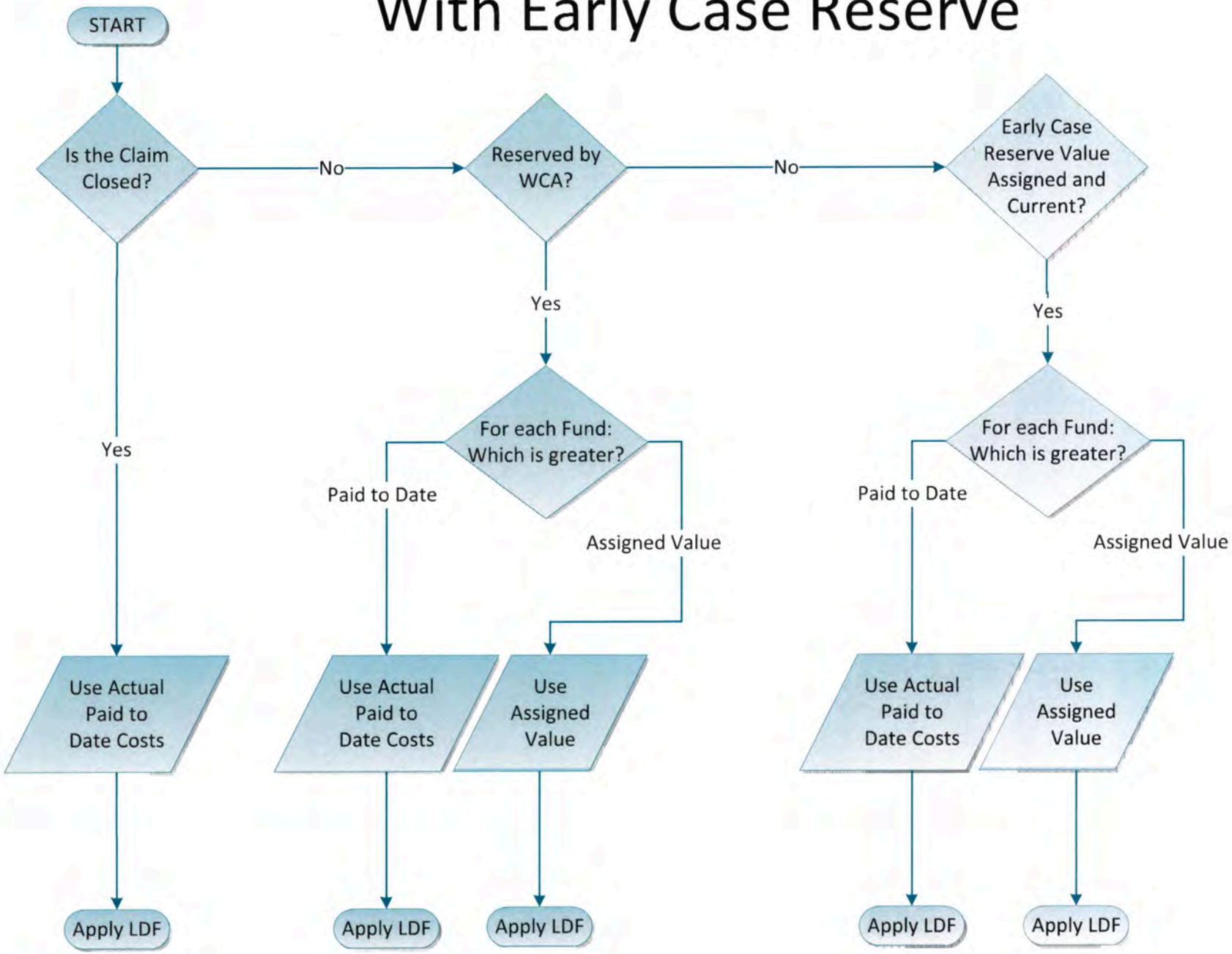
With Early Case Reserve



Washington State Department of
Labor & Industries

Issue Brief

Issue: Impact of Early Case Reserves at Adjustment

Date: **August 15, 2016**

Summary

In an effort to increase the department's ability to predict long term claim costs and department liabilities, Henry Cheng (Actuarial Services) has developed a predictive model that is designed to place early case reserve (ECR) values on all State Fund claims for the first nine months of a claim's life span. This form of predictive modeling is common among insurance companies and was designed to help bring the department into alignment with current industry standards.

