Citizens Property Insurance Corporation

Personal Residential

Homeowners Rate & Rule Filing

Submitted by
Citizens Property Insurance Corporation
301 West Bay Street
Suite 1300
Jacksonville, Florida 32202

Contents

1 Filing Purpose

This is a rate and rule filing for the Homeowners of Citizens Property Insurance Corporation (Citizens).

This filing is being made to comply with applicable statutory ratemaking provisions, which are as follows:

§627.351(6)(n)1. Rates for coverage provided by the corporation shall be actuarially sound and subject to the requirements of s. 627.062, except as otherwise provided in this paragraph. The corporation shall file its recommended rates with the office at least annually. The corporation shall provide any additional information regarding the rates which the office requires. The office shall consider the recommendations of the board and issue a final order establishing the rates for the corporation within 45 days after the recommended rates are filed. The corporation may not pursue an administrative challenge or judicial review of the final order of the office.

§627.351(6)(n)3. After the public hurricane loss-projection model under s. 627.06281 has been found to be accurate and reliable by the Florida Commission on Hurricane Loss Projection Methodology, the model shall be considered when establishing the windstorm portion of the corporation's rates. The corporation may use the public model results in combination with the results of private models to calculate rates for the windstorm portion of the corporation's rates. This subparagraph does not require or allow the corporation to adopt rates lower than the rates otherwise required or allowed by this paragraph.

§627.351(6)(n)4. The corporation must make a recommended actuarially sound rate filing for each personal and commercial line of business it writes,

§627.351(6)(n)5. Notwithstanding the board's recommended rates and the office's final order regarding the corporation's filed rates under subparagraph 1., the corporation shall annually implement a rate increase which, except for sinkhole coverage, does not exceed the following for any single policy issued by the corporation, excluding coverage changes and surcharges:

a. Eleven percent for 2022.

b. Twelve percent for 2023.

c. Thirteen percent for 2024.

d. Fourteen percent for 2025.

e. Fifteen percent for 2026 and all subsequent years.

§627.351(6)(n)6. The corporation may also implement an increase to reflect the effect on the corporation of the cash buildup factor pursuant to s. 215.555(5)(b).

§627.351(6)(c)9. Must provide that the corporation make its best efforts to procure catastrophe reinsurance at reasonable rates, to cover its projected 100-year probable maximum loss as determined by the board of governors. If catastrophe reinsurance is not available at reasonable rates, the corporation need not purchase it, but the corporation shall include the costs of reinsurance to cover its projected 100-year probable maximum loss in its rate calculations even if it does not purchase catastrophe reinsurance.

2 Indication Summary

On the next page is a summary of the rate indications and the selected uncapped rate change. The rate indication is the total indication based on Personal Residential Multi-peril (PRM) and Personal Residential Wind-Only (PRW) combined policies. Separate indications were calculated for Homeowners (HO-3/HW-2), Renters (HO-4/HW-4), and Condo Unit-Owners (HO-6/HW-6) policy forms.

Citizens has made the following changes to this rate filing as compared to previous filings. These will be discussed in more detail later in the memorandum.

1. Inclusion of a 1-in-100 PML - Include an additional cost provision such that Citizens' rates reflect reinsurance coverage of a 1-in-100 year event as directed in SB 76. This is discussed in greater detail in Section 5.8.4.
2. Use of Inflation Factors in Selecting a Prospective Premium Trend - Explicitly include the effect of rising inflation in the prospective premium trend. This is described in Section 5.1.
3. Territory Wind Indications Based on Percentile of Four Models - Select a percentile close to the selected statewide percentile of the four model results and use that percentile of the four models for each individual territory. More information is provided in Section 6.8.1.
4. Select 11.0% Rate Change - For individual policies, if the statewide indication is greater than 11.0%, we are proposing increasing all premiums by 11.0% in 2022 and 12.0% in 2023 in accordance with the glide-path. The exception to this is sinkhole premium and the impact of the FHCF Build-Up.

Similar to last year, we are proposing the following:

1. Higher Selected Hurricane Model Results - Prior to last year, we selected the median of the four hurricane model results for each line of business. With this filing, for the statewide indication, we select on the higher end of the range, basing our selection on the two highest model results. See Section 3.1 for the selections.

2.1 Concerning the 11% Rate Change Selection

Statute requires that Citizens annually file actuarially sound rates with the OIR subject to the restriction that no single policyholder experience a rate change greater than 11% in 2022 or 12% in 2023. According to the CAS Statement of Principles Regarding Property and Casualty Insurance Ratemaking (SPRPCR), an actuarially sound rate "should provide for all costs [associated with the transfer of risk] so that the insurance system is financially sound." Citizens has overall actuarial soundness when its premiums equal its costs. The SPRPCR also states that a "rate provides for the costs associated with an individual risk transfer." Each policyholder's rate is actuarially sound when it equals that individual policy's own expected costs. When Citizens becomes fully actuarially sound, it will be actuarial sound both overall, and for each individual policy. Until then, the inevitable consequence of the statutory glide path is that achieving overall actuarial soundness more quickly will necessarily slow progress towards individual actuarial soundness, and vice versa.

This year, Citizens' board directed staff to recommend that Citizens give all policyholders a rate increase of 11% in 2022, or 12% in 2023, excluding the peril of sinkhole or the effects of the FHCF build-up factor. This allows Citizens to reach overall actuarial soundness as quickly as possible. It is a change from prior years, in which Citizens recommended rate changes capped below at 0%, or at -10%. The reason for this change is to prioritize Citizens' financial soundness, which is rapidly deteriorating due to Citizens' precipitous growth.

The poor health of the Florida property insurance market has resulted in many insureds receiving either no offer of coverage from the private market at all, or a policy with a premium that is much higher than that of the corresponding Citizens policy. This has caused rapid growth. Citizens' insured policy count increased 40% in 2021, from 542,000 to 760,000 policies. And Citizens' budget is for another 40% increase in 2022, to 1,064,000 policies. This increases the risk that Citizens'

will need to assess Floridians by increasing its hurricane exposure. And adverse selection means it is also likely to worsen Citizens' overall rate adequacy in ways that are hard to capture in a rate indication. Our recommended rate changes mitigate these threats to Citizens' financial soundness by prioritizing overall actuarial soundness while also ensuring no policyholder experiences a rate change over 11% in 2022, or 12% in 2023.

Table 1: Homeowners HO-3/HW-2 – Uncapped Indication Summary including Proposed Capped Changes

Peril	Premium ($ 000)	AIR Hurricane Model	Public Hurricane Model	RMS Hurricane Model	RQE Hurricane Model	Selected Indication	Proposed Capped Change
Wind	520,515	55.3%	20.9%	[redacted]	27.1%	56.5%	
Water	399,020	-0.3%	-0.3%		-0.3%	-0.3%	
All Other	66,066	7.7%	7.7%		7.7%	7.7%	
Sinkhole	7,221	-19.0%	-19.0%		-19.0%	0.0%	
Total	**992,821**	**29.2%**	**11.2%**		**14.5%**	**30.0%**	**10.6%**

Table 2: Renters HO-4/HW-4 – Uncapped Indication Summary including Proposed Capped Changes

Peril	Premium ($ 000)	AIR Hurricane Model	Public Hurricane Model	RMS Hurricane Model	RQE Hurricane Model	Selected Indication	Proposed Capped Change
Wind	1,117	32.5%	55.5%	[redacted]	-39.3%	38.0%	
All Other	674	-2.4%	-2.4%		-2.4%	-2.4%	
Total	**1,790**	**19.3%**	**33.7%**		**-25.5%**	**22.8%**	**10.9%**

Table 3: Condo Unit-Owners HO-6/HW-6 – Uncapped Indication Summary including Proposed Capped Changes

Peril	Premium ($ 000)	AIR Hurricane Model	Public Hurricane Model	RMS Hurricane Model	RQE Hurricane Model	Selected Indication	Proposed Capped Change
Wind	27,765	24.8%	192.2%	[redacted]	-14.5%	70.0%	
All Other	32,635	55.8%	55.8%		55.8%	55.8%	
Total	**60,400**	**41.5%**	**118.5%**		**23.5%**	**62.3%**	**10.8%**

For HO-3/HW-2, HO-4/HW-4 and HO-6/HW-6, the proposed rate changes will be implemented in the form of adjustments to the base rates and to the FHCF Cash Build Up factors. Additionally, the submitted Rate Collection System (RCS) new business rating examples rely on the current 02/01/2022 new business capping factors. The new business capping factors will need to be updated with the approved rate changes. Once Citizens receives the rate order from this filing, we will update the new business capping factors and amend this filing.

3 Filing Overview

The indication in this filing is for all Personal Residential policies including multi-peril policies written in the Personal Lines Account (PLA-PRM), multi-peril policies written in the Coastal account (COASTAL-PRM) and wind-only policies written in the Coastal account (PRW). Indications are provided separately for Homeowners, Renters, and Condominium Unit-Owners (Condo).

The personal residential experience for multi-peril and wind-only policies are combined into a single indication so that an insured in the Coastal Account will be charged the same rate for wind coverage (subject to 11% glide-path cap in 2022 and 12% glide-path in 2023), regardless of whether coverage is provided as part of a wind-only or multi-peril policy.

Statewide indications are calculated separately for the perils of Wind, Sinkhole, Water, and All Other (AOP). The combined statewide indication is determined by averaging the four separate peril indications. As discussed later in the filing, explicit adjustments are made to condo owners historical losses to address loss assessments.

The individual peril indications are allocated separately to each territory. The overall territory indication is determined by weighting together the four separate territory peril indications.

The data used to calculate the indications includes both actual historical data as well as hurricane modeling data. The non-hurricane related portions of the indication are based on actual premiums and non-hurricane losses from the previous five calendar-accident periods. The experience period includes accident year periods ending 06/30/2017 through 06/30/2021, evaluated as of 09/30/2021.

The hurricane portion of the indication does not rely on actual hurricane losses. It relies on the results of hurricane models accepted by the Florida Commission on Hurricane Loss Projection Methodology. Citizens gives consideration to four different hurricane models. The models considered in this filing are AIR Worldwide Corporation Hurricane Model for the U.S. v1.0.0 as implemented in Touchstone 2021 (AIR), Risk Management Solutions - North Atlantic Hurricane Model 21.0 on RiskLink 21.0 (Build 2050) (RMS), Florida Hurricane Model 2021a on Risk Quantification and Engineering v21 (RQE), and FIU – Florida Public Hurricane Model v8.1 (FPM), all of which are Long Term Hurricane with Demand Surge, No Storm Surge software versions. The hurricane average annual loss is based on Citizens' in-force book of business as of 06/30/2021. Any in-force policy as of 06/30/2021 that was "tagged" for future take-out as of 06/30/2021 were removed.

Territory hurricane relativities were derived with consideration of each of the model results along with a selection considering all four hurricane model results at the territory level. This is discussed in more detail below. Note that actual individual risk's modeled results were not combined or modified in anyway. Each risk's modeled result was examined separately and independently.

The overall indication follows the OIR's prescribed method as explained in the Standardized Rate Indication worksheet. The overall premium level is priced to cover expected non-catastrophe losses and expenses, underwriting expenses, FHCF expenses, net private reinsurance expenses, provision for exposed surplus in a 1-in-100 year hurricane (SB 76), average annual loss, and pre-event liquidity expenses.

3.1 Determination of Overall Uncapped Rate Changes

Citizens calculated separate indications for the perils of wind, water, sinkhole, and all-other perils (AOP). In determining the final selected wind indication, Citizens considered four different hurricane indications based on four different hurricane models, resulting in four different statewide wind indications.

A change made in the wind indication this year is the inclusion of a 1-in-100 PML which will be explained in more detail in Section 5.8.4. As done last year, we are selecting a higher wind indication within the range of models. This higher selection reflects two realities. The first is that Citizens is growing, and this growth potentially brings adverse selection that is not reflected in current data but will worsen the hurricane indication during the effective period of the rates.

The second new reality is that social inflation due to increased litigation will tend to make hurricane losses significantly more severe than is expected in the models. This was made apparent when looking at the modeled versus actual losses for Hurricane Irma. Table 4 shows that the expected losses from the various hurricane models were lower than the actual Hurricane Irma losses. Note, we do not have modeled results for Irma from FPM.

Table 4: Irma - Modeled Results versus Actual Results

Account	AIR	RMS	RQE	Median	Actual
PLA	$281,823,232	[redacted]	$130,263,224	$139,342,438	$860,915,845
Coastal	$810,614,920		$502,450,304	$502,450,304	$813,410,260
CLA	$25,092,368		$6,656,634	$25,092,368	$35,871,413
Total	$1,117,530,520	[redacted]	$639,370,162	$666,885,110	$1,710,197,518

In the past, when determining the statewide and individual territory wind rate indications, we selected the median of the four models. As done last year at the statewide level, we made a selection that was between the two highest models. If the highest model appeared to be an outlier, the selection was closer to the second highest model than the highest model. The selected statewide wind rate indications for HO-3/HW-2, HO-4/HW-4 and HO-6/HW-6 are in in Tables 1, 2 and 3, respectively.

For HO-3/HW-2, the four statewide wind indications ranged from 20.9% to [redacted]. Based on these outcomes, an uncapped wind indication of 56.5% was selected. For the water and all other (AOP) indications, the actual calculated indication was selected as the uncapped indication. For sinkhole, 0% was selected as the recommended rate change. This selection is discussed in detail in Section 3.2.2. The resulting overall selected indication is 30.0%.

A similar approach was applied to HO-4/HW-4 and HO-6/HW-6. Four separate indications were calculated and the final indication was selected. For HO-4/HW-4, the wind indications ranged from -39.3% to 55.5%. Based on these outcomes, an uncapped wind indication of 38.0% was selected. For HO-6/HW-6, the wind indications ranged from -14.5% to 192.2%. Based on these outcomes, an uncapped wind indication of 70.0% was selected. In both cases, the actual calculated AOP indication was selected (note there is no separate sinkhole or water indication for these policy forms).

3.2 Determination of Recommended Territory Rate Changes

Separately for each peril, the selected uncapped rate indication is allocated to each territory. For Sinkhole, Water, and All Other there is only one set of indications and thus allocating the overall indication to each territory is straightforward, following the traditional approach. For the peril of wind, there are four different territory indications.

3.2.1 Non-Sinkhole

For the statewide wind selections, we consider all four models with greatest consideration given to the highest two models. The statewide wind indication must then be allocated to each territory (as shown in **Exhibit 7** and **Exhibit 8**). We made a change this year to the way we selected the wind territory indications. Instead of selecting the median of the four models as done in the past, we selected a percentile close to the selected statewide percentile of the four model results. We then selected that percentile of the four models for each individual territory. This selection recognizes the range of model results in every territory.

Once the uncapped peril indications are allocated to each territory, territorial base rates are determined such that the capped indicated rate need is realized for each peril. Within a given territory, the indicated rate changes for each policy can vary from policy to policy. In order to comply with the "glide-path" established by statute §627.351(6)(n)5, an 11% policy level rate cap will be applied to the non-sinkhole premium when rating a policy and setting the base rates. In order to be mindful of the impact to Citizens' overall rate adequacy, it is recommended that all non-sinkhole rate increases are set to 11% in 2022 (and 12% in 2023) for all lines for which the statewide indication is above 11.0%. This is the case for HO-3/HW-2, HO-4/HW-4 and HO-6/HW-6. This provides a reasonable balance between Citizens appropriate overall rate level with the appropriate individual policyholder rate level. Note that all of the premium impacts measured in the RCS forms reflect the re-rating of policies with the recommended actuarial sound base rates, with an 11% change applied to the non-sinkhole premium for each policy.

3.2.2 Sinkhole

Last year we did implement a rate reduction of -12% for HO3 sinkhole. This year the sinkhole indication is -19.0%. Our recommendation is to leave sinkhole rate unadjusted and apply a 0% rate change this year. The reasoning for this is based on the very high volatility of results for this peril. This volatility is due to:

1. the relatively low number of policies with sinkhole coverage (23% of PRM HO3 policies have sinkhole)
2. the very low frequency (most recent period has a .05% frequency)
3. potential high loss (in 5 year experience period, severity has ranged from $12,366 to $54,986) result in very high volatility in sinkhole results from year to year.

For last year's indication that led to a recommended-12% decrease, the loss trend results were:

Table 5: Homeowners – Sinkhole Statewide Loss & ALAE Trend from Last Year's Indication (most recent period ends 3/31/2020 evaluated as of 6/30/2020).

		Accident Year Results		
	Rate of Change	Pure Premium	Frequency	Severity
(9)	17 Point	-7.6%	-22.7%	19.6%
(10)	13 Point	-12.4%	-24.7%	16.3%
(11)	9 Point	-18.8%	-31.3%	18.2%
(12)	5 Point	6.4%	-17.8%	29.4%
(13)	Selected Historical	-7.6%		
(14)	Selected Projected	0.0%		

The loss trend included in this indication calculation is:

Table 6: Homeowners – Sinkhole Statewide Loss & ALAE Trend from This Year's Indication (most recent period ends 6/30/2021 evaluated as of 9/30/2021).

		Accident Year Results		
	Rate of Change	Pure Premium	Frequency	Severity
(9)	17 Point	-36.5%	-18.8%	-21.8%
(10)	13 Point	-36.4%	-17.5%	-22.9%
(11)	9 Point	-21.4%	-5.3%	-16.9%
(12)	5 Point	138.8%	-27.2%	228.2%
(13)	Selected Historical	-36.5%		
(14)	Selected Projected	5.0%		

And if we add an additional quarter of data from the indication calculation, we have:

Table 7: Homeowners – Sinkhole Statewide Loss & ALAE Trend from This Year's Indication including an Additional Quarter (most recent period ends 9/30/2021 evaluated as of 12/31/2021).

		Accident Year Results		
	Rate of Change	Pure Premium	Frequency	Severity
(9)	17 Point	-26.3%	-18.0%	-10.2%
(10)	13 Point	-11.1%	-11.3%	0.2%
(11)	9 Point	-40.2%	-0.4%	40.9%
(12)	5 Point	330.6%	-12.5%	392.2%

So, there are hints that sinkhole costs could be increasing in the upcoming policy period. Based on this, we think it prudent to forgo any adjustment to sinkhole rates at this time.

4 Filing Format

The subsequent main sections of this Actuarial Memo are:

5 Indication

There are three excel files that contain all of the detail of the filed indications. For each Homeowner structure type (HO-3/HW-2, HO-4/HW-4, and HO-6/HW-6) there is one indication workbook including the OIR promulgated risk load. The format of the indication calculations are based on the OIR prescribed indication method (RIF). Each supporting exhibit is on a separate worksheet that is named to correspond to the column of the RIF. Detailed explanation of these exhibits is provided starting on page 12. Included in these files are the statewide and territory Wind Peril indication, the statewide and territory Water Peril indication (for HO-3/HW-2 only), the statewide and territory All Other Peril indication, and the statewide and territory Sinkhole indication (for HO-3/HW-2 only). The file names for the workbooks are provided below:

Homeowners Rate Indication.xlsx,

Renters Rate Indication.xlsx, and

Condo Rate Indication.xlsx.

The first worksheet (to the far left) in the workbook contains a table of contents displaying the name and description all of the statewide indication exhibits. The last exhibit relating to the statewide indications is exhibit **55B**.

6 Territory Indication

Immediately to the right of the Statewide Indication is the Territory Table of Contents. All of the territory exhibits, beginning with **Exhibit 1A**, are to the right of that worksheet. Note that these indication workbooks contain results for the aforementioned approved hurricane models AIR, FPM, RMS, and RQE. In addition to the exhibits contained in these workbooks, there are other excel workbooks that contain detailed support for the indications. These separate files are listed on page 9.

7 Support for Hurricane Credibility Approach

8 Rate Manual Changes

All rate manual changes are provided in **Manual Pages S&D.pdf**.

9 Additional Information

9.1 HO-8 Policies

References

Table 8: HO & HW Filing Summary; List of All Support Files for Rate Filing.

