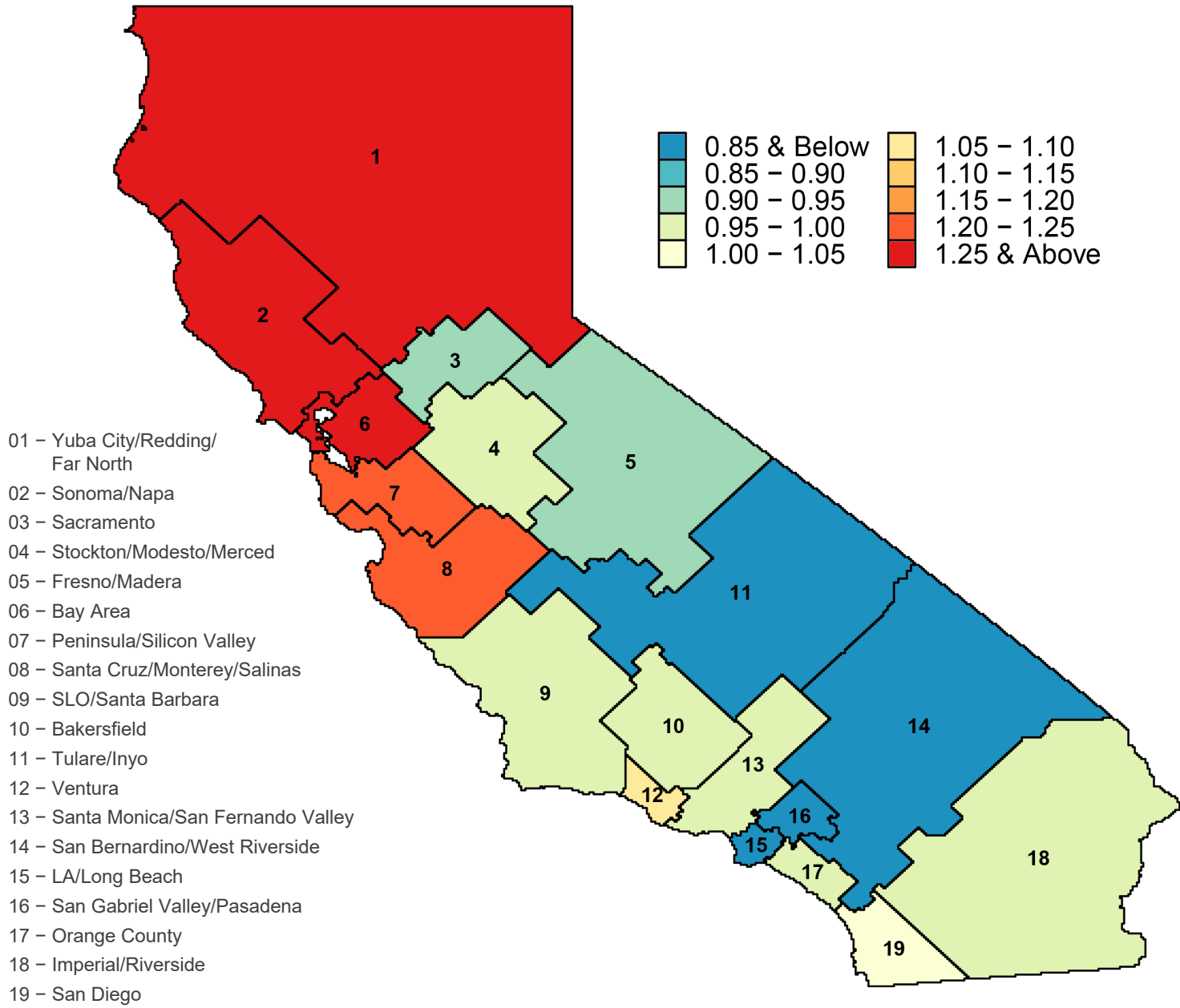
Exhibit 3 – Limited* Incurred Severity on Indemnity Claims Relative to Statewide



Insights

- Regional differences in indemnity claim severity are more muted than for claim frequency. The magnitude of the differences has been consistent over time, but the relative severities by region have fluctuated. The severity relativities shown are adjusted for classification mix.
- The highest severity cost is in SLO/Santa Barbara (9), which is more than 10% above the statewide average.
- The lowest severity costs are in the San Bernardino/West Riverside (14) and Sacramento (03) regions, around 6% below the statewide average.
- Regional relativities in severities at mature levels (42 and 66 months from policy inception) continue to be very similar to those shown at 18 months maturity for the same policy years (see tabs SEV04 and SEV05 in the [Geo Data Table](#)).

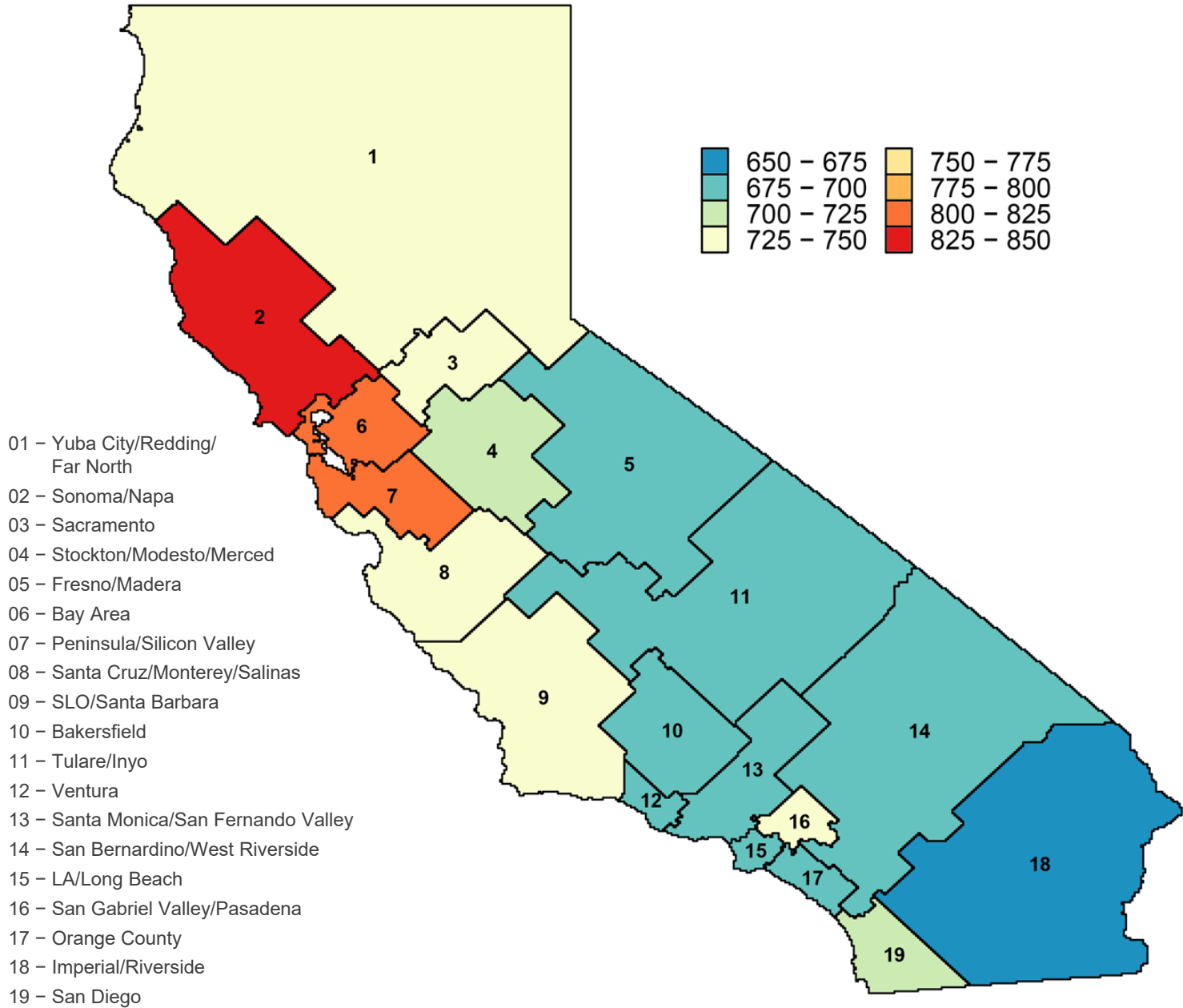
Exhibit 4 – Two-Year Average Ratio of Actual to Expected Indemnity Claims in Excess of \$250,000: RL 5



Insights

- After adjustment for industry mix, regions with lower indemnity frequency tend to have a higher share of large claims, and there is a significant amount of variation among regions.
- Regional patterns at 66 months (RL 5) are generally consistent with results at 42 months (RL 3) and with patterns without adjustment for industry mix (see tabs SEV09, SEV10 and SEV11 in the [Geo Data Table](#)).
- Yuba City/Redding/Far North (01), Sonoma/Napa (02) and Bay Area (06) have shares of large claims that are above the statewide average.
- San Bernardino/West Riverside (14), LA/Long Beach (15) and San Gabriel Valley/Pasadena (16) have shares of large claims that are below the statewide average.

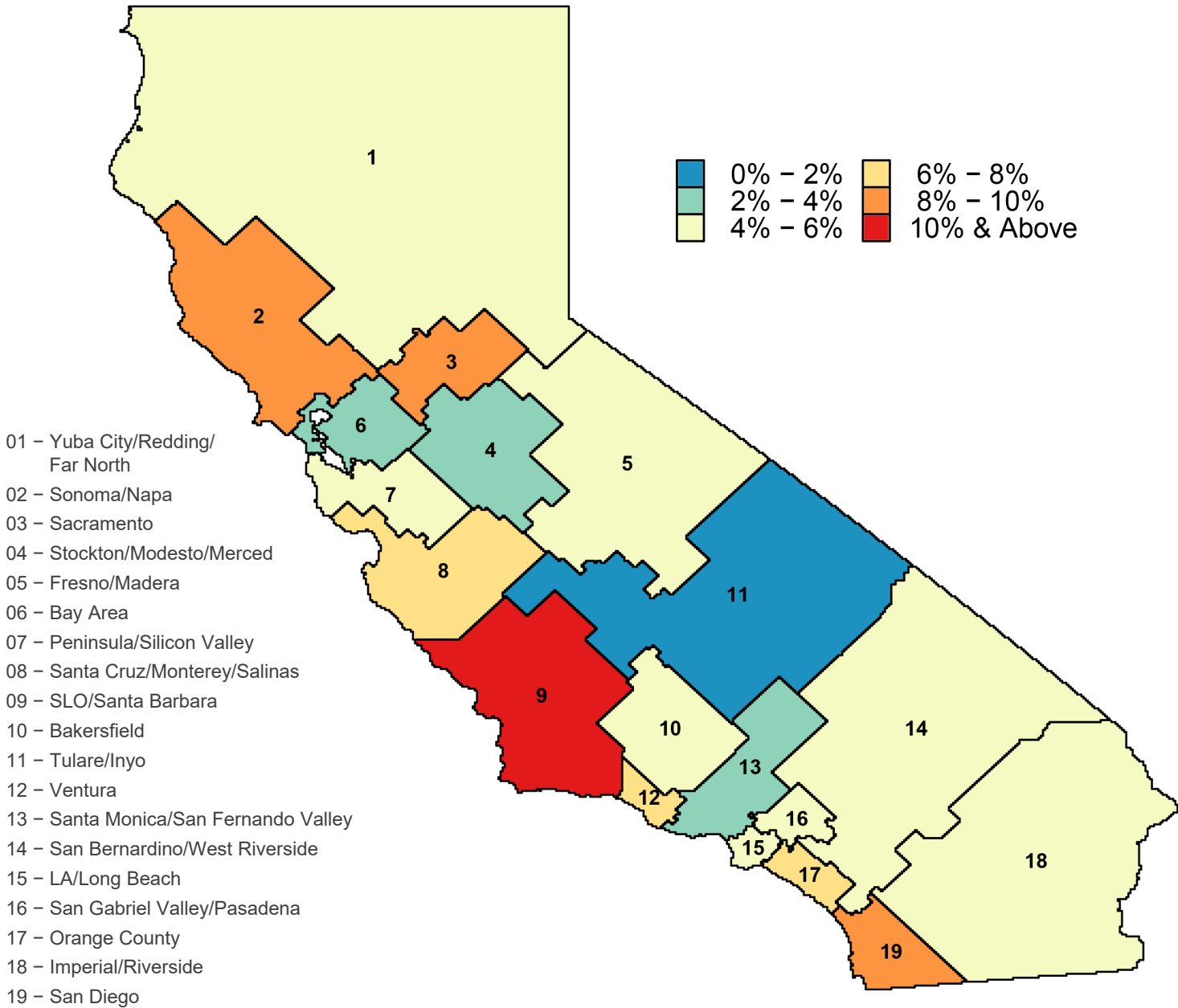
Exhibit 5 – Median Injured Worker’s Average Weekly Wage (\$)



Insights

- Wage levels remain highest in Sonoma/Napa (02), Bay Area (06) and Peninsula/Silicon Valley (07).
- Wages are lower throughout most of the central and southern parts of the state. The Imperial/Riverside (18) region has the lowest average weekly wage. Wages in San Diego (19) are close to the statewide average after the higher-than-average increase shown in [Exhibit 6](#).