Prior to implementation of the predictive model, questions were raised as to how the ECR values would impact adjustment results for participants within the Retrospective Rating program. In order to understand the impacts of using the ECR values, a parallel adjustment report was run on the most recent adjustment for July participants. It is important to note that the July coverage period represents the largest number of participants as well as the most diverse industries within Retro; therefore, it was felt that running the parallel adjustment on this particular subset of participants would allow for a comprehensive review of the ECR impacts.

Upon review, it was determined that the use of ECR values had a nominal impact on the overall results for the first adjustment of the July 2014 coverage period and that the impacts were in alignment with department expectations and support the intent of the ECR model. Based on these results, we feel confident in recommending the department move forward with the implementation of the ECR predictive model.

Background – Parallel Adjustment Process

In order to understand the impacts of using the ECR model in the adjustment process, Nichole Runnels in Actuarial Services, partnered with contractor Rebecca Eaton, in Information Services, to run a "parallel adjustment report" which was processed simultaneously with the actual July adjustment.

Running the parallel adjustment report provided the department with the opportunity to understand the impacts of the ECR values on the most critical elements within the adjustment process. Those elements include the:

1) Loss ratio[1] percentage difference between Retro and Non-Retro;
2) Overall target refund/performance adjusted refund (PAR) percentage and amount as well as July's portion of the target refund/PAR;
3) Performance Adjustment Factor (PAF) and loss development factors (LDFs); and,

[1]Loss ratio is defined as case incurred losses divided by standard premium.

4) Individualized loss performance for all July participants.

Once these elements were calculated under both the standard adjustment model as well as the ECR predictive model, we were able to then determine the extent to which the ECR values impacted the parallel adjustment results.

When processing the parallel adjustment, the following constraints were factored into the process:

1) For those claims with a date of injury that fell within the nine month predictive model, which were open and had not yet received an actual case reserve, an ECR value was used in place of an actuarial average value.

2) All claims with a date of injury older than nine months, which were open and had not yet received an actual case reserve, *retained* the last known ECR value from the predictive model.

3) Only one of the four quarters used to calculate the percent difference in loss ratios between Retro and Non-Retro contained ECR values.

Impacts of ECR Values on the First Adjustment of July 2014

Upon review, it was determined that the use of ECR values had an inconsequential impact on the overall adjustment results for the first adjustment of the July 2014 coverage period. This determination was based on the following:

- Impact on July's loss ratio: Increase of 3% (*exhibit 1*)
- Impact on overall target refund/PAR: Decrease of 0.9% or $1.5M (*exhibit 2*)
- Impact on July's portion of the target refund: Decrease of 2.4% or $3.2M (*exhibit 2*)
- Impact on PAF and LDFs: Decrease in PAF by 1% and reduction in LDFs (*exhibits 2 and 3)*

In addition to having an inconsequential impact on the overall adjustment results, the ECR values had a <u>nominal impact</u> on the distribution of refunds among participants as well.

- Group performance: Decline in refund of $2.9M or 2%, from $135.8M to $132.9M (*attachment 1*)
  - 14 of the 28 groups had an increase in refund ($1.5M)
  - 10 groups had a decrease in refund (-$4.4M)
  - 4 groups were not impacted
  - The Automotive, Agriculture, Grocery, Manufacturing and Healthcare industries all saw an increase in refunds while Transportation, Government, Construction, and Retail saw an overall decrease in refunds (*attachment 2*).

- Individual performance: Decline in refund of $300K or 0.9%, from $3.5M to $3.2M (*attachment 1)*
  - 28 of the 64 individuals had an increase in refund ($351K)
  - 4 individuals had a decrease in refund (-$626K)
  - 32 individuals were not impacted

- Number of claims impacted by ECR: 545 or 2% of all claims (*exhibit 4)*.
  - Out of 25,026 total claims adjusted, only 545 claims received an ECR value. This is an overall increase as compared to the number of claims which received an actuarial average value under the regular adjustment model.
  - Of the 545 ECR claims, 495 were distributed among the groups and 50 were distributed among individual participants.
  - Construction, Manufacturing, and Agriculture had the majority of ECR claims (381 of the 495, or 77%) with 223, 87, and 71 claims respectively

It is important to note these impacts are based on actual performance and does not take into account any change in behavior or management of claims that may come as a result of implementing the ECR values.

