

State: Missouri **Filing Company:** NCCI
TOI/Sub-TOI: 16.0 Workers Compensation/16.0004 Standard WC
Product Name: R-1412 (HG) 2016 Update to the Retrospective Rating Plan Parameters - Hazard Group Differentials, Excess Loss Pure Premium Factors and Excess Loss and Allocated Expense Pure Premium Factors
Project Name/Number: /

Filing at a Glance

Company: NCCI
Product Name: R-1412 (HG) 2016 Update to the Retrospective Rating Plan Parameters - Hazard Group Differentials, Excess Loss Pure Premium Factors and Excess Loss and Allocated Expense Pure Premium Factors
State: Missouri
TOI: 16.0 Workers Compensation
Sub-TOI: 16.0004 Standard WC
Filing Type: Rule
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Effective Date 01/01/2017
Requested (New):
Effective Date 01/01/2017
Requested (Renewal):

Author(s): Lesley O'Brien, Alison Herwig, Frank Gnolfo, Robert Dalton, Michelle Baker, Miguel Joubert
Reviewer(s): Patrick Lennon (primary)
Disposition Date: 07/29/2016
Disposition Status: APPROVED
Effective Date (New): 01/01/2017
Effective Date (Renewal): 01/01/2017

State Filing Description:

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General Information

Project Name: Status of Filing in Domicile:
 Project Number: Domicile Status Comments:
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 Created By: Frank Gnolfo Submitted By: Frank Gnolfo
 Corresponding Filing Tracking Number:
 State TOI: 16.0 Workers Compensation State Sub-TOI: 16.0004 Standard WC

Filing Description:

This item proposes revisions to the following values in NCCI's Retrospective Rating Plan Manual for Workers Compensation and Employers Liability Insurance (Retrospective Rating Plan Manual):

- Hazard Group Differentials (commonly referred to as Relativities)
- Excess Loss Pure Premium Factors (ELPPFs) and Excess Loss and Allocated Expense Pure Premium Factors (ELAEPPFs)

Company and Contact

Filing Contact Information

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Filing Company Information

NCCI CoCode: State of Domicile: Florida
 901 Peninsula Corporate Circle Group Code: Company Type:
 Boca Raton, FL 33487 Group Name: State ID Number: 9999-85000
 (561) 893-3186 ext. [Phone] FEIN Number: 65-0439698

Filing Fees

Fee Required? Yes
 Fee Amount: \$50.00
 Retaliatory? No
 Fee Explanation: Rule filing
 Per Company: Yes

Company	Amount	Date Processed	Transaction #
NCCI	\$50.00	06/14/2016	110339067

State Specific

NAIC Number: NA
 Have you reviewed the General Instructions document? (yes/no)(General Instructions updated 11/14/14): Yes
 If this is a rate filing, was rate data added on the rate/rule schedule? (yes/no): No

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Correspondence Summary

Dispositions

Status	Created By	Created On	Date Submitted
APPROVED	Patrick Lennon	07/29/2016	07/29/2016

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Disposition

Disposition Date: 07/29/2016
Effective Date (New): 01/01/2017
Effective Date (Renewal): 01/01/2017
Status: APPROVED

Comment:

Rate data does NOT apply to filing.

Schedule	Schedule Item	Schedule Item Status	Public Access
Supporting Document	Filing Memorandum	APPROVED	Yes
Supporting Document	R-1412 (HG) Informational Only Exhibit	APPROVED	Yes
Rate	R-1412 (HG) Exhibit 1	APPROVED	Yes

State: Missouri **Filing Company:** NCCI
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Rate/Rule Schedule

Item No.	Schedule Item Status	Exhibit Name	Rule # or Page #	Rate Action	Previous State Filing Number	Attachments
1	APPROVED 07/29/2016	R-1412 (HG) Exhibit 1	HG Differentials	Replacement	R-1411	Exhibit 1_R-1412-HG.pdf

ITEM R-1412—2016 UPDATE TO THE RETROSPECTIVE RATING PLAN PARAMETERS—HAZARD GROUP DIFFERENTIALS, EXCESS LOSS PURE PREMIUM FACTORS AND EXCESS LOSS AND ALLOCATED EXPENSE PURE PREMIUM FACTORS

EXHIBIT 1-HG

**RETROSPECTIVE RATING PLAN MANUAL—2009 EDITION
STATE SPECIAL RATING VALUES
1. HAZARD GROUP DIFFERENTIALS**

(Applies in: AK, AL, AR, AZ, CO, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MD, ME, MI, MO, MS, MT, NC, NE, NH, NM, NV, OK, OR, RI, SC, SD, TN, TX, UT, VT, WI, WV)