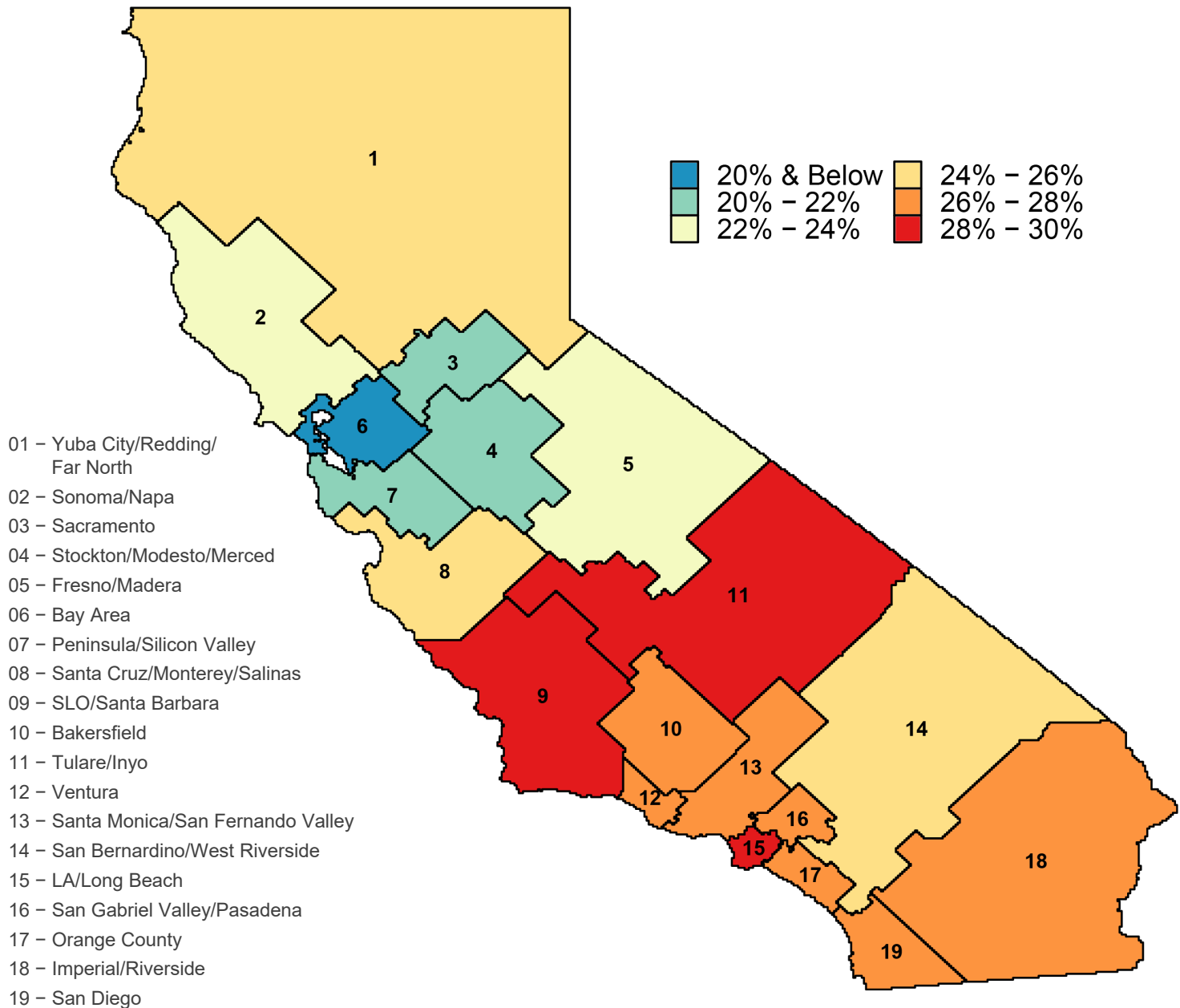
Exhibit 6 – PY 2021 to PY 2022 Change in Median Injured Worker’s Average Weekly Wage



Insights

- The median injured worker’s average weekly wage increased from policy year 2021 to 2022 in all regions, with a statewide increase of almost 6%.
- Injured workers in the Sonoma/Napa (02), Sacramento (03) and San Diego (19) regions experienced increases over 8%, while workers in the SLO/Santa Barbara (09) region experienced an increase of more than 10%.
- Injured workers in the Stockton/Modesto/Merced (04), Bay Area (06), Tulare/Inyo (11) and Santa Monica/San Fernando Valley (13) regions had increases of less than 4%.

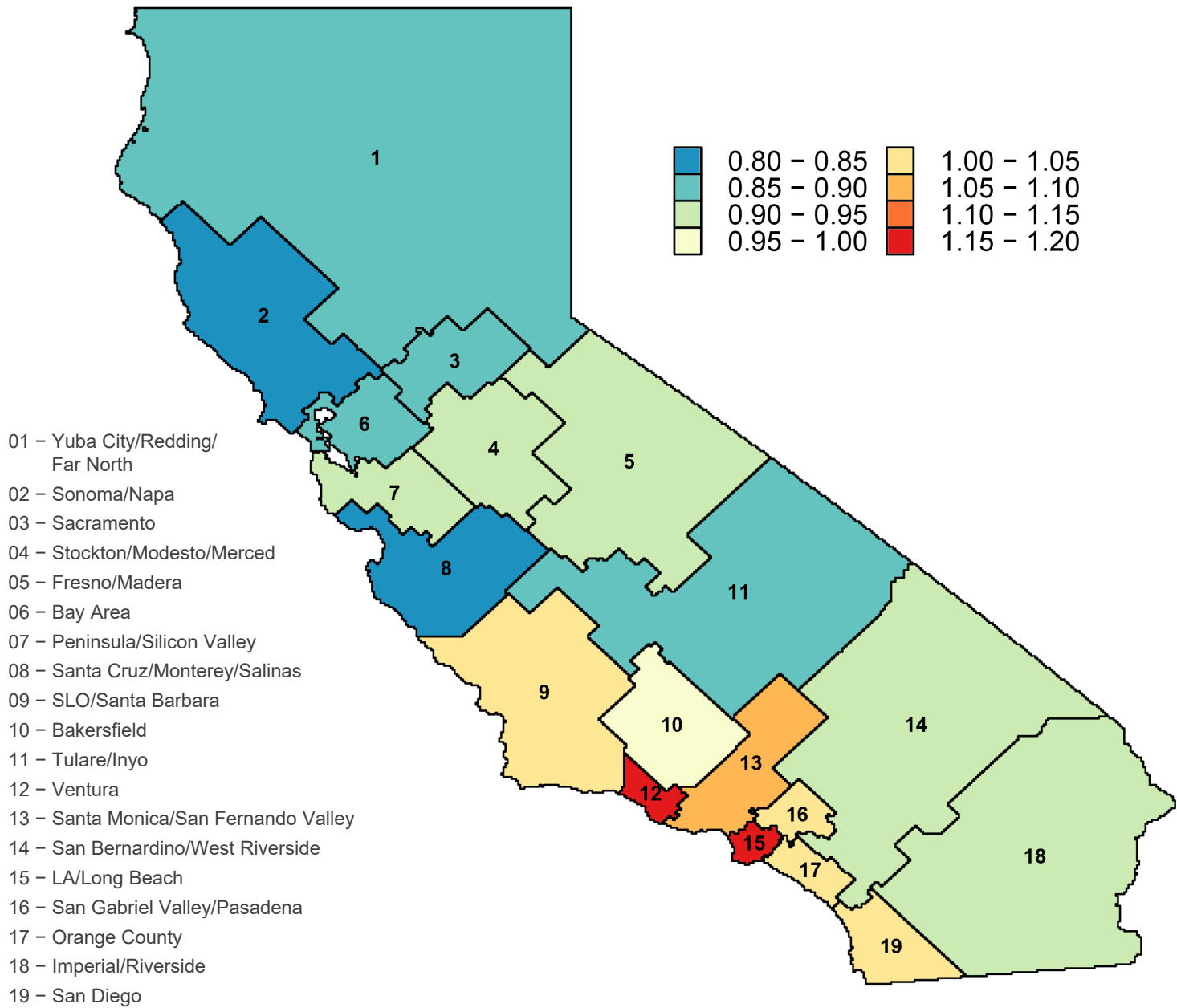
Exhibit 7 – Permanent Disability Claims as a Share of Indemnity Claims



Insights

- There has been a slight increase in the statewide share of indemnity claims that include permanent disability from PY 2021 to PY 2022 at 18 months (RL 1), reversing the decreases since PY 2015 (see tab CLAIM01 in the [Geo Data Table](#)).
- Southern California regions have higher shares of indemnity claims with permanent disability than Northern California regions. SLO/Santa Barbara (09), Tulare/Inyo (11) and LA/Long Beach (15) have the highest shares, with more than 28% of their indemnity claims having permanent disability.
- Sacramento (03), Stockton/Modesto/Merced (04), Bay Area (06) and Peninsula/Silicon Valley (07) have the lowest shares, with less than 22% of their indemnity claims having permanent disability.
- While the overall share of permanent disability claims increases at later maturities (42, 66 and 90 months from policy inception), regional patterns remain similar, but the magnitude of the differences is smaller (see tabs CLAIM03, CLAIM04 and CLAIM19 in the [Geo Data Table](#) as well as [Exhibit 8](#)).

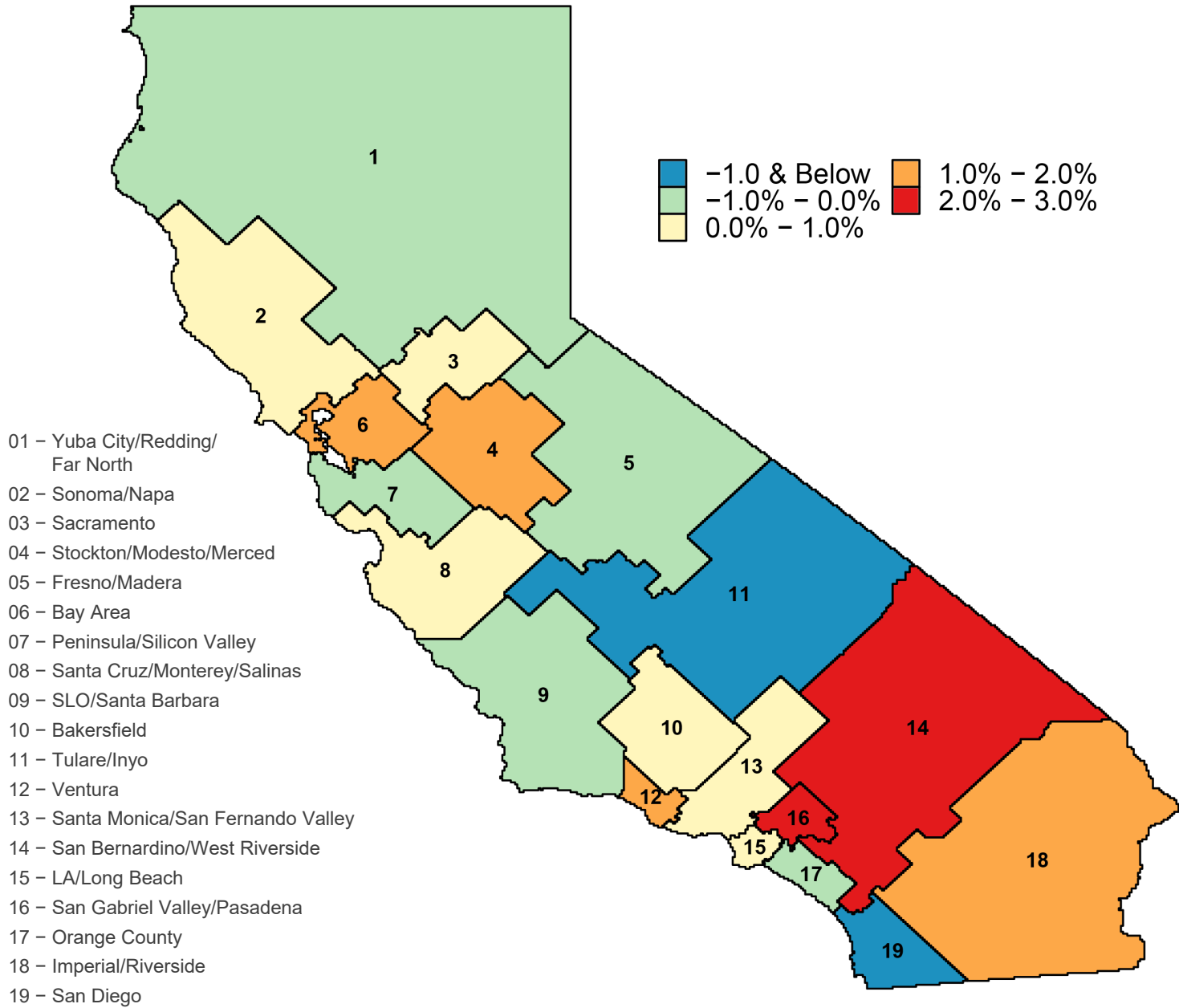
Exhibit 8 – Permanent Disability Claims as a Share of Indemnity Claims Relative to Statewide: RL 7



Insights

- Regional patterns in permanent disability claim filing at 90 months (RL 7) are consistent, but less extreme than the differences at 18 months (RL 1) ([Exhibit 7](#)).
- The share of indemnity claims that include permanent disability is more than 17% above the statewide average in LA/Long Beach (15) and 15% below the statewide average in Ventura (12) at 90 months.
- Claims throughout the northern and central regions of the state remain less likely to involve permanent disability at 90 months. Indemnity claims in Sonoma/Napa (02) and Santa Cruz/Monterey/Salinas (08) are more than 15% less likely to involve permanent disability.

