

# Oklahoma Schools Insurance Group

Financial Report  
June 30, 2018 and 2017

## Contents

|  |       |
|--|-------|
| Independent auditor's report                                 | 1-2   |
| Management's discussion and analysis                         | 3-7   |
| Financial statements   |       |
| Statements of net position                                   | 8     |
| Statements of revenues, expenses and changes in net position | 9     |
| Statements of cash flows                                     | 10    |
| Notes to financial statements                                | 11-17 |
| Required supplementary information                           |       |
| 10-year loss development                                     | 18-19 |



RSM US LLP

## Independent Auditor's Report

The Board of Trustees  
Oklahoma Schools Insurance Group

### Report on the Financial Statements

We have audited the accompanying financial statements of Oklahoma Schools Insurance Group, which comprise the statements of net position, as of June 30, 2018 and 2017, and the related statements of revenues, expenses, and changes in net position, and cash flows for the years then ended; and the related notes to the financial statements.

### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Oklahoma Schools Insurance Group as of June 30, 2018 and 2017, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

**Other Matters***Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and loss development information, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

*RSM US LLP*

Oklahoma City, Oklahoma  
November 5, 2018

## Oklahoma Schools Insurance Group

### Management's Discussion and Analysis

---

The following Management's Discussion and Analysis (MD&A) of the activities and financial performance of Oklahoma Schools Insurance Group (OSIG) provides an introduction to the financial statements for the year ended June 30, 2018.

OSIG, established in July 2001, is an Inter-local Cooperation Act Agency of schools offering membership to public school districts in Oklahoma, with a mission to provide quality, cost effective, risk management products and services to its member school districts.

### Financial and Activity Highlights

|  | Years Ended June 30 |               |               |
|--|---------------------|---------------|---------------|
|  | 2018                | 2017          | 2016          |
| Member schools at beginning of year              | 377                 | 349           | 347           |
| Member schools added (lost) during the year, net | (2)                 | 28            | 2             |
| Total member schools, end of year                | <u>375</u>          | <u>377</u>    | <u>349</u>    |
| Member contributions                             | \$ 26,291,720       | \$ 25,448,903 | \$ 23,489,304 |
| Member dividends                                 | -                   | -             | 996,598       |

During the years ended June 30, 2018, 2017, and 2016 net position increased (decreased) \$636,127, \$(1,481,313) and \$(843,474), respectively. These changes are a direct result of claim experience, the benefit of excess insurance policies protecting against large claim losses and investment income. In years ended June 30, 2018, 2017 and 2016, OSIG declared \$-0-, \$-0- and \$996,598 dividends to the members.

The school superintendents who serve on the OSIG Board of Trustees have played an integral part in the formation and critical decisions of OSIG. All member schools have a voice in OSIG. It is a school-owned program, run by its members and in business solely to serve Oklahoma schools.

OSIG operates under the open meeting act similar to school districts. OSIG has several committees comprised of school superintendents from the Board of Trustees and welcomes anyone who wants to serve on those committees. In addition to the property and casualty insurance program available to OSIG members, OSIG offers online training programs in the areas of child safety and child sexual abuse prevention and various employment practices liability issues to its member schools. Additional services may be added in the future. As of June 30, 2018, OSIG has 375 member school districts.

#### Board of Trustees:

- Terry Davidson—Superintendent—Comanche Public Schools
- Rick Thomas—Superintendent—Skiatook Public Schools
- Dusty Ricks—Superintendent—Mid America Technology Center
- Brad Overton—Superintendent—Cordell Schools
- Bill Seitter—Superintendent—Watonga Schools
- John Cox—Superintendent—Peggs Schools
- Sherry Durkee—Superintendent—Sand Springs Public Schools