Impact Summary

As previously stated, the intent of the predictive model is to more accurately forecast ultimate claim costs and liabilities for the department. With this goal in mind, based on the timing of the adjustment cycles, Retro participants would expect to see:

- A greater number of ECR claims at first adjustment, with a reduction in ECR claims by the time of the second and third adjustments.
  - This would follow the current trend we see regarding the use of actuarial averages.

- A "smoothing affect" across the three adjustments for one coverage period.
  - Our participants are currently experiencing increased returns at first adjustment but decreased returns, and even assessments, at second and third. This volatility is due to less than adequate pricing and classifying of open claims at first adjustment.
  - By increasing the accuracy of predicting claim types and values at the time of first adjustment, the costs would be more reflective of those that would be captured at second and third adjustment.
  - This increased accuracy would create a small overall decrease in the amount of refunds collected at first adjustment; however, would generate less volatile returns at the time of the second and third adjustments.

- Increased fairness in the distribution and collection of Retro premiums.
  - Those participants with a greater number of open claims at first adjustment will receive claim values that will be more in line with the ultimate costs of the claim.

While we do not have data to quantify the impacts of the ECR values on second and third adjustments, the impacts on the first adjustment of the July 2014 coverage period, as described in "Impacts of ECR Values on the First Adjustment of July 2014" section above, are in alignment with the department's expectations and support the intent behind the ECR model.

Education and Outreach

Below is a list of outreach activities that have already taken place as well as a list of activities that will be taking place in the near future.

To date, the Retro program has:

- Shared preliminary ECR data with the Data Workgroup, which is comprised of Retro groups as well as Third Party Administrators.
  - The data was based on parallel Monthly and Quarterly reports. The workgroup members received the following reports for their own Retro groups:
  - The workgroup also had a meeting with Bill Vasek and Henry Cheng to better understand the predictive model.

- Discussed the predictive model with the Retro Advisory Committee (RAC).
  - At the February 2016 RAC meeting:
    - Concerns were raised by the Community with regards to implementing the predictive model. Their concerns were centered on their feelings of not having enough data to fully understand the impacts of the usage of ECR values.
    - In order to address the Community's concerns the department committed to running the parallel adjustment report for July participants.

Next steps for education and outreach include:

- Effective September, the department is committed to releasing:
  - Parallel Monthly, Quarterly, and Adjustment reports

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Washington State Department of Labor & Industries

Issue Brief - Exhibit Document

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Exhibits

Exhibit 1 – July 2014 Loss Ratio Calculation:

	Retro	ECR - Retro	% Difference	Non-Retro	ECR Non-Retro	% Difference
Case Incurred Losses	$ 143,907,058	$ 148,364,173	3.00%	$ 394,022,507	$ 404,899,728	3%
Standard Premium	$ 556,803,307	$ 556,803,307		$ 1,172,191,923	$ 1,172,191,923	
Loss Ratio	25.85%	26.65%	3.00%	33.61%	34.54%	3%

	Retro to Non Retro Comparison		ECR Retro to Non Retro Comparison	% Difference
% Difference between Loss Ratios	23.11%		22.86%	-1%

- Impact on July's loss ratio: Increase of 3%
- Impact on July's loss ratio percent difference between Retro and Non-Retro: Decrease of 1%
- Only one of the four quarters used to calculate the loss ratio information contained ECR values.

Exhibit 2 – July 2014 PAF Calculation:

	Enrollment Period	Current Refund	ECR Refund	% Difference
Quarter 1	10/1/2013	$4,613,418	$5,065,510	9.8%
Quarter 2	1/1/2014	$23,901,141	$25,283,622	5.8%
Quarter 3	4/1/2014	$987,053	$837,107	-15.2%
Quarter 4	7/1/2014	$139,324,459	$136,093,294	-2.3%
Performance Adjusted Refund		$168,826,071	$167,279,533	-0.9%
Performance Adjusted Refund %		21.04%	20.85%	-0.9%
Performance Factor		0.9437	0.9340	-1.0%

- Impact on overall target refund/performance adjusted refund (PAR): Decrease of 0.9% or $1.5M
- Impact on July's portion of the target refund/PAR: Decrease of 2.3% or $3.2M
- Impact on the Performance Adjustment Factor: Reduced by 1%, dropping from 0.9437 to 0.9340