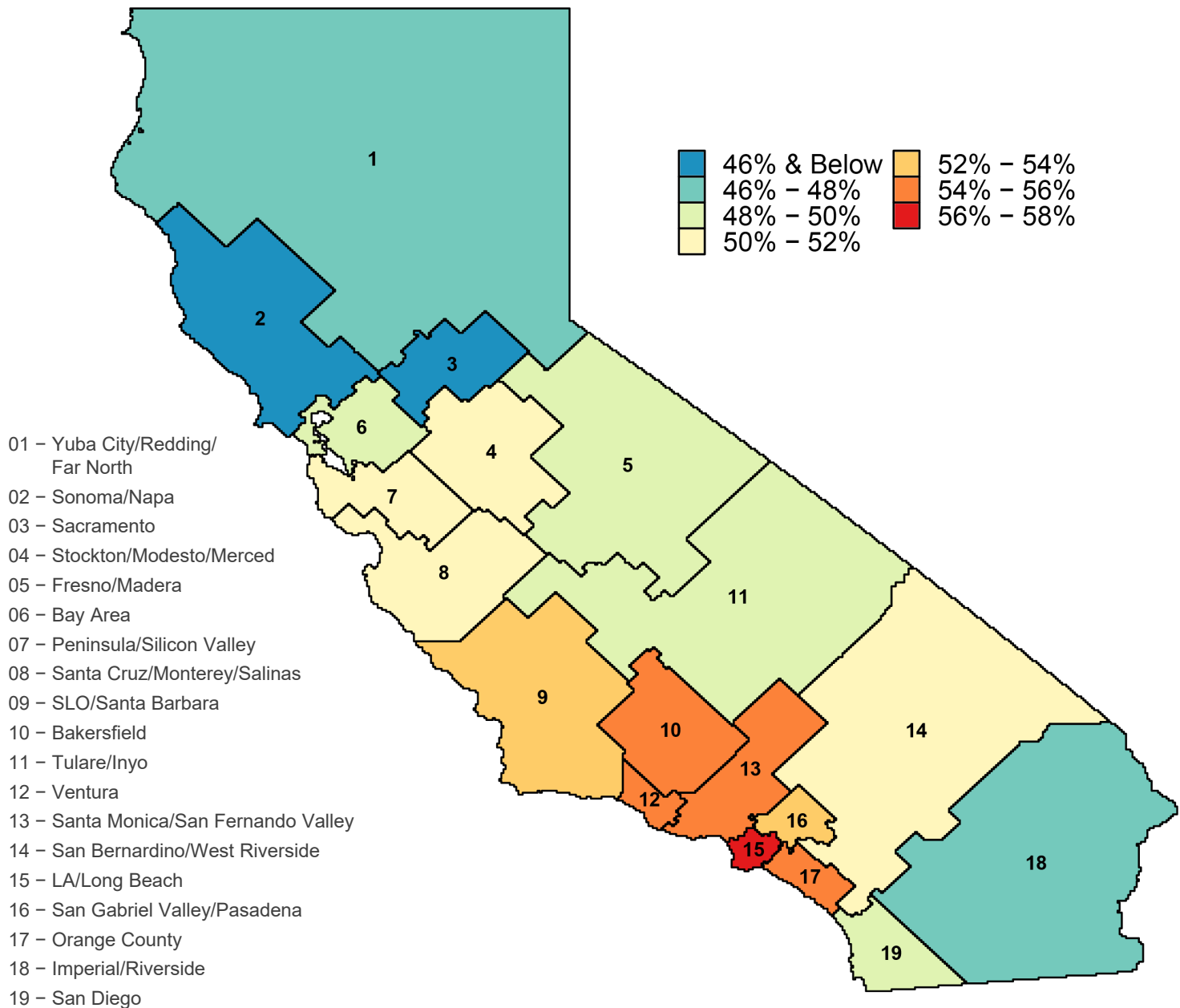
Exhibit 9 – PY 2021 to PY 2022 Change in Cumulative Injury and Occupational Disease Claims as a Share of Total Claims



Insights

- After a statewide decrease in the share of cumulative injury and occupational disease, also referred to as cumulative trauma (CT), claims in PY 2021, there has been a slight statewide increase in PY 2022.
- Unlike prior policy years, in which changes in the share of CT claims were directionally consistent across most regions, PY 2022 has had a mix of positive and negative changes (see tab CLAIM06 in the [Geo Data Table](#)).
- Southern California regions were more likely to have an increase in the share of CT claims. San Bernardino/West Riverside (14) and LA/Long Beach (16) have had the largest increases at more than 2%.
- Tulare/Inyo (11) and San Diego (19) experienced decreases of more than 1%.

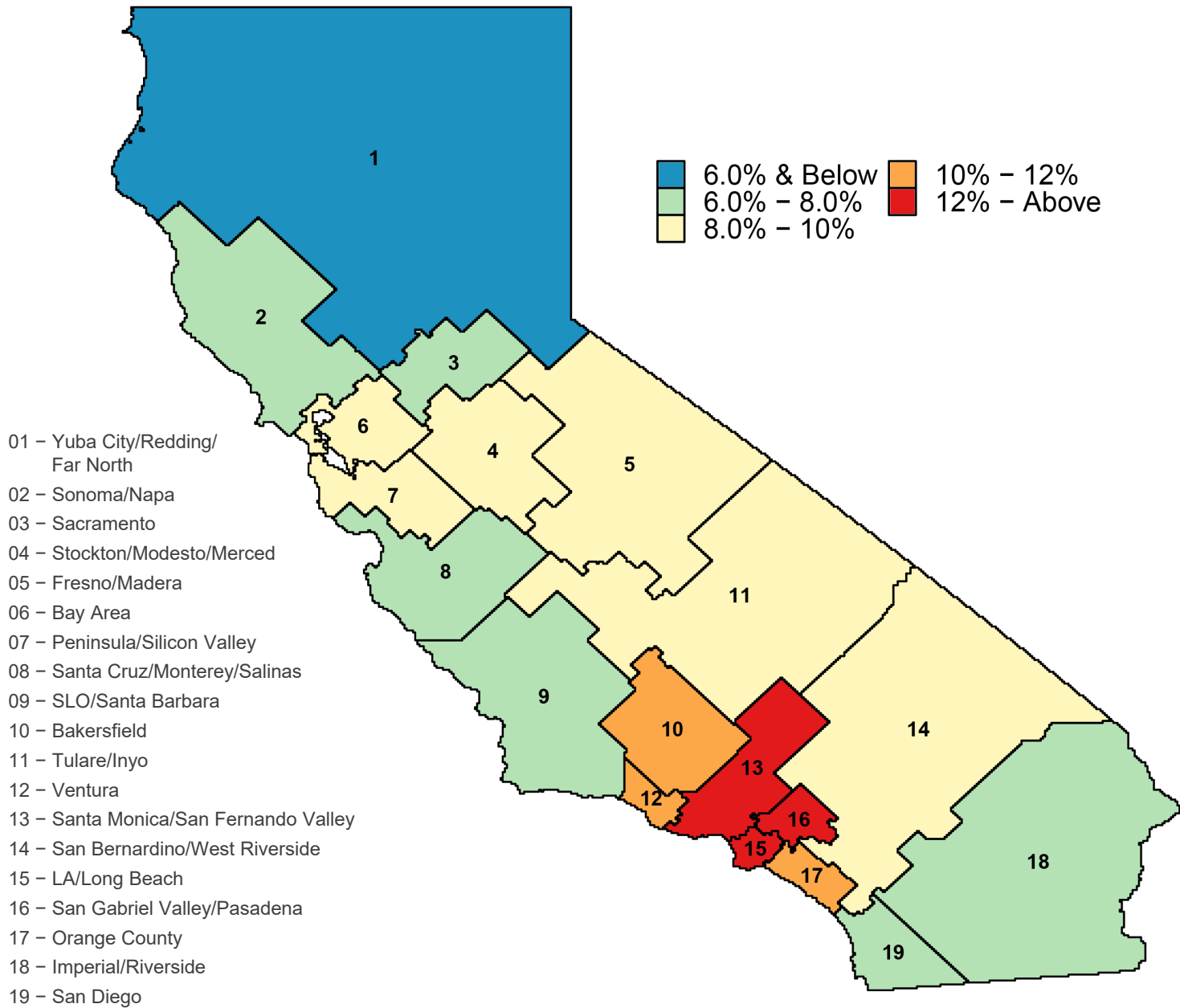
Exhibit 10 – Open Share of Indemnity Claims



Insights

- The share of indemnity claims that remain open at first report level (18 months maturity) is significantly higher in Southern California. Over the past decade, open shares have decreased throughout the state. The regional dispersion has also decreased, but the relative pattern has remained consistent.
- The LA/Long Beach (15) region has the highest share of indemnity claims that are open, at more than 57%.
- The Sonoma/Napa (02) and Sacramento (03) regions have the smallest shares of indemnity claims that are open, at around 45%.
- Regional differences in the share of indemnity claims that are open are similar at later maturities (42, 66 and 90 months) as they are at early maturities (18 months), although the size of the difference decreases over time as more claims close (see tabs CLAIM13, CLAIM14 and CLAIM21 in the [Geo Data Table](#)).