Component	Subject	File Name
Cover Letter	Cover Letter	HO Cover Letter.docx
		HW Cover Letter.docx
Explanatory Memorandum	Filing Memo.	Homeowners Filing Memorandum.pdf
	Rate Indication	Homeowners Rate Indication.xlsx
		Renters Rate Indication.xlsx
		Condo Rate Indication.xlsx
	Filing Memo.	Homeowners Filing Memorandum (Trade Secret).pdf
	Rate Indication	Homeowners Rate Indication (Trade Secret).xlsx
		Renters Rate Indication (Trade Secret).xlsx
		Condo Rate Indication (Trade Secret).xlsx
Reinsurance Expense Support	FHCF Premium	FHCF Premium.accdb (diskette)
		HO FHCF Premium Explanation.doc
		HW FHCF Premium Explanation.doc
		FHCF Personal Lines Premium Example Policies.xlsx
		Homeowners FHCF Build-Up Factors.xlsx
	Reinsurance Support	HO Reinsurance Expense Support.docx
		HW Reinsurance Expense Support.docx
		Cost of Reinsurance Support Questionnaire.doc
		Reinsurance Recovery AIR.xslx
		Reinsurance Recovery EQE.xslx
		Reinsurance Recovery FPM.xslx
		Reinsurance Recovery RMS (Trade Secret).xslx
		Reinsurance Contract - Coastal (A), (B).pdf
		Reinsurance Contract - Coastal (C), (D), (E).pdf
		Reinsurance Contract - Coastal (F).pdf
		Reinsurance Contract - Coastal (G).pdf
		Reinsurance Contract - PLA (H), (I), (J).pdf
		Reinsurance Contract - PLA (K) Reset.pdf
		Reinsurance Contract - PLA (K).pdf
		Reinsurance Contract - PLA (L).pdf
		Traditional Reinsurance.xlsx
	Reinsurance Premium	Reinsurance Premium.xlsx
		Service - Willis Re.pdf
	Recovery Calculation	air recovery calculation.xlsb (diskette)
		fpm recovery calculation.xlsb (diskette)
		rms recovery calculation (trade secret).xlsb (diskette)
		eqe recovery calculation.xlsb (diskette)
Supplementary Information	Base Rates Calculation	Homeowners New Base Rates Calculation.xlsx
		Renters New Base Rates Calculation.xlsx
		Condo New Base Rates Calculation.xlsx
	Pre-Event Funding	Pre Event Funding Support.xlsx
		Pre Event Funding Support (Trade Secret).xlsx
		Managed Bond Accounts.pdf
	Credibility	Hurricane Credibility Detailed Support.pdf
	Rate Change Calculation	policy_calculation_HO3_HW2.xlsb (diskette)
		policy_calculation_HO4_HW4.xlsb (diskette)

Component	Subject	File Name
		policy_calculation_HO6_HW6.xlsb (diskette)
	Loss & ALAE	HO Coverage Adjustments to Losses and ALAE.docx HW Coverage Adjustments to Losses and ALAE.docx
	Loss Trend	HO3 Loss & ALAE Water CY Adj Jun2021.xlsx HO3 Loss & ALAE Trend Sep 2021.xlsx
	Loss Development	HO3 Water Loss & ALAE Development - Broward.xlsx HO3 Water Loss & ALAE Development - Miami-Dade.xlsx HO3 Water Loss & ALAE Development - Palm Beach.xlsx
Catastrophe Model Support	AIR CAT Model	ActualvsModeledLossComparison.xlsx AIR Catastrophe Support.docx AIR Attachments.pdf AIR_v9 ModeledLoss_PR.xls Attachment A - Project Information and Assumption Form - Exposure.docx CitizensMappingstoAIRCodes.xlsx PL AIR Input and Output.accdb (diskette)
	RQE CAT Model	RQE Catastrophe Model Support - Part A.pdf (Trade Secret) RQE Catastrophe Model Support - Part B.docx (Trade Secret) PL RQE Input and Output.accdb (diskette)
	FPM CAT Model	FPM Catastrophe Support - Part A.docx FPM Catastrophe Support - Part B.docx PL FPM Input and Output.accdb (diskette)
	RMS CAT Model	RMS Catastrophe Model Support - Part A (Trade Secret).pdf RMS Catastrophe Model Support - Part B (Trade Secret).docx PL RMS Input and Output (Trade Secret).accdb (diskette)
Rate Level Workbook	RIF Tables	HO Source of Information for RIF.docx HW Source of Information for RIF.docx RIF HO Individual Peril using AIR.xls RIF HO Individual Peril using FPM.xls RIF HO Individual Peril using RQE.xls
Supplementary Information		RIF HO Individual Peril using RMS.xls
	Manual	Summary of Changes.docx
Ex-Wind Credits	Exhibit	PR-M HO Ex Wind Credits Exhibits.xlsx PR-M HO Ex Wind Rate Level Effect.xlsx
OIR-B1-1790	OIR-B1-1790	OIR-B1-1790.pdf

Component	Subject	File Name
RCS Verification	RCS Verification	PRM HO Rate Level Effect Verification OIR-001.xlsx PRM HO3 Rating Example Verification OIR-001.xlsx PRM HO4 Rating Example Verification OIR-001.xlsx PRM HO6 Rating Example Verification OIR-001.xlsx PRW HW Rate Level Effect Verification OIR-001.xlsx PRW HW2 Rating Example Verification OIR-001.xlsx PRW HW4 Rating Example Verification OIR-001.xlsx PRW HW6 Rating Example Verification OIR-001.xlsx
Rate Support by Territory	Rate Support by Territory	HO Rate Support By Territory.docx HW Rate Support By Territory.docx
Manual Pages		PR-M HO Rating Steps and Factors 2022_0120_PR-W HW Rating Steps and Factors PP 8-01-2022.pdf 2022_0120_PR-W HW Rating Steps and Factors S&D8-01-2022.pdf

5 Indication

The following exhibit names are in **underlined bold** and correspond to the worksheet tab name in the Excel workbook.

5.1 Premium Trend Selections

Row (B) of the RIF

Row (B) of the RIF contains the selected annual premium trend. The premium trend selection has two components: one historical, and the other prospective. The historical premium trend selections were based on the historical trends observed in both the average on-leveled earned premium and the average total insured value amounts based on rolling 12 month moving averages. Both combined trends (wind + Water + AOP + sinkhole, wind + AOP) and individual peril trends are provided.

In each of the subsequent sections the selection of historical and prosepective trends for each peril are discussed specific to that peril. The historical trend is selected using one of the Fitted Annual Rate of Change provided on Page 1 of the worksheet. The projected trend for HO-3, HO-4 and HO-6 is selected as discussed in sections 5.1.1, 5.1.2 and 5.1.3, respectively.

For HO-3, the prospective premium trend selection takes into account increased inflation factors as discussed in Section 5.1.1. Similar to the loss trend approach, we rely on an approach which relies on the use of two-step premium trending. The results from the two-step trending determines the final one-step trend selected for each RIF.

The following sections describe the calcuation of the final selected premium trend. Below are the items in the exibits.

Column (4) displays the annual average earned premium at the current rate level at each quarter starting with calendar year ending 06/30/2017 through the calendar year ending 06/30/2021. These averages are used to calculate an annualized rate of change based on the last 17, 13, 9, and 5 quarters.

Column (5) displays the historical average Coverage A amount amounts for policies that are in-force at the end of each quarter for calendar year ending 06/30/2017 through the calendar year ending 06/30/2021. These averages are used to calculate an annualized rate of change based on the last 17, 13, 9 and 5 quarters.

The selected historical trend can be found in (C), and the projected premium trend can be found in (D).

Using the selections made for the historical premium trend in item (C) and the projected premium trend in (D), we produce the two-step premium trend factors in column (2). Column (3) provides the one-step trend implied by the factor in Column (2) for a given accident year. For example, for HO-3 Wind 2.5% is the one-step trend which would produce the same premium trend factor as the a two-step premium trend of 1.147 for accident year ending 06/30/2018. Columns (4a) through (4e) provide the implied one-step trend factors assuming each one-step trend in column (3). Column (5a) through (5e) calculate the difference between each of these factors with the factors in column (2) produced by our two-step trend selections.

The sum of square errors are calculated for each of the columns (5a) through (5e). The selected annual premium trend in item (B) is selected as the one-step trend in column (3) which produces the smallest sum of square errors for the corresponding columns (5a) through (5e). This selection in item (B) produces premium trend factors in the corresponding RIF for each accident year.

5.1.1 Homeowners

Prem Inflation

For the prospective trend, consideration must be given to increased costs to repair homes in recent years according to the Residential Replacement Cost Index Report that the inflation guard factors are based on. This report contains information about price trends for roofing material, drywall material, retail labor, and more items related to the cost of building or repairing a home or structure. Normally, it is expected that these costs are in line with our underlying premium data assuming there has been no substantial change to Citizens' book of business. However, the report shows a greater increase in growth in building costs in recent years as observed in Table 9. For example, the average inflation factor for zip codes beginning with 320 increased from 6.40% in late 2020 to 17.20% at the beginning of 2022.

Table 9: HO-3 – Inflation Factors

Zip Code	Effective 10/01/2020	Effective 04/01/2021	Effective 07/01/2021	Effective 10/01/2021	Effective 01/01/2022	Average
320	1.064	1.092	1.104	1.089	1.172	1.104
321	1.063	1.098	1.102	1.094	1.145	1.100
322	1.061	1.087	1.108	1.084	1.188	1.106
323	1.047	1.075	1.081	1.073	1.231	1.101
324	1.074	1.103	1.103	1.091	1.158	1.106
325	1.112	1.142	1.149	1.116	1.151	1.134
326	1.064	1.095	1.099	1.094	1.144	1.099
327	1.051	1.081	1.093	1.071	1.149	1.089
328	1.048	1.075	1.092	1.060	1.154	1.086
329	1.038	1.060	1.075	1.064	1.144	1.076
330	1.044	1.073	1.068	1.058	1.228	1.094
331	1.050	1.073	1.076	1.065	1.250	1.103
332	1.050	1.073	1.076	1.065	1.250	1.103
333	1.046	1.079	1.069	1.059	1.222	1.095
334	1.036	1.069	1.067	1.058	1.196	1.085
335	1.046	1.077	1.089	1.066	1.098	1.075
336	1.050	1.080	1.091	1.061	1.089	1.074
337	1.058	1.105	1.118	1.085	1.100	1.093
338	1.037	1.071	1.086	1.072	1.117	1.077
339	1.069	1.101	1.099	1.074	1.142	1.097
341	1.054	1.093	1.103	1.084	1.149	1.097
342	1.060	1.087	1.093	1.069	1.112	1.084
344	1.045	1.079	1.084	1.090	1.126	1.085
346	1.054	1.090	1.097	1.093	1.091	1.085
347	1.046	1.075	1.087	1.067	1.141	1.083
349	1.039	1.070	1.079	1.067	1.158	1.083

These increased costs will be recognized in our premium trends via the annual inflation factors applied to replacement values of our insured structures, or policy coverage A limits, at the upcoming renewals which occur after our latest evaluation period ending 6/30/2021. Because we do not have the exact inflation factors that will be in place during our proposed effective period, we take the average annual inflation factor over the latest 5 quarters for each zip code group determined by their first 3 digits. These averages are shown in Table 9 and are also provided in Column (2) in **Prem Inflation**. We then take a weighted average across all zip code groups weighted by the total insured value (TIV) in each zip code group. The resulting value is provided at the bottom of the table in columns (3) through (6) in **Prem Inflation**. This gives us our estimated annual increase in coverage A limits.

In order to recognize the increased premium due to the increases in the coverage A limit, we calculate the average premium increase based on current average coverage A amounts and current coverage A factors from our rating manual. We do this for each peril separately by finding the coverage A factors for current and proposed coverage A amounts which are in rows (7) and (9), respectively. We then calculate the average annual premium increase in row (11) by dividing the proposed coverage A factor by the current coverage A factor and subtracting 1.0. The selected prospective trends for each peril are in row (10).

Premium Trend

Rolling quarterly annual averages for all perils combined. This is provided for informational purposes and is not used in the indication. The indication uses the trend numbers more specific to the individual peril trend indication.

Prem Wind

Rolling quarterly annual averages for the wind peril combined.

The fitted trends range from -1.4% to 0.8% based on average earned premium at current rate level. The fitted trends based on average Coverage A amount range from 2.9% to 6.9%. The premium trend of 2.5% is selected that produces premium trend factors closest to the two-step premium trend factors as a result of a historical trend of -0.5% based on the 17 Point Fitted Annual Rate of Change and a projected trend of 9.4% based on the estimated annual premium increase due to increased inflation factors.

Prem Water

Rolling quarterly annual averages for the water peril combined.

The fitted trends range from 2.7% to 9.1% based on average earned premium at current rate level. The fitted trends based on average Coverage A amount range from 4.4% to 3.6%. The premium trend of 4.2% is selected that produces premium trend factors closest to the two-step premium trend factors as a result of a historical trend of 2.7% based on the 17 Point Fitted Annual Rate of Change and a projected trend of 8.5% based on the estimated annual premium increase due to increased inflation factors.

Prem All Other

Rolling quarterly annual averages for the all other peril combined.

The fitted trends range from 2.8% to 5.3% based on average earned premium at current rate level. The fitted trends based on average Coverage A amount range from 4.4% to 3.6%. The premium trend of 4.1% is selected that produces premium trend factors closest to the two-step premium trend factors as a result of a historical trend of 2.5% based on the 17 Point Fitted Annual Rate of Change and a projected trend of 8.5% based on the estimated annual premium increase due to increased inflation factors.

Prem Sinkhole

Rolling quarterly annual averages for the sinkhole peril combined.

The fitted trends range from -13.0% to -5.8% based on average earned premium at current rate level. The fitted trends based on average Coverage A amount range from 4.0, 4.0% to 3.6%. The premium trend of 0.0% is selected that produces premium trend factors closest to the two-step premium trend factors as a result of a historical trend of -7.0% based on the 17 Point Fitted Annual Rate of Change

and a projected trend of 10.6% based on the estimated annual premium increase due to increased inflation factors.

5.1.2 Renters

Premium Trend

Rolling quarterly annual averages for all perils combined. This is provided for informational purposes and is not used in the indication. The indication uses the trend numbers more specific to the individual peril trend indication.

Prem Wind

Rolling quarterly annual averages for the wind peril combined.

The fitted trends range from 0.6% to 4.9% based on average earned premium at current rate level. The fitted trends based on average Coverage C amount range from 1.3% to 5.4%. The premium trend of 1.9% is selected that produces premium trend factors closest to the two-step premium trend factors as a result of a historical trend of 0.6% based on the 17 Point Fitted Annual Rate of Change and a projected trend of 5.0% which considers both the earned premium and coverage C 5 point Fitted Annual Rates of Change.

Prem All Other

Rolling quarterly annual averages for the all other peril combined.

The fitted trends range from 1.1% to 2.9% based on average earned premium at current rate level. The fitted trends based on average Coverage C amount range from 3.4% to 5.5%. The premium trend of 1.9% is selected that produces premium trend factors closest to the two-step premium trend factors as a result of a historical trend of 2.9% based on the 17 Point Fitted Annual Rate of Change and a projected trend of 3.0% which considers both the earned premium and coverage C 5 point Fitted Annual Rates of Change.

5.1.3 Condo Unit-Owners

Premium Trend

Rolling quarterly annual averages for all perils combined. This is provided for informational purposes and is not used in the indication. The indication uses the trend numbers more specific to the individual peril trend indication.

Prem Wind

Rolling quarterly annual averages for the wind peril combined.

The fitted trends range from -5.8% to -3.8% based on average earned premium at current rate level. The fitted trends based on average Coverage A+C amount range from -3.3% to 1.1%. The premium trend of -3.0% is selected that produces premium trend factors closest to the two-step premium trend factors as a result of a historical trend of -5.8% based on the earned premium 17 Point Fitted Annual Rate of Change and a projected trend of 0.0% which considers both the earned premium and coverage A + C 5 point Fitted Annual Rates of Change.

Prem All Other

Rolling quarterly annual averages for the all other peril combined.

The fitted trends range from 0.4, 0.4% to 5.8% based on average earned premium at current rate level. The fitted trends based on average Coverage A+C amount range from 1.4% to 12.0%. The premium trend of 0.5% is selected that produces premium trend factors closest to the two-step premium trend factors as a result of a historical trend of 0.4% based on the 17 Point Fitted Annual Rate of Change and a projected trend of 6.0% which considers both the earned premium and coverage A + C 5 point Fitted Annual Rates of Change.

5.2 Loss Trend Selections

Row (C) and (D) of the RIF

Loss Trends are determined separately for the wind, water, all other, and sinkhole. For the statewide indication we select a loss trend based on each peril's statewide results from the past five years. Exhibits **Loss <Peril> CY** and **Loss and ALAE <Peril> CY** develop the loss (and ALAE) trend based on the pure premium of Citizens' calendar year closed claim data. It is comprised of payments made in a period and the number of claims closed in the same period. Exhibits **Loss <Peril> AY** and **Loss and ALAE <Peril> AY** develop the loss (and ALAE) trend based on the developed accident period pure premium of Citizens' incurred claim data.

All of the loss trend exhibits include pure premium information in rolling 12 month intervals. These exhibits display the 17, 13, 9, and 5 Fitted Annual Rate of change, separately for frequency, severity and pure premium. A two-step approach for loss trending is applied to adjust the historical losses to the prospective policy period. The first step is to trend the historical non-cat losses to the end of the historical period. The second step is to the trend the losses from the end of the historical period to the average accident date for the projected rates, which in this case is 08/01/2023.

As is appropriate, we set the historical selection equal to the actual average historical trend. Selecting the water loss trend requires additional analysis. This is because the primary force behind the historical water trends has been the change in the fraction of litigated claims. This fraction got very high- above 50% of claims entered litigation in accident year ending 03/31/2016 - but has been decreasing since then. In addition, special consideration must be made in selecting a prospective water trend.

Summary of Selected Loss Trend

Included in this filing are several different groupings of historical data. There are exhibits that have all perils combined versus showing the individual perils separately. Some of these exhibits are provided for informational purposes only and were not directly used in the final loss trend selection. As done last year, we consider trends based on loss and ALAE combined in addition to loss only. Our selections are based on loss and ALAE combined. In this section we focus on statewide loss trend selection by peril. In sections 6.2.1 and 6.2.2 of this document, we discuss loss trend selection by region of the state.

5.2.1 Homeowners

5.2.1.1 Statewide - Water

In recent past years, the litigation rate on water has been a significant driver of Citizens' rate need for HO3. Due to attorney's fees, a litigated claim costs over 4 times as much as a non-litigated claim. In early 2016 the litigation rate exceeded 50% as more than half of all water claims ended up in litigation. Since that time the following actions have been taken over the years to address this issue:

1. Effective 7/1/2016 there were policy language changes addressed define more clearly what exactly was covered with the Collapse coverage, the timing of loss reporting, and a limit to what is considered reasonable emergency repair costs.
2. Effective 7/1/2017, Citizens introduced a voluntary Managed Repair Program (MRP).
3. Effective 7/1/2018, Citizens introduced a $10K and $3K sublimit for permanent repairs and emergency water services, respectively, if a policyholder with a water claim did not select the MRP.
4. Effective 7/1/2019, HB 7065 went into effect. This bill put limits on the use of an AOB as well as how the plaintiff attorney's fees would be paid.

The cumulative effect of these actions has been to significantly lower Citizens' water claim litigation rate as shown in Table 10.

Table 10: HO-3 Litigation Rates

End of AY	Statewide Lit Rate	Southeast Lit Rate	Rest of State Lit Rate
06/30/2017	43.8%	51.7%	13.5%
06/30/2018	33.7%	39.9%	12.4%
06/30/2019	29.8%	36.9%	12.4%
06/30/2020	23.3%	26.7%	14.9%
06/30/2021	23.3%	24.9%	11.2%

Given the change in the underlying litigation rate, which impacts the overall tail of the claims, and given the change in exposures over the past five years, we base our loss trend selection strictly on developed accident year loss/ALAE trend. For completeness we provide both the calendar year loss trends as well as the Styrsky-adjusted calendar loss year trends (Styrsky 2005). We also provide the accident year loss trend exhibit updated with an additional quarter of data that is not used directly in the RIF.

Table 11: Homeowners – Water Statewide Loss & ALAE Trend

		Accident Year Results			Calendar Year Results		
	Fitted Annual Rate of Change	Pure Premium	Frequency	Severity	Pure Premium	Frequency	Severity
(9)	17 Point	-11.2%	0.4%	-11.6%	-5.7%	-1.9%	-3.9%
(10)	13 Point	-12.0%	5.3%	-16.4%	-13.9%	-4.4%	-10.0%
(11)	9 Point	-12.5%	5.6%	-17.2%	-23.5%	-10.6%	-14.4%
(12)	5 Point	-7.0%	-2.1%	-5.0%	-31.5%	-16.8%	-17.7%
	Selected Historical	-11.2%					
	Selected Projected	0.0%					

Note: the details for the Accident Year and Calendar Year results are displayed in exhibits **Loss & ALAE Water AY** and **Loss & ALAE Water CY**, respectively.