Exhibit 3 – July 2014 1st Adjustment Loss Development Factors (LDFs):

July 2014 - 1st Adjustment			
Regular or ECR	**Regular**	**ECR**	**Difference**
Fatalities Ind LDF	1.0000	1.0000	0%
Fatalities MA LDF	1.0000	1.0000	0%
TPD Ind LDF	1.0000	1.0000	0%
TPD MA LDF	1.3006	1.2605	-3%
SS LIF Ind LDF	1.0000	1.0000	0%
SS LIF MA LDF	1.3006	1.2605	-3%
SS MON Ind LDF	1.0000	1.0000	0%
SS MON MA LDF	1.7057	1.6531	-3%
SS ONE Ind LDF	1.0000	1.0000	0%
SS ONE MA LDF	1.7057	1.6531	-3%
PPD Ind LDF	3.0095	2.8872	-4%
PPD MA LDF	1.7057	1.6531	-3%
TL Ind LDF	4.5000	4.5000	0%
TL MA LDF	1.8168	1.7608	-3%
Misc Ind LDF	8.0000	8.0000	0%
Misc MA LDF	2.2457	2.1766	-3%
MA Only LDF	1.5860	1.5372	-3%
PAF	0.9437	0.9340	-1%

- Decrease in LDFs for PPD, the medical aid portions of TL and MISC, and the MA only claim type factors

Exhibit 4 – Number of ECR claims by Industry Category:

Industry Category	Total Claim Count	Total Open Claim Count	# of Actuarial Averages (current state)	# of ECR Claims (future state)
3 - Construction	8,706	669	45	223
11 - Manufacturing	5,040	317	39	87
1 - Agriculture	3,769	217	18	71
9 - Healthcare	2,403	100	11	31
14 - Transportation	1,143	108	8	31
8 - Grocery	1,098	61	9	22
12 - Retail	698	45	3	18
7 - Government	174	27	1	7
2 - Automotive	185	17	1	5
Individuals	1,810	165	15	50
Grand Total	**25,026**	**1,726**	**150**	**545**

- Construction, Manufacturing, and Agriculture had the majority of ECR claims

WA State Department of Labor and Industries

Attachment 1

Retrospective Rating Program

Refund/Assessment Summary - ECR compared to Actual Adjustment

Enrollment Beginning:

7/1/2014

First Evaluation

Actual PAF:	0.9437
ECR PAF:	0.9340

	Association Name	Standard Premium	Developed Losses	Standard Loss Ratio	Plan	Hazard Group	Size Group	Single Loss Limit	Max Loss Ratio	Min Loss Ratio	Net Insurance Charge%	Policy Admin Expense	Incurred Loss & Expense	Net Insurance Charge	Retrospective Premium Indicated	Actual Cumulative Refund	ECR Cumulative Refund	Actual Ratio Refunded	ECR Ratio Refunded
	Subtotal - 37 Firms with Refunds	21,557,561	10,470,241	49%								1,034,489	11,464,259	3,817,297	16,316,045	5,363,841	5,241,516	20%	24%
	Subtotal - 27 Firms with Assessments	18,371,579	13,659,128	74%								881,836	11,812,765	7,685,057	20,379,658	(1,692,011)	(2,008,079)	-13%	-11%
	Subtotal - 64 Individual Firms	39,929,140	24,129,369	60%								1,916,325	23,277,024	11,502,354	36,695,703	3,671,830	3,233,437	9%	8%
	Average Firm Size	**623,893**																	
11 - Manufacutring	ARCHBRIGHT	44,986,573	26,927,471	60%	L	5	74	500k	130.0%	0.0%	4.5%	2,159,356	28,812,394	1,293,676	32,265,426	12,721,684	12,721,147	28%	28%
3 - Construction	ABC - IPC	4,460,094	1,895,685	43%	L	8	70	500k	97.0%	30.0%	20.6%	214,085	2,028,383	418,658	2,661,126	2,157,191	1,798,968	48%	40%
3 - Construction	ASSOC BUILDERS AND CONTRACTORS	19,840,305	6,530,103	33%	L	8	73	120K	71.9%	25.0%	75.8%	952,335	6,987,210	5,299,100	13,238,645	6,599,849	6,601,660	33%	33%
3 - Construction	ASSOCIATED GENERAL CONTRACTORS	53,992,794	26,729,860	50%	L	8	74	500k	86.5%	20.0%	23.9%	2,591,654	28,600,950	6,821,327	38,013,931	16,703,104	15,978,863	31%	30%
11 - Manufacutring	ASSOCIATED INDUSTRIES OF THE	6,053,812	4,554,480	75%	L	5	71	500k	95.8%	50.0%	13.8%	290,583	4,873,294	673,489	5,837,366	24,711	216,446	0%	4%
3 - Construction	BUILDING INDUSTRY ASSN OF WA	65,006,137	31,300,558	48%	L	8	74	500k	125.0%	0.0%	9.6%	3,120,295	33,491,597	3,208,495	39,820,387	25,335,533	25,185,750	39%	39%
11 - Manufacutring	GREATER VANCOUVER CHAMBER	2,807,277	1,560,400	56%	L	5	69	500k	72.1%	0.0%	39.0%	134,749	1,669,628	650,320	2,454,697	337,841	352,580	12%	13%
9 - Healthcare	LEADINGAGE WASHINGTON	9,783,762	5,650,402	58%	L	2	72	500k	85.5%	0.0%	20.8%	469,621	6,045,930	1,257,553	7,773,104	1,996,030	2,010,658	20%	21%
3 - Construction	MASTER BUILDERS ASSOCIATION	43,266,451	20,703,706	48%	L	8	74	500k	115.0%	35.0%	11.1%	2,076,790	22,152,965	2,456,764	26,686,519	17,129,808	16,579,932	40%	38%
7 - Government	NW DISTRICT COUNCIL OF	1,021,445	413,942	41%	L	2	63	250K	74.0%	0.0%	43.4%	49,029	442,918	192,182	684,129	324,266	337,316	32%	33%
14 - Transportation	PACIFIC INLAND TARIFF BUREAU	25,735,313	17,988,347	70%	L	7	73	500k	115.0%	25.0%	9.0%	1,235,295	19,247,531	1,730,353	22,213,179	4,202,347	3,522,134	16%	14%
3 - Construction	SMART 'A' TEAM	45,117,396	23,171,997	51%	L	8	74	500k	130.0%	0.0%	8.8%	2,165,635	24,794,037	2,189,313	29,148,985	16,572,746	15,968,411	37%	35%