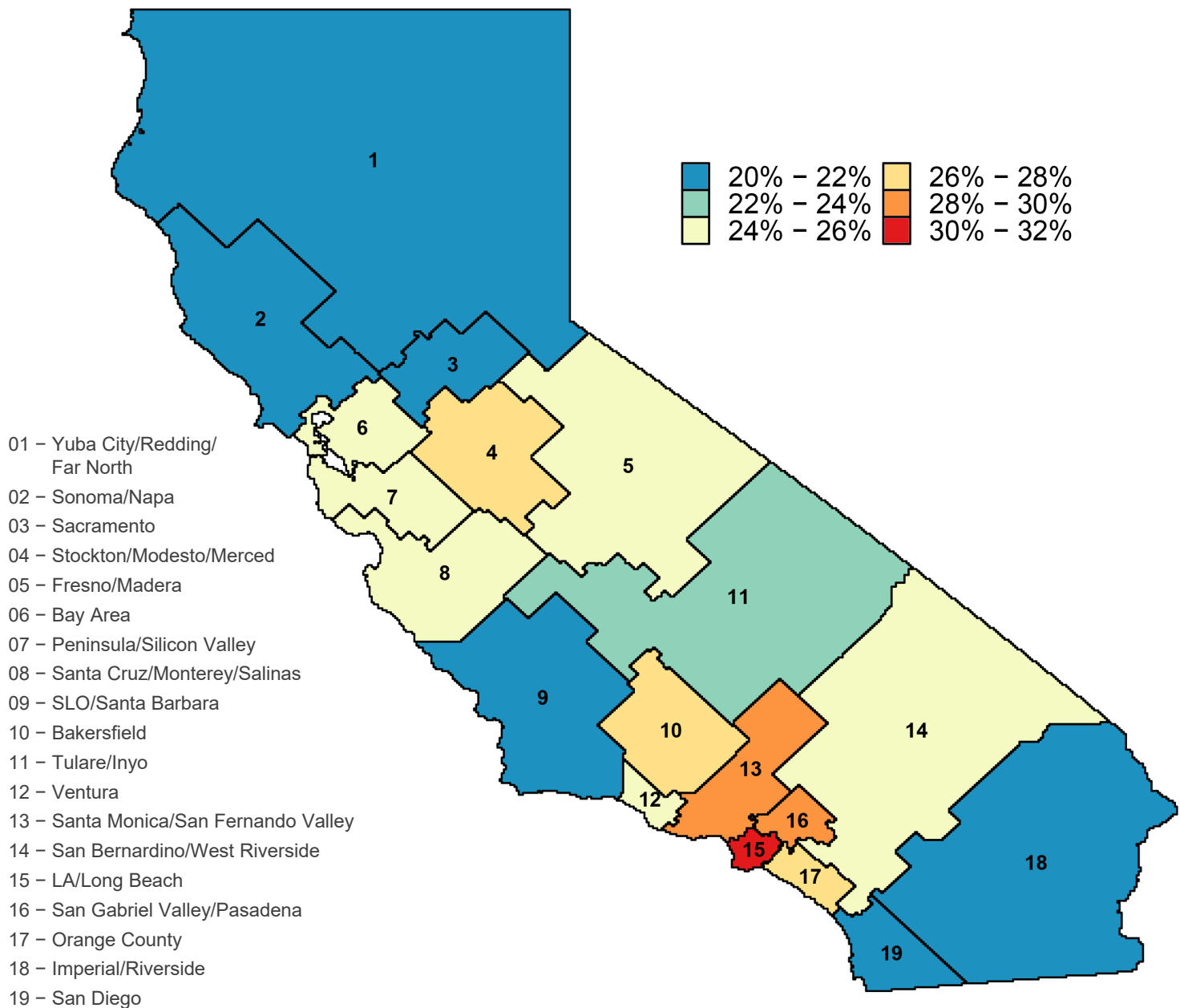
Exhibit 11 – Paid Medical for Medical-Legal as a Share of Total Paid Medical



Insights

- The statewide share of paid medical for medical-legal reports continued to increase and is at an all-time high for this regional study. The share increased in nearly all regions, but the magnitude varied by region (see tab MDC01 in the [Geo Data Table](#)).
- Medical-legal reports account for a significantly greater share of paid medical in the LA Basin than in the rest of the state.
- Santa Monica/San Fernando Valley (13), LA/Long Beach (15) and San Gabriel Valley/Pasadena (16) have the highest shares, more than 12%.
- Yuba City/Redding/Far North (01) has the lowest share, less than 6%.

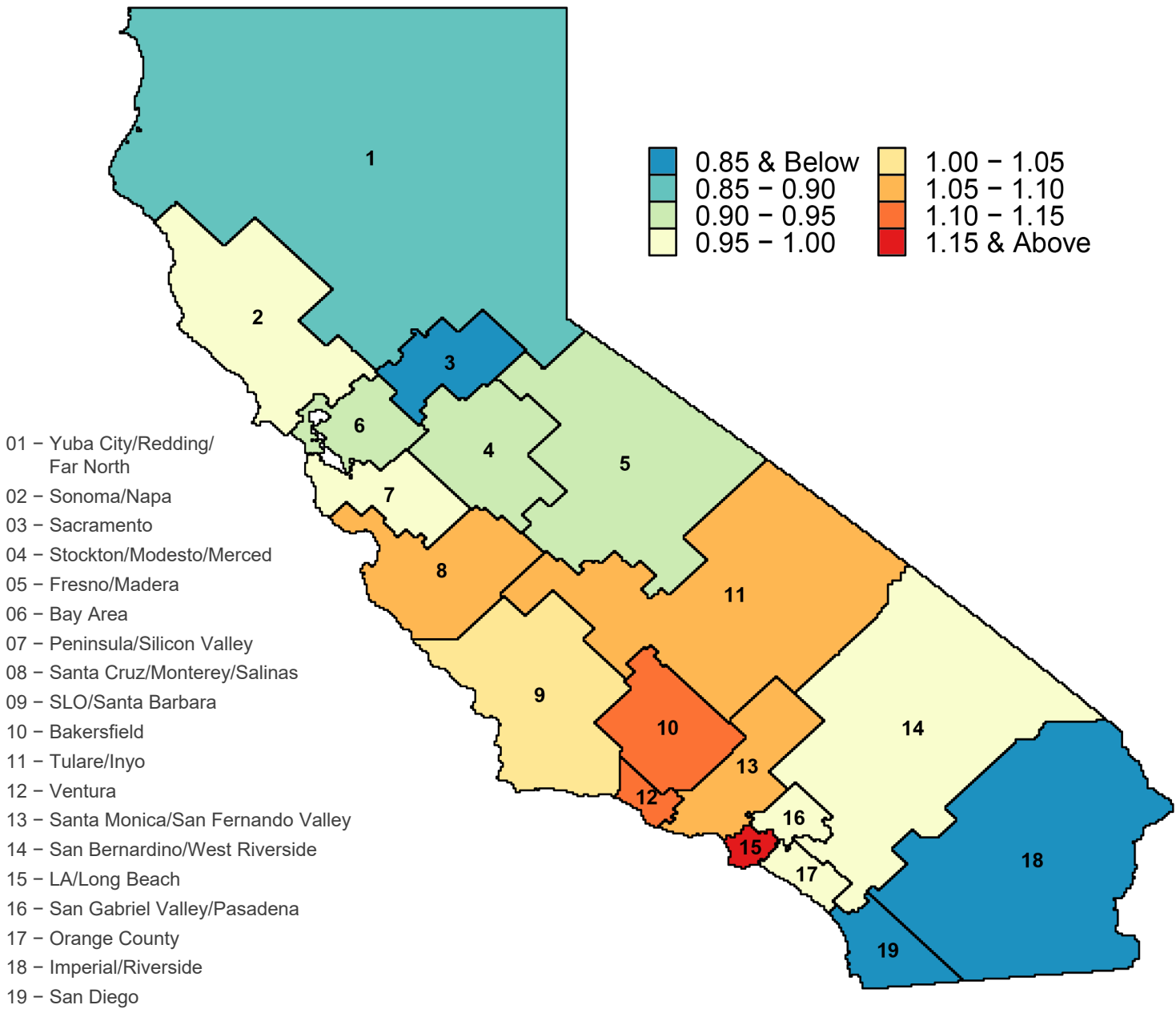
Exhibit 12 – Share of Indemnity Claims with a Medical-Legal Report



Insights

- The statewide share of indemnity claims with a medical-legal report increased and is at an all-time high for this study. The share increased in all regions (see tab MDC03 in the [Geo Data Table](#)).
- LA/Long Beach (15) has the highest share of indemnity claims with a medical-legal report, at more than 30%.
- Yuba City/Redding/Far North (01), Sonoma/Napa (02), Sacramento (03), SLO/Santa Barbara (09), Imperial/Riverside (18) and San Diego (19) have the lowest shares, less than 22%.

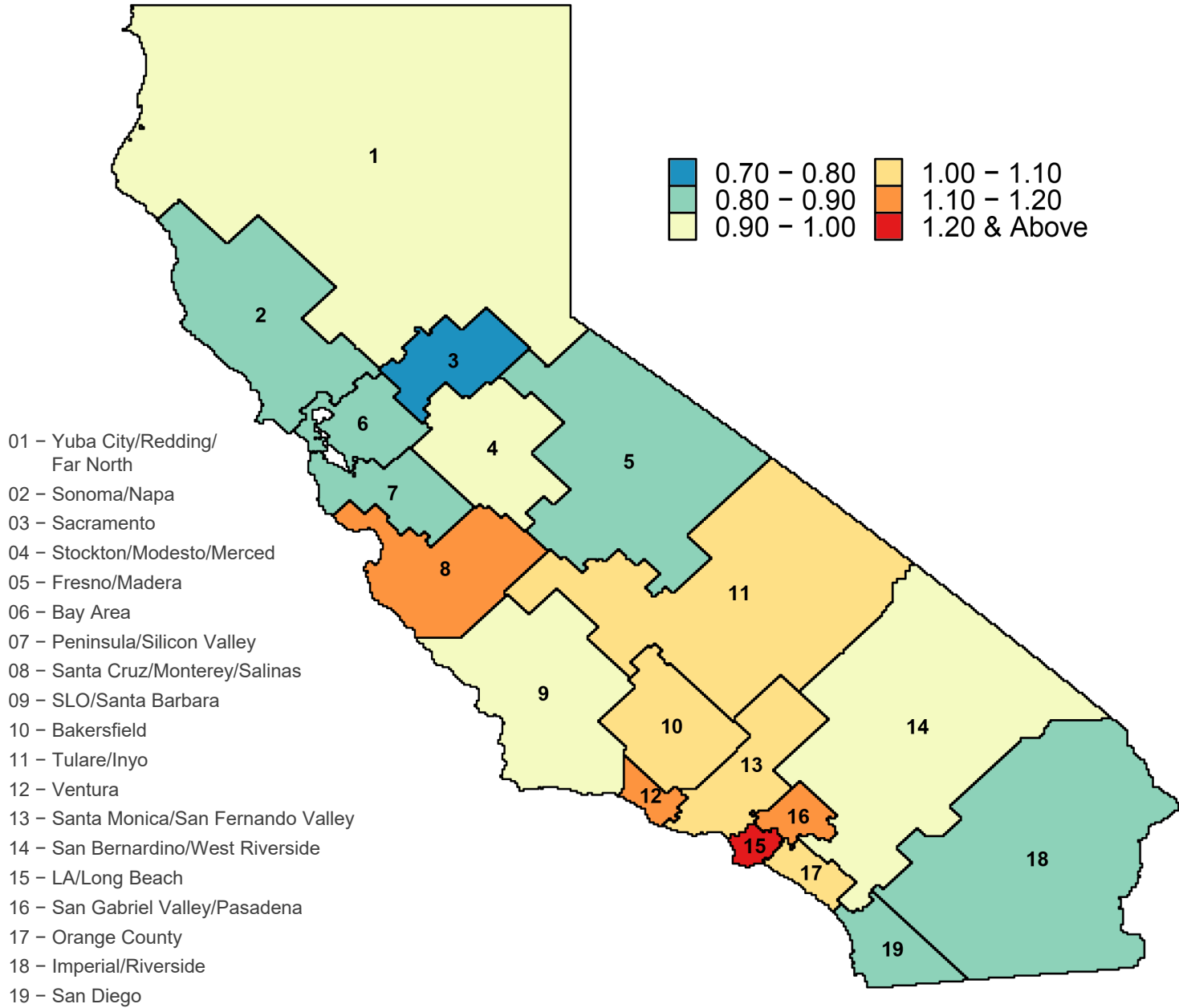
Exhibit 13 – Ratio of Limited* Losses to Modified Pure Premium Relative to Statewide



Insights

- Limited loss ratios are highest in the LA/Long Beach (15) region, at more than 25% above the statewide average. Bakersfield (10) and Ventura (12) also have ratios that are more than 11% above the statewide average.
- Limited loss ratios are lowest in the Imperial/Riverside (18) and San Diego (19) regions, more than 17% below the statewide average.
- These differences in limited loss ratios are largely driven by regional differences in indemnity claim frequency rates discussed previously ([Exhibit 2](#)).
- Regional patterns are generally similar but somewhat more varied at 42, 66 and 90 months (see tabs LR02, LR03 and LR04 in the [Geo Data Table](#) and [Exhibit 14](#)).