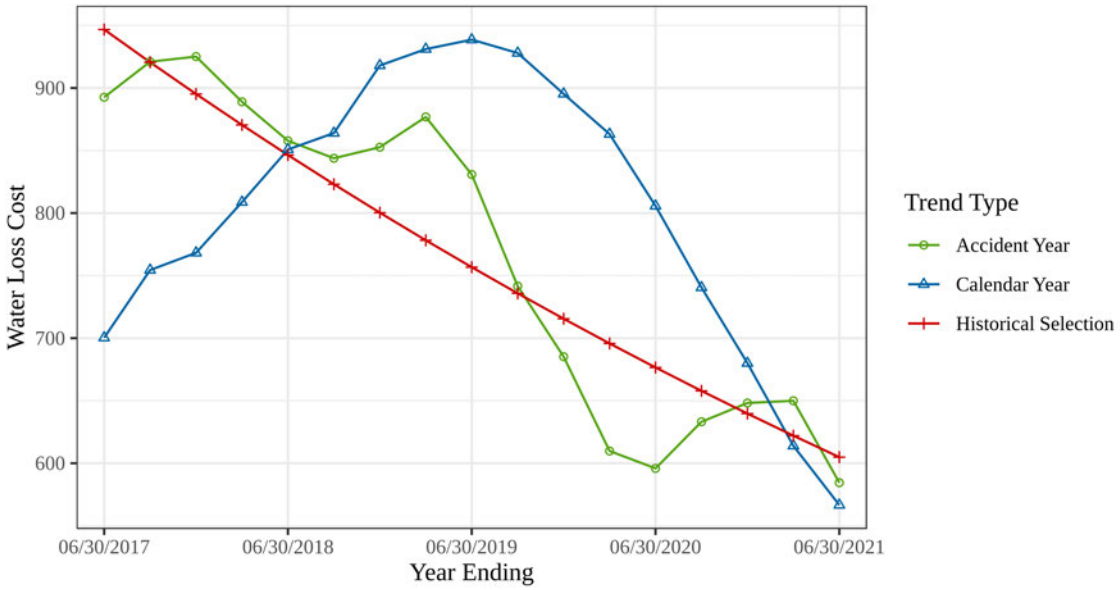

Figure 1: Homeowners – Statewide Historical 5 Year AY and CY Water Pure Premium Trends

The final selected historical and projected Water loss trend selections are -11.2% and 0.0%, respectively. The 17 point fitted annual rate of change is selected for the historical period. The most recent fitted rates of change are showing a steep negative trend. We attribute these large double digit negative trends to a reduction in the litigation rates as described above which has led to a sharp drop in severity. While we have seen significant improvement in this regard, there is uncertainty as to whether that improvement will continue into the future. Therefore, we select a modest prospective loss trend of 0.0%.

Table 12: Homeowners – Water Statewide Adjusted Calendar Year Loss Trend - Styrsky Method

		Calendar Year Results		
	Fitted Annual Rate of Change	Pure Premium	Frequency	Severity
(8)	17 Point	-1.1%	1.0%	-2.0%
(9)	13 Point	-9.6%	-1.8%	-8.0%
(10)	9 Point	-16.8%	-6.6%	-11.0%
(11)	5 Point	-20.7%	-10.8%	-11.1%

The detail for Table 12 can be found in excel workbook **HO3 Water Loss Trend CY Adj Jun2021.xlsx**.

Below is the AY Loss and ALAE Trend based on data as of 12/31/2021 for accident periods ending 09/30/2017 through 09/30/2021. Detail on the Table 13 trend results as of 12/31/2021 are located in the file **HO3 Loss & ALAE Trend AY Sep 2021.xlsx**.

Table 13: Homeowners – Water Statewide Accident Year Loss and ALAE Trend through 09/30/2021

		Accident Year Results		
	Fitted Annual Rate of Change	Pure Premium	Frequency	Severity
(9)	17 Point	-12.6%	0.3%	-12.8%
(10)	13 Point	-14.1%	4.2%	-17.5%
(11)	9 Point	-12.9%	1.5%	-14.2%
(12)	5 Point	-20.3%	-12.6%	-8.9%

5.2.1.2 Statewide - All Other Excluding Water

For the statewide indication we select a loss trend based on statewide results from the past five years. We consider two different groupings of data. We consider loss and ALAE based on developed accident year results and based on calendar year results. Below are the fitted loss and ALAE results.

Table 14: Homeowners – All Other Statewide Loss & ALAE Trend

		Accident Year Results			Calendar Year Results		
	Fitted Annual Rate of Change	Pure Premium	Frequency	Severity	Pure Premium	Frequency	Severity
(9)	17 Point	-1.4%	-8.9%	8.2%	-10.9%	-11.4%	0.6%
(10)	13 Point	1.5%	-9.3%	11.9%	-8.8%	-13.4%	5.3%
(11)	9 Point	5.9%	-9.1%	16.5%	-13.6%	-19.0%	6.6%
(12)	5 Point	5.4%	-10.1%	17.3%	-28.5%	-26.3%	-3.1%
	Selected Historical	-1.4%					
	Selected Projected	5.9%					

Note: the details for the Accident Year and Calendar Year results are displayed in exhibits **Loss & ALAE All Other AY** and **Loss & ALAE All Other CY**, respectively.

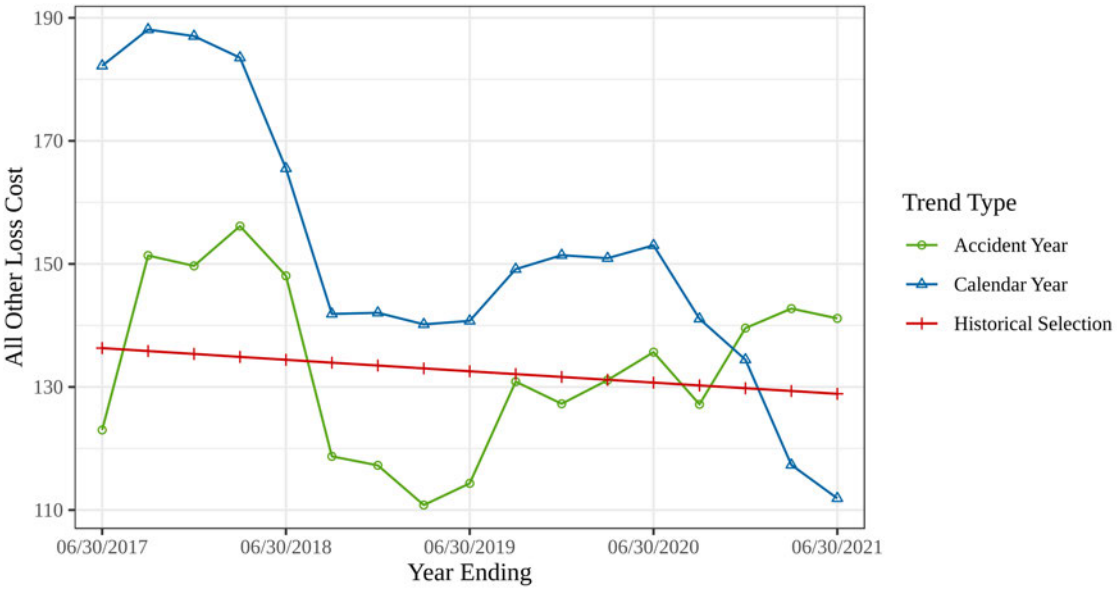

Figure 2: Homeowners – Statewide Historical 5 Year AY and CY All Other Pure Premium Trends

The final selected historical and projected All Other loss trend selections are -1.4% and 5.9%, respectively. The 17 point fitted annual rate of change is selected for the historical period. A projected trend at the 9 point fitted annual rate of change is selected.

Below is the AY Loss and ALAE Trend based on data as of 12/31/2021 for accident periods ending 09/30/2017 through 09/30/2021. Detail on the below trend results through accident year 09/30/2021 are located in the file **HO3 Loss & ALAE Trend AY Sep 2021.xlsx**.

Table 15: Homeowners – All Other Statewide Accident Year Loss and ALAE Trend through 09/30/2021

		Accident Year Results		
	Fitted Annual Rate of Change	Pure Premium	Frequency	Severity
(9)	17 Point	-1.1%	-9.9%	9.8%
(10)	13 Point	5.4%	-8.9%	15.7%
(11)	9 Point	4.3%	-10.3%	16.4%
(12)	5 Point	13.6%	-10.9%	27.5%

5.2.1.3 Statewide - Wind

Loss & ALAE Wind AY

This loss trend selection is limited to non-catastrophe wind losses. The pure premiums range from $26.45 to $199.68. The relatively small amount of data and relatively small pure premiums result in the fitted trends being very sensitive to somewhat small changes quarter-to-quarter. The fitted annual trends range from 22.1% to 98.6%.

The final selected historical wind loss trend selection is 74.9%. The historical trend is obtained by observing the 17 point Fitted Annual Rate Changes for accident year pure premium shown in **Loss & ALAE Wind AY**. The prospective wind loss trend selection is 26.5%. The 13 and 9 point fitted annual rates of change for pure premium are high due to extremely high frequency trends

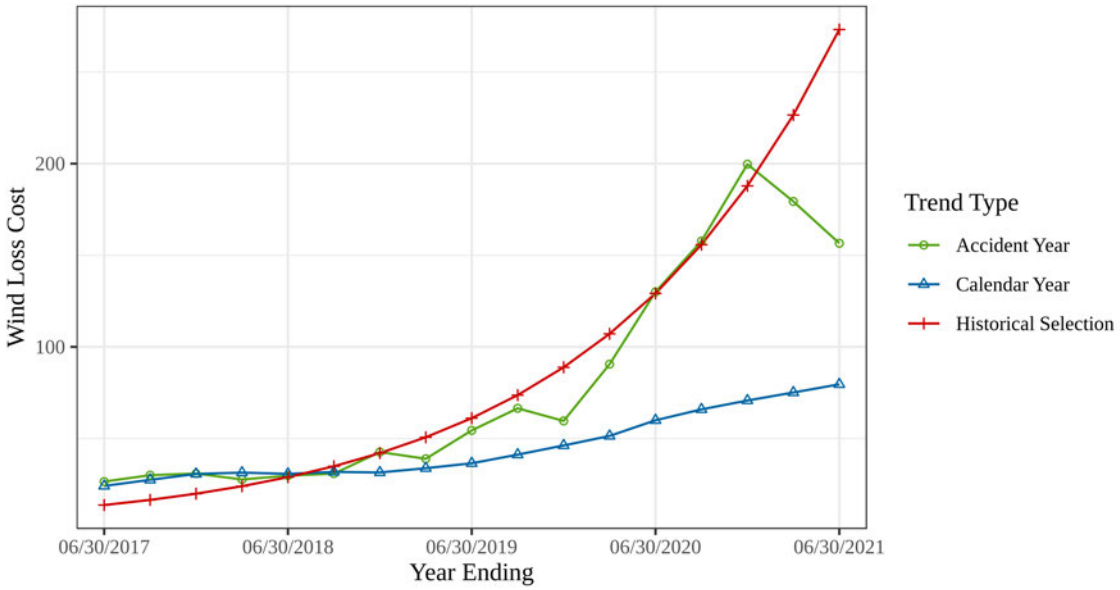

Figure 3: Homeowners – Statewide Historical 5 Year AY and CY Wind Pure Premium Trends

that we do not necessarily expect to see continue. Therefore, we selected the 17 point severity fitted annual rate of change as the prospective wind loss trend.

Below is the AY Loss and ALAE Trend based on data as of 12/31/2021 for accident periods ending 09/30/2017 through 09/30/2021. Detail on the below trend results through accident year 09/30/2021 are located in the file **HO3 Loss & ALAE Trend AY Sep 2021.xlsx**.

Table 16: Homeowners – Wind Statewide Accident Year Loss and ALAE Trend through 09/30/2021

		Accident Year Results		
	Fitted Annual Rate of Change	Pure Premium	Frequency	Severity
(9)	17 Point	84.8%	58.4%	16.7%
(10)	13 Point	95.8%	73.3%	13.0%
(11)	9 Point	74.4%	46.7%	18.8%
(12)	5 Point	7.3%	1.8%	5.4%

5.2.1.4 Statewide - Sinkhole

Loss & ALAE Sinkhole AY

For sinkhole, the historic to present day loss trend selection is -36.5% based on the 17 point fitted annual rate of change for accident year pure premium. We select 5.0% for the prospective loss trend.

Table 17: Homeowners – Sinkhole Statewide Loss & ALAE Trend

		Accident Year Results			Calendar Year Results		
	Fitted Annual Rate of Change	Pure Premium	Frequency	Severity	Pure Premium	Frequency	Severity
(9)	17 Point	-36.5%	-18.8%	-21.8%	-34.4%	-30.2%	-5.9%
(10)	13 Point	-36.4%	-17.5%	-22.9%	-39.0%	-29.1%	-14.0%
(11)	9 Point	-21.4%	-5.3%	-16.9%	-46.7%	-35.3%	-17.6%
(12)	5 Point	138.8%	-27.2%	228.2%	-40.9%	-41.4%	0.7%
	Selected Historical	-36.5%					
	Selected Projected	5.0%					

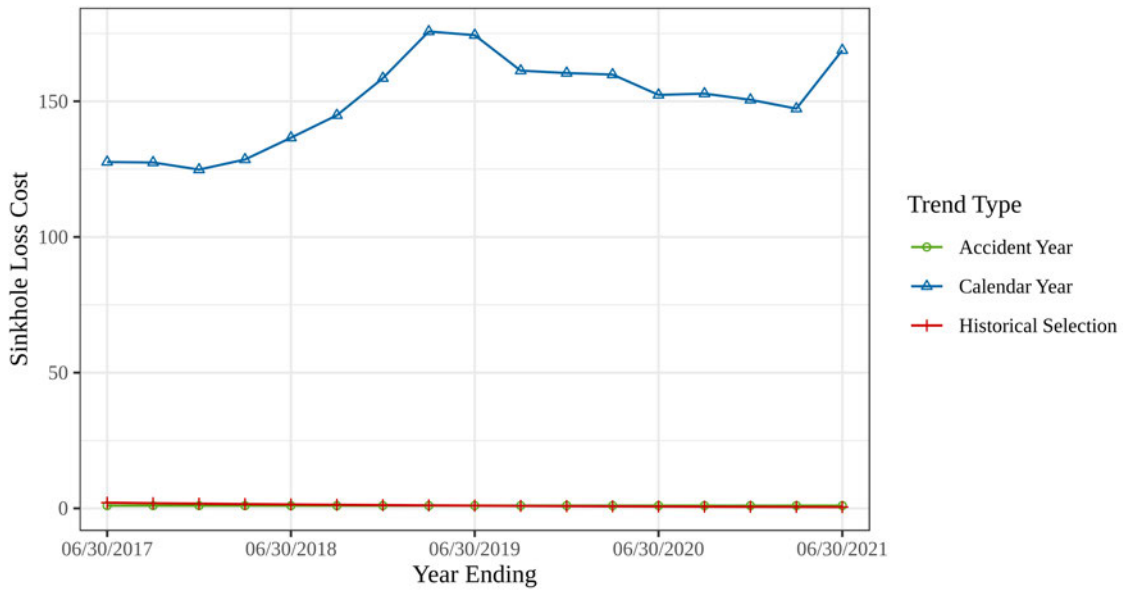

Figure 4: Homeowners – Statewide Historical 5 Year AY and CY Sinkhole Pure Premium Trends

Table 18 contains the AY Loss and ALAE Trend based on data as of 12/31/2021 for accident periods ending 09/30/2017 through 09/30/2021. Detail on the below trend results through accident year 09/30/2021 are located in the file **HO3 Loss & ALAE Trend AY Sep 2021.xlsx**.

Table 18: Homeowners – Sinkhole Statewide Accident Year Loss and ALAE Trend through 09/30/2021

		Accident Year Results		
	Fitted Annual Rate of Change	Pure Premium	Frequency	Severity
(9)	17 Point	-26.3%	-18.0%	-10.2%
(10)	13 Point	-11.1%	-11.3%	0.2%
(11)	9 Point	40.2%	-0.4%	40.9%
(12)	5 Point	330.6%	-12.5%	392.2%

5.2.2 Renters

The all other historical loss trend is selection is based on Citizens' data. The final historical selection of 0.0% is based on the accident year 17 Point Fitted Annual Rate of Change. The prospective loss trend selected is 0.0%. The detail can be found in **Loss Fastrack**.

5.2.3 Condo Unit-Owners

5.2.3.1 Statewide - Wind

Loss & ALAE Wind

The wind historical loss trend is selection is based on Citizens' data. The selected historical trend is 0.0% and the prospective loss trend selected is 5.0%. The loss assessments following hurricanes Matthew and Irma distorted the wind data, so we select a historical trend of 0.0%.

5.2.3.2 Statewide - All Other

Loss & ALAE All Other

The all other historical loss trend is selection is based on Citizens' data. The final historical selection of 3.3% is based on the accident year 17 Point Fitted Annual Rate of Change. The prospective loss trend selected is 4.0% recognizing that the historical fits are all hovering around 4.0% as shown in **Loss & ALAE All Other AY**.

5.3 Premium Adjustments

5.3.1 On-Level Factors

Column (6) of the RIF

A summary of the results of the on-leveling of the premium is displayed on exhibit **6** of the statewide indication. Due to the dramatic shifting of the business over the years (both in volume and mix of business), it is necessary to on-level this premium using the extension of exposures method. Both PRM and PRW premium at current rate level were calculated using the extension of exposures method.

Note that all premium due to risks which have coverage limits above what is allowable under current underwriting criteria have been removed.

5.4 Incurred Non-Hurricane Loss and LAE

5.4.1 Actual Incurred Losses & ALAE

Columns (9) through (11) of the RIF

The numbers that appear on columns (9) through (11) of the RIF are developed in worksheets **9-11A**, **9-11B**, and **9-11C**.

Exhibit **9-11A** tabulates the historical total losses evaluated as of 09/30/2021. The total incurred losses are categorized into hurricane losses, non-hurricane catastrophe losses, wind losses excluding catastrophes, sinkhole losses, and total losses excluding catastrophes. Note that all losses associated with a risk with policy limits above the allowable threshold were removed.

Exhibit **9-11B** shows any adjustments done to historical losses. This adjusts sinkhole losses attributable to structures other than the primary building by removing them. The other perils are adjusted to account for removal of losses due to dropped objects.

Exhibit **9-11C** summarizes the results from worksheets **9-11A** and **9-11B**. The results from **9-11C** are what appear in columns (9) through (11) on the RIF.

Columns (13) through (15) of the RIF

Exhibit **13-15A** tabulates the historical total allocated loss adjustment expenses (ALAE) evaluated as of 09/30/2021. All other perils are adjusted for the elimination of builder's risk and the removal of dropped objects. Note that all ALAE amounts associated with risks with policy limits above the allowable threshold were removed. Other than these adjustments, the numbers tabulated in columns (13) through (15) on the RIF are the actual incurred ALAE numbers.

Exhibit **13-15B** shows any adjustments done to historical ALAE. There are no adjustments needed for historical allocated loss adjustment expenses in any of the rate indications.

Exhibit **13-15C** summarizes the results from worksheets **13-15A** and **13-15B**. The results from **13-15C** are what appear in columns (13) through (15) on the RIF.

5.4.2 Incurred ULAE

Columns (17) through (19) of the RIF

The numbers that appear on columns (17) through (19) of the RIF are developed in worksheets **17-19A**, **17-19B**, and **17-19C**.

Exhibit **17-19A** displays the paid Loss and ULAE for each accident year, segmented by multi-peril homeowners, multi-peril fire and wind-only.. Catastrophe numbers are separated out from non-catastrophe as of 12/31/2020. These numbers come directly from Citizens' Accounting Department. Note that the numbers in this format were not available for 2004 (Non-Cat versus Cat).

Exhibit **17-19B** determines the Combined Ratio of ULAE to Loss for Non-Cat Water, Non-Cat Non-Water, Non-Hurricane Cat, and Hurricane causes of loss. Support for each selection is described below. The combined PRM and PRW ULAE to Loss ratio is calculated in columns (5), (10), (15), and (20).

Exhibit **17-19C** calculates the incurred ULAE dollar amounts by multiplying the historical incurred losses by the ULAE to loss ratios from exhibit **17-19B**. This is done separately for non-hurricane cat, hurricane, wind excluding cat, sinkhole, and all other. These numbers appear on columns (17) through (19) of the RIF.

5.4.2.1 Non-Catastrophe ULAE

Citizens is updating the way ULAE to Loss ratios are selected for non-catastrophe causes of loss. In the past, we were only able to split ULAE costs by accident year, cat or non-cat and policy type segment (multi-peril homeowners, multi-peril fire and wind-only). Because of this, all of the

multi-peril homeowners' forms had the same non-catastrophe ULAE to Loss ratio projection. We believe that ULAE costs vary by policy type and cause of loss. For example, Citizens changed its ULAE processes to better handle litigated claims which created additional costs. We have seen that a large portion of these litigated claims are HO-3 and DP-3 water claims, so we would like to allocate an appropriate portion of the increasing ULAE costs to the policy forms and causes of loss most impacted by litigation.

Since our last filing, Citizens has completed work to better understand the ULAE cost allocation. We are now able to track claim activities in the system associated with ULAE costs, which allows us to allocate ULAE at a more granular level such as by policy form, cause of loss, catastrophe name, calendar and accident year, etc. Below is an explanation of how we select a ULAE to Loss ratio for the multi-peril homeowners' forms. A similar process is followed for the other forms as well.

Accounting Data

Prior indications estimated the future non-catastrophe ULAE provision using the historical ratio of AY paid-ULAE-to-paid-loss. These ratios are shown in Exhibit **17-19A** and in Table 19.