3 - Construction	SMART DREAM TEAM	27,905,389	12,249,133	44%	L	8	73	500k	130.0%	0.0%	9.1%	1,339,459	13,106,572	1,191,387	15,637,418	13,053,572	12,267,971	47%	44%
3 - Construction	SOUTHWEST WASHINGTON	1,898,074	345,062	18%	L	8	67	120K	43.8%	0.0%	133.8%	91,108	369,216	493,826	954,150	915,282	943,924	48%	50%
7 - Government	STATE OF WASHINGTON (DES)	3,608,047	2,316,283	64%	L	3	70	500k	80.0%	50.0%	24.8%	173,186	2,478,423	613,410	3,265,019	553,928	343,028	15%	10%
3 - Construction	TRI CITY CONSTRUCTION COUNCIL	5,861,568	2,518,817	43%	L	8	71	500k	84.2%	0.0%	28.7%	281,355	2,695,134	772,964	3,749,453	1,985,418	2,112,115	34%	36%
11 - Manufacutring	VIGILANT	25,648,824	17,962,459	70%	L	6	73	500k	100.0%	0.0%	12.7%	1,231,144	19,219,831	2,446,684	22,897,659	2,463,127	2,751,165	10%	11%
8 - Grocery	WA ASSN OF NEIGHBORHOOD STORES	706,027	809,623	115%	P	5	59	250K	93.9%	60.0%	14.7%	33,889	709,367	103,927	847,183	(135,305)	(135,305)	-19%	-19%
7 - Government	WA ASSN OF SEWER & WATER DIST	842,575	204,393	24%	L	5	61	250K	48.2%	0.0%	104.6%	40,444	218,701	228,718	487,863	339,602	354,712	40%	42%
9 - Healthcare	WA BIOTECH & BIOMEDICAL ASSN	2,330,230	1,302,316	56%	L	4	68	120K	80.0%	35.0%	46.3%	111,851	1,393,478	644,623	2,149,952	464,164	180,278	20%	8%
9 - Healthcare	WA HEALTH CARE ASSN - WHCA	23,444,558	13,020,399	56%	L	2	73	250K	95.3%	30.0%	17.9%	1,125,339	13,931,827	2,493,797	17,550,963	5,497,739	5,893,595	23%	25%
11 - Manufacutring	WA MANUFACTURERS COUNCIL	10,838,995	6,546,947	60%	L	4	72	500k	160.0%	40.0%	2.0%	520,272	7,005,233	140,105	7,665,610	3,095,812	3,173,385	29%	29%
12 - Retail	WA RETAIL ASSN	10,936,373	8,000,973	73%	L	3	72	500k	90.0%	50.0%	15.8%	524,946	8,561,041	1,354,357	10,440,344	510,927	496,029	5%	5%
2 - Automotive	WA RETAIL ASSN - AUTOMOTIVE	3,355,653	2,339,275	70%	L	6	69	500k	87.0%	60.0%	17.4%	161,071	2,503,024	435,776	3,099,871	213,824	255,782	6%	8%
14 - Transportation	WA TRUCKING ASSOCIATION	8,888,022	6,717,887	76%	L	7	72	500k	69.5%	50.0%	37.1%	426,625	6,609,578	2,450,832	9,487,035	(599,013)	(599,013)	-7%	-7%
11 - Manufacutring	WASHINGTON AGGREGATES &	2,676,826	1,596,769	60%	L	7	68	120K	71.0%	30.0%	67.2%	128,488	1,708,543	1,148,141	2,985,172	(258,378)	(308,346)	-10%	-12%
8 - Grocery	WASHINGTON FOOD INDUSTRY	14,520,959	8,930,847	62%	L	3	73	250K	97.2%	32.5%	18.0%	697,006	9,556,006	1,719,125	11,972,137	2,421,474	2,548,822	17%	18%
1 - Agriculture	WASHINGTON STATE FARM BUREAU	50,762,442	41,204,330	81%	L	4	74	500k	107.7%	55.0%	6.6%	2,436,597	44,088,633	2,923,076	49,448,306	1,194,926	1,314,136	2%	3%
	Subtotal - Associations	**$516,295,921**	**$293,492,464**	**57%**								**$24,782,207**	**$313,301,444**	**$45,351,978**	**$383,435,629**	**$135,822,209**	**$132,866,143**	**26%**	**26%**
	Total Enrollment	**$556,225,061**	**$317,621,833**	**57%**								**$26,698,532**	**$336,578,468**	**$56,854,332**	**$420,131,332**	**$139,494,039**	**$136,099,580**	**25%**	**24%**