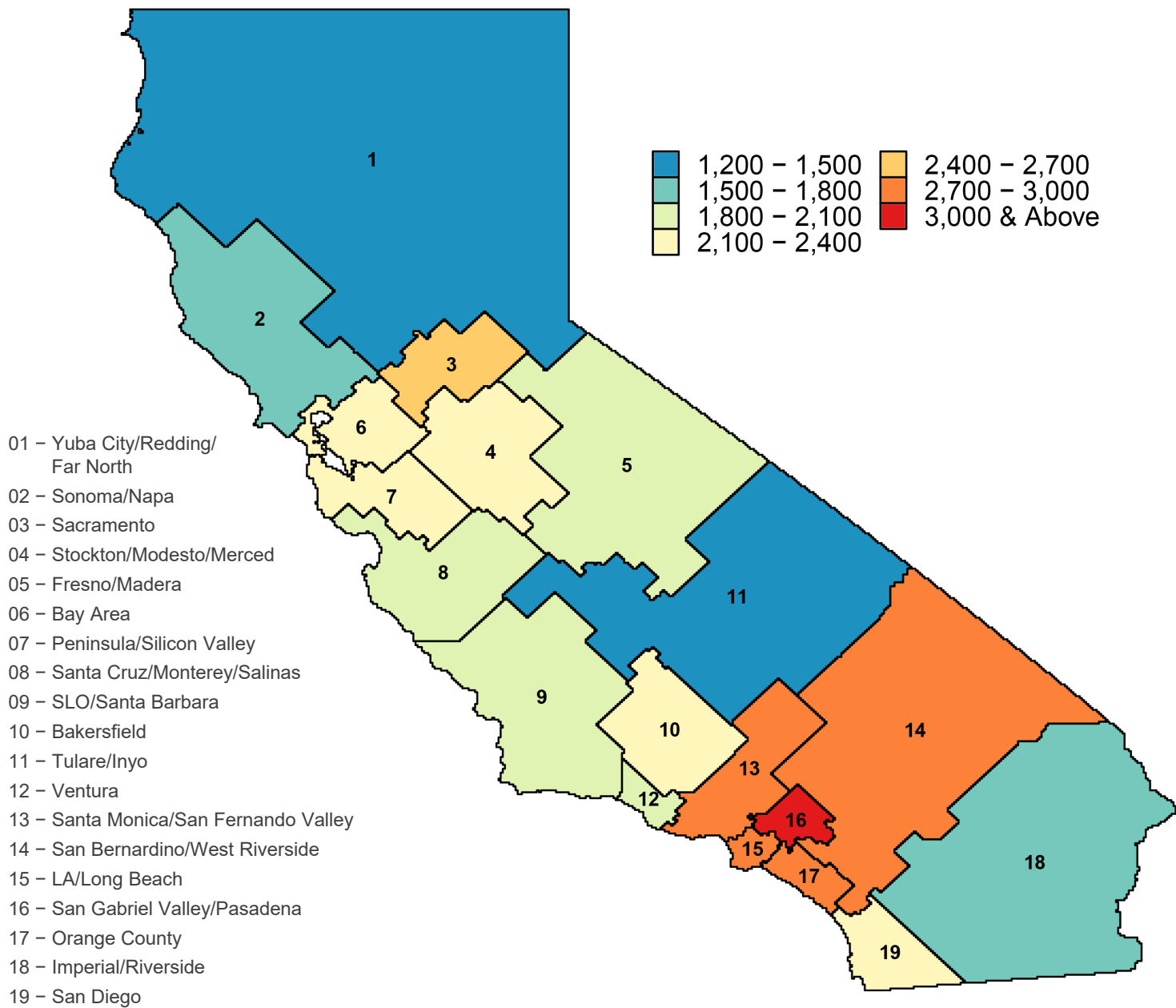
Exhibit 14 – Ratio of Limited* Losses to Modified Pure Premium at RL 7 Relative to Statewide



Insights

- Limited loss ratios at 90 months (RL 7) broadly follow the same regional pattern as ratios at 18 months (RL 1), with larger regional differences ([Exhibit 13](#)).
- Limited loss ratios at 90 months are highest in LA/Long Beach (15), almost 35% above the statewide average, and lowest in Sacramento, at more than 25% below the statewide average.

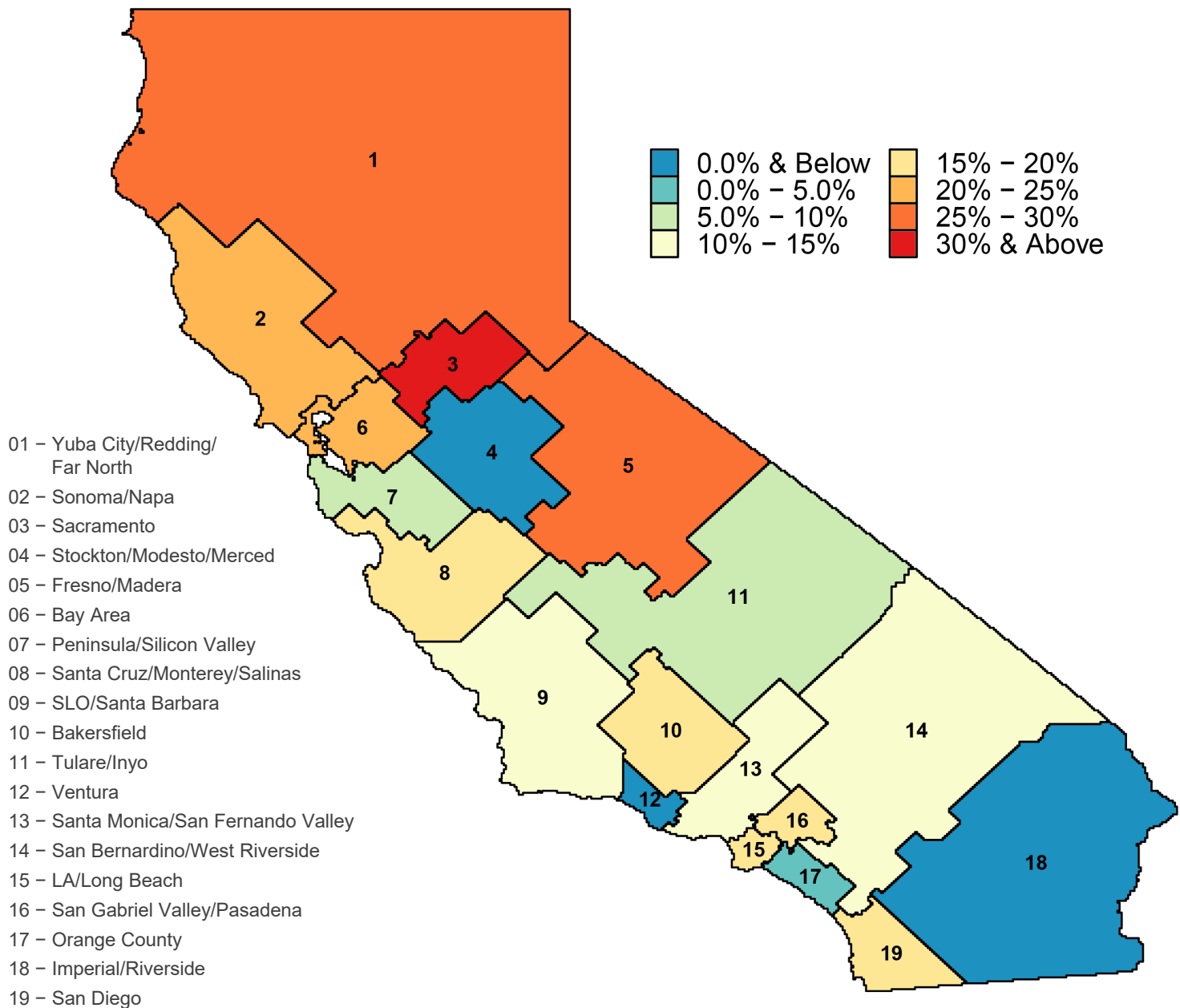
Exhibit 15 – Median Paid ALAE on Permanent Disability Claims (\$)



Insights

- Median paid ALAE on permanent disability claims is significantly higher in the LA Basin than in Northern California regions. The median paid ALAE on permanent disability claims in San Gabriel Valley/Pasadena (16) is more than twice as high as in Yuba City/Redding/Far North (01).
- Median paid ALAE has one of the largest ranges of regional differences observed in the state.
- Regional patterns in median paid ALAE are similar at both 42 and 66 months, with smaller regional differences (see tabs ALAE02 and ALAE03 in the [Geo Data Table](#)).

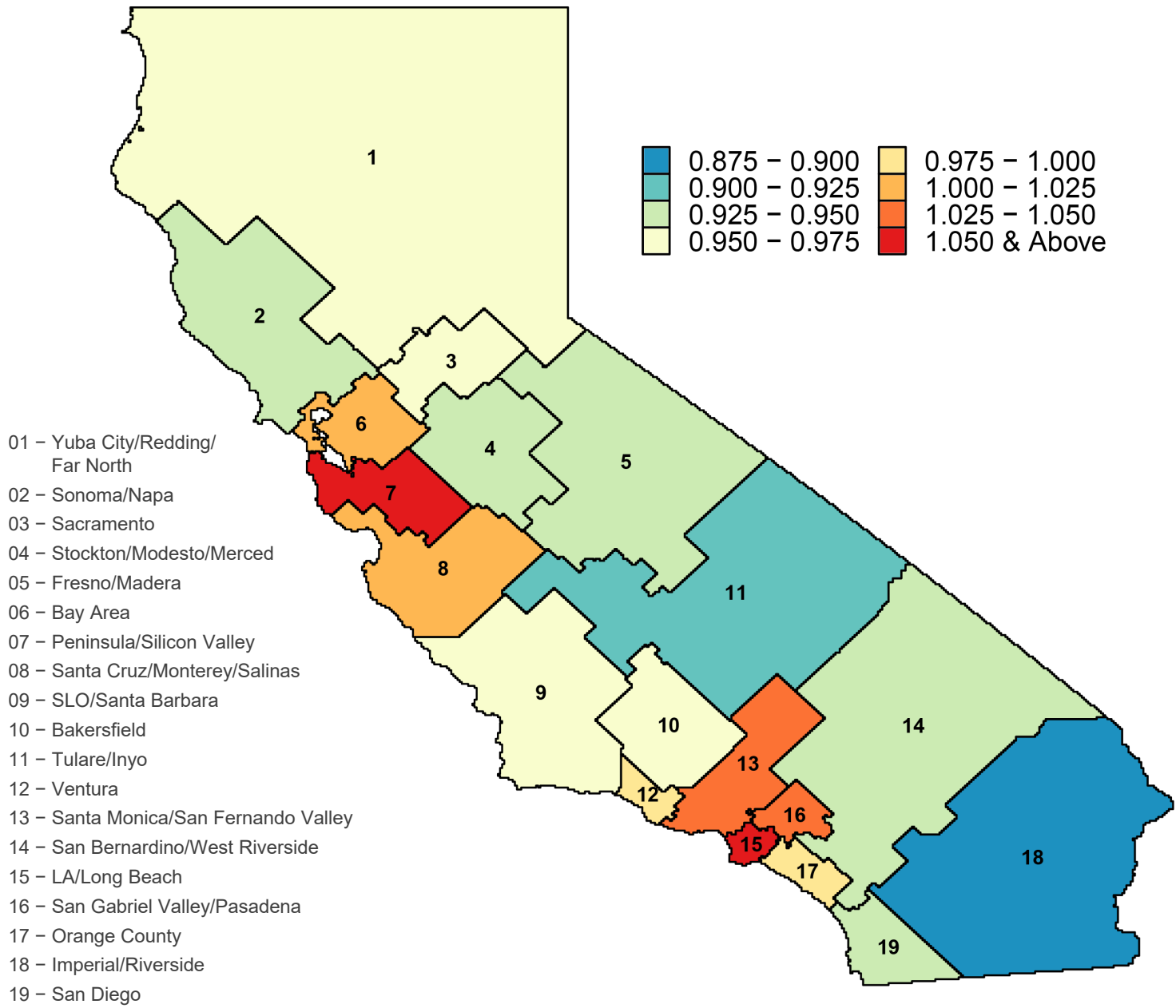
Exhibit 16 – PY 2021 to PY 2022 Change in Median Paid ALAE on Permanent Disability Claims



Insights

- All but three regions had an increase in median paid ALAE on permanent disability claims from PY 2021 to PY 2022 as the statewide median increased by 15% (see tab ALAE16 in the [Geo Data Table](#)).
- Northern California regions had larger increases in median paid ALAE than Southern California regions, contributing to a slight compression in the differences across regions.
- Sacramento (03) had the highest increase in median paid ALAE, at 32%.
- Ventura (12) and Stockton/Modesto/Merced (04) had the only significant decreases in median paid ALAE, at more than 5%.