Table 19: HO-3 – ULAE to Paid Loss Ratio by Accident Year

HO-3 Non-Cat ULAE			
Accident Year	Paid ULAE	Paid Loss	ULAE to Loss Ratio
NON CAT 2005	4,201,527	158,247,919	2.7%
CAT 2005	50,715,020	535,347,582	9.5%
2006	5,548,549	222,125,325	2.5%
2007	11,476,909	449,128,838	2.6%
NON CAT 2008	14,870,490	402,605,200	3.7%
FAY 2008	1,834,272	13,720,001	13.4%
2009	19,874,445	363,134,961	5.5%
2010	28,478,116	582,321,529	4.9%
2011	43,698,847	868,550,542	5.0%
2012	54,295,929	637,385,743	8.5%
2013	44,926,706	372,543,137	12.1%
2014	39,672,888	270,146,715	14.7%
2015	38,938,640	230,389,491	16.9%
NON CAT 2016	39,867,597	175,448,238	22.7%
CAT 2016	565,683	7,231,878	7.8%
NON CAT 2017	46,948,273	174,751,199	26.9%
CAT 2017	78,021,852	710,527,856	11.0%
NON CAT 2018	43,103,116	156,911,141	27.5%
CAT 2018	1,876,528	34,204,862	5.5%
2019	41,493,001	122,848,175	33.8%
2020	35,708,753	100,928,328	35.4%
DIRECT TOTAL	**674,727,920**	**7,143,013,022**	**9.4%**

Notice the ratios are much higher for the latest years. Relying on the most recent ratios would create a provision for future ULAE that is too large because the ULAE to Loss ratios have been developing downward in recent years. We looked at the Loss and ULAE amounts from accounting over time to determine the developed Loss and ULAE for each accident year. The results are in Table 20.

Table 20: HO-3 – Developed ULAE to Paid Loss Ratio by Accident Year

Accident Year	Developed Loss	Developed ULAE	ULAE to Loss Ratio
2014	275,765,449	41,254,985	15.0%
2015	239,384,768	41,393,600	17.3%
2016	186,830,199	43,618,513	23.3%
2017	192,212,730	53,705,604	27.9%
2018	185,709,385	53,773,071	29.0%
2019	176,950,730	60,795,152	34.4%
2020	255,735,872	81,595,685	31.9%
Selected ULAE			33.1%
Selected Non-Water ULAE			11.4%
Selected Water ULAE			37.5%

Developed Loss is the developed non-cat loss for all multi-peril homeowners' forms. Developed ULAE is the developed non-cat ULAE for all multi-peril homeowners' forms. ULAE to Loss Ratio is Developed ULAE divided by Developed Loss.

Notice, for accident year 2020, the ULAE to Loss ratio is smaller than the non-developed ULAE to Loss ratio. We select a ULAE to Loss ratio of 33.1% which is the average of accident years 2019 to 2020. This is what we expect the overall ULAE to Loss ratio to be for all multi-peril homeowners' forms.

ULAE Allocation

Table 21 segments the ULAE costs for accident years 2017-2020 by policy form and cause of loss. This shows the percentage of ULAE that was attributed to each policy form and cause of loss for each accident year. For example, in 2017 3.2% of the ULAE activities were from HO-3 policies with an All Other Perils loss. Note this table excludes catastrophe losses and does not include accident year 2021 as it is relatively immature.

Table 21: HO-3 – ULAE Allocation by Accident Year

Policy Form	Cause of Loss	2017	2018	2019	2020	2017-2020
HO-3	AOP	3.2%	5.3%	7.0%	13.3%	4.9%
HO-3	Other Wind	1.7%	2.1%	2.6%	8.4%	2.2%
HO-3	Sinkhole	0.1%	0.1%	0.1%	0.0%	0.1%
HO-3	Water	87.8%	84.0%	78.1%	56.8%	83.8%
HO-4	AOP	0.0%	0.1%	0.2%	0.4%	0.1%
HO-4	Water	0.0%	0.0%	0.0%	0.0%	0.0%
HO-6	AOP	1.0%	1.8%	2.4%	4.3%	1.6%
HO-6	Other Wind	0.4%	0.2%	0.0%	0.1%	0.3%
HO-6	Water	5.2%	5.1%	7.6%	13.3%	5.8%
MHO-3	AOP	0.1%	0.4%	0.6%	1.7%	0.3%
MHO-3	Other Wind	0.0%	0.1%	0.1%	0.2%	0.1%
MHO-3	Sinkhole	0.0%	0.0%	0.0%	0.0%	0.0%
MHO-3	Water	0.5%	0.8%	1.2%	1.6%	0.7%
Grand Total	**All**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Once we have the ULAE allocated to policy form and cause of loss, we can allocate the total expected ULAE to the policy form and cause of loss segments used in the indications. For HO-3, we select a ULAE to Loss ratio for the perils of non-catastrophe water and non-catastrophe non-water because the litigation rates are much higher for HO-3 water than HO-3 non-water. For HO-4, HO-6 and MHO-3 we select a ULAE to Loss ratio for all of the non-catastrophe causes of loss combined.

Table 22: HO-3 – ULAE to Loss Ratio by Policy Form and Cause of Loss

Policy Form	Cause of Loss	Total Loss ($000s)	Total ULAE ($000s)	ULAE to Loss
HO-3	Non Water Non Cat	186,076	22,217	11.9%
HO-3	Water Non Cat	636,891	259,875	40.8%
HO-4	Non Cat	1,648	351	21.3%
HO-6	Non Cat	82,251	24,059	29.3%
MHO-3	Non Cat	28,982	3,568	12.3%
Total	**Non Cat**	**935,847**	**310,070**	**33.1%**

Total Loss is the total developed loss from the RIF for the five years of the experience period. ULAE Allocation is based on the accident year 2017 - 2020 average in Table 21. Total ULAE final row, Total, is Total Loss times 33.1% - which is the selected ULAE to Loss ratio in Table 20. The remaining rows allocate the Total row to the policy form and cause of loss based on the ULAE Allocation percent. ULAE to Loss is the selected ULAE to Loss ratio that will be applied in the indication. This is Total ULAE divided by Total Loss.

So, instead of selecting a ULAE to Loss ratio of 33.1% for all multi-peril homeowners' forms as we would have done in the past, we will select the ULAE to Loss ratios in Table 22 as our ULAE to Loss ratios in the indications. These results are entered into Column (3) of of the Non-Cat ULAE tables in **17-19B**.

5.4.2.2 Non-Hurricane Catastrophe ULAE

For the Non-Hurricane Cat ULAE, Accident Year 2008 is the only year that has enough data to determine a ULAE ratio specifically for this category (Tropical Storm Fay). This ratio from exhibit **17-19A** is selected for each of the loss years. The combined PRM and PRW ULAE to Loss ratio is calculated in column (15) in exhibit **17-19B**.

5.4.2.3 Hurricane Catastrophe ULAE

For Hurricane ULAE the selected ratio is based on the data from the 2016, 2017 and 2018 hurricanes. The combined PRM and PRW ULAE to Loss ratio is calculated in column (20) in exhibit **17-19B**.

5.4.3 Projected Non-Hurricane Catastrophes

Columns (22) through (24) of the RIF

5.4.3.1 Homeowners

The numbers that appear on columns (22) through (24) of the RIF are developed in worksheets **22-24A**, **22-24B**, **22-24C**, and **22-24D**.

Exhibit **22-24A** displays Citizens' actual ratio of non-hurricane cat losses to the non-cat losses. The selected number for HO-3 PRM is 4.6%. This number will be used to determine the non-hurricane loss provision.

The 4.6% selected factor is applicable to PRM policies. It is a percentage of non-hurricane catastrophe losses to non-catastrophe losses. The wind-only policies will have non-hurricane catastrophe losses and very limited non-catastrophe losses. Therefore this percentage is not directly applicable to wind-only policies. In order to determine a factor that can be applied to PRM and PRW policies, the factor based on PRM data is converted from a non-hurricane cat to non-cat ratio to a non-hurricane cat to AAL ratio. This is then applied to the wind-only AAL to determine the non-hurricane catastrophe losses for the wind-only policies. The projected non-hurricane catastrophe for PRM and PRW are summed and taken as a percentage of the accident year 2021 developed losses and

LAE. This percentage is then applied to each accident year losses to determine the non-hurricane catastrophe losses. This is all contained in exhibits **22-24B** and **22-24C**.

An additional consideration is the fact that sinkhole incurred losses have varied significantly in recent years. The volatility in sinkholes is not expected to be correlated with non-hurricane catastrophe losses. Therefore, PRM sinkhole losses will be removed from the calculation.

Exhibit **22-24B** determines the Total Projected PRM Non-Hurricane Catastrophe Loss & LAE used in the next worksheet. First, non-catastrophe & non-sinkhole PRM losses will be developed. Then the selected factor of 4.6% will be applied to the developed non-catastrophe & non-sinkhole PRM losses to determine the projected non-hurricane catastrophe losses.

Columns (1) through (6) come directly from the Water RIF except for column (5). Columns (8) through (13) come directly from the All Other RIF. Column (5) is set equal to column (12) since we consider the trends observed for water losses are not applicable for non-hurricane catastrophe losses. Using these water trends for non-hurricane catastrophe water losses would not be appropriate since they are due to non-weather related water claims which are not expected to increase exposure to non-hurricane catastrophe losses. Columns (15) and (16) are the loss and ALAE for the wind losses, PRM policies only (Note the Wind RIF contains both PRM and PRW wind loss & ALAE). Columns (18) through (20) come directly from the Wind RIF. Column (24) is the projected loss & ALAE for the non-hurricane cat. It is equal to column (22) multiplied by column (23).

Exhibit **22-24C** calculates the Non-Hurricane Cat to Non-Catastrophe & Non-Sinkhole Ratio of PRM and PRW losses. The ratio of PRM Non-Hurricane Cat to Hurricane AAL was used to project the expected PRW non-hurricane catastrophe losses, by applying it to the PRW AALs. This ratio is shown in row (3) and the expected PRW non-hurricane cat loss and LAE is shown in row (5) for each hurricane model. The ratio of Non-Hurricane Cat to Non-Catastrophe & Non-Sinkhole for PRW and PRM combined is shown in row (8).

Exhibit **22-24D** breaks the losses and LAE from **22-24C** into separate loss, ALAE, and ULAE components which are used in the RIF. There are four versions of this exhibit, one for each hurricane model.

5.4.3.2 Renters

The procedure described above for HO-3 is similar for HO-4. The difference is the initial selected non-hurricane catastrophe percentage. The selected non-hurricane catastrophe for PRM HO-4 is the selected 0.98% and is based on Citizens' actual historical data.

5.4.3.3 Condo

The procedure described above for HO-3 is similar for HO-6. The difference is the initial selected non-hurricane catastrophe percentage. The selected non-hurricane catastrophe for PRM HO-6 is the selected 0.96% and is based on Citizens' actual historical data.

5.5 In-Force Premium by Peril & Adjustments

Columns (26) and (27) of the RIF

This number is determined using in-force policy counts applicable to each peril.

Columns (28) and (29) of the RIF

The in-force premium is determined by re-rating all policies in-force as of 06/30/2021 using 02/01/2022 rates. All premiums and losses throughout this exhibit include the multi-peril policies written in the PLA account as well as the multi-peril and wind-only policies written in the COASTAL account.

5.6 Projected Hurricane Loss and LAE

Columns (30) through (32) of the RIF

5.6.1 Homeowners

Exhibit **30-32A** calculates the hurricane LAE ratio based on actual paid hurricane losses, ALAE, and ULAE. This results in a 24.6% hurricane LAE ratio. The hurricane LAE ratio considers all claim activity related to the 2004, 2005, 2016, 2017 and 2018 hurricanes (Hermine, Matthew, Irma and Michael) to capture the information available as of 06/30/2021.

As can be seen in the exhibit, hurricane ALAE ratio is 11.9% for all years listed above. If we include only the most recent hurricanes in 2016, 2017 and 2018, the ALAE ratio increases to 21.2%. We selected 15.0% which is in the middle of the two.

Exhibit **30-32B** displays the on-leveled in-force premium as of 06/30/2021. The PRM premium is on-leveled using both the extension of exposure methods as well as the parallelogram method. However, only the extension of exposures method is used for the PRW portion of the premium.

Exhibit **30-32C** displays the statewide hurricane model results. This includes (1) AIR Worldwide Corporation Hurricane Model for the U.S. v1.0.0 as implemented in Touchstone 2021 (AIR), (2) Risk Management Solutions - North Atlantic Hurricane Model 21.0 on RiskLink 21.0 (Build 2050) (RMS), (3) Florida Hurricane Model 2021a on Risk Quantification and Engineering v21 (RQE), and (4) FIU – Florida Public Hurricane Model v8.1 (FPM) model results. The LAE factor comes directly from Exhibit **30-32A**.

5.6.2 Renters

The procedure described above for HO-3 is the same for HO-4 with a selected Hurricane LAE ratio of 19.2%.

5.6.3 Condo

The procedure described above for HO-3 is the same for HO-6 with a selected Hurricane LAE ratio of 23.4%.

5.7 Development & Adjustments

5.7.1 Loss and ALAE Development

Column (35) of the RIF

The following worksheets provide support for the stated Loss Development Factors (LDFs) stated for total, wind, water, all other, and sinkhole incurred loss and ALAE.

5.7.1.1 Total Loss & ALAE

Exhibit **35A** displays the total incurred loss and ALAE loss triangle, evaluated at 15, 27, etc months. All catastrophe losses have been excluded. The impact of the 10% mandatory sinkhole deductible is included. Claims attributed to policies above the maximum allowable policy limits have been removed. Note that this triangle is for informational purposes only and is not used directly in the indication. The indication is based on separate, by-peril, LDFs.

5.7.1.2 Wind Loss & ALAE

Exhibit **35B** displays the wind incurred loss and ALAE loss triangle, evaluated at 15, 27, etc months. The selected link ratios are determined by using the average of the last three link ratios. For all later development, the selected factor is 1.00. Note that this exhibit contains 10 years' worth of data but it only contains PRM non-catastrophe wind losses. Due to technical data issues with the historical wind-only data it is difficult to produce the same triangle with both PRW and PRM data. The omission of the wind-only development pattern from this triangle will not have a material impact on the final answer.

5.7.1.3 Water Loss & ALAE

Exhibits **35C1** through **35C5B** display the support for the water incurred loss and ALAE loss triangle, evaluated at 15, 27, etc months.

35C1 - Summary

In determining the ultimate water loss and ALAE, a frequency/severity method was used by examining litigated claims separately from non-litigated claims due to the continuing change in the rate of claim litigation. Similar to what we saw last year, due to a change in the rate of claims entering into litigation, settlement time has been changing from year to year. As a result, it was determined that the frequency/severity method would provide the best means to determine ultimate loss and ALAE.

Columns (1) through (3) and columns (4) through (6) provide the ultimate severity, claim count, and amounts for non-litigated and litigated claims, respectively, based on exhibits **35C2A** through **35C5B**. The ultimate amounts in columns (3) and (6) are combined to attain the total amount for litigated and non-litigated claims combined in column (7). The selected loss development factors (LDFs) in column (9) are calculated by the total amount in column (7) divided by the case incurred in column (8).

35C2 - Reported Claim Count

This exhibit provides the reported claim count triangle for water claims as of 09/30/2021 in **35C2A**. Both litigated and non-litigated claims are included in this triangle. The reporting pattern of claims has been fairly consistent over the years with a slight increase in link ratios. The selected link ratios up to and including the 63-to-75 months is based on, at each evaluation point, a straight average of the two most recent ratios. For 63 months and beyond, 1.000 is selected. The results of the selected link ratios are applied to the current reported claims to project the ultimate reported claims in **35C2B**.

35C3 - Percentage of Litigated Claims

From 2013 to 2017 Citizens saw a large increase in claims entering litigation and since then there have been many different measures put in place, both by Citizens and by HB7065, to combat this increase. As a result, in recent years Citizens has experienced a decreasing trend in claims going into litigation. Litigated claims generally take longer to settle and have higher severity. Given this difference in settlement pattern and ultimate costs, we will examine litigated claims separately from non-litigated claims. The underlying assumption in our approach is that the overall reported claim count pattern will not change. That is, despite a change in the percentage of claims entering into litigation, the total number of claims reported will continue to follow historical patterns. What will change is the final percentage of the reported claims that end up in litigation. There are four triangles included in **35C3** (three triangles in **35C3A** and one triangle in **35C3B**):

Triangle 1 - Reported Litigated Claim Counts

This triangle includes all reported claims that entered into litigation. A claim does not enter

into this triangle until it enters litigation. For example, if a claim, with accident year 2013 was reported in 2013 but did not enter litigation until August 2014, it would first appear in the triangle in the 2013 @ 27 month cell. It would not have been included in the 2013 @ 15 month cell since it was not litigated at that point in time. The purpose of this triangle is to identify the pattern of claims entering into litigation. So date of litigation, rather than date reported, determines when the claim is recorded in the triangle.

Triangle 2 - Reported Claim Counts

This triangle includes all reported claims, both litigated and non-litigated. Claims are recorded in the triangle as they are reported. This triangle is identical to the Report Claim Triangle in **35C2A**.

Triangle 3 - Percent of Claims Litigated

This triangle measures the percentage of total claims that are in litigation at each point in time. It is comprised by dividing each cell in Triangle 1 by the corresponding cell in Triangle 2. For example, as shown in triangle 2, for AY ending 06/30/2021, as of 09/30/2021, there were a total of 10,710 claims reported. As indicated in triangle 1, for AY ending 06/30/2021, as of 09/30/2021, of those 10,710 reported claims, 1,278 were in litigation. This percentage of reported claims in litigation is reflected in Triangle 3 as 11.9% (1,278/10,710).

Triangle 4 - Percent of Claims Litigated Link Ratios

This triangle contains the link ratios based of off Triangle 3. It calculates the percentage increase in the number of claims that enter into litigation at each maturity level. For the litigated claim counts, the percent of claims litigated at 15 months through 51 months has increased dramatically along the latest diagonal. We therefore consider only the two most recent diagonals when selecting link ratios. Our selected LDFs for these periods are in between the latest two diagonals, but closer to the latest diagonal. While it may be viewed as being less statistically credible to only consider two link ratios, given the changing pattern, we feel this selection will lead to a better predictor as to what to expect in the future year(s) of development. That is, we are trading "stability" for "responsiveness" in an attempt to properly capture the emerging trend in litigation development. For later periods, we select the average of the last 3 diagonals or 1.0.

In **35C3C** we develop the projected ultimate percentage of claims that will enter into litigation. The Reported Litigated Percent in column (1) is developed using the selected link ratios of Triangle 4 in column (2) for the Projected Reported Litigated Percent in column (3). Column (3) is multiplied by the Ultimate Claim Count in column (3) of **35C2B** to get the Projected Number of Claims Litigated in column (4).

35C4 - Litigated Severity

The purpose of this exhibit is to calculate the ultimate severity of litigated claims in **35C4A** and **35C4B**. There are 3 triangles included in **35C4A**. The ultimate severity selected is shown in **35C4B**.

Triangle 1 - Litigated Incurred Loss

This triangle is comprised of case incurred losses from claims that entered into litigation. The triangle was developed in the same manner as Triangle 1 from exhibit **35C3A**. The incurred amount enters into the triangle in the time period that the claims enters litigation and not at the time the claim is reported.

Triangle 2 - Litigated Severity

This triangle is the severity developed from Triangle 1. The incurred amounts from Exhibit **35C4A** Triangle 1 are divided by the reported litigated claim count in each cell from Exhibit **35C3A** Triangle 1.

Triangle 3 - Litigated Severity Link Ratios

This triangle calculates the link ratios from Triangle 2. The selected link ratios are combined to produce the ultimate severity development factors. We select a three year average for link

ratios up through 63-to-75 months as there appears to be a change in pattern compared to older link ratios. For 75 months and beyond we select 1.000. The cumulative LDFs based on this selections are applied to the current severity for each accident period in columns (1) through (3). This developed severity is what is displayed in exhibit **35C1** and used to project the ultimate losses for litigated claims.

35C5 - Non-Litigated Severity

The purpose of this exhibit is to calculate the ultimate severity of non-litigated claims in **35C5A** and **35C5B**. There are 3 triangles included in **35C5A**. The ultimate severity selected is shown in **35C5B**.

Triangle 1 - Non-Litigated Incurred Loss

This triangle is comprised of case incurred losses from claims that have never entered into litigation. As of 09/30/2021, all incurred losses on claims that were identified as entering into litigation at any time were removed. For example, consider a claim with accident year 2012 that was reported and experienced incurred losses in 2012 but did not enter into litigation until 2014. For this claim, all incurred loss amounts are removed from the triangle, including those losses incurred in 2012, which was prior to the claim entering litigation in 2014. The purpose of this is to project a severity that is not impacted by litigation.

Triangle 2 - Non-Litigated Severity

This triangle is the severity developed from Triangle 1. The incurred amounts from Triangle 1 are divided by the non-litigated claims. Note that for the purposes of this, the non-litigated claim counts are determine in the same fashion as the non-litigated losses from Triangle 1. Any claim identified as being litigated as of 09/30/2021 is removed from all cells of the calculation.

Triangle 3 - Non-Litigated Severity Link Ratios

This triangle calculates the link ratios from Triangle 2. The selected link ratios are combined to produce the ultimate severity development factors. Keeping consistent with our selections for the litigated severities, the three year link ratios for 15 to 63 months are selected. For all other development periods the link ratios are very close to 1.000 with some development factors slightly below 1.000 and some slightly above. We view this more as "noise" than actual signal. The belief is that when a claim does not enter litigation, the claim is more straight forward to settle. After 63 months, enough information is available that results in the ability to more accurately project the final costs at an early maturity. Based on that, we select 1.000 for all development periods after 51-to-63.

The cumulative LDFs based on these selections are applied to the current severity for each accident period in columns (1) through (3). This developed severity is what is displayed in exhibit **35C1** and used to project the ultimate losses for non-litigated claims.