July 2014 1st Adjustment Results Comparison - By % Difference

Industry Cateogry Description	Association Name	# of ECR Claims	Standard Premium	Actual Developed Losses	ECR Developed Losses	% Difference	Actual Standard Loss Ratio	ECR Standard Loss Ratio	Actual Cumulative Refund	ECR Cumulative Refund	% Difference	Actual Ratio Refunded	ECR Ratio Refunded
9 - Healthcare	WA BIOTECH & BIOMEDICAL ASSN	4	2,330,230	1,120,917	1,302,316	16.18%	48.10%	55.89%	464,164	180,278	-61.16%	19.91%	7.74%
7 - Government	STATE OF WASHINGTON (DES)	6	3,608,047	2,158,285	2,316,283	7.32%	59.81%	64.20%	553,928	343,028	-38.07%	15.35%	9.51%
11 - Manufacturing	WASHINGTON AGGREGATES &*	2	2,676,826	1,568,839	1,596,769	1.78%	58.60%	59.65%	(258,378)	(308,346)	19.34%	-9.65%	-11.52%
3 - Construction	ABC – Inland Pacific Chapter	9	4,460,094	1,618,175	1,895,685	17.15%	36.28%	42.50%	2,157,191	1,798,968	-16.61%	48.36%	40.33%
14 - Transportation	PACIFIC INLAND TARIFF BUREAU	28	25,735,313	17,405,070	17,988,347	3.35%	67.63%	69.90%	4,202,347	3,522,134	-16.19%	16.32%	13.69%
3 - Construction	SMART DREAM TEAM	36	27,905,389	11,576,104	12,249,133	5.81%	41.48%	43.90%	13,053,572	12,267,971	-6.02%	46.77%	43.96%
3 - Construction	ASSOCIATED GENERAL CONTRACTORS	39	53,992,794	26,183,344	26,729,860	2.09%	48.49%	49.51%	16,703,104	15,978,863	-4.34%	30.93%	29.59%
3 - Construction	SMART 'A' TEAM	36	45,117,396	22,653,023	23,171,997	2.29%	50.20%	51.36%	16,572,746	15,968,411	-3.65%	36.73%	35.39%
3 - Construction	MASTER BUILDERS ASSOCIATION	39	43,266,451	20,241,106	20,703,706	2.29%	46.78%	47.85%	17,129,808	16,579,932	-3.21%	39.59%	38.32%
12 - Retail	WA RETAIL ASSN	18	10,936,373	7,988,951	8,000,973	0.15%	73.04%	73.16%	510,927	496,029	-2.92%	4.67%	4.54%
3 - Construction	BUILDING INDUSTRY ASSN OF WA	52	65,006,137	31,172,812	31,300,558	0.41%	47.95%	48.15%	25,335,533	25,185,750	-0.59%	38.97%	38.74%
11 - Manufacturing	WASHINGTON EMPLOYERS INC.	44	44,986,573	26,926,991	26,927,471	0.00%	59.85%	59.86%	12,721,684	12,721,147	0.00%	28.27%	28.28%
8 - Grocery	WA ASSN OF NEIGHBORHOOD STORES*	0	706,027	832,994	809,623	-2.81%	117.98%	114.67%	(135,305)	(135,305)	0.00%	-19.16%	-19.16%
14 - Transportation	WA TRUCKING ASSOCIATION	3	8,888,022	6,934,591	6,717,887	-3.12%	78.02%	75.58%	(599,013)	(599,013)	0.00%	-6.73%	-6.74%
3 - Construction	ASSOC BUILDERS AND CONTRACTORS	11	19,840,305	6,531,065	6,530,103	-0.01%	32.91%	32.91%	6,599,849	6,601,660	0.03%	33.26%	33.27%
9 - Healthcare	LEADINGAGE WASHINGTON	10	9,783,762	5,661,719	5,650,402	-0.20%	57.86%	57.75%	1,996,030	2,010,658	0.73%	20.40%	20.55%
11 - Manufacturing	WA MANUFACTURERS COUNCIL	12	10,838,995	6,618,023	6,546,947	-1.07%	61.05%	60.40%	3,095,812	3,173,385	2.51%	28.56%	29.28%
3 - Construction	SOUTHWEST WASHINGTON	0	1,898,074	356,513	345,062	-3.21%	18.78%	18.18%	915,282	943,924	3.13%	48.22%	49.73%
7 - Government	NW DISTRICT COUNCIL OF	1	1,021,445	422,448	413,942	-2.01%	41.35%	40.53%	324,266	337,316	4.02%	31.74%	33.02%
11 - Manufacturing	GREATER VANCOUVER CHAMBER	4	2,807,277	1,570,313	1,560,400	-0.63%	55.93%	55.58%	337,841	352,580	4.36%	12.03%	12.56%
7 - Government	WA ASSN OF SEWER & WATER DIST	0	842,575	211,296	204,393	-3.27%	25.07%	24.26%	339,602	354,712	4.45%	40.30%	42.10%
8 - Grocery	WASHINGTON FOOD INDUSTRY	22	14,520,959	9,031,717	8,930,847	-1.12%	62.19%	61.50%	2,421,474	2,548,822	5.26%	16.67%	17.55%
3 - Construction	TRI CITY CONSTRUCTION COUNCIL	1	5,861,568	2,610,835	2,518,817	-3.52%	44.54%	42.97%	1,985,418	2,112,115	6.38%	33.87%	36.03%
9 - Healthcare	WA HEALTH CARE ASSN - WHCA	17	23,444,558	13,334,190	13,020,399	-2.35%	56.87%	55.54%	5,497,739	5,893,595	7.20%	23.44%	25.14%
1 - Agriculture	WASHINGTON STATE FARM BUREAU	71	50,762,442	41,308,813	41,204,330	-0.25%	81.37%	81.17%	1,194,926	1,314,136	9.98%	2.35%	2.59%
11 - Manufacturing	VIGILANT	23	25,648,824	18,201,254	17,962,459	-1.31%	70.96%	70.03%	2,463,127	2,751,165	11.69%	9.60%	10.73%
2 - Automotive	WA RETAIL ASSN - AUTOMOTIVE	5	3,355,653	2,372,673	2,339,275	-1.41%	70.70%	69.71%	213,824	255,782	19.62%	6.37%	7.62%
11 - Manufacturing	ASSOCIATED INDUSTRIES OF THE*	2	6,053,812	4,711,914	4,554,480	-3.34%	77.83%	75.23%	24,711	216,446	775.91%	0.40%	3.58%
	Totals	**495**	**516,295,921**	**291,323,975**	**293,492,464**	**0.74%**	**56.43%**	**56.85%**	**135,822,209**	**132,866,143**	**-2.18%**	**26.31%**	**25.73%**