State	Hazard Group						
	A	B	C	D	E	F	G
AK	1.17	0.94	0.86	0.73	0.61	0.51	0.44
AL	1.39	1.09	0.98	0.82	0.67	0.56	0.45
AR	1.90	1.50	1.35	1.13	0.93	0.78	0.63
AZ	1.89	1.47	1.31	1.08	0.87	0.73	0.57
CO	1.90	1.52	1.39	1.17	0.98	0.83	0.70
CT	1.40	1.12	1.03	0.86	0.73	0.61	0.52
DC	1.29	1.02	0.93	0.78	0.65	0.54	0.45
FL	2.03	1.59	1.43	1.20	0.98	0.82	0.66
GA	1.41	1.11	1.01	0.84	0.70	0.59	0.48
HI	2.50	2.02	1.88	1.58	1.34	1.13	0.99
IA	1.25	1.01	0.93	0.78	0.65	0.55	0.47
ID	1.81	1.45	1.34	1.13	0.95	0.80	0.68
IL	1.16	0.93	0.86	0.73	0.62	0.52	0.45
IN	1.56	1.26	1.18	1.00	0.85	0.72	0.64
KS	1.70	1.35	1.24	1.04	0.86	0.73	0.61
KY	1.75	1.39	1.26	1.06	0.87	0.73	0.60
LA	0.87	0.70	0.65	0.55	0.46	0.39	0.34
MD	1.55	1.23	1.13	0.94	0.79	0.66	0.55
ME	1.86	1.48	1.36	1.14	0.96	0.81	0.68
MI	1.95	1.57	1.43	1.21	1.04	0.88	0.77
MO	1.64	1.30	1.19	0.99	0.82	0.69	0.57
MS	1.79	1.42	1.30	1.09	0.91	0.77	0.64
MT	1.51	1.17	1.04	0.87	0.70	0.59	0.46
NC	1.26	0.99	0.90	0.75	0.62	0.53	0.43
NE	1.57	1.24	1.12	0.94	0.77	0.65	0.53
NH	1.43	1.15	1.07	0.90	0.77	0.65	0.57
NM	1.20	0.97	0.89	0.75	0.63	0.53	0.46
NV	1.76	1.34	1.17	0.96	0.76	0.63	0.47
OK	1.73	1.38	1.26	1.05	0.87	0.72	0.60
OR	2.77	2.20	2.01	1.68	1.40	1.18	0.97
RI	2.06	1.66	1.54	1.30	1.10	0.93	0.81
SC	1.52	1.21	1.10	0.93	0.77	0.65	0.55
SD	1.63	1.26	1.12	0.93	0.75	0.62	0.48
TN	1.91	1.53	1.40	1.17	0.98	0.82	0.69
TX	2.65	2.03	1.82	1.63	1.40	1.14	0.85
UT	1.62	1.27	1.14	0.95	0.77	0.64	0.51
VT	1.34	1.08	1.00	0.84	0.71	0.60	0.51
WI	1.68	1.34	1.23	1.04	0.89	0.75	0.66
WV	2.51	2.01	1.84	1.54	1.28	1.07	0.90

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Supporting Document Schedules

Satisfied - Item:	Filing Memorandum
Comments:	
Attachment(s):	R-1412_Memo.pdf
Item Status:	APPROVED
Status Date:	07/29/2016
Satisfied - Item:	R-1412 (HG) Informational Only Exhibit
Comments:	By state
Attachment(s):	Exhibit 2_R-1412-HG_MO.pdf
Item Status:	APPROVED
Status Date:	07/29/2016

FILING MEMORANDUM

**ITEM R-1412—2016 UPDATE TO THE RETROSPECTIVE RATING PLAN
 PARAMETERS—HAZARD GROUP DIFFERENTIALS, EXCESS LOSS PURE PREMIUM
 FACTORS AND EXCESS LOSS AND ALLOCATED EXPENSE PURE PREMIUM FACTORS**
PURPOSE

This item proposes revisions to the following values in NCCI's *Retrospective Rating Plan Manual for Workers Compensation and Employers Liability Insurance (Retrospective Rating Plan Manual)*:

- Hazard Group Differentials (commonly referred to as Relativities)
- Excess Loss Pure Premium Factors (ELPPFs) and Excess Loss and Allocated Expense Pure Premium Factors (ELAEPPFs)