**Executive director:** David Martin

## Oklahoma Schools Insurance Group

### Management's Discussion and Analysis

---

#### Financial and Activity Highlights (Continued)

**Program administrators:** Arthur J. Gallagher Risk Management Services, Inc.:

- Wally Bryce—national vice president business development
- Jay Eshelman—regional president
- Chris Mangum—area president
- Jennifer McKenzie—program manager
- Mati Jamu—assistant program manager
- Morgan McDonald – senior customer service representative
- Susan Sullivan—administrative assistant
- Roger Johnson—independent loss control consultant
- Marty Martin—independent loss control consultant

**Claims administrators:** Alternative Service Concepts, LLC:

- Richard Hall—senior liability claims adjuster
- Glen Bynum—senior property claims adjuster
- Lacrista Medina—liability claims adjuster

**Accounting and assurance services:**

- Hogan and Taylor, L.L.P. (accounting services)
- RSM US LLP (audit services)

**Insurance coverage and carriers:**

| Coverage                      | Insurance Company                  | AM BEST Financial Rating |
|-------------------------------|------------------------------------|--------------------------|
| Buildings and contents        | Alliant Property Insurance Program | A-VIII to A++XV          |
| Automobile physical damage    | Alliant Property Insurance Program | A-VIII to A++XV          |
| Cyber liability               | Alliant Property Insurance Program | A-VIII to A++XV          |
| Boiler and machinery          | Travelers Prop. & Casualty         | A++ XV                   |
| General liability             | United Educators Ins. Co.          | A IX                     |
| Automobile liability          | United Educators Ins. Co.          | A IX                     |
| Educators legal liability     | United Educators Ins. Co.          | A IX                     |
| Umbrella liability            | United Educators Ins. Co.          | A IX                     |
| Pollution                     | Illinois Union Insurance Company   | A++XV                    |
| School violent act protection | Lloyds of London                   | A                        |
| Crime                         | Self-funded                        | N/A                      |

**Mission statement:** The mission of Oklahoma Schools Insurance Group (OSIG) is to provide quality, cost effective, risk management products and services to member schools.

## Oklahoma Schools Insurance Group

### Management's Discussion and Analysis

---

#### Overview of the Financial Statements

This report consists of the MD&A (this part), the statements of net position, the statements of revenues, expenses and changes in net position and the statements of cash flows. These statements provide financial information on OSIG as a whole.

These statements include all assets and liabilities using the accrual basis of accounting, which is consistent with the accounting used by private-sector institutions. All of the current year's revenues and expenses are recognized when earned or incurred, regardless of when cash is received or paid. Capital assets are capitalized and depreciated over their useful lives.

This financial report is designed to provide member school districts, creditors and suppliers with a general overview of OSIG's finances.

**The statements of net position:** The statements of net position and the statements of revenues, expenses and changes in net position report OSIG's net position and how it has changed over the stated period. Net position, the difference between assets plus deferred outflows of resources and liabilities plus deferred inflows of resources, is one measure of OSIG's financial health or position. OSIG has no deferred outflows or inflows at June 30, 2018, 2017 or 2016. The following summarizes OSIG's assets, liabilities and net position as of June 30, 2018, 2017 and 2016:

|  | As of June 30        |                      |                      |
|--|----------------------|----------------------|----------------------|
|  | 2018                 | 2017                 | 2016                 |
| Assets:                                    |                      |                      |                      |
| Cash, cash equivalents and investments     | \$ 24,390,499        | \$ 20,276,093        | \$ 21,194,784        |
| Reinsurance receivable                     | 961,957              | 619,729              | 2,503,421            |
| Other                                      | 564,364              | 80,797               | 78,488               |
| Total assets                               | <u>\$ 25,916,820</u> | <u>\$ 20,976,619</u> | <u>\$ 23,776,693</u> |
| Liabilities:                               |                      |                      |                      |
| Unpaid losses and loss adjustment expenses | \$ 10,870,371        | \$ 8,074,359         | \$ 8,775,557         |
| Prepaid member contributions               | 1,623,772            | 1,635,182            | 1,279,309            |
| Other                                      | 1,601,341            | 81,959               | 1,055,395            |
| Total liabilities                          | <u>\$ 14,095,484</u> | <u>\$ 9,791,500</u>  | <u>\$ 11,110,261</u> |
| Net position:                              |                      |                      |                      |
| Investment in capital assets               | \$ 13                | \$ 165               | \$ 316               |
| Unrestricted                               | 11,821,323           | 11,184,954           | 12,666,116           |
| Total net position                         | <u>\$ 11,821,336</u> | <u>\$ 11,185,119</u> | <u>\$ 12,666,432</u> |