Used for determining the territorial ultimate losses by territory for the water peril shown in **Exhibit 5B WA** through **Exhibit 5F WA** are regional loss development factors selected in **Appendix 8_WA_LDF**. Refer to Section 6.3.1 for more detail on the calculation of the territorial loss development factors.

5.7.1.4 All Other Loss & ALAE

Exhibit **35D** displays the all-other incurred loss and ALAE loss triangle, evaluated at 15, 27, etc months. For homeowners, the selected link ratios are the average of the latest 3 link ratios. For all later development the selected factor is 1.00. For renters and condos, the average excluding high and low link ratios from **35D** are selected.

Used for determining the territorial ultimate losses by territory for all other perils shown in **Exhibit 5B AO** through **Exhibit 5F AO** are regional loss development factors calculated in **Appendix 8 AO SE** and **Appendix 8 AO RE** for Southeast Florida (Miami-Dade and Broward) and the Rest of the State, respectively. The loss development factor assignment to each territory is shown in **Appendix 8 AO LDF**. Refer to Section 6.3.2 for determination of region definitions.

5.7.1.5 Sinkhole Loss & ALAE

Due the impact of SB 408, traditional loss development methods based off of loss triangles were not be appropriate in past rate indications. However, we now have enough experience periods since SB 408 was passed, so this year we will rely on a link ratio loss development method. Because we do not have much sinkhole experience, we combined the HO-3, DP-1 and DP-3 sinkhole losses in a single triangle to establish developmet factors. This is done in the workbook **Sinkhole Combined**. Exhibit **35E Combined** displays the sinkhole incurred loss and ALAE loss triangle, evaluated at 15, 27, etc months. The selected link ratios are the average of all link ratios since SB 408 went into effect (accident year ending 06/30/2014 and later). The final selected LDFs in **35E** of the indication workbook come from the combined exhibit.

5.7.2 Adjustment Factor for Law Changes, etc.

Column (41) of the RIF

Support for the Adjustment Factor for Law Changes, etc. is provided for each of the policy forms which analyzes the impact from various sources. In the past, we have made an explicit adjustment for water losses eliminated by HB 7065. However, we are now seeing the impacts of HB 7065 in our experience period in the form of decreased litigation rate. Therefore we will not be making a separate adjustment for this. We will be making an adjustment due to loss assessments following a hurricane for Condos.

5.7.2.1 Loss Assessment Adjustment for Condos

For accident years ending 06/30/2017 and 06/30/2018, we saw a large increase in the loss ratio for "Other Wind" losses in HO-6/HW-6 and many of the losses were from Loss Assessments after Hurricanes Matthew, Irma and Michael. We do not expect to have such large loss ratios for non-hurricane years as shown in **41**. We see that for the Accident Years ending 06/30/2008 through 06/30/2021 the ratio of Loss Assessment wind losses to non-Loss Assessment wind losses was 177.5% on average, so we apply that 177.5% to each experience period instead of using actual ratios to smooth out the losses.

5.7.3 Accident Year Weights

Column (44) of the RIF

Exhibit **44** displays the weights given to each of the historical accident years. The weights have been selected in accordance with generally accepted actuarial standards to give increasing weight to more recent years. This gives a balance between responsiveness to more recent trends as well as recognizing five years of historical experience. We apply the generally accepted weighting of 30%, 25%, 20%, 15%, and 10% with one exception for the Renter's all other perils indication.

For the HO-4/HW-4 all other indication we apply weighting of 20%, 35%, 20%, 15%, and 10% which gives more weight to the second latest year than the latest year. This is due to the fact that the lastest year had three large individual claims that resulted in an unusually high loss ratio.

5.8 Expense Provisions

Column (47) through (48) of the RIF

In this section we provide an overview of the selections made for the expense provisions of operating expenses, net cost of the Florida Hurricane Catastrophe Fund (FHCF) Reinsurance, net cost of pre-event funding, and private reinsurance. In addition to the private reinsurance cost as included in past filings we recognize SB 76 which requires Citizens to include any additional reinsurance cost Citizens would have had if full coverage for a 1-in-100 year event was purchased.

5.8.1 Operating Expenses

Exhibit **47-48A** displays the Other Acquisition Expenses, General Expenses, and Taxes, Licenses and Fees as a percent of premium, which are all from the IEE report using a combination of Allied Lines and Homeowners Multiple Peril.

5.8.1.1 Other Acquisition

For Other Acquisition Expenses the selection gives the most weight to the most recent 2 years. This is because there was a change in accounting practices starting 2019 that shifted some expenses from the General Expense bucket to the Other Acquisition bucket so relying on the expenses in prior years would not be appropriate. Specifically, our accounting department moved Business Process Outsourcing, Underwriting and other related expenses into Acquisition Expenses consistent with Issue Paper 94-1.

5.8.1.2 General Expenses

For General Expenses the selection gives the most weight the most recent 2 years for the same reason as Other Acquisition Expenses.

5.8.1.3 Taxes, Licenses, and Fees

The selected taxes, licenses, and fees ratio is 1.75%. Note that this expense provision is included even though there is a 1.75% tax surcharge. The surcharge is a result of Florida Statute 627.351(6)(n)2.

5.8.1.4 Commission Rate

The effective commission rate is different for the wind-only and multi-peril policies, so the statewide commission rates must be calculated separately and then combined. Exhibit **47-48B** provides a breakdown by territory of the Commission Percentage in Column (3).

For a wind-policy the commissionable premium is 10%/115% due to the fact that the commission rate is 10% but it is not applicable to the 15% Catastrophe Financing Surcharge. Also, for PRM, the amount of premium varies by territory depending on the Cat Protection Surcharge. This exhibit determines an overall statewide commission rate by taking the weighted average of the commission rate in each territory.

5.8.2 Net Cost of FHCF Reinsurance

Exhibit **47-48C** calculates the net cost of the mandatory layer of the FHCF reinsurance as a percent of wind premium. The estimated premium from row (1) is calculated by applying the FHCF rates to the 06/30/2021 in-force book of business and dividing by 1.25 to remove the effect of the cash build up factor build into the FHCF rates that will impact policies going into effect during the projected period. The attached file **FHCF Premium.accdb** supports this calculation. Rows (1) through (7) calculate the net cost of the FHCF, as a percent of premium, prior to the consideration

of the increase due to the cash build-up. Rows (8) through (11) calculate the total charge due to the build-up.

In order to recognize the expected ceded loss of the reinsurance purchased by the FHCF, the net loss and LAE prior to expense loadings and credits in the recent FHCF Ratemaking Report's Updated Exhibit II Row (23) is used for **47-48C** Row (2). The premium total in the recent FHCF Ratemaking Report's Updated Exhibit II Row (45b) which includes a load for the expenses and cash build up is used for **47-48C** Row (3). For the loss ratio (representing recoveries in our exhibit's Row (5)), we divided the amount from Row (3) by 1.25 recognizing that this loss ratio is being applied to our FHCF premiums excluding the cash build up in **47-48C** Row (1).

Note that all FHCF calculations in this filing are based on the updated FHCF Ratemaking Report as of 03/16/2021 and the FHCF Payout Multiple for the 2021 contract year. See accompanying FHCF premium support files that are listed in Table 8 of the List of the Support Files.

5.8.3 Net Cost of Pre-Event Funding

5.8.3.1 Citizens Use of Pre-Event Funding

Pre-event liquidity is needed for Citizens to reasonably guarantee that it has sufficient claims paying resources to cover claims associated with storm losses and can promptly pay policyholder claims especially after a large hurricane or multiple relatively smaller hurricanes, similar to 2004 and 2005. Citizens has multiple claims paying resources, but some of them are not immediately available post-event. Pre-event financing helps to provide a bridge to those sources, particularly reimbursements from the Florida Hurricane Catastrophe Fund (FHCF). Post-event funding available through assessment mechanism is not sufficient as it is a slow process and potentially can take up to a year depending upon market conditions.

The ability to quickly access cash after a storm is a standard option offered by private reinsurance, and Citizens has this option available in all of its private and capital market reinsurance contracts. However, this liquidity option is not available for the FHCF reinsurance, or for the portions of losses that potentially would be covered by assessments. Citizens' pre-event financing provides a market solution for this additional liquidity at a minimal cost through the issuance of pre-event bonds.

In addition to these pre-event bonds, Citizens' surplus represents a significant source of liquidity. As Citizens has slowly rebuilt its surplus since the 2004/2005 storm season as prescribed, however limited, by the statutory 10% glide path, its liquidity needs have marginally decreased. Nonetheless, only one or two large, or even small, storms could severely deplete Citizens' surplus, which would again markedly increase its liquidity needs.

While Citizens surplus can vary greatly from year to year depending on the fortune of the latest storm seasons, the financial markets under current market conditions provides Citizens an opportunity to procure liquidity for multiple years at a minimal cost. For example, Citizens' most recent Series 2015A1 bonds in the amount of $700 million were issued at a low interest rate of 3.03% (All in TIC for the fixed rate bonds), which provides liquidity through 2025.

The purchase of the liquidity bonds represent a reduction of Citizens' risk. ASOP 30 defines insurance risk as "[t]he extent to which the level or timing of actual insurance cash flows is likely to differ from expected insurance cash flows." Our private reinsurance reduces Citizens' risk in both the level and timing of claim payments for hurricane losses, because it provides for a prompt reimbursement of any claim payments. FHCF reinsurance reduces the uncertain level of the claim payments, but not the risk of not having enough liquid funds to make an immediate payment remains. The pre-event liquidity bonds reduces Citizens' risk in the timing of payments, but not the level of the payments. Because this reduction in risk is purchased on an open, competitive market, in economic terms the price is fair and not excessive.

These pre-event bonds provide a liquid source for prompt payment of hurricane claims despite the risk catastrophic hurricanes and other insured losses at a minimal cost. They provide permanence in Citizens capital structure but must be paid back at maturity, from the proceeds of the bonds but interest on these bonds is paid by policyholders as a very small component of policyholder

premiums. As policyholder premiums are intended to include all costs for providing coverage, we have included these pre-event liquidity costs as part of the policyholder's premiums. They are small, and are capped due to the 11% glide path makes them even smaller.

5.8.3.2 Summary of Outstanding Bonds

Below is a summary of Citizens surplus, outstanding liquidity bonds, and the estimated FHCF coverage.

Table 23: Summary of Citizens' Surplus, Outstanding Liquidity Bonds, and Estimated FHCF Coverage.

	PLA	CLA	Coastal
Surplus as of 9/30/2021	1,687,222,770	1,925,487,869	2,922,501,056
Estimated FHCF Coverage for 2022 Storm Season	1,611,000,000		1,176,000,000
Total Face Value of Pre-Event Liquidity Bonds in 2022 Storm Season			275,000,000

The total projected 2022 (8/1/2022 to 7/31/2023) cost for the Coastal account is $7.0M. This is the net projected cost in 2022 of the bonds that Citizens has issued and represents the interested paid to the bond holders in 2022 minus the projected interested earned on the bond proceeds that are being held in 2022. See **Pre Event Funding Support.xlsx** for more detail.

5.8.3.3 Bond Interest Expense

Each bond series interest expense shown in the worksheet Summary is taken directly from the provided Amortization Summary given in the worksheet **2015A Amortization Summary** contained in the workbook **Pre Event Funding Support.xlsx**. The interest expense for 2021 and 2022 are the sum of the Total Expense for months in each of those years. The projected interest expense is selected as the sum of Total Expense from 8/31/2021 until 7/31/2022 corresponding to the effective period for this year's rate indication.

5.8.3.4 Bond Interest Income

The interest income is based on the examination of past interest income results, and working with Citizens' external Financial Advisories (Raymond James) to project future earned interest on the assets associated with the pre-event liquidity bonds. Based on the type of asset, two different interest rates apply. There is a projected Managed Interest Income rate of 0.85% and a Money Market (MMKT) interest income rate of 0.04% for the year 2022. These rates are applied to the appropriate asset amounts to determine the monthly projected investment income.

In worksheet **2022 Interest Income** from the workbook **Pre Event Funding Support.xlsx** provides support for each of the stated interest income values in Summary worksheet. The interest income is calculated by applying the above stated interest income rates to the proceeds on Managed or MMKT account balances. The initial balance for each of these account balances are adjusted for the draw down.

5.8.3.5 Net Cost of Pre-Event Liquidity Exhibits

Exhibits **47-48D AIR**, **47-48D FPM**, **47-48D RMS**, and **47-48D EQE** allocate the company wide costs of pre-event funding to each policy form based on average annual losses (AALs) produced by each model. The cost is built into the Other expense provision on the Wind RIF. The costs of these bonds are assigned to the wind peril only. This cost does not affect the water, all other, or sinkhole indication. These exhibits determine the statewide provision including both the PLA and Coastal accounts costs for each policy form.

Allocating Costs to Commercial Non-Residential for Indications

In past years, Citizens has allocated the Pre-Event Funding (Liquidity Costs) by account to each wind rate indication (line of business) using that line's average annual loss (AAL) for each hurricane model. This included allocation to Commercial Non-Residential (CNR) for all models except the Florida Public Model (FPM). In this case, 0% allocation was used. The result of this is that the indications based on the FPM did not spread any of these costs to the CNR lines. This causes the pre-event loads to be higher in all of the other lines.

However, as in our last rate filing, to provide an allocation of the Pre-Event Funding (Liquidity Costs) to the Commercial Non-Residential (CNR) rate indications under the Florida Public Model (FPM), we will select a reduction to the Liquidity Costs to the company as a whole based on the proportion of average annual loss (AAL) that CNR makes under the other three models as done in our prior rate filing. Then this reduced Liquidity Cost will be allocated to the Personal Residential Lines (PR) and Commercial Residential Lines (CR) of business based on the FPM AALs.

For the Coastal Exhibit we select the middle value 8.2% of the total Liquidity Cost associated with CNR and allocate the remaining 90% to the PL and CR lines. Similar for the Commercial Lines Account (CLA) we select 4.5% as a middle value from these three models to be representative of CNR for the Florida Public Model (FPM). PLA is not affected. The statewide exhibit would be based on the sums from these exhibits.

Table 24: Change in Liquidity Cost for FPM Rate Indications due to Reduction to Liquidity Costs.

	Coastal	PLA	CLA	HO-3
Net Cost of Pre-Event Liquidity	6,993,882	0	0	
Selected % Attributed to CNR	8.2%	0%	6.5%	
Net Cost of Pre-Event Liquidity for FPM	6,399,402	0	0	
FPM Proj. Net Liq Cost as % of Wind Premium under Previous Method for HO-3				1.2%
FPM Proj. Net Liq Cost as % of Wind Premium under Filed Method for HO-3				0.9%
Change in Liquidity Cost				-0.3%

5.8.4 Private Reinsurance

Citizens has seven private reinsurance contracts in the Coastal Account and five private reinsurance contracts in the Personal Lines Account (PLA) in place for the 2021-2022 hurricane season. Refer to the accompanying Reinsurance Support excel workbook **Reinsurance_Recovery_<model>.xlsx**. **Exhibit 2** displays the complete layer chart for each account. There is a separate workbook for each hurricane model considered.

Reinsurance contracts are provided by our broker Willis Re. The list of I & L agreements can be found in the file **Traditional Reinsurance.xlsx**. A complete list of all reinsurance contracts provided in this filing can be found in Table 8.

The reinsurance premium derivation provided in **Reinsurance Premium.xlsx** includes recognition of Commission and Brokerage fees. Support for their treatment in determining the final reinsurance premium can be found on page 11 within section 7.2 of **Service - Willis Re.pdf**. In **Traditional Reinsurance.xlsx**, the "Brokerage" amount corresponds to the "Fixed Fee" referenced in this section. The "Commission" in the **Traditional Reinsurance.xlsx**, refers to the commissions which the Brokers receive from the individual markets. The brokers essentially "return" these commissions to Citizens via a reduction in the "Fixed Fee" (the Fixed Fee Offset) and via a reduction in the annual deposit premium. Brokerage fees less allocated commission are removed from the initial reinsurance premium as these are paid for by Wills Re as per agreements with reinsurance brokers.

Note that the Brokerage amount of $3,000,000 is the rate based on the contract between Citizens and Willis Re, not based on policy premiums written by Citizens. In the past, we have allocated Brokerage based on Coverage Amount and have chosen to keep it consistent at this time. We have no specific guidelines regarding how the Brokerage should be allocated (either by coverage or premium). There is no impact on financial reporting depending on the way it is allocated.

Table 25: Summary of Non-FHCF Private Reinsurance Contracts for the Coastal Account

Label	Contract	Layer	Percent	Limit	Inuring Cover	Attachment
A	2021 Sliver	FHCF	100.0%	$ 0.133B	FHCF	$ 0.601B
B	2021 Layer 1	FHCF, 1	100.0%	$ 0.100B	FHCF	$ 0.734B
C	2022 Layer 2	2	50.00%	$ 0.500B	FHCF	$ 0.834B
D	2021 Layer 3	2,3	55.00%	$ 0.500B	FHCF, Sliver Layers 1&2	$ 0.601B
E	2021 Layer 4	2,3,4	43.80%	$ 0.742B	FHCF, Layers 2&3	$ 0.834B
F	2021 CAT Bond - A	2,3,4	40.18%	$ 0.350B		$ 2.906B
G	2021 CAT Bond - B	4,Top	31.57%	$ 0.275B		$ 2.035B

Table 26: Summary of Non-FHCF Private Reinsurance Contracts for the PLA Account

Label	Contract	Layer	Percent	Limit	Inuring Cover	Attachment
H	2021 PLA Sliver	Lower,FHCF	100.0%	$ 0.166B	FHCF	$ 0.749B
I	2021 PLA SY - Occ	FHCF,1	21.31%	$ 1.173B	FHCF,Sliver	$ 0.749B
J	2021 PLA SY - Agg	FHCF,1	12.79%	$ 1.173B	FHCF,Sliver	$ 0.749B
K	2020 PLA Cat Bond	FHCF,1	12.56%	$ 0.110B		$ 2.000B
L	2021 PLA Cat Bond	FHCF,1,Top	27.71%	$ 0.325B		$ 2.412B

Notes on the Reinsurance Contracts

Coastal Account

A 2021 Sliver - Traditional Occurrence

This reinsurance contract pertains to the loss and expense alongside the FHCF coverage inuring to the benefit of the FHCF. Per Article 2, page 4 of **Reinsurance Contract - Coastal (A), (B).pdf**, this reinsurance attaches for net losses over $0.601B, subject to a limit of $0.133B.

Article 9 of the contract provides the specifics on the ceded premium. Refer to the workbook **Reinsurance Premium.xlsx** for the derivation of ceded premium $18,072,276 that appears in **Reinsurance_Recovery_AIR.xlsx** on **Exhibit 4A CST** Item (5).

B 2021 Layer 1 - Traditional Occurrence

This reinsurance contract pertains to the loss and expense in Layers FHCF & 1 with attachment point $0.734B inuring to the benefit of the FHCF. As illustrated in the Coastal Layer Chart on **Exhibit 2** the coverage for this contract drops down into the FHCF layer assuming 100% of remaining exposure above the 2021 Sliver not covered by the FHCF, and the largest portion of the contract's coverage is in the Layer 1 above the FHCF coverage with the Assumed Percent of Layer Reinsured as 100% resulting in $0.100B of coverage. Refer to **Exhibit 1** of **Reinsurance_Recovery_AIR.xlsx** for the location of the specified Limit of Insurance, Insurance Percentage, Attachment Level, and Exhaustion Level found in **Reinsurance Contract - Coastal (A), (B).pdf**. The Assumed Percent of Layer Reinsured is provided in **Traditional Reinsurance.xlsx**.

Article 8 of the contract provide the specifics on the ceded premium. Refer to the workbook **Reinsurance Premium.xlsx** for the derivation of ceded premium $9,571,553 that appears in **Reinsurance_Recovery_AIR.xlsx** on **Exhibit 4A CST** Item (5).

C 2021 Layer 2 - Aggregate

This reinsurance contract pertains to the loss and expense in Layer 2 with attachment point $0.834B inuring to the benefit of the FHCF. As illustrated in the Coastal Layer Chart on **Exhibit 2** the coverage for this contract is contained within Layer 2 assuming 50.0% of the exposure above Layer 1 resulting in $0.250B of coverage. Refer to **Exhibit 1** of **Reinsurance_Recovery_AIR.xlsx** for the location of the specified Limit of Insurance, Insurance Percentage, Attachment Level, and Exhaustion Level found in **Reinsurance Contract - Coastal (C), (D), (E).pdf**. The Assumed Percent of Layer Reinsured is provided in **Traditional Reinsurance.xlsx**.

Article 8 of the contract provide the specifics on the ceded premium. Refer to the workbook **Reinsurance Premium.xlsx** for the derivation of ceded premium $24,583,194 that appears in **Reinsurance_Recovery_AIR.xlsx** on **Exhibit 4A CST** Item (5).