BACKGROUND

A retrospective rating plan adjusts the premium for an employer's policy on the basis of losses incurred during the term of that policy. At the simplest level, an employer's retrospective rating premium (RRP) is determined by the formula $RRP = (BP + LCF * L) * TM$, where:

RRP	=	Retrospective Rating Premium, subject to minimum and maximum amounts
BP	=	Basic Premium
LCF	=	Loss Conversion Factor, generally reflecting loss adjustment expense
L	=	Actual Incurred Loss during the effective policy period
TM	=	Tax Multiplier

The RRP is not known until after the policy has expired and the actual losses are fully developed. The basic premium contains provisions for the expenses of the carrier. It also includes a net insurance charge, which results from the maximum and minimum limitations on the RRP. The net insurance charge reflects the charge to compensate for the possibility that the RRP will exceed the maximum premium amount. It also reflects the savings resulting from the possibility that the RRP will be less than the minimum premium amount. The net insurance charge is the difference between the charge for the maximum and the savings from the minimum.

Appendix B—Table of Insurance Charges in NCCI's *Retrospective Rating Plan Manual* contains the excess ratios needed to quantify the insurance charge and savings described above. The ratio of the loss limit to expected losses—the entry ratio—is used to identify the values in the Table of Insurance Charges. The charges depend not only on the maximum and minimum subject losses but also on the size of the employer. This is because the expected variation in losses is lower for larger employers.

Hazard Group Differentials

The variation in the loss ratios for employers in the lower hazard groups generally should be smaller than the variation for employers in the higher hazard groups. The Hazard Group Differential factors adjust for this difference by placing lower hazard group employers in a higher Expected Loss Range and higher hazard group employers in a lower Expected Loss Range than would otherwise be the case. This adjustment affects the column selection in the Table of Insurance Charges, which then impacts the basic premium portion of the retrospective policy premium. The Hazard Group Differentials should be updated regularly to reflect changes in the circumstances (e.g., state statutory benefit levels and inflation) underlying each state's severity.

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The Hazard Group Differential is determined by dividing the countrywide average cost per case by the average cost per case for the state and hazard group.

For Michigan, Texas, and Wisconsin, a credibility formula is applied for determining each state's average cost per case using the sum of the latest five years of lost-time claim counts relative to a standard of 155,000 to achieve 100% credibility. The complement of credibility (i.e., 1.0 – state credibility) is applied to the countrywide average cost per case for the hazard group.

ELPPFs and ELAEPFFs

The Retrospective Rating Plan contains an optional provision—an individual loss limitation—that limits the loss amount arising out of any one accident that will be used in the calculation of retrospective premium adjustments. The charge for limiting losses is determined by application of an Excess Loss Factor (ELF) or an Excess Loss and Allocated Expense Factor (ELAEF). The ELFs and ELAEFs vary by loss limitation, state, and hazard group. The variation in ELFs and ELAEFs among hazard groups reflects the varying degrees of severity exposure to occupational hazards inherent to operations associated with each classification.

In states for which loss costs are developed, NCCI files ELPPFs and ELAEPFFs instead of ELFs and ELAEFs. Carriers convert these two factors into ELFs and ELAEFs. The differences between ELPPFs and ELAEPFFs are:

- ELPPFs represent the expected amount of losses above a given limit (excess losses) relative to the loss cost portion of the premium. ELPPFs do not consider the inclusion of allocated loss adjustment expense (ALAE) as part of incurred losses. Carriers convert ELPPFs to ELFs.

$$\text{ELPPF} = \text{Excess Losses/Loss Cost Premium}$$

- ELAEPFFs, which apply when the definition of loss includes ALAE, represent the expected amount of losses and ALAE above a given limit (excess losses including ALAE) relative to the loss cost portion of the premium. These optional values are provided for loss cost states where permitted. Refer to the Exhibit Comments and Implementation Summary of this memorandum for a list of the states where ELAEPFFs are not provided. Carriers convert ELAEPFFs to ELAEFs.

$$\text{ELAEPFF} = \text{Excess Losses and Allocated Loss Adjustment Expenses/Loss Cost Premium}$$

ELPPFs and ELAEPFFs are updated regularly for two reasons:

1. ELPPFs and ELAEPFFs are computed from excess ratios, which reflect the expected percentage of losses above a given loss limit. For any fixed limit, inflation will increase the percentage of losses above that limit. Therefore, ELPPFs and ELAEPFFs are regularly updated to accurately reflect the effect of inflation on those losses.
2. Overall excess ratios are computed as a weighted average of claim group excess ratios. Thus, excess ratios, and consequently ELPPFs and ELAEPFFs, are updated regularly for changes in the mix of claim groups.