## Oklahoma Schools Insurance Group

### Management's Discussion and Analysis

---

#### Overview of the Financial Statements (Continued)

**The statements of revenues, expenses and changes in net position:** The following summarizes OSIG's statements of revenues, expenses and changes in net position for the years ended June 30, 2018, 2017 and 2016:

|   | Years Ended June 30 |               |               |
|---|---------------------|---------------|---------------|
|   | 2018                | 2017          | 2016          |
| Operating revenues:                     |                     |               |               |
| Member contributions                    | \$ 26,291,720       | \$ 25,448,903 | \$ 23,489,304 |
| Operating expenses:                     |                     |               |               |
| Losses and loss adjustment expenses     | 8,931,545           | 9,966,761     | 7,932,283     |
| Insurance premiums                      | 11,204,265          | 11,652,147    | 10,794,487    |
| Agent commissions                       | 2,631,850           | 2,545,495     | 2,373,665     |
| Management fees                         | 2,103,338           | 2,048,853     | 1,879,144     |
| Claims administration fees              | 617,000             | 517,423       | 479,918       |
| Other expenses                          | 298,942             | 287,143       | 323,087       |
| Total operating expenses                | 25,786,940          | 27,017,822    | 23,782,584    |
| Operating income (loss)                 | 504,780             | (1,568,919)   | (293,280)     |
| Nonoperating revenues:                  |                     |               |               |
| Investment income                       | 318,870             | 231,647       | 288,413       |
| Net change in fair value of investments | (187,433)           | (144,041)     | 157,992       |
| Distributions to members                | -                   | -             | (996,598)     |
| Net nonoperating revenues               | 131,437             | 87,606        | (550,193)     |
| Change in net position                  | 636,217             | (1,481,313)   | (843,473)     |
| Net position at beginning of year       | 11,185,119          | 12,666,432    | 13,509,905    |
| Net position at end of year             | \$ 11,821,336       | \$ 11,185,119 | \$ 12,666,432 |

All of OSIG's operating revenue is related to the receipt of member contributions from OSIG's member school districts. OSIG's operating expenses primarily relate to insurance premiums, claims losses and loss adjustment expenses, agent commissions, management fees and claims administration fees. The non-operating revenues are comprised of investment income and the net change in fair value of investments.



## Oklahoma Schools Insurance Group

### Management's Discussion and Analysis

---

#### Overview of the Financial Statements (Continued)

**The statements of cash flows:** The primary purpose of the statements of cash flows is to provide information about the cash receipts and disbursements of an entity during a period. These statements also aid in the assessment of an entity's ability to generate future cash flows, ability to meet obligations as they come due and needs for external financing. The following summarizes OSIG's cash flows for the years ended June 30, 2018, 2017 and 2016:

|  | Years Ended June 30 |                     |                     |
|--|---------------------|---------------------|---------------------|
|  | 2018                | 2017                | 2016                |
| Cash provided by (used in):                          |                     |                     |                     |
| Operating activities                                 | \$ 3,994,314        | \$ (2,069)          | \$ 157,497          |
| Financing activities                                 | -                   | (996,598)           | -                   |
| Investing activities                                 | (3,731,662)         | 1,467,421           | 1,684               |
| Net increase (decrease) in cash and cash equivalents | 262,652             | 468,754             | 159,181             |
| Cash and cash equivalents at beginning of year       | 2,996,232           | 2,527,478           | 2,368,297           |
| Cash and cash equivalents at end of year             | <u>\$ 3,258,884</u> | <u>\$ 2,996,232</u> | <u>\$ 2,527