D 2021 Layer 3 - Aggregate

This reinsurance contract pertains to the loss and expense in Layers 2 & 3 with attachment point $0.601B inuring to the benefit of the FHCF, Sliver, and Layer 1 & 2 contracts. As illustrated in the Coastal Layer Chart on **Exhibit 2** the coverage for this contract drops down into Layer 2 assuming 55.0% of remaining exposure above Layer 1 not covered by the Layer 2 contract, and the largest portion of the contract's coverage is in the Layer 3 above Layer 2 with the Assumed Percent of Layer Reinsured as 55.0% resulting in $0.275B of coverage. Refer to **Exhibit 1** of **Reinsurance_Recovery_AIR.xlsx** for the location of the specified Limit of Insurance, Insurance Percentage, Attachment Level, and Exhaustion Level found in **Reinsurance Contract - Coastal (C), (D), (E).pdf**. The Assumed Percent of Layer Reinsured is provided in **Traditional Reinsurance.xlsx**.

Article 8 of the contract provide the specifics on the ceded premium. Refer to the workbook **Reinsurance Premium.xlsx** for the derivation of ceded premium $25,170,301 that appears in **Reinsurance_Recovery_AIR.xlsx** on **Exhibit 4A CST** Item (5).

E 2021 Layer 4 - Aggregate

This reinsurance contract pertains to the loss and expense in Layers 2, 3 & 4 with attachment point $0.834B inuring to the benefit of the FHCF, Layer 2 & 3 contracts. As illustrated in the Coastal Layer Chart on **Exhibit 2** the coverage for this contract drops down into Layer 2 assuming 43.801% of remaining exposure above Layer 1 not covered by the Layer 2 & 3 contracts, drops down into Layer 3 assuming 43.801% of remaining exposure above Layer 2 not covered by the Layer 3 contract, and the largest portion of the contract's coverage is in the Layer 4 with the Assumed Percent of Layer Reinsured as 43.801% resulting in $0.325B of coverage. Refer to **Exhibit 1** of **Reinsurance_Recovery_AIR.xlsx** for the location of the specified Limit of Insurance, Insurance Percentage, Attachment Level, and Exhaustion Level found in **Reinsurance Contract - Coastal (C), (D), (E).pdf**. The Assumed Percent of Layer Reinsured is provided in **Traditional Reinsurance.xlsx**.

Article 8 of the contract provide the specifics on the ceded premium. Refer to the workbook **Reinsurance Premium.xlsx** for the derivation of ceded premium $18,119,396 that appears in **Reinsurance_Recovery_AIR.xlsx** on **Exhibit 4A CST** Item (5).

F 2021 Catastrophe Bond - Class A

This reinsurance contract pertains to the loss in Layer 4 and Top Layer with attachment point $2.906B and exhaustion point $3.777B. The Insurance Percentage is 40.18%, resulting in $.350B of coverage. Refer to **Exhibit 1** of **Reinsurance_Recovery_AIR.xlsx** for the location of the specified Limit of Insurance, Insurance Percentage, Attachment Level, and Exhaustion Level found in **Reinsurance Contract - Coastal (F).pdf**.

Article 6 of the contract provides the specifics on the ceded premium. Refer to the workbook **Reinsurance Premium.xlsx** for the derivation of ceded premium $22,797,850 that appears in **Reinsurance_Recovery_AIR.xlsx** on **Exhibit 4A CST** Item (5).

G 2021 Catastrophe Bond - Class B

This reinsurance contract pertains to the loss in Layers 2, 3, & 4 with attachment point $2.035B and exhaustion point $2.906B. The Insurance Percentage is 31.57%, resulting in $.275B of coverage. Refer to **Exhibit 1** of **Reinsurance_Recovery_AIR.xlsx** for the location of the specified Limit of Insurance, Insurance Percentage, Attachment Level, and Exhaustion Level found in **Reinsurance Contract - Coastal (G).pdf**.

Article 6 of the contract provides the specifics on the ceded premium. Refer to the workbook **Reinsurance Premium.xlsx** for the derivation of ceded premium $20,672,756 that appears in **Reinsurance_Recovery_AIR.xlsx** on **Exhibit 4A CST** Item (5).

Personal Lines Account

H 2021 PLA Sliver - Traditional Occurrence

This reinsurance contract pertains to the loss and expense alongside and below the FHCF coverage inuring to the benefit of the FHCF. Per Article 2, page 4 of **Reinsurance Contract - PLA (H), (I), (J).pdf**, this reinsurance attaches for net losses over $0.749B, subject to a limit of $0.166B.

Article 9 of the contract provides the specifics on the ceded premium. Refer to the workbook **Reinsurance Premium.xlsx** for the derivation of ceded premium $29,289,335 that appears in **Reinsurance_Recovery_AIR.xlsx** on **Exhibit 4A PLA** Item (5).

I 2021 PLA SY - Occurrence

This reinsurance contract pertains to the loss and expense in Layer 1 and the FHCF Layer with attachment point $0.749B inuring to the benefit of the FHCF and Sliver contracts. As illustrated in the PLA Layer Chart on **Exhibit 2** the coverage for this contract drops down into the FHCF Layer assuming 21.313% of remaining exposure above the Sliver not covered by the FHCF, and the largest portion of the contract's coverage is in the Layer 1 with the Assumed Percent of Layer Reinsured as 21.313% resulting in $0.250B of coverage. Refer to **Exhibit 1** of **Reinsurance_Recovery_AIR.xlsx** for the location of the specified Limit of Insurance, Insurance Percentage, Attachment Level, and Exhaustion Level found in

Reinsurance Contract - PLA (H), (I), (J).pdf. The Assumed Percent of Layer Reinsured is provided in **Traditional Reinsurance.xlsx**.

Article 8 of the contract provide the specifics on the ceded premium. Refer to the workbook **Reinsurance Premium.xlsx** for the derivation of ceded premium $20,641,600 that appears in **Reinsurance_Recovery_AIR.xlsx** on **Exhibit 4A PLA** Item (5).

J 2021 PLA SY - Aggregate

This reinsurance contract pertains to the loss and expense in Layer 1 and the FHCF Layer with attachment point $0.749B inuring to the benefit of the FHCF and Sliver contracts. As illustrated in the PLA Layer Chart on **Exhibit 2** the coverage for this contract drops down into the FHCF Layer assuming 12.788% of remaining exposure above the Sliver not covered by the FHCF, and the largest portion of the contract's coverage is in the Layer 1 with the Assumed Percent of Layer Reinsured as 12.788% resulting in $0.150B of coverage. Refer to **Exhibit 1** of **Reinsurance_Recovery_AIR.xlsx** for the location of the specified Limit of Insurance, Insurance Percentage, Attachment Level, and Exhaustion Level found in **Reinsurance Contract - PLA (H), (I), (J).pdf**. The Assumed Percent of Layer Reinsured is provided in **Traditional Reinsurance.xlsx**.

Article 8 of the contract provide the specifics on the ceded premium. Refer to the workbook **Reinsurance Premium.xlsx** for the derivation of ceded premium $18,498,291 that appears in **Reinsurance_Recovery_AIR.xlsx** on **Exhibit 4A PLA** Item (5).

K 2020 PLA Catastrophe Bond

This reinsurance contract pertains to the loss in Layer 1 and FHCF Layer with attachment point $2.000B and exhaustion point $2.876B. The Insurance Percentage is 12.557%, resulting in $.110B of coverage. Refer to **Exhibit 1** of **Reinsurance_Recovery_AIR.xlsx** for the location of the specified Limit of Insurance, Insurance Percentage, Attachment Level, and Exhaustion Level found in **Reinsurance Contract - PLA (K) Reset.pdf** and **Reinsurance Contract - PLA (K).pdf**.

Article 6 of the contract provides the specifics on the ceded premium. Refer to the workbook **Reinsurance Premium.xlsx** for the derivation of ceded premium $7,292,391 that appears in **Reinsurance_Recovery_AIR.xlsx** on **Exhibit 4A PLA** Item (5).

L 2021 PLA Catastrophe Bond

This reinsurance contract pertains to the loss in Layer 1, FHCF & Top Layers with attachment point $2.412B and exhaustion point $3.585B. The Insurance Percentage is 27.707%, resulting in $.325B of coverage. Refer to **Exhibit 1** of **Reinsurance_Recovery_AIR.xlsx** for the location of the specified Limit of Insurance, Insurance Percentage, Attachment Level, and Exhaustion Level found in **Reinsurance Contract - PLA (L).pdf**.

Article 6 of the contract provides the specifics on the ceded premium. Refer to the workbook **Reinsurance Premium.xlsx** for the derivation of ceded premium $21,412,540 that appears in **Reinsurance_Recovery_AIR.xlsx** on **Exhibit 4A PLA** Item (5).

Anticipated Reinsurance Recoveries

Item (7) in **Exhibit 4A CST** and **Exhibit 4A PLA** for each workbook **Reinsurance_Recovery_<model>.xlsx** contains the anticipated reinsurance recoveries used as part of the calculation for net cost of reinsurance. In a separate diskette each recovery calculation workbook **<model>_recovery_calculation.xlsb** provides how each of these values were calculated by contract and hurricane model.

Within each recovery calculation workbook **Results** provides the anticipated reinsurance recoveries based on the results in **Blender** under the contract conditions specified in **Program Design** based on 50,000 scenarios for up to 8 loss events in a given year.

1-in-100 Reinsurance Provision

While Citizens did purchase reinsurance for the 2021-2022 hurricane season, it did not purchase up to a level of 1-in-100 event coverage. As a result, Citizens has $0.594B, $0.300B, and $0.099B of surplus in the Coastal Account, PLA, and CLA, respectively, exposed to a 1-in-100 year event. To reflect the recently approved SB 76, we calculate what the net cost of the additional reinsurance would have been had Citizens purchased full coverage up to a 1-in-100 year event. To accomplish this, where possible, we used the rate on line for a given layer that Citizens actually paid for reinsurance for the 2021-2022 hurricane season. When this is not available (as is the case for CLA), we rely on an estimate of the cost provided by Raymond James.

Refer to the accompanying Reinsurance Support excel workbook **Reinsurance_Recovery_<model>.xlsx**. **Exhibit 2** displays the complete layer chart for each account. There is a separate workbook for each hurricane model considered.

Determination of 1-in-100 Cost by Layer

Exhibit 4B CST and **Exhibit 4B PLA** provide an adjustment for each layer's exposure not covered by the purchased reinsurance contracts listed earlier. The adjustment in any layer is the product of the Amount of Exposure in that layer, Column (1), times the Net Rate on Line, Column (2). The Net Rate on Line is calculated in **Appendix 4B CST** and **Appendix 4B PLA** based on the latest private reinsurance contract in each layer. The labeling of (A) and (B) signify the labeling used in Exhibit 1 of the reinsurance contract used to estimate the Net Rate on Line in Column (2) as supported in **Appendix 4B CST** and **Appendix 4B PLA**.

Net Rate on Line by Layer

The Net Rate on Line is calculated in **Appendix 4B CST** and **Appendix 4B PLA** as Column (7) for each layer. The Coverage Limit for the reinsurance contract used in the calculation is provied in Column (1). First, using the Risk Initial Reinsurance Premium in Column (2) we calculate the Gross Rate on Line in Column (3) as the ratio of Column (2) divided by Column (1). The Rate on Line in Column (5) is the Gross Rate on Line after Reinsurer Commission in Column (4) is removed. Last, we remove the Expected Loss & LAE for Risk Transfer in Column (5) to obtain the Net Rate on Line in Column (7).

The Expected Loss & LAE for Risk Transfer and Reinsurer expenses are removed as to arrive at the best estimate of risk margin present in the market. The Expected Loss & LAE for Risk Transfer in Column (6) is the same as that for the reinsurance contract as shown in **Exhibit 4A CST** and **Exhibit 4A PLA** Item (7).

Reinsurance Recovery Exhibits

Exhibit 1 provides a summary of the attachment and exhaustion points of all of the reinsurance contracts. **Exhibit 2** provides a layer chart. **Exhibit 3** calculates the hurricane LAE ratio used for the purposes of the recovery calculation workbook and the layer charts. **Exhibit 4A CST** and **Exhibit 4A PLA** calculates the net cost of the reinsurance for the private reinsurance contracts. **Exhibit 5** allocates the net cost of reinsurance to each policy form for all accounts combined and **Exhibit 5 Coastal**, **Exhibit 5 PLA**, and **Exhibit 5 CLA** allocate by account using capped inforce premiums.

5.9 Statewide Credibility

Column (55) of the RIF

Exhibits **55A** and **55B** calculate the credibility associated with Citizens' historical loss experience. The full credibility standard is 40,000 earned structure years. On a statewide combined basis, each are fully credible. Exhibit **55A** is based on all perils combined. Exhibit **55B** provides the credibility for each peril specific RIF.

The calculation for the wind indication has two components: (i) the hurricane modeled loss ratio and (ii) the non-hurricane loss ratio. Of these two components, the hurricane modeled loss ratio is most significant since it utilizes the latest actual building information to determine the best reasonable estimate for average annual loss (AAL) each building would incur from hurricane events.

We cannot rely on actual losses as done for the non-hurricane loss ratio since hurricane events are very infrequent. However, hurricane loss estimates must be part of the rate indication since they are significant when they occur and the hurricane modeled AAL is the best to do just that. We consider the hurricane modeled AAL to be fully credible on a statewide perspective given that the result is on a larger group of policies using their actual structural information to determine the result.

Given that the Projected Hurricane Loss & LAE ratio represents the greatest portion of the Combined Hurricane and Non-Hurricane Loss & LAE ratio, and the low credibility measure is calculated in exhibit **55B** is due to the lack of Non-Hurricane Loss & LAE, Citizens selects the statewide Wind Credibility as 100%.

However, on a territory level a wind credibility standard for full credibility has been selected by model as done in last year's indication. Refer to Section 6.4.2 for more detail on its use in **Exhibit 2C AIR**, **Exhibit 2C FPM**, **Exhibit 2C RMS**, and **Exhibit 2C RQE**.

6 Territory Indication

In Exhibits **Exhibit 1A** through **Exhibit 9B** the territorial rate changes are calculated. The statewide indications for Wind, Water, All-Other, and Sinkhole are separately allocated to each territory. The separate by-peril indications are then combined at the territory level to determine an overall rate indication for the territory.

Before the discussion of the detailed territory exhibits, the determination of the complement of credibility used for the hurricane, water, and all other when allocating the statewide indication to the territory is discussed.

6.1 Complement of Credibility

The development of the territorial complement of credibility used for each peril losses are described below.

6.1.1 Hurricane

For purposes of determining the territory level Hurricane Loss & LAE Ratio in Exhibits **Exhibit 2C RMS**, **Exhibit 2C AIR**, **Exhibit 2C EQE**, and **Exhibit 2C FPM**, territories were grouped to determine a complement of credibility for each territory. The grouping was based on the FHCF rating zones. The "average" FHCF zone was calculated for each of Citizens territories. The territories were sorted from the lowest rated FHCF Zone (1) to the highest rated FHCF Zone (25). Actuarial judgment was then employed to determine the cutoff for each group.

Homeowners

Group A was formed by grouping Zones (1) through (3). Group B was formed by grouping Zones (4) through (11). Group C was formed by grouping Zones (12) through (14). Group D was formed by grouping Zones (15) through (17). Group E was formed by grouping Zones (18) through (25). The details of this listing are in the **Appendix 9A** exhibit Below is a summary of the selected groups and their loss ratios using the AAL from each model. If there were no policies in-force to attain an average FHCF Zone for a particular territory, then a FHCF Zone was selected based on the Dominant Counties in each Rating Group Table found in the FHCF 2018 Ratemaking Formula Report.

Exhibit **Appendix 9B** provide the loss ratios for each model aggregated by average FHCF Zone as well as the portion of in-force policies and premium of the selected average FHCF Zone. Exhibit **Appendix 9C** defines the groups based on average FHCF Zone and their loss & LAE ratio used as the complements of credibility for that group. Below is a summary of the selected groups and their loss ratios using the AAL from each model.

Table 27: Homeowners – Hurricane Loss & LAE Ratio Complement of Credibility.

Group	FHCF Zone	AIR	Public Model	RMS	RQE
A	1-3	39.6%	32.9%	[redacted]	22.6%
B	4-11	45.1%	23.8%	[redacted]	44.2%
C	12-14	34.5%	13.4%	[redacted]	57.8%
D	15-17	43.2%	12.4%	[redacted]	60.0%
E	18-25	61.8%	22.5%	[redacted]	65.2%

Renters

The procedure described above for HO-3 is exactly the same for HO-4 except that there were different groups selected. Below is a summary of the selected groups and their loss ratios using the AAL from each model. If there were no policies in-force to attain an average FHCF Zone for a particular territory, then a FHCF Zone was selected based on the Dominant Counties in each Rating Group Table found in the most recent FHCF Ratemaking Formula Report.

Table 28: Renters – Hurricane Loss & LAE Ratio Complement of Credibility.

Group	FHCF Zone	AIR	Public Model	RMS	RQE
A	1-9	61.9%	22.9%	[redacted]	29.0%
B	10-25	45.7%	43.3%		31.5%

Condo Unit-Owners

The procedure described above for HO-3 is exactly the same for HO-6 except that there were different groups selected. Below is a summary of the selected groups and their loss ratios using the AAL from each model. If there were no policies in-force to attain an average FHCF Zone for a particular territory, then a FHCF Zone was selected based on the Dominant Counties in each Rating Group Table found in the most recent FHCF Ratemaking Formula Report.

Table 29: Condo Unit-Owners – Hurricane Loss & LAE Ratio Complement of Credibility.

Group	FHCF Zone	AIR	Public Model	RMS	RQE
A	1-13	33.9%	49.0%	[redacted]	32.3%
B	14-25	46.3%	83.6%		47.9%

6.1.2 Sinkhole

For purposes of allocating the overall sinkhole indication to each territory, specific territories were placed into 3 broader groups to determine a complement of credibility as approved in the latest rate filing. The counties of Hernando, Pasco, Pinellas and Hillsborough comprise group A. Group B is comprised the southeast counties of Dade, Broward and Palm Beach. Group C consists of all remaining territories. The loss ratios in the remaining territories vary greatly but lack enough experience to be considered credible. Below are the loss ratios of each group. The group loss ratios are used as the complement of credibility for each territory within a given group. These complements are used in **Exhibit 4A**, column (8) of the territory indication worksheets. The details of this listing are in **Appendix 8 Sinkhole Group** exhibit.

Table 30: Homeowners – Sinkhole Loss & LAE Ratio Complement of Credibility.

Group	Group Description	Projected & Developed Loss & LAE Ratio
A	Hernando, Hillsborough, Pasco, Pinellas	5.8%
B	Dade, Broward, Palm Beach	20.2%
C	Other	25.7%

6.1.3 Water

There is a clear difference in the water results by region of the state. Given the relatively recent steep increase in water litigation claims in South East Florida, there will be nine groupings for the complement of credibility calculations. As can be seen in Table 32, each of the counties in South East Florida has a reasonable amount of data to be considered credible and their loss ratios are different from each other. Regions were selected with consideration of geographical location and loss & LAE ratio. Table 31 provides the counties assigned to each region:

Table 31: Homeowners – Regions used for Complement of Credibility
Water Relativity

Region	County
Broward	Broward
Central East Coast	Brevard, Indian River, Martin, Orange, Osceola, Saint Lucie
Inland	All Other Counties
Miami-Dade	Miami-Dade
North East Coast	Duval, Flagler, Nassau, Saint Johns, Volusia
North Gulf Coast	Hernando, Hillsborough, Pasco, Pinellas
Palm Beach	Palm Beach
Panhandle	Bay, Citrus, Dixie, Escambia, Franklin, Gulf, Levy, Okaloosa, Santa Rosa, Taylor, Wakulla, Walton
South Gulf Coast	Charlotte, Collier, Lee, Manatee, Monroe, Sarasota

The relativity applied to the complement of credibility from column (7) below is used in column (9) of **Exhibit 6A WA** to determine the territory level water loss ratio. Column (1) and (2) are summed by region coming directly from **Appendix 8 WA** columns (1) and (2). Column (7) is the credibility weighted average, using column(6), of the regional relativity in column (4) and the excluding South East Coast relativity shown in column (4).