The proposed state ELPPFs and ELAEPFFs are based on the latest five years of Unit Statistical data. The latest five years of data generally underlies the latest approved NCCI experience filings.

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FILING MEMORANDUM

ITEM R-1412—2016 UPDATE TO THE RETROSPECTIVE RATING PLAN PARAMETERS—HAZARD GROUP DIFFERENTIALS, EXCESS LOSS PURE PREMIUM FACTORS AND EXCESS LOSS AND ALLOCATED EXPENSE PURE PREMIUM FACTORS PROPOSAL

Hazard Group Differentials

This item proposes to revise the Hazard Group Differentials in NCCI's *Retrospective Rating Plan Manual* as shown in Exhibit 1.

ELPPFs and ELAEPFFs

This item also proposes to update the ELPPFs and ELAEPFFs that are used with an optional loss limitation in NCCI's *Retrospective Rating Plan Manual*. Exhibits 3 and 4 contain the proposed ELPPFs and ELAEPFFs.

Note: Appendix A—Table of Expected Loss Ranges in NCCI's *Retrospective Rating Plan Manual* is not being updated with this item. Typically, the Hazard Group Differentials and the Expected Loss Ranges are updated at the same time; however, a review of recent changes in countrywide claim severities indicates that a change to the Expected Loss Ranges is not needed. The current Appendix A, which became effective on January 1, 2013, will continue to apply.

IMPACT

The values proposed in this item are based on the latest filed information available as of April 28, 2016.

Hazard Group Differentials

Retrospective rating should produce premium that is equitably distributed to all employers but, on average, close to the guaranteed cost premium. The Hazard Group Differentials changes maintain the aggregate expected balance, although the impact will vary slightly for each employer. For most employers electing retrospective rating, the impact on final premium from these changes is expected to be negligible. The improved equity afforded by retrospective rating from this change will result in no change to the insurance charges for many employers.

The statewide impact will be negligible. The program is designed to be revenue-neutral countrywide. The development of Hazard Group Differentials in each state is provided in Informational Exhibit 2.

ELPPFs and ELAEPFFs

The proposed ELPPFs and ELAEPFFs are necessary to maintain the aggregate expected balance between the retrospectively rated premium and the guaranteed cost premium. If the ELPPFs and ELAEPFFs are not updated, there will be a natural erosion of rate adequacy over time caused by inflation acting to increase the percentage of losses over any fixed loss limit.

This proposal to adjust the ELPPFs and ELAEPFFs may increase or decrease premium for an employer that chooses to purchase an individual loss limitation, depending on which limit is purchased. The proposed ELPPFs and ELAEPFFs are adjusted to remove losses beyond \$50 million.

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The proposed ELPPFs and ELAEPFFs also reflect an updated mix of loss weights by claim group. Because retrospectively rated policies represent a small percentage of a state's premium, changes are expected to have a negligible impact on overall statewide premium levels.

IMPLEMENTATION

Hazard Group Differentials Effective January 1, 2017

In all states except Hawaii, this item will become effective for new and renewal voluntary policies only, effective on and after 12:01 a.m. on January 1, 2017.

This item will be implemented in Hawaii's loss cost filing proposed to be effective January 1, 2017. The effective date is determined upon regulatory approval of the individual carrier's election to adopt this change.

ELPPFs and ELAEPFFs Effective Concurrent With Each State's Approved Loss Cost/Rate Filing

This item is applicable to new and renewal voluntary policies only and will become effective concurrent with each state's approved loss cost/rate filing effective on and after October 1, 2016. For example, this item will be effective January 1, 2017, for approved loss cost/rate filings that have a January 1, 2017 effective date. Similarly, this item will be effective July 1, 2017, for approved loss cost/rate filings that have a July 1, 2017 effective date.

If there is no loss cost/rate filing for a state in a given year, this item will take effect on that state's regular loss cost/rate effective date. The regular loss cost/rate effective date is one year later than the date of the state's previous year's effective date.