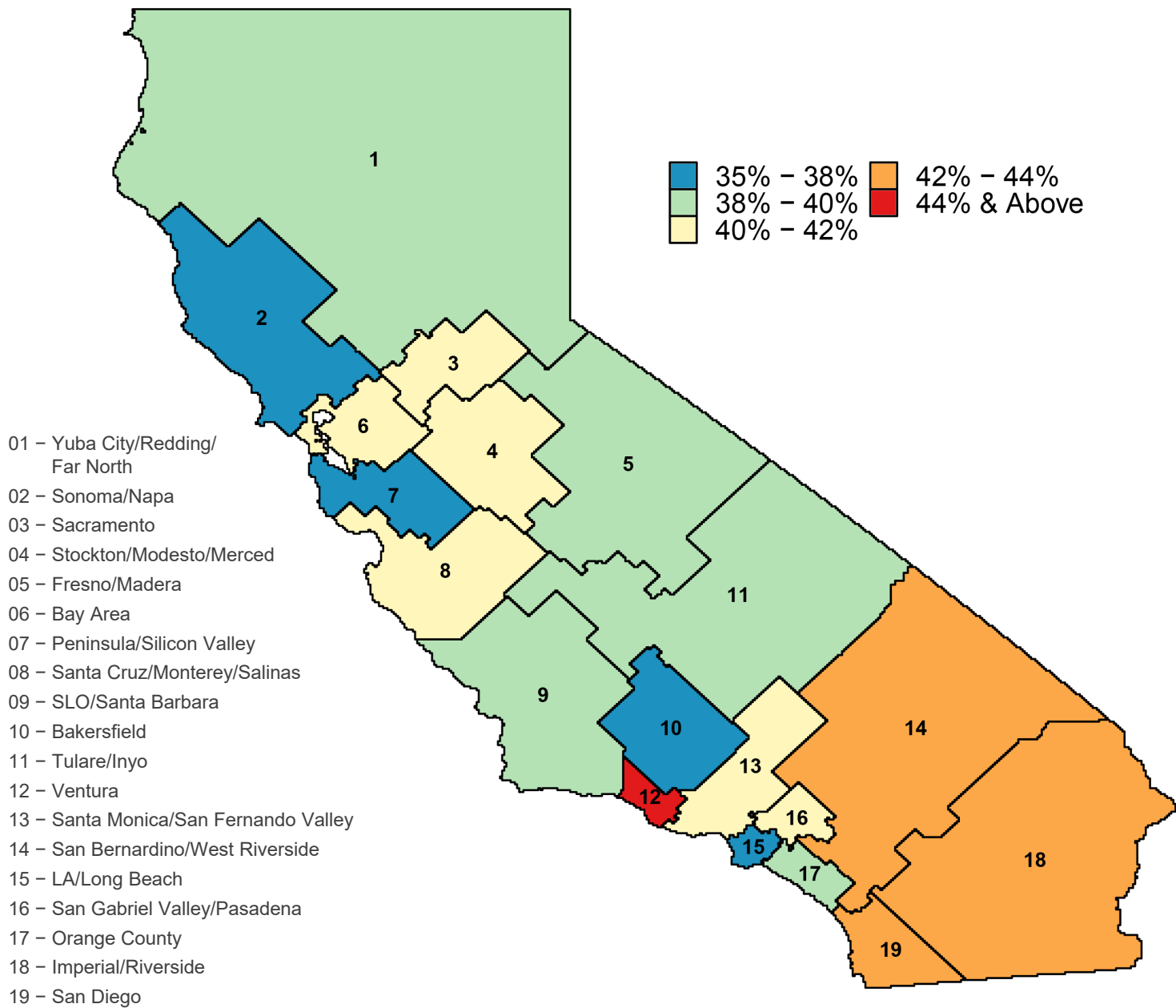
Exhibit 17 – Limited* Incurred Loss Development RL 1 to RL 7 Relative to Statewide



Insights

- Regional differences in loss development are modest. Urban regions tend to have higher loss development.
- Loss development is higher than the statewide average in the LA Basin. This could be related to the higher proportion of CT claims, the higher share of open claims and the higher indemnity claim count development in the LA Basin (see tabs CLAIM05, CLAIM09 and DEV06 in the [Geo Data Table](#)).
- These differences are similar to the relative loss developments from 18 to 42 months (RL 1 to RL 3) and 18 to 66 months (RL 1 to RL 5) (see tabs DEV01 and DEV02 in the [Geo Data Table](#)).

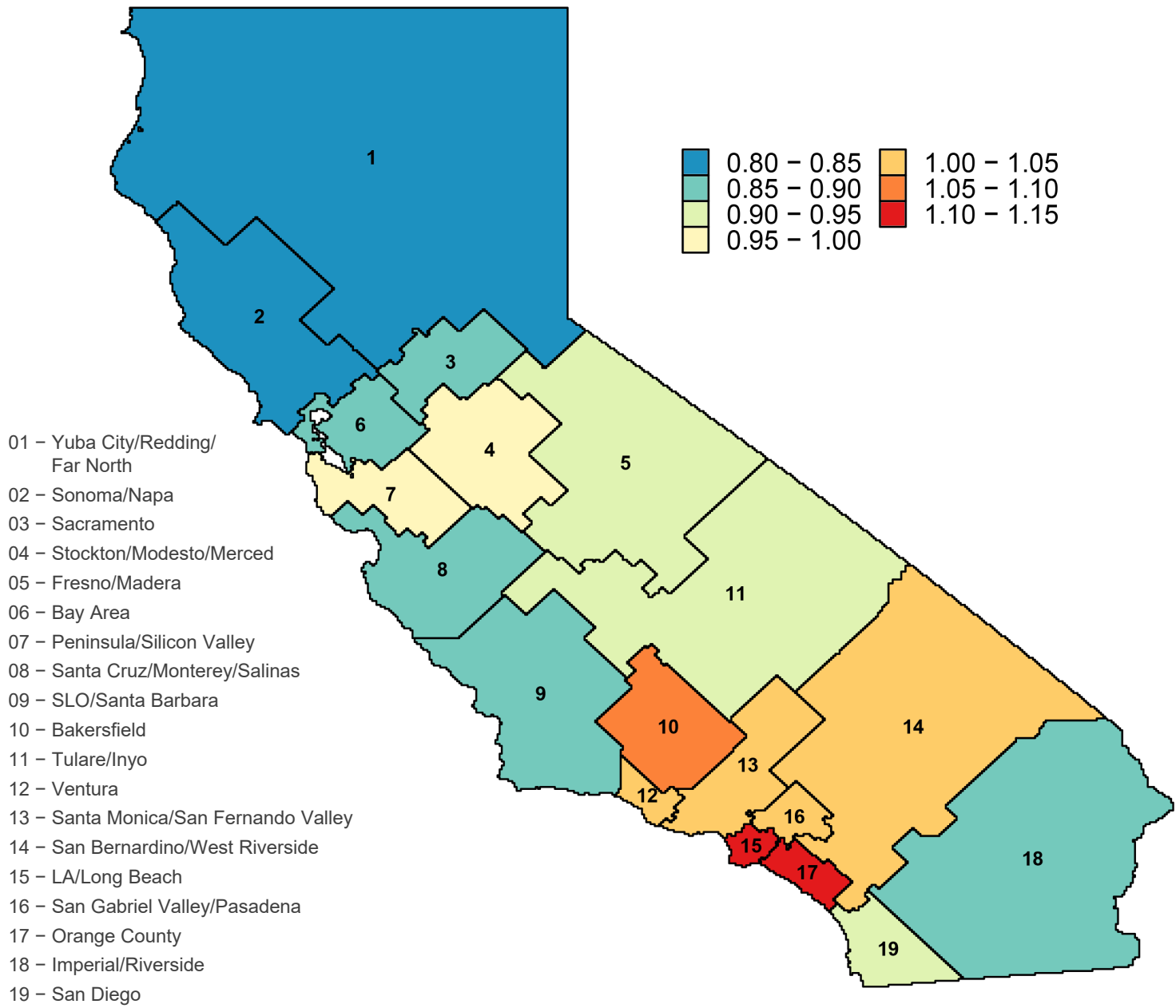
Exhibit 18 – Share of Injured Workers with One Year of Tenure or Less



Insights

- Studies have shown that newly hired workers are more likely to be injured on the job. Differences in the share of injured workers with less than one year tenure are relatively similar throughout the state. (See [Impacts of Employee Tenure on Workers’ Compensation Claim Frequency in California.](#))
- The share of injured workers with one year of tenure or less decreased in every region from accident year (AY) 2022 to AY 2023 (see tab TI02 in the [Geo Data Table](#)).
- Ventura (12) has the highest share at more than 44%. San Bernardino/West Riverside (14), Imperial/Riverside (18) and San Diego (19) also have relatively high shares, with more than 42% of their workers having less than one year of tenure.
- Sonoma/Napa (02) and Peninsula/Silicon Valley (07) regions have the lowest shares, at less than 36%.
- There is an association between tenure and wage, as regions with higher shares of short-tenured workers will tend to have lower median wages ([Exhibit 5](#)).

Exhibit 19: Share of Litigated Indemnity Claims Relative to Statewide



Insights

- Litigation rates vary significantly throughout the state. This drives patterns of ALAE costs by region ([Exhibit 15](#)) as well as overall costs ([Exhibit 13](#) and [Exhibit 14](#)).
- The LA/Long Beach (15) and Orange County (17) regions had the highest share of litigated indemnity claims, at more than 12% above the statewide average.
- The Yuba City/Redding/Far North (01) and Sonoma/Napa (02) regions had the lowest shares of litigated indemnity claims, at more than 17% below the statewide average.

A photograph of a wind farm at sunset. The sky is filled with orange and red clouds, and the silhouettes of many wind turbines are visible against the horizon. The foreground shows a dirt road or path leading towards the turbines.

Technical Appendix

Technical Appendix

Increasing evidence of geographical differences in California workers' compensation claim costs led WCIRB staff to develop a database that could provide refined estimates of regional claim frequencies and other claim cost differentials. This database resolves two problems with unit statistical report (USR) data, which does not provide geographic information for exposures or claims.

The first problem is determining the appropriate allocation of USR exposures by classification to geographic locations. This problem was resolved by linking the WCIRB's USR data to D&B Hoovers data, which provides information on employer locations, including the industries at each location and estimates of the number of employees at each location. The second problem is determining the appropriate allocation of claims to employer locations. This problem was resolved by using the geographic information for select data available in the WCIRB's medical transaction data call (MDC). The resulting triple-linked database – USR, MDC and D&B Hoovers – provides an enriched database that allows for more refined analyses of geographical differences across California.

In addition to the three primary data sources used to form the triple-linked database, WCIRB staff also utilized the following sources:

- WCIRB policy and inspection report data (for names and addresses)
- WCIRB indemnity transaction data (for accident year 2020 through 2023 claims)
- Occupational Employment Survey (to develop regional wage adjustments)
- Self-insurance rosters from the Office of Self-Insurance Plans within the director's office of the Department of Industrial Relations (to identify D&B Hoovers records without associated workers' compensation policies)

Methods of Linkage – USR to D&B Hoovers

Multiple methods were used to link USR and D&B Hoovers data. Linkages were established using employer names (including owner/proprietor, Doing Business As and parent company names), addresses and Federal Employer Identification Numbers. A protocol was established among linkage methods to avoid ambiguity. Ambiguously matched data was excluded from the study.

Over time, the availability of contemporaneous D&B Hoovers and USR data has ameliorated this issue of ambiguously matched data and allowed for enhanced USR-D&B Hoovers match rates. In this year's study, approximately 91% of the target policy year's data was successfully matched.

In parallel with linking the USR and D&B Hoovers data, WCIRB staff also matched D&B Hoovers data to the self-insurance rosters published by the Office of Self-Insurance Plans within the director's office of the Department of Industrial Relations. Self-insured employers identified in the D&B Hoovers data were then excluded from matching with USR data to increase the overall quality of the matching.

Geolocating Exposures

Exposures were allocated to locations recognizing regional wage differentials (developed from the Occupational Employment Survey) and the relative number of employees estimated by D&B Hoovers to be at each location. Each classification's exposures were allocated to locations using the industries at the location provided by D&B Hoovers. Note that the regional wage differentials are by county – not by WCIRB region. The regional wage differentials used in the study are provided in the zip code-to-region mapping.

Technical Appendix (...continued)

Geolocating Claims

Claims were allocated to locations at which the claim's classification had exposure allocated. Claims were located to the nearest such location by calculating the location of each claim's "center of medical services" determined from MDC observations. All MDC features were used to geolocate claims. Features were weighted in proportion to their accuracy in geolocating so that features that provide good geolocating information receive greater weight than features that provide poor geolocating information. The average number of MDC observations used to geolocate a claim was 27.7.

Identifying Optimal Geographic Units of Analysis

A market area approach was used to identify economically cohesive geographical units. To identify economically cohesive geographical units, WCIRB staff examined the "correlation" of medical providers among geographic units. The reasoning behind doing so is that regions utilizing common providers form a more natural geographic unit.

To identify economically cohesive geographical units, WCIRB staff first identified the minimum number of claims required in a geographic unit for reasonably stable results. A selection of 130 claims was made based on reviewing the clustering patterns for geographical units with greater claim volumes and identifying the volumes below which the ability to detect previously identified and stable clusters deteriorated. The average geolocated claim's number of MDC observations used in geolocating was 27.7, so the expected number of geolocating MDC observations for a geographic unit with 130 claims was 3,601.