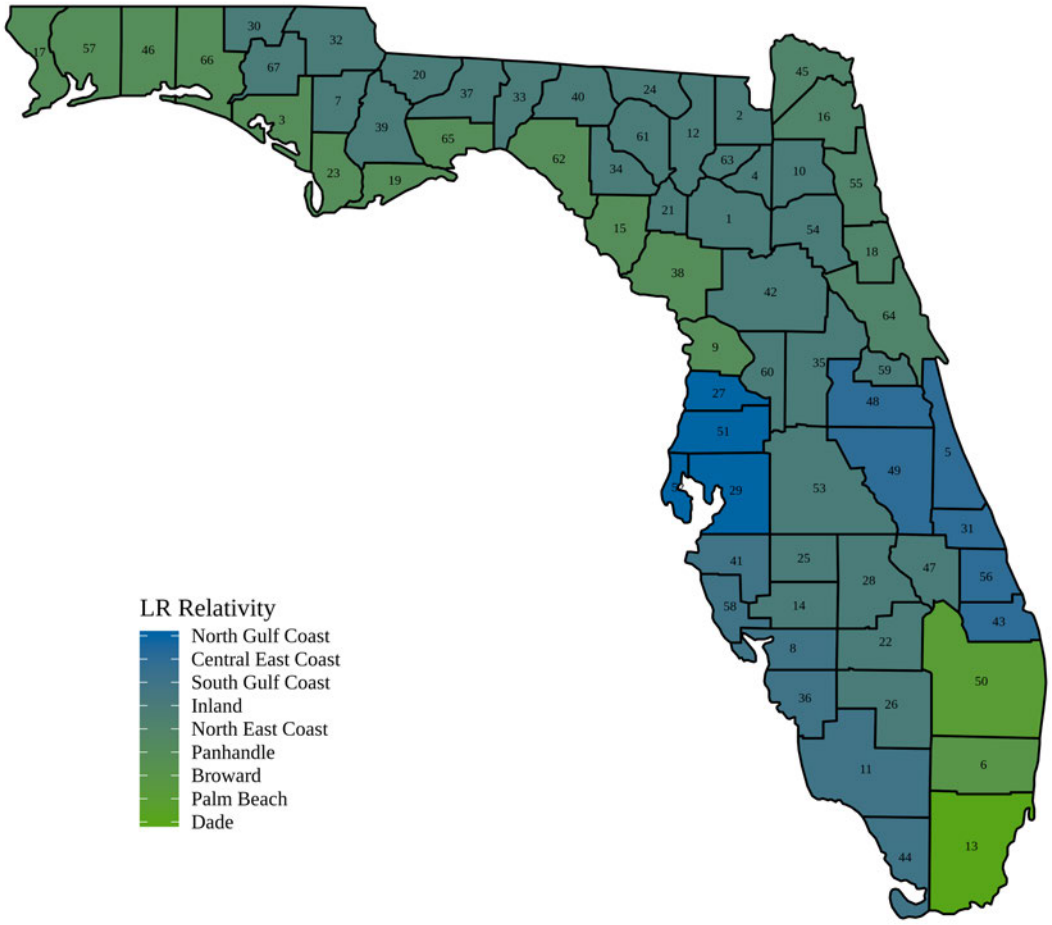

Figure 5: Homeowners – Map of Water Complement of Credibility Assigned by County.

Table 32: Homeowners – Water Relativity Applied to Complement of Credibility by Region

Region	(1) Sum of Earned Premium (000s)	(2) Sum of Water Loss & LAE (000s)	(3) Loss & LAE Ratio	(4) Rel.	(5) Earned House Years	(6) Cred.	(7) Rel. Applied to Compl. of Cred.
Central East Coast	23,885,842	23,770,341	99.5%	1.351	25,258	0.795	1.378
Inland	8,036,701	6,425,800	80.0%	1.085	10,060	0.501	1.284
North East Coast	6,310,630	3,975,736	63.0%	0.855	9,736	0.493	1.174
North Gulf Coast	178,896,786	210,562,460	117.7%	1.598	289,571	1.000	1.598
Panhandle	5,093,281	2,120,887	41.6%	0.565	7,829	0.442	1.078
Dade	610,831,876	367,494,983	60.2%	0.817	274,132	1.000	0.817
Broward	341,360,490	248,386,047	72.8%	0.988	154,342	1.000	0.988
Palm Beach	86,212,006	60,976,088	70.7%	0.960	62,703	1.000	0.960
South Gulf Coast	24,793,468	23,239,002	93.7%	1.272	31,207	0.883	1.297
Statewide	1,285,421,078	946,951,345	73.7%	1.000	864,837		
Excl South East Coast	247,016,707	270,094,227	109.3%	1.484	373,661		

Notes:

(1) Total Earned Premium grouped by region.

(2) Total Loss and LAE grouped by region.

(3) =(2)/(1).

(4) =(3)/(3) Total.

(5) Earned House Years grouped by Territory Groups.

(6) Minimum of 1.0 and $\sqrt{(5)/40{,}000}$.

(7) = (4) for Dade, Broward, Palm Beach, North Gulf Coast,
= (6)(4) + (1-(6))*1.484 otherwise.*

6.1.4 All Other excluding Water

As with the Water territorial indications, to reflect that fact that different territories have different experience, we form regional groups to determine a complement of credibility. In the case of All Other excluding Water, we started with the same groupings used for Water, and then adjusted based on actual results. Because the South East counties are not fully credible on their own, we group them together in the South East Region.

Table 33: Homeowners – Regions used for Complement of Credibility
All Other Relativity

Region	County
Central East Coast	Brevard, Indian River, Martin, Orange, Osceola, Saint Lucie
Inland	All Other Counties
North East Coast	Duval, Flagler, Nassau, Saint Johns, Volusia
North Gulf Coast	Hernando, Hillsborough, Pasco, Pinellas
Panhandle	Bay, Citrus, Dixie, Escambia, Franklin, Gulf, Levy, Okaloosa, Santa Rosa, Taylor, Wakulla, Walton
South East Coast	Broward, Miami-Dade, Palm Beach
South Gulf Coast	Charlotte, Collier, Lee, Manatee, Monroe, Sarasota

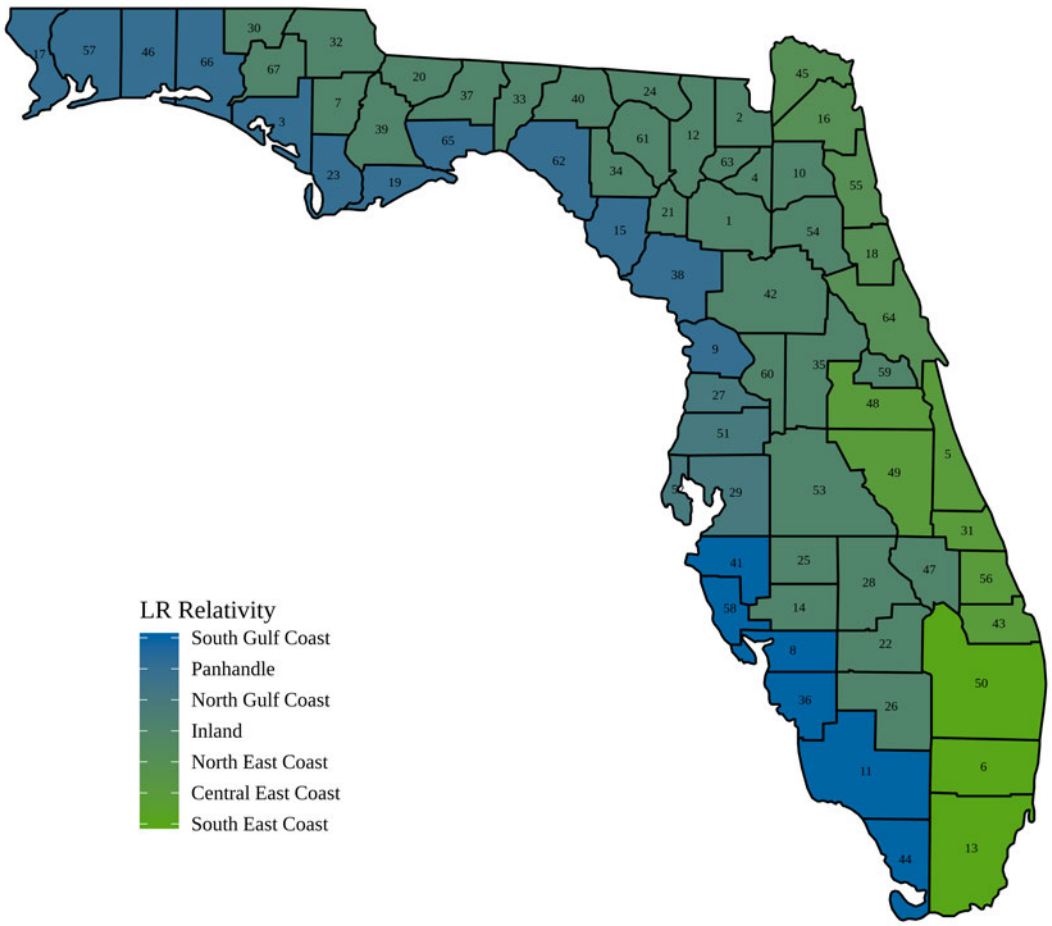

Figure 6: Homeowners – Map of All Other Complement of Credibility Assigned by County.

The relativity applied to the complement of credibility from column (7) below is used in column (9) of **Exhibit 6A AO** to determine the territory level all other loss ratio. Column (1) and (2) are summed by region coming directly from **Appendix 8 AO** columns (1) and (2). Column (7) is the credibility weighted average, using column(6), of the regional relativity in column (4) and the excluding South East Coast relativity shown in column (4).

Table 34: Homeowners – All Other Relativity Applied to Complement of Credibility by Region

Region	(1) Sum of Earned Premium (000s)	(2) Sum of All Other Loss & LAE (000s)	(3) Loss & LAE Ratio	(4) Rel.	(5) Earned House Years	(6) Cred.	(7) Rel. Applied to Compl. of Cred.
Central East Coast	4,556,974	2,956,802	64.9%	0.835	25,258	0.795	0.920
Inland	3,728,251	2,371,527	63.6%	0.819	10,060	0.501	1.033
North East Coast	3,272,223	1,732,289	52.9%	0.682	9,736	0.493	0.969
North Gulf Coast	46,782,216	47,154,112	100.8%	1.298	289,571	1.000	1.298
Panhandle	2,236,043	3,164,388	141.5%	1.822	7,829	0.442	1.502
South East Coast	148,512,884	102,728,894	69.2%	0.890	491,176	1.000	0.890
South Gulf Coast	4,959,369	6,160,246	124.2%	1.599	31,207	0.883	1.558
Statewide	214,047,960	166,268,259	77.7%	1.000	864,837		
Excl. South East Coast	65,535,076	63,539,365	97.0%	1.248	373,661		

Notes:

(1) Total Earned Premium grouped by Territory Groups.

(2) Total Loss and LAE grouped by Territory Groups.

(3) =(2)/(1).

(4) =(3)/(3) Total.

(5) Earned House Years grouped by Territory Groups.

(6) Minimum of 1.0 and $\sqrt{(5)/40{,}000}$.

(7) = (4) for South East Coast and North Gulf Coast,
= (6)(4) + (1-(6))*1.248 otherwise.*

6.2 Territorial Loss Trend Selection

In last year's indication, Citizens developed water and AOP loss trends separately for Broward, Miami-Dade, Palm Beach and the Rest of the State. This approach was reviewed for this year's rate indication regarding two items:

1) Should the groupings be kept the same as done in the previous year (Broward, Miami-Dade, and Palm Beach counties for Water and AOP)?
2) Should the Rest of State be partitioned into more granular pieces?

6.2.1 Water

Broward, Miami-Dade and Palm Beach Trends

Each of these counties has a reasonable amount of data to be considered fairly credible. They are trending differently from each other as well as from the rest of state of Florida. Therefore, we are selecting separate historical water loss trends for each county in South East. Table 35 shows the accident year results for all three counties.

Table 36 shows the accident year results for all three counties combined and a summary of the three South East county trend results. A more detailed table can be found in **Loss & ALAE Water AY**.

Similar to the statewide trends, the 5 point fitted annual rates of change are negative due to managed repair and HB7065 which have reduced litigation and AOB. Litigation and AOB cannot continue decreasing at this same rate, so we select a prospective trend of 0.0% for all three counties. These selections are entered into **Appendix 8 WA Trend**. Once input into this exhibit, they flow throughout the rest of the applicable territory exhibits.

Table 35: Homeowners – Water South East Florida Loss and ALAE Trend by County

	Miami-Dade			Broward			Palm Beach		
Fitted Annual Rate Of Change	Pure Premium	Frequency	Severity	Pure Premium	Frequency	Severity	Pure Premium	Frequency	Severity
17 Point	-17.9%	-5.0%	-13.6%	-12.9%	-1.8%	-11.2%	-3.0%	2.4%	-5.3%
13 Point	-18.4%	0.3%	-18.6%	-12.3%	7.4%	-18.4%	-7.3%	6.2%	-12.7%
9 Point	-19.5%	-0.9%	-18.8%	-12.2%	13.9%	-22.9%	-20.6%	0.7%	-21.1%
5 Point	-6.7%	-9.5%	3.1%	-12.2%	-1.7%	-10.7%	-18.5%	-10.7%	-8.7%

Table 36: Homeowners – Water South East Florida Loss and ALAE Trend

		Pure Premium	Pure Frequency	Severity
(9)	17 Point Fitted Annual Rate of Change:	-15.3%	-2.9%	-12.8%
(10)	13 Point Fitted Annual Rate of Change:	-15.7%	3.6%	-18.6%
(11)	9 Point Fitted Annual Rate of Change:	-17.3%	4.7%	-21.0%
(12)	5 Point Fitted Annual Rate of Change:	-10.6%	-6.7%	-4.2%
	Miami Dade Selected Annual Loss Trend (up to date):	-17.9%		
	Broward Selected Annual Loss Trend (up to date):	-12.9%		
	Palm Beach Selected Annual Loss Trend (up to date):	-3.0%		

Rest of State Grouping

In determining whether or not to break out the Rest of State into more granular regions, we look at six separate geographical regions. Given the lack of credibility of these individual regions, it wouldn't make sense to attempt to examine each region on a more granular basis.

Continuing as done last year, the loss trend selection based on the combined Rest of State is most appropriate for each of the individual non-southeast regions as shown in Table 37. These regions have seen the litigation rate bouncing around in recent years, so selecting a 0.0% prospective trend is appropriate.

Table 37: Homeowners – Water Rest of State Loss and ALAE Trend

		Premium	Pure Frequency	Severity
(9)	17 Point Fitted Annual Rate of Change:	14.6%	12.4%	2.0%
(10)	13 Point Fitted Annual Rate of Change:	7.1%	11.0%	-3.5%
(11)	9 Point Fitted Annual Rate of Change:	2.7%	6.0%	-3.1%
(12)	5 Point Fitted Annual Rate of Change:	-9.3%	2.8%	-11.8%
	Selected Annual Loss Trend (up to date):	14.6%		
	Selected Annual Loss Trend (projected):	0.0%		

6.2.2 All Other excluding Water

Similar to the approach applied for the Water territorial indications, for purposes of complement of credibility, territories were grouped into regions. Last year, we included Miami Dade and Broward in the Southeast region and Palm Beach was part of Rest of State.

For All Other Perils, these counties are all trending differently from each other and from the rest of the state. Therefore, we are selecting separate historical and prospective All Other loss trends. Table 38 shows the accident year results for Miami-Dade and Broward counties combined (as done last year) and a summary of the three South East county historical trend results. Table 39 shows the results for each southeast county separately. Prospective trend selections for Broward, Miami-Dade and Palm Beach are all 5.9%.

Continuing as done last year, the loss trend selection based on the combined Rest of State is most appropriate for each of the individual non-southeast regions as shown in Table 40.

Table 38: Homeowners – All Other Perils South East Florida Loss and ALAE Trend

		Premium	Pure Frequency	Severity
(9)	17 Point Fitted Annual Rate of Change:	-4.2%	-15.0%	12.7%
(10)	13 Point Fitted Annual Rate of Change:	-4.4%	-15.8%	13.5%
(11)	9 Point Fitted Annual Rate of Change:	3.0%	-14.5%	20.5%
(12)	5 Point Fitted Annual Rate of Change:	-6.0%	-22.7%	21.6%
	Miami Dade Selected Annual Loss Trend (up to date):	-6.9%		
	Broward Selected Annual Loss Trend (up to date):	6.0%		
	Palm Beach Selected Annual Loss Trend (up to date):	-12.7%		

Table 39: Homeowners – All Other Perils South East Florida Loss and ALAE Trend by County

	Miami-Dade			Broward			Palm Beach		
Fitted Annual Rate Of Change	Pure Premium	Frequency	Severity	Pure Premium	Frequency	Severity	Pure Premium	Frequency	Severity
17 Point	-6.9%	-17.3%	12.7%	6.0%	-11.2%	19.4%	-12.7%	-14.9%	2.5%
13 Point	-10.2%	-18.9%	10.7%	13.8%	-9.1%	25.1%	-9.0%	-19.3%	12.7%
9 Point	-3.1%	-17.9%	18.1%	25.5%	-5.8%	33.3%	-18.1%	-22.6%	5.8%
5 Point	-7.2%	-22.8%	20.2%	0.6%	-18.6%	23.7%	-11.9%	-33.9%	33.3%

Table 40: Homeowners – All Other Rest of State Loss and ALAE Trend

		Pure Premium	Pure Frequency	Severity
(9)	17 Point Fitted Annual Rate of Change:	4.0%	-0.8%	4.9%
(10)	13 Point Fitted Annual Rate of Change:	14.3%	-1.0%	15.4%
(11)	9 Point Fitted Annual Rate of Change:	9.3%	-2.9%	12.5%
(12)	5 Point Fitted Annual Rate of Change:	22.4%	6.0%	15.5%
	Selected Annual Loss Trend (up to date):	4.0%		
	Selected Annual Loss Trend (projected):	5.9%		

6.3 Territorial Loss Development Selection

The statewide separate peril indications calculated in the RIFs rely on the statewide loss development triangles in exhibits **35A** through **35E**. However, similar to the loss trend, the loss development for the perils of water and AOP vary significant by region of the state. When we allocate these statewide indication for the perils of water AOP to territory, we consider loss development separately by region of the state.

6.3.1 Water

Following the approach taken for the statewide water loss & ALAE development, a frequency/severity approach is taken on litigated and non-litigated claims separately for Miami Dade, Broward, Palm Beach and the Rest of State. See the workbooks **HO3 Water Loss & ALAE Development - Miami-Dade.xlsx**, **HO3 Water Loss & ALAE Development - Broward.xlsx**, and **HO3 Water Loss & ALAE Development - Palm Beach.xlsx** in addition to the HO3 Rate Indication workbook.

Appendix 8 WA LDF SE1 through **Appendix 8 WA LDF SE5B** and **Appendix 8 WA LDF RS1** through **Appendix 8 WA LDF RS5B** display the support for the territorial water incurred loss and ALAE loss triangle, evaluated at 15, 27, etc months used for the southeast and the rest of the state in **Appendix 8_WA_LDF**.

6.3.2 All Other excluding Water

Below is a summary of the LDF factors by region. The full triangles for the peril of AOP x Water by region can be found in **Appendix 8 AO Region LDF**. The selected LDFs are summarized in **Appendix 8 AOP_XWA**.

Note that when the loss triangles are segmented by region, credibility issues quickly emerge resulting in high volatility. This is the reason why we ended up selecting South East (Miami-Dade and Broward) versus Rest of State.

6.4 Wind Indications

6.4.1 Exhibit 1

Note that all experience in Exhibits 1 contain both PR-W and the wind portion of PR-M policies.

Exhibit 1A shows the historical actual non-catastrophe wind incurred loss and ALAE for each territory for accident years ending 06/30/2017 through 06/30/2021, evaluated as of 09/30/2021.

Exhibit 1B through **Exhibit 1F** show the historical losses from **Exhibit 1A** being developed, trended and loaded for ULAE. Non-Hurricane Cat losses (column (5)) are also added. The development and trend factors come straight from the statewide Wind RIF. The Non-Hurricane ULAE ratio is developed using information for the Wind RIF. To be consistent with the way we consider all four models to determine the statewide indication, we rely on a median of the four models. The Projected Non-Hurricane Cat loss ratio is calculated from the Wind RIF and **Appendix 10** and that is applied to the territorial premium to determine the Non-Hurricane Cat losses. Details of both calculations are footnoted on the exhibits.

Exhibit 1G and **Exhibit 1H** show the on-leveled and projected wind earned premium by territory, respectively. **Exhibit 1H** is the result of applying the premium trend to the on-leveled premium from **Exhibit 1G**.

Exhibit 1I shows the historical wind earned house years by territory.

6.4.2 Exhibit 2

Exhibit 2A calculates a credibility weighted non-hurricane wind loss and LAE ratio by territory. The 5 Year Wind Loss + LAE Ratio creates the Loss Ratio Relativity using the statewide Loss + LAE Ratio as the base. The complement of credibility for the Loss Ratio Relativity is 1.00 representing the statewide Loss + LAE Ratio. The territorial loss ratios are balanced back to add to the statewide loss ratio. The statewide indication is used as the complement of credibility. \

Exhibit 2B calculates projected hurricane losses and LAE for each hurricane model used in the indication (FPM, AIR, RQE, and RMS). Columns (1) through (4) displays the hurricane model results from the RMS, AIR, RQE, and FPM models, respectively. The LAE factor from Statewide Exhibit **30-32C** is applied to the AALs.

Exhibit 2C FPM credibility weights the projected expected hurricane loss ratio, based on the FPM model with the complement of credibility as described in section 6.1.1. See Appendix 9 in worksheets **Appendix 9A** through **Appendix 9C** for details of the complement. The notes of the exhibit describe the process of developing the credibility weighted loss ratio. The selected credibility standard is 330, 530, and 330 risks for HO-3, HO-4, and HO-6, respectively. Support for the credibility standard is shown in **class_cred_calc.xlsx**. Column (8) displays the selected loss ratio by territory based on the FPM model.