Anticipated Effective Dates by State

The following chart shows the anticipated effective dates for each state:

State	Anticipated Effective Date*
Alabama	March 1, 2017
Alaska	January 1, 2017
Arkansas	July 1, 2017
Colorado	January 1, 2017
Connecticut	January 1, 2017
District of Columbia	November 1, 2016
Georgia	March 1, 2017

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Hawaii	The effective date will be determined upon regulatory approval of the individual carrier's election to adopt this change.
Illinois	January 1, 2017
Indiana	January 1, 2017
Kansas	January 1, 2017
Kentucky	October 1, 2016
Louisiana	May 1, 2017
Maine	April 1, 2017
Maryland	January 1, 2017
Mississippi	March 1, 2017
Missouri	January 1, 2017
Montana	July 1, 2017
Nebraska	February 1, 2017
Nevada	March 1, 2017
New Hampshire	January 1, 2017
New Mexico	January 1, 2017
North Carolina	April 1, 2017
Oklahoma	January 1, 2017
Oregon	January 1, 2017
Rhode Island	August 1, 2017
South Carolina	September 1, 2017
South Dakota	July 1, 2017
Tennessee	March 1, 2017
Texas	July 1, 2017
Utah	December 1, 2016
Vermont	April 1, 2017
West Virginia	November 1, 2016

* Subject to change, depending on the approved effective date of the loss cost/rate filing if one has been submitted for a state.

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EXHIBIT COMMENTS AND IMPLEMENTATION SUMMARY

Exhibit	Exhibit Comments
1-HG	Displays the revised Hazard Group Differentials in NCCI's <i>Retrospective Rating Plan Manual</i> .
2-HG	Provides informational exhibits describing the development of the Hazard Group Differentials for each state.
3-EL	<ul style="list-style-type: none"> • Displays the revised state ELPPFs in NCCI's <i>Retrospective Rating Plan Manual</i>. • Applies in all states except AZ, FL, IA, ID, MI, and WI. • In AZ, FL, IA, and ID, the ELFs are included in the annual experience filing. In MI and WI, the ELPPFs are not developed by NCCI.
4-EL	<ul style="list-style-type: none"> • Displays the revised state ELAEPFFs in NCCI's <i>Retrospective Rating Plan Manual</i>. • Applies in all states except AZ, FL, GA, IA, ID, IL, KY, LA, MD, MI, OR, SD, and WI. • In AZ, FL, IA, and ID, the ELAEFs are included in the annual experience filing. In MI and WI, the ELAEPFFs are not developed by NCCI. In GA, IL, KY, LA, MD, OR, and SD, ELAEPFFs do not apply.

Note: For filing purposes, this memorandum is being provided for the Hazard Group and ELPPF and ELAEPFF exhibits. The Hazard Group exhibits are filed with the regulatory authority as Item R-1412-HG. The ELPPF and ELAEPFF exhibits are filed with the regulatory authority as Item R-1412-EL.

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ITEM R-1412—2016 UPDATE TO THE RETROSPECTIVE RATING PLAN PARAMETERS—HAZARD GROUP DIFFERENTIALS, EXCESS LOSS PURE PREMIUM FACTORS AND EXCESS LOSS AND ALLOCATED EXPENSE PURE PREMIUM FACTORS

EXHIBIT 2-HG

DEVELOPMENT OF MISSOURI HAZARD GROUP DIFFERENTIALS FOR HAZARD GROUPS A TO G

Five years of historical experience is trended, on-leveled, and developed to estimate the severities for each state, hazard group, and claim group. The observed data for 37 states is input into a Bayesian multilevel model which produces fitted severities by state, hazard group, and claim group. Similarly, a second Bayesian multilevel model produces fitted claim counts from the same observed data by state, hazard group, and claim group. For a given hazard group, state severities are calculated by weighting the fitted severities by claim group together using fitted claim counts. The fitted severities and fitted claim counts by state are consistent with the values underlying NCCI's excess loss factor methodology.

The severities for all states are weighted together to calculate the average countrywide severity. The state and hazard group differentials are calculated by dividing the countrywide severity by the individual state hazard group severities.

(1)	(2)	(3)	(4) = (3) / (2)
<u>Hazard Group</u>	<u>Missouri Fitted Severities</u>	<u>Countrywide Average Severity</u>	<u>Proposed State and Hazard Group Differentials</u>
A	36,530		1.64
B	46,033		1.30
C	50,580		1.19
D	60,417		0.99
E	72,952		0.82
F	86,842		0.69
G	105,616		0.57
All		60,022	

Note: The underlying data source for the above calculations is NCCI's Unit Statistical data, excluding medical-only claims. The Unit Statistical data for each state is adjusted accordingly, as reflected in the data underlying the Excess Loss Factor (ELF) calculation.