Staff then developed a customized grid for the state for which each cell had at least 130 claims. Cells varied in geographic area as required to include at least 130 claims. Cells smaller than 1.3mi² in geographic area but with more than 130 claims were not subdivided. The provider correlation matrix for the grid was then calculated. If two geographic units had half of the providers in common, then the correlation between the two units was 0.50. The provider correlations range between zero and unity. The statewide average provider correlation across the grid was 0.12.

Unity less the provider correlation was used as a measure of dissimilarity between geographic units. Cluster analysis using Ward's 2D linkage criterion was then performed using this measure of dissimilarity. The cluster analysis algorithm first divided the state into two clusters such that the dissimilarity within the clusters is minimized. This process was repeated iteratively for each division until a desired number of clusters was reached. WCIRB staff evaluated a range of clusters and selected 19 as striking a good balance between robustness in the geographic units' results and the level of refinement. The average provider correlation for the selected 19 geographic regions is 0.40.

A mapping of U.S. Postal Service nine-digit zip codes to the study regions is available in the [Geo Study](#) page of the WCIRB website. The mapping includes the regional wage differentials. Note that an accurate mapping requires the use of the nine-digit, or zip code plus 4 digits, codes. Regions are not uniquely identified at the five-digit zip code level, and five-digit zip codes may map to multiple regions.

Technical Appendix (...continued)

Methods of Linkage – USR to MDC

The USR data was linked with MDC data using insurer, policy and claim number matching. While more straightforward, the linkages between these datasets are not complete. Not all insurers participate in MDC. For the study period, approximately 5% of insured data was not in MDC because the insurer did not participate in MDC. Matching was performed, and employer experience was included at the policy level. For example, for an employer insured by two insurers, one of which participated in MDC while the other did not participate in MDC, only the experience of the insurer that participated in MDC was included. Further, only claims that were medically active and for which data was submitted to MDC are available in MDC. USR claims for which there were no medical payments captured in MDC will not be available to match with MDC. For example, settlements paid directly to injured workers typically would not be captured in MDC. The claim experience captured in the study, therefore, represents a subset of all claim experience. No regional biases were detected due to excluding this data.

WCIRB Indemnity Transaction Data

The WCIRB began the mandatory collection of indemnity transaction data from most insurers for transactions beginning April 1, 2020. Data from these insurers is expected to represent 90% of claims in the insured market. Detailed transaction information is reported for each first report of injury (FROI) and subsequent report of injury (SROI) as reported to the Division of Workers' Compensation. This data is reported well before USR or MDC data is available,

in some cases the day after the injury occurs. FROI and SROI records are reported for medical only and expense only claims as well as indemnity claims.

The indemnity transaction dataset was constructed using FROI and SROI records with reported accident dates from April 1, 2020 through December 31, 2023. The USR data was linked with indemnity transaction data using insurer group code, accident date and claim number matching. While more straightforward than the linkage to D&B Hoovers, the linkages between these datasets are not complete.

When used without linkage to USR data, claims were located based on the employer zip code and the zip code of the injury site that are listed in the most recent FROI record submitted for each claim. Zip codes outside of California were excluded.

Let us know what you think about this study by emailing us at ActuarialResearch@wcirb.com.

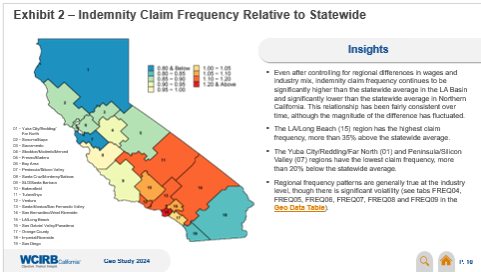


More Info

More Info

Exhibit 2 – Indemnity Claim Frequency Relative to Statewide

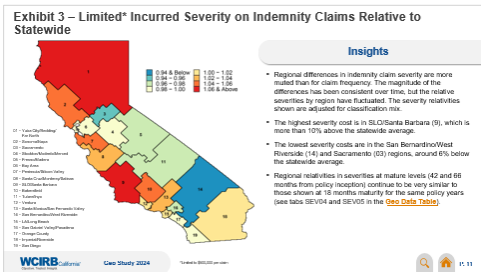
- This map shows the regional indemnity claim frequency relative to statewide. The expected statewide frequencies were developed at a classification level, so relativities are adjusted for industry mix.
- The regional indemnity claim frequency relativities for PY 2013 through 2022 are provided on tab **FREQ01** in the [Geo Data Table](#).
- The regional total claim frequency relativities (not mapped) for PY 2013 to 2022 are provided on tab **FREQ03** in the [Geo Data Table](#).
- The regional indemnity claim frequency relativities by industrial sector for PY 2013 to 2022 are provided on tabs **FREQ04** through **FREQ09** in the [Geo Data Table](#).



Return to Exhibit 2

Exhibit 3 – Limited Incurred Severity on Indemnity Claims Relative to Statewide

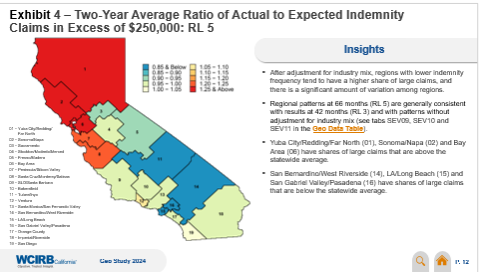
- This map shows total incurred severity on indemnity claims, controlled for classification mix, relative to statewide.
- These severities are at first report level, with all losses limited to \$500,000, and are not necessarily the severities ultimately expected as claims mature.
- The data underlying this map as well as changes in prior policy years are provided on tab **SEV01** in the [Geo Data Table](#).
- The regional total incurred severity on indemnity claims at third report level for PY 2013 to 2020 are provided on tab **SEV04** in the [Geo Data Table](#).
- The regional total incurred severity on indemnity claims at fifth report level for PY 2013 to 2018 are provided on tab **SEV05** in the [Geo Data Table](#).



Return to Exhibit 3

Exhibit 4 – Two-Year Average Ratio of Actual to Expected Indemnity Claims in Excess of \$250,000: RL 5

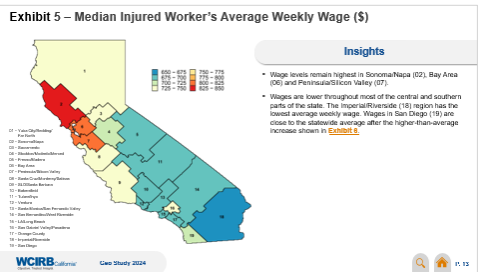
- This map shows the PY 2017–2018 average share of indemnity claims that have incurred losses in excess of \$250,000 at fifth report level relative to expected count and adjusted for industry mix.
- To adjust for industry mix, expected excess claim count shares were developed at the classification level.
- The data underlying this map as well as regional ratios of actual to expected excess claims for prior policy years are provided in tab **SEV12** in the [Geo Data Table](#).
- The regional ratios of actual to expected excess claims at third report level are provided on tab **SEV10** in the [Geo Data Table](#).



Return to Exhibit 4

Exhibit 5 – Median Injured Worker’s Average Weekly Wage

- This map shows the PY 2022 median injured worker’s wage. The median injured worker’s wage for PY 2013 to 2022 is provided on tab **WORKER02** in the [Geo Data Table](#).
- Annual changes in median injured worker’s wages for PY 2013 to 2022 are provided on tab **WORKER01** in the [Geo Data Table](#).
- The median injured worker’s age for claims with permanent disability for PY 2013 to 2022 is provided on tab **WORKER03** in the [Geo Data Table](#).

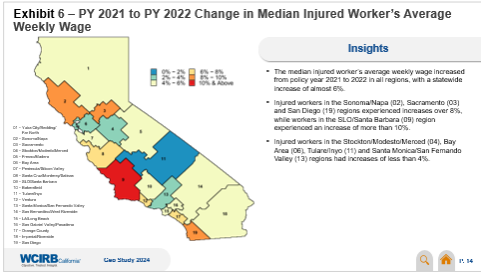


Return to Exhibit 5

More Info (...continued)

Exhibit 6 – PY 2021 to PY 2022 Change in Median Injured Worker’s Average Weekly Wage

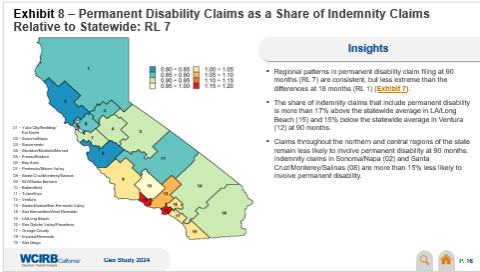
- This map shows the percentage point change in median injured worker’s average weekly wage for claims from PY 2021 to 2022.
- The data underlying this map as well as changes in prior policy years are provided on tab WORKER01 in the [Geo Data Table](#).



[Return to Exhibit 6](#)

Exhibit 8 – Permanent Disability Claims as a Share of Indemnity Claims Relative to Statewide: RL 7

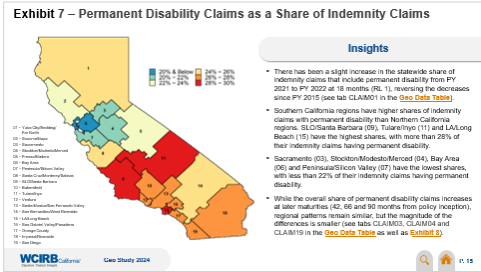
- This map shows the PY 2016, at seventh report level, regional shares of indemnity claims that are permanent disability, relative to statewide.
- Seventh report level, regional shares of indemnity claims that are permanent disability, for PY 2013 to 2016 are shown on tab CLAIM19 in the [Geo Data Table](#).
- Each region’s permanent disability share of indemnity claims for PY 2013 to 2022 at first report level is provided on tab CLAIM01, for PY 2013 to 2020 at third report level on tab CLAIM03 and for PY 2013 to 2018 at fifth report level on tab CLAIM04 in the in the [Geo Data Table](#).



[Return to Exhibit 8](#)

Exhibit 7 – Permanent Disability Claims as a Share of Indemnity Claims

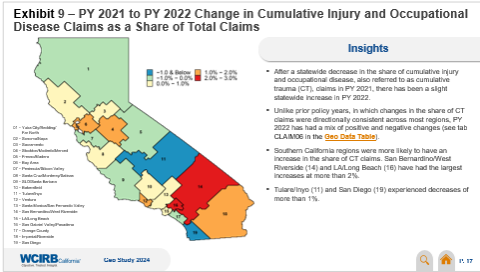
- This map shows the PY 2022, at first report level, regional shares of indemnity claims that are permanent disability.
- Each region’s permanent disability share of indemnity claims for PY 2013 to 2022 is provided on tab CLAIM01 in the [Geo Data Table](#).
- Each region’s indemnity claim share of total claims for PY 2013 to 2022 is provided on tab CLAIM02 in the [Geo Data Table](#).
- Each region’s permanent disability share of indemnity claims for PY 2013 to 2020 at third report level is provided on tab CLAIM03, for PY 2013 to 2018 at fifth report level on tab CLAIM04 and for PY 2013 to 2016 at seventh report level on tab CLAIM19 in the in the [Geo Data Table](#).



[Return to Exhibit 7](#)

Exhibit 9 – PY 2021 to PY 2022 Change in Cumulative Injury and Occupational Disease Claims as a Share of Total Claims

- This map shows the percentage point change in the share of total claims due to cumulative injury and occupational disease from PY 2021 to 2022.
- The data underlying this map as well as changes in prior policy years are provided on tab CLAIM06 in the [Geo Data Table](#).
- The cumulative injury shares by region for PY 2013 to 2022 are provided on tab CLAIM05. Third report level values of cumulative injury share are provided on tab CLAIM07 and fifth report level values of cumulative injury share on tab CLAIM08 in the in the [Geo Data Table](#).

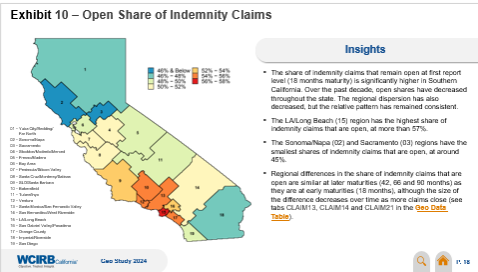


[Return to Exhibit 9](#)

More Info (...continued)

Exhibit 10 – Open Share of Indemnity Claims

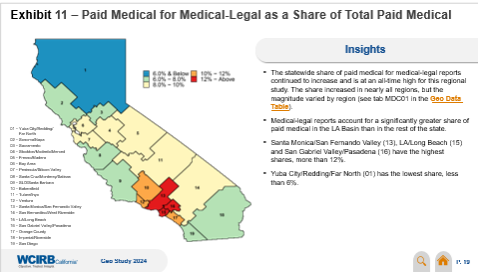
- This map shows each region’s share of indemnity claims that were reported as open at first report level for PY 2022.
- The open shares by region for indemnity claims at first report level for PY 2013 to 2022 are provided on tab CLAIM09, at third report level are provided on tab CLAIM13 and at fifth report level are provided on tab CLAIM14 in the [Geo Data Table](#).
- The open shares by region for all claims at first report level for PY 2013 to 2022 are provided on tab CLAIM11, at third report level are provided on tab CLAIM15 and at fifth report level are provided on tab CLAIM16 in the in the [Geo Data Table](#).
- The open shares by region for permanent disability claims at first report level for PY 2013 to 2022 are provided on tab CLAIM12, at third report level are provided on tab CLAIM17 and at fifth report level are provided on tab CLAIM18 in the in the [Geo Data Table](#).