Exhibit 2C AIR credibility weights the projected expected hurricane loss ratio, based on the AIR model with the complement of credibility as described in section 6.1.1. See Appendix 9 in worksheets **Appendix 9A** through **Appendix 9C** for details of the complement. The notes of the exhibit describe the process of developing the credibility weighted loss ratio. The selected credibility standard is 100, 130, and 180 risks for HO-3, HO-4, and HO-6, respectively. Support for the credibility standard is shown in **class_cred_calc.xlsx**. Column (8) displays the selected loss ratio by territory based on the AIR model.

Exhibit 2C RQE credibility weights the projected expected hurricane loss ratio, based on the RQE model with the complement of credibility as described in section 6.1.1. See Appendix 9 in worksheets **Appendix 9A** through **Appendix 9C** for details of the complement. The notes of the exhibit describe the process of developing the credibility weighted loss ratio. The selected credibility standard is 100, 190, and 200 risks for HO-3, HO-4, and HO-6, respectively. Support for the credibility standard is shown in **class_cred_calc.xlsx**. Column (8) displays the selected loss ratio by territory based on the RQE model.

Exhibit 2C RMS credibility weights the projected expected hurricane loss ratio, based on the RMS model with the complement of credibility as described in section 6.1.1. See Appendix 9 in worksheets **Appendix 9A** through **Appendix 9C** for details of the complement. The notes of the exhibit describe the process of developing the credibility weighted loss ratio. The selected credibility standard is 100, 150, and 150 risks for HO-3, HO-4, and HO-6, respectively. Support for the credibility standard is shown in **class_cred_calc.xlsx**. Column (8) displays the selected loss ratio by territory based on the RMS model.

Exhibit 2D AIR, **Exhibit 2D FPM**, **Exhibit 2D RMS**, and **Exhibit 2D RQE** allocates the expense provisions by territory. The Fixed Expense is the only expense component that varies for each model due to the calculation of the reinsurance costs. Also the Fixed Expense provision varies by PLA territory versus Coastal territory. All private reinsurance purchased pertains to the Coastal account only. Additionally, the costs associated with the pre-event liquidity are higher in the Coastal account. As a result the Fixed Expense provision is higher for Coastal account territories. The calculation of the different Fixed Expense provisions is included in the top right side of each **Exhibit 2D** in excel column (O).

Exhibit 2E combines the non-hurricane loss ratio and the hurricane loss ratio to derive a total wind loss ratio by territory. This is done separately for the AIR, RQE, RMS, and FPM results.

Exhibit 2F FPM allocates the statewide wind indication from the Wind RIF, based on the FPM, to each territory. An uncapped rate indication is displayed in column (8).

Exhibit 2F AIR allocates the statewide wind indication from the Wind RIF, based on the AIR model, to each territory. An uncapped rate indication based solely on the AIR is displayed in column (8).

Exhibit 2F RQE allocates the statewide wind indication from the Wind RIF, based on the RQE model, to each territory. An uncapped rate indication based solely on the RQE is displayed in column (8).

Exhibit 2F RMS allocates the statewide wind indication from the Wind RIF, based on the RMS model, to each territory. An uncapped rate indication based solely on the RMS is displayed in column (8).

6.5 Sinkhole Indications

6.5.1 Exhibit 3

Exhibit 3A shows the historical actual sinkhole incurred loss and ALAE for each territory for accident years ending 06/30/2017 through 06/30/2021, evaluated as of 09/30/2021.

Exhibit 3B through **Exhibit 3F** show the historical losses from **Exhibit 3A** being developed, trended and loaded for ULAE. The development and trend factors come straight from the statewide Sinkhole RIF. The Sinkhole ULAE ratio is developed using information for the Sinkhole RIF. Details of the ULAE calculation is footnoted on the exhibit.

Exhibit 3G and **Exhibit 3H** show the on-leveled and projected sinkhole earned premium by territory, respectively.

Exhibit 3I shows the historical sinkhole earned structure years.

6.5.2 Exhibit 4

Exhibit 4A calculates a credibility weighted sinkhole loss and LAE ratio by territory. The projected territorial sinkhole loss ratio is credibility weighted with the group loss ratio. The selected credibility standard is 40,000 risks adjusted for peril frequency as shown in the Statewide Exhibit **55B**. The credibility weighted loss ratio is calculated by

$$[\text{territory credibility}] * [\text{territory loss ratio}] + [1 - \text{territory credibility}] * [\text{group loss ratio}].$$

Exhibit 4B calculates the indicated rate change for each territory. Column (2) is the projected sinkhole loss ratio from **Exhibit 4A**. Column (5) is calculated by

$$([\text{Loss \& LAE Ratio}] + [\text{Fix Expense}]) \,/\, (1 - [\text{Variable Expense }]) - 1 = ((2) + (3)) \,/\, (1 - (4)) - 1.$$

Column (7) off-balances the results from column (5) so that the overall change is 0%. Column (8) is column (7) multiplied by the overall statewide indication.

Exhibit 4C displays the current and indicated average sinkhole premium for each territory.

6.6 Water Indications

6.6.1 Exhibit 5

Exhibit 5A WA shows the historical actual all other incurred loss and ALAE for each territory for accident years ending 06/30/2017 through 06/30/2021, evaluated as of 09/30/2021.

Exhibit 5B WA through **Exhibit 5F WA** shows the historical losses from **Exhibit 5A WA** being developed, trended and loaded for ULAE. The development and trend factors come from **Appendix 8 WA LDF** and **Appendix 8 WA Trend**. The Water ULAE ratio is developed using information for the Water RIF. Details of the ULAE calculation is footnoted on the exhibit.

Exhibit 5G WA and **Exhibit 5H WA** show the on-leveled and projected water earned premium by territory, respectively.

Exhibit 5I WA shows the water historical earned structure years.

6.6.2 Exhibit 6

Exhibit 6A WA calculates credibility weighted water loss and LAE ratio by territory. The 5 Year Water Loss + LAE Ratio creates the Loss Ratio Relativity using the statewide Loss + LAE Ratio as the base. As discussed in the above section on Complement of Credibility, the complement for the Loss Ratio Relativity is based on regional results. Refer to section 6.1.3 for the Relativity Applied to the Complement of Credibility for each territory determined by region assigned. The territorial loss ratios are balanced back to the statewide loss ratio.

Exhibit 6B WA calculates an indicated Water RIF rate change for each territory. The overall statewide indication from the Water RIF is allocated to territory based on the loss ratios from **Exhibit 6A WA**.

6.7 All Other Indications

6.7.1 Exhibit 5

Exhibit 5A AO shows the historical actual all other incurred loss and ALAE for each territory for accident years ending 06/30/2017 through 06/30/2021, evaluated as of 09/30/2021.

Exhibit 5B AO through **Exhibit 5F AO** shows the historical losses from **Exhibit 5A AO** being developed, trended and loaded for ULAE. The development and trend factors come straight from the statewide All Other RIF. The All Other ULAE ratio is developed come from **Appendix 8 AOP LDF** and **Appendix 8 AOP XWA Trend**. Details of the ULAE calculation is footnoted on the exhibit.

Exhibit 5G AO and **Exhibit 5H AO** show the on-leveled and projected all other excluding water earned premium by territory, respectively.

Exhibit 5I AO shows the all other excluding water historical earned structure years.

6.7.2 Exhibit 6

Exhibit 6A AO calculates credibility weighted all other loss and LAE ratio by territory. The 5 Year All Other Loss + LAE Ratio creates the Loss Ratio Relativity using the statewide Loss + LAE Ratio as the base. As discussed in the above section on Complement of Credibility, the complement for the Loss Ratio Relativity is based on regional results. Refer to section 6.1.4 for the Relativity Applied to the Complement of Credibility for each territory determined by region assigned. The territorial loss ratios are balanced back to the statewide loss ratio.

Exhibit 6B AO calculates an indicated All Other RIF rate change for each territory. The overall statewide indication from the All Other RIF is allocated to territory based on the loss ratios from **Exhibit 6A AO**.

6.8 Combined Territorial Indications

6.8.1 Exhibit 7

Exhibit 7 includes the wind indication based on the AIR, FPM, RMS, and RQE models in columns (5) through (8), respectively. Column (9) provides the centermost wind indication of columns (5) through (8). This is what we have selected for the territory indicated change in the past. However, this year we made as selection that considers the percentile of the selected statewide indication. Column (10) shows the final selected wind indication by territory set equal to the selected percentile of values in columns (5) through (8). This results in a Total wind indication in column (10) that is much closer to the selected statewide indication. Columns (11) through (13) provide the indicated rate changes for Sinkhole, Water, and All Other. This exhibit is a summary of exhibits 1 through 6, showing the uncapped indication for each peril.

6.8.2 Exhibit 8

This exhibit displays the selected changes to each territory by peril. Column (5) displays the indication by territory based on the selected percentile of model values from **Exhibit 7**, column (10). As explained in the Filing Overview, this is the basis of allocating the selected statewide Wind indication to territory. Note that the Overall Selected Statewide indications are displayed above column (5).

Columns (6), (7) & (8) are the uncapped indications for the sinkhole, water, and AOP perils by territory, respectively. Columns (9) through (12) display the selected uncapped indications by territory.

To determine the capped premium impact for the non-sinkhole perils, first all of the in-force policies are individually re-rated with the new indicated uncapped base rates. Then policy level capping is applied which sets all non-sinkhole rate changes to 11.0%. The results of this are displayed in **Exhibit 9A** and **Exhibit 9B**.

Since sinkhole rates are not subject to the cap, all sinkhole rate changes can be controlled within the base rate. There is no need to re-rate policies to determine the sinkhole premium impact. Additionally, as described above, with this proposal, we are recommending a 0% rate change for all territories for sinkhole. This is displayed in column (10).

All territory data in this exhibit follows the "grouping" based on the indication. Specifically, for a PRM policy in the Coastal account, the wind portion of this policy is included in a wind-only territory while the non-wind portion of the policy is included in the appropriate PLA territory. As explained in the Filing Overview, this is done to establish identical wind rates (subject to the glide-path limitations) for the multi-peril and wind-only products in the same Coastal territory.

To measure actual premium impacts in a territory, the re-rated capped policies are regrouped such that data from a policy is included in the same territory. Specifically, for a multi-peril policy in the Coastal account, all premium, wind and otherwise, is assigned to the Coastal territory where that policy resides. No portion of that policy premium is included in the PLA territory. This regrouping is the displayed in **Exhibit 9A** and **Exhibit 9B**. This grouping is in alignment with the RCS forms.

6.8.3 Exhibit 9A

Exhibit 8 displays the selected rate change, by peril, for wind-only and multi-peril policies combined. **Exhibit 9A** pertains to multi-peril policies only. All of the multi-peril policies are re-rated with the indicated rate changes from **Exhibit 8** and total average premium change is set to 11.0%.

The indicated changes for each peril (columns (6), (8), (10), and (12)) are the resulting premium changes if no policy level capping is applied to the selected indications from Exhibit 8. The average premium change for each peril (columns (7), (9), (11), and (13)) are the premium impacts after the

application of the 11% capping. The all peril combined indication and all peril combined average premium change are listed in columns (14) and (15), respectively. All of these changes exclude the FHCF Buildup. Columns (16) & (17) display the current and proposed FHCF Buildup premium. And column (18) is the proposed capped premium change including the FHCF Buildup.

6.8.4 Exhibit 9B

This exhibit is identical to Exhibit 9A except that it pertains to wind-only and not multi-peril policies.

The indicated changes for wind peril (column (2)) is the resulting premium change if no capping is applied to the selected indications from Exhibit 8. The average premium change for wind (columns (3)) is the premium impact after the total average premium change is set to 11.0%. All of these changes exclude the FHCF Buildup. Columns (4) & (5) display the current and proposed FHCF Buildup premium. And column (6) is the capped premium change including the FHCF Buildup.

7 Support for Hurricane Credibility Approach

We have included with the 2019 rate indication an approach to the credibility adjustment to the hurricane loss model results for personal lines (HO-3/HW-2, HO-4/HW-4, HO-6/HW-6, DP-3/DW-2, DP-1, MHO-3/MW-2 and MDP-1/MD-2) as provided last year. ASOP 25 broadly defines credibility as "A measure of the predictive value in a given application that the actuary attaches to a particular body of data (predictive is used here in the statistical sense, and not in the sense of predicting the future.)" Longley-Cook refines this definition by noting that "Credibility is meaningful only against a stated or implied background of the purpose for which the data are to be used and a consideration to the value of the prior knowledge available." Practically, credibility theory uses prior information to smooth the effect of historical happenstance in historical losses on a rate indication.

Traditional credibility techniques have not worked well on hazards that occur infrequently with high severity, such as hurricane losses. Instead F.S. 627.062(2)(b) require that Florida rate indications base the provision in rates for the cost of future hurricane losses on a hurricane catastrophe model approved by the Florida Commission on Hurricane Loss Projection Methodology. These models smooth historical data in ways that can be considered analogous to, or special cases of, more traditional actuarial credibility techniques. This is explained in more detail in the attached document, **hurricane_credibility_detailed_ support.pdf**, section 4. Because the hurricane models also smooth the effect of historical happenstance in hurricane losses, they replace traditional credibility techniques in performing this role.

Statutory and practical requirements complicate the use of the hurricane loss models. By statute, Citizens rates cannot exactly include the results of the hurricane loss models. F.S. 627.351(6)(n)5, the "glide path" statute, requires that no individual policyholder's rates increase by more than 10% per year, which can create mismatches where the provision in a policy's premium for the expected costs for hurricane losses does not match that policy's modeled average hurricane losses. Additional mismatches are caused by OIR rule 69O-170.017 which requires Citizens to grant premium discounts for wind mitigation features as set forth in forms OIR-B1-1700 and OIR-B1-1699. These forms are based on the 2007 OIR studies Development of Loss Relativities for Wind Resistive Features of Residential Structures and Development of Loss Relativities for Wind-Resistive Features of Residential Structures of Five or More Units, which in turn are based on the Applied Research Associates (ARA) hurricane loss model. Since the ARA model is not included in the rate indication (and is not licensed by or available to Citizens), this will also create mismatches between individual policies' premiums and modeled average hurricane loss. Finally, it is not practical to calculate every policy's modeled hurricane loss when the policy is written or renewed. Instead, like every other insurance company, Citizens in effect must approximate an individual policy's modeled hurricane loss when calculating that policy's premium. This should have only a very small effect on policies' premiums compared to the effects of the glide path and wind mitigation discounts, and is mentioned mostly for completeness.

These additional statutory requirements have very little effect on the indication in territories where Citizens writes more than a few hundred policies. However, in very small territories, a change in the types of policies written by Citizens can lead to excessive or inadequate rates, as measured by the approved hurricane loss models. Take the 2016 rate indication as an example. Ideally, the provision for hurricane losses would be based on the modeled losses of policies written by Citizens in 2016. Since these are not yet available when the indication is prepared in 2015, the indication follows OIR rules and uses the modeled hurricane losses for policies insured by Citizens on 12/31/2014. In very small territories, where Citizens writes less than about 100 policies, changes in the policies written by Citizens from 2014 to 2016 can amplify the mismatches created by the glide path and wind mitigation discounts, and create rate fluctuations for policyholders. This is not an issue in larger territories.

For territories where Citizens writes less than 100 policies, traditional credibility techniques can be applied to the modeled loss ratio to smooth any possible rate fluctuations. (Nothing needs to be done for larger territories, and we recommend a straightforward use of the modeled hurricane losses.) This allows the indication to be extrapolated to territories with very few policies. This is another traditional use for credibility techniques, but one that is perhaps less emphasized compared

to the smoothing of historical losses.

We examined three methods for the HO-3/HW-2 indication:

1) A classical credibility method: This assumes the sample modeled loss ratios are normally distributed, and find a standard of full credibility that requires the sample mean be within 10

2) A maximum-accuracy hierarchical credibility method: This is explained in more detail in Hurricane Credibility Detailed Report.pdf. It does not assume a normally distributed sample modeled loss ratio. It uses the same method of grouping of territories as last year's indication, which is based on the FHCF territories.

3) A Gaussian-process method: This is explained in more detail in Hurricane Credibility Detailed Report.pdf. It groups territories based on their geographic proximity. All three methods gave similar results. For better consistency with last year's indication, we use method (1), the classical credibility method.

The standards for full credibility are calculated in **class_cred_cal.xlsx**. The process variance is estimated using the well-known unbiased estimator. The formula for the unbiased estimator of process variance is given in equation A.14 of **hurricane_credibility_detailed_report.pdf**. The estimator is calculated for each indication in **Appendix 9D** from the 2016 rate filing. **Appendix 9D** also included a credibility calculation using a hierarchical credibility formula as additional support. The rates are affected only by the estimate of the process variance.

The formula for the credibility standard is:

$$Z = \left\{ \Phi^{-1}\left(1 - \frac{1-0.95}{2}\right) \frac{\sigma}{0.1\mu} \right\}^2.$$

This can be derived as follows:

We assume that $\bar{X}$ is normally distributed with mean μ and variance σ^2/N, where N is exposure in the territory. We want the sample average to be within 10% of the true mean 95% of the time:

$$\Pr\left(\left|\bar{X} - \mu\right| < 0.1\mu\right) = 95\%.$$

This is equivalent to:

$$\begin{aligned}
\Pr\left(\bar{X} - \mu < 0.1\mu\right) &= 1 - \frac{1-0.95}{2} \\
\Pr\left(\frac{\bar{X} - \mu}{\sigma/\sqrt{Z}} < \frac{0.1\mu}{\sigma/\sqrt{Z}}\right) &= 1 - \frac{1-0.95}{2} \\
\Pr\left(N(0,1) < \frac{0.1\mu}{\sigma/\sqrt{Z}}\right) &= 1 - \frac{1-0.95}{2}
\end{aligned}$$

Where $N(0,1)$ is a random variable that follows the standard normal distribution with cumulative distribution function $\Phi(x)$. Then:

$$\begin{aligned}
\Phi^{-1}\left(1 - \frac{1-0.95}{2}\right) &= \frac{0.1\mu}{\sigma/\sqrt{Z}} \\
Z &= \left\{ \Phi^{-1}\left(1 - \frac{1-0.95}{2}\right) \frac{\sigma}{0.1\mu} \right\}^2
\end{aligned}$$

Our calculation is somewhat complicated because we based the credibility standard on premium, and then convert that to a standard based on policy count using the average premium. This can be

considered more appropriate, because it accounts for the reality that policies with larger premiums are more likely to cause rate fluctuations. This is especially important in the DP-3 indication, where tenant and condo policies inappropriately inflate the unweighted estimate of the process variance. It should not have a large impact on the credibility standard for other lines compared to basing the credibility standard only on policy count. In any case, the indication ultimately uses a credibility standard based on the policy count and not the premium.

Typically, the selected credibility standard is the rounded full credibility standard where we did not allow the credibility standard to be below 100 policies. This allows for somewhat larger tail distributions when there are very few policies that is assumed under a normal distribution. Most lines have a credibility standards of 100 policies. There are two main exceptions:

1) The Florida Public Model tends to have larger credibility standards than the other models. This may indicate that it incorporates somewhat different damage functions than the other models.

2) HO-4 and HO-6 have slightly larger standards for full credibility. This reflects the agreement between the HO-4 and HO-6 capped premiums, and hurricane loss models, and not necessarily some inherent property of the HO-4 and HO-6 policy types.

This year's treatment represents an improvement over last year's treatment primarily for two reasons:

1) The credibility standard is based directly on the hurricane model results, instead of derived from the standard used in other perils.

2) Even though a classical credibility method is still used, for HO-3 we have verified that it gives an answer that is very similar to other, more sophisticated models that make fewer assumptions. In particular, we have validated the territorial groups that serve as the compliment of credibility. This is explained in more detail in the supplemental report, **Hurricane Credibility Detailed Report.pdf**, section 5.5.

8 Rate Manual Changes

8.1 Overview of Manual Changes

A "Summary of Changes" document is included with this filing and provides specific details regarding the rating table changes being submitted with this filing. Refer to **PR-M HO Summary of Changes 1-20-2022.docx** and **PR-W HW Summary of Changes 1-20-2022.docx** for more detail.

8.2 Implementation

This filing is submitted as "File and Use" with a requested effective date of August 1, 2022 for both new and renewal business.

9 Additional Information

9.1 HO-8 Policies

Effective early in 2013, Citizens introduced an HO-8 policy form for the first time. The HO-8 rates are calculated by applying factor to the current HO-3 rates (see filing 12-17919).

As of 06/30/2021, Citizens had 5,371 HO-8 policies in-force. The amount of total earned premium from inception of the policy, from 04/01/2013 to 06/30/2021, is around $23M. Given the lack of HO-8 experience, we did not evaluate the HO-8 rates based upon its own experience. With this filing, it is proposed that established HO-8 to HO-3 relativities remain unchanged. Any approved HO-3 rate change will flow through to the HO-8.

As with last year's rate filing we will provide new business capping factors for HO-8 instead of relying on the factors for HO-3 due to the recent activity of the water peril for HO-3. Since HO-8 policies lack sufficient volume, we replicate existing HO-3 policies in the data set treating them as an HO-8 policy with their glide-path beginning when HO-8 was introduced in 2013 instead of 2010.

List of Figures

List of Tables

References

Styrsky, C. J. 2005. "The Effect of Changing Exposure Levels on Calendar Year Loss Trends." *Casualty Actuarial Society Forum: Winter*, 125–51.