*Did not re-enroll for the 2016 coverage year

Attachment 2

Industry Cateogry Comparison - Actual Adjustment Model vs ECR Model												
Industry Cateogry Description and # of Groups	# of ECR Claims	Standard Premium	Actual Developed Losses	ECR Developed Losses	% Difference	Actual Standard Loss Ratio	ECR Standard Loss Ratio	Actual Cumulative Refund	ECR Cumulative Refund	% Difference	Actual Ratio Refunded	ECR Ratio Refunded
Transportation - 2	31	34,623,335	24,339,661	24,706,234	2%	70%	71%	3,603,334	2,923,121	-19%	10%	8%
Government - 3	7	5,472,067	2,792,029	2,934,618	5%	51%	54%	1,217,796	1,035,056	-15%	22%	19%
Construction - 9	223	267,348,208	122,942,977	125,444,921	2%	46%	47%	100,452,503	97,437,594	-3%	38%	36%
Retail - 1	18	10,936,373	7,988,951	8,000,973	0%	73%	73%	510,927	496,029	-3%	5%	5%
Healthcare - 3	31	35,558,550	20,116,826	19,973,117	-1%	57%	56%	7,957,933	8,084,531	2%	22%	23%
Manufacturing - 6	87	93,012,307	59,597,334	59,148,526	-1%	64%	64%	18,384,797	18,906,377	3%	20%	20%
Grocery - 2	22	15,226,986	9,864,711	9,740,470	-1%	65%	64%	2,286,169	2,413,517	6%	15%	16%
Agriculture - 1	71	50,762,442	41,308,813	41,204,330	0%	81%	81%	1,194,926	1,314,136	10%	2%	3%
Automotive - 1	5	3,355,653	2,372,673	2,339,275	-1%	71%	70%	213,824	255,782	20%	6%	8%
Totals	**495**	**516,295,921**	**291,323,975**	**293,492,464**	**1%**	**56%**	**57%**	**135,822,209**	**132,866,143**	**-2%**	**26%**	**26%**

Attachment 3

Early Case Reserve Claim Value Comparison

July Adjustment Report

Below you will find three claims which were adjusted during the first adjustment of the July 2014 coverage period. These three claims demonstrate the difference between values used under the actual adjustment compared to those values which were captured under the parallel adjustment report using the early case reserve (ECR) values.

Example Claims

Adjustment Type	Claim Type	Med Aid Paid	Indemnity Awarded	Future Reserve Med	Future Reserve Indemnity	Case Incurred Loss	Discounted Developed Loss	Final Incurred Loss
Actual	Medical	$7,489	$0	$0	$0	$7,489	$11,878	$11,402
Parallel	Time Loss	$7,489	$0	$9,601	$3,890	$20,980	$30,092	$47,146

Adjustment Type	Claim Type	Med Aid Paid	Indemnity Awarded	Future Reserve Med	Future Reserve Indemnity	Case Incurred Loss	Discounted Developed Loss	Final Incurred Loss
Actual	Misc	$1,356	$997	$4,082	$0	$6,435	$20,188	$20,266
Parallel	MIsc	$1,356	$997	$2,380	$0	$4,733	$16,108	$16,182

Adjustment Type	Claim Type	Med Aid Paid	Indemnity Awarded	Future Reserve Med	Future Reserve Indemnity	Case Incurred Loss	Discounted Developed Loss	Final Incurred Loss
Actual	Time Loss	$25,666	$38,362	$0	$0	$64,028	$219,259	$229,664
Parallel	PPD	$25,666	$38,362	$24,221	$26,767	$153,378	$381,267	$395,103