[Return to Exhibit 10](#)

Exhibit 11 – Paid Medical for Medical-Legal as a Share of Total Paid Medical

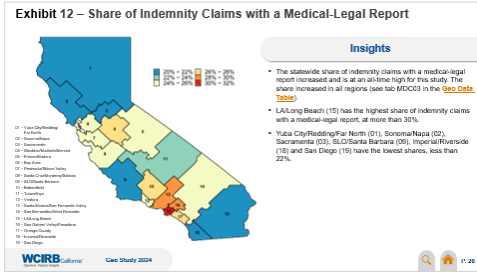
- This map shows the PY 2022 share of paid medical accounted for by medical-legal reports.
- Medical-legal reports are used to address disputed issues and are expected to be more frequent for permanent disability claims.
- The incidence of medical-legal reports beyond that explained by differences in permanent disability shares suggests a degree of litigiousness.
- The regional values of medical-legal as a share of total paid medical for PY 2013 to 2022 are provided on tab MDC01 in the [Geo Data Table](#). The values relative to statewide are provided on tab MDC02.
- The regional median permanent disability rating is provided in tab SEV06 for first report level, in tab SEV07 for third report level and in tab SEV08 for fifth report level in the [Geo Data Table](#).



[Return to Exhibit 11](#)

Exhibit 12 – Share of Indemnity Claims with a Medical-Legal Report

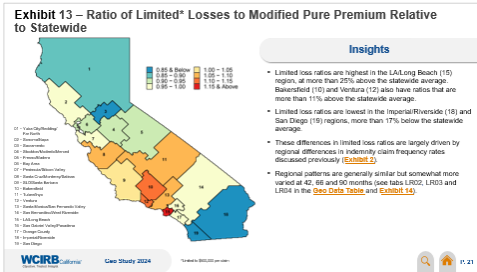
- This map shows the PY 2022 share of indemnity claims with a medical-legal report.
- The shares by region of indemnity claims with a medical-legal report for policy years 2013 to 2022 are provided on tab MDC03 in the [Geo Data Table](#).



[Return to Exhibit 12](#)

Exhibit 13 – Ratio of Limited Losses to Modified Pure Premium Relative to Statewide

- This map shows regional loss ratio relativities after application of experience rating for experience-rated employers for PY 2022.
- Expected losses contemplate a \$500,000 per claim limit and are controlled for classification mix and regional wage level differences. Each claim’s actual losses are limited to \$500,000.
- The limited losses are compared to the modified pure premium for those risks, which is the premium generated at the approved advisory pure premium rates adjusted by the applicable experience modifications.
- The regional loss ratio relativities for PY 2013 to 2022 are provided on tab LR01, for PY 2013 to 2020 at third report level on tab LR02, for PY 2013 to 2018 at fifth report level on tab LR03 and for PY 2013 to 2016 at seventh report level on tab LR04 in the [Geo Data Table](#).

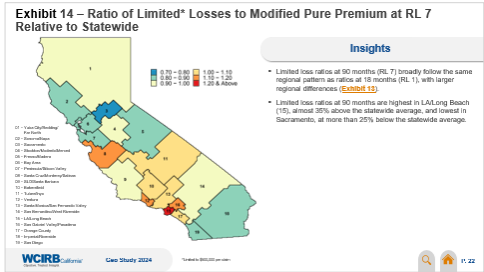


[Return to Exhibit 13](#)

More Info (...continued)

Exhibit 14 – Ratio of Limited Losses to Modified Pure Premium at RL 7 Relative to Statewide

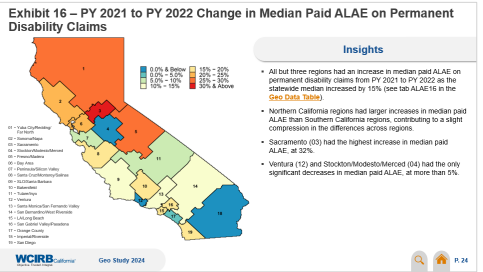
- This map shows regional loss ratio relativities, at seventh report level, after application of experience rating for experience-rated employers for PY 2016.
- Incurred losses are limited to \$500,000 per claim.
- The regional loss ratio relativities for PY 2013 to 2016, at seventh report level, are provided on tab LR04 in [Geo Data Table](#).



Return to Exhibit 14

Exhibit 16 – PY 2021 to PY 2022 Change in Median Paid ALAE on Permanent Disability Claims

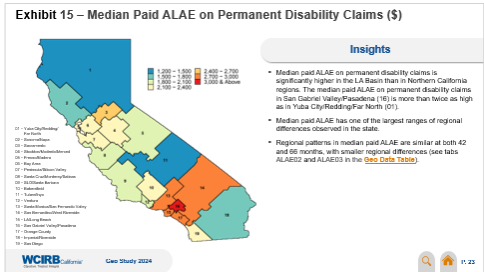
- This map shows the PY 2021 to PY 2022 change in median paid ALAE per permanent disability claim.
- The data underlying this map as well as prior policy year changes in median paid ALAE are provided on tab ALAE16 in the [Geo Data Table](#).



Return to Exhibit 16

Exhibit 15 – Median Paid ALAE on Permanent Disability Claims

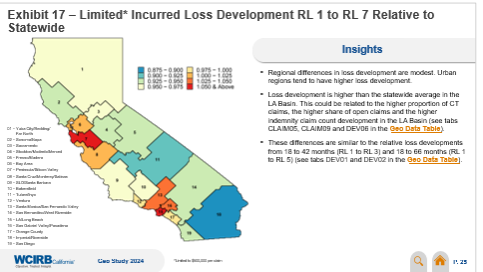
- This map shows the regional median paid allocated loss adjustment expense (ALAE) per permanent disability claim for PY 2022.
- The regional median paid ALAE per permanent disability claim for PY 2013 to 2022 at first report level is provided on tab ALAE01, at third report level on tab ALAE02 and at fifth report level on tab ALAE03 in the [Geo Data Table](#).
- The regional average paid ALAE per permanent disability claim for PY 2013 to 2022 at first report level is provided on tab ALAE07, at third report level on tab ALAE08 and at fifth report level on tab ALAE09 in the [Geo Data Table](#).
- The regional paid ALAE shares of incurred losses on permanent disability claims at first report level are provided on tab ALAE04, at third report level on tab ALAE05 and at fifth report level on tab ALAE06 in the [Geo Data Table](#).



Return to Exhibit 15

Exhibit 17 – Limited Incurred Loss Development RL 1 to RL 7 Relative to Statewide

- This map shows regional indemnity loss development relativities from first report level to seventh report level for PY 2016.
- Incurred losses are limited to \$500,000 per claim.
- This development includes incurred but not reported claims.
- The relativities from RL 1 to RL 3 for PY 2013 to 2020 are provided on tab DEV01, from RL 1 to RL 5 for PY 2013 to 2018 on tab DEV02 and from RL 1 to RL 7 for PY 2013 to 2016 on tab DEV07 in the [Geo Data Table](#).
- The regional indemnity claim count development relativities for PY 2013 to 2020 from RL 1 to RL 3 are provided on tab DEV05 and for PY 2013 to 2018 from RL 1 to RL 5 are provided on tab DEV06 in the [Geo Data Table](#).

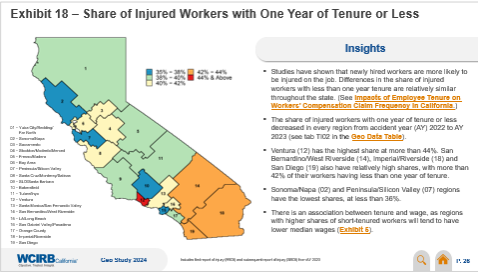


Return to Exhibit 17

More Info (...continued)

Exhibit 18 – Share of Injured Workers with One Year of Tenure or Less

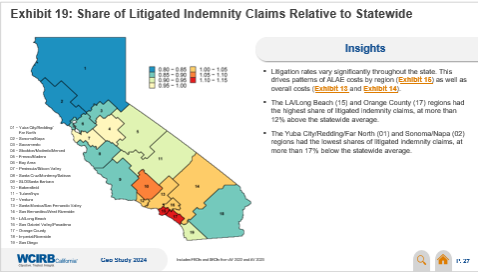
- This map shows the share of all claims where the injured worker had been hired less than one year prior to the date of injury.
- This includes AY 2023 claims for which FROI and SROI data have been reported.
- The shares of injured workers with one year of tenure or less by region, for AY 2020 to 2023, are provided on tab TI01 of the [Geo Data Table](#).
- The changes in the shares of injured workers with one year of tenure or less by region, for AY 2020 to 2023, are provided on tab TI02 of the [Geo Data Table](#).



Return to Exhibit 18

Exhibit 19 – Share of Litigated Indemnity Claims Relative to Statewide

- This map shows regional shares of indemnity claims that are likely to have been litigated relative to statewide.
- This includes claims from PY 2022 for which FROI and SROI records have been reported and linked to USR data at first report level.
- Claims are considered likely to have been litigated if a Date of Litigation is reported on the SROI or paid ALAE is greater than \$1,000.
- The data underlying this map is provided on tab LIT01 in the [Geo Data Table](#).



Return to Exhibit 19

Notice and Copyright

The *WCIRB Geo Study 2024* (Study) was developed by the Workers' Compensation Insurance Rating Bureau of California (WCIRB) for the convenience of its users. This Study was developed for the limited purpose of assessing regional differences in California workers' compensation claim frequency and severity during a specific period of time and may not reflect trends before or after the specific period addressed in this Study. The WCIRB has made reasonable efforts to ensure the accuracy of this Study. You must make an independent assessment regarding the use of this Study based upon your particular facts and circumstances. The WCIRB shall not be liable for any damages of any kind, whether direct, indirect, incidental, punitive or consequential, arising from the use, inability to use, or reliance upon information provided in this Study.

© 2024 Workers' Compensation Insurance Rating Bureau of California. All rights reserved.

No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including, without limitation, photocopying and recording, or by any information storage or retrieval system without the prior written permission of the Workers' Compensation Insurance Rating Bureau of California (WCIRB), unless such copying is expressly permitted in this copyright notice or by federal copyright law. No copyright is claimed in the text of statutes and regulations quoted within this work.

Each WCIRB member company, including any registered third party entities, (Company) is authorized to reproduce any part of this work solely for the following purposes in connection with the transaction of workers' compensation insurance: (1) as necessary in connection with Company's required filings with the California Department of Insurance; (2) to incorporate portions of this work, as necessary, into Company manuals distributed at no charge only to Company employees; and (3) to the extent reasonably necessary for the training of Company personnel. Each Company and all agents and brokers licensed to transact workers' compensation insurance in the state of California are authorized to physically reproduce any part of this work for issuance to a prospective or current policyholder upon request at no charge solely for the purpose of transacting workers' compensation insurance and for no other purpose. This reproduction right does not include the right to make any part of this work available on any website or any form of social media.

Workers' Compensation Insurance Rating Bureau of California, WCIRB, WCIRB California, WCIRB Connect, WCIRB Inquiry, WCIRB CompEssentials, X-Mod Direct, eSCAD, Comprehensive Risk Summary, Annual Business Comparative, X-Mods and More and the WCIRB California logo (WCIRB Marks) are registered trademarks or service marks of the WCIRB. WCIRB Marks may not be displayed or used in any manner without the WCIRB's prior written permission. Any permitted copying of this work must maintain any and all trademarks and/or service marks on all copies.

To seek permission to use any of the WCIRB Marks or any copyrighted material, please contact the WCIRB at customerservice@wcirb.com.

Workers' Compensation Insurance Rating Bureau of California

1901 Harrison Street, 17th Floor
Oakland, CA 94612
888.CA.WCIRB (888.229.2472)



wcirb.com

WCIRBCalifornia™
Objective. Trusted. Integral.

© 2024 Workers' Compensation Insurance Rating Bureau of California. All rights reserved.

1901 Harrison Street, 17th Floor
Oakland, CA 94612
888.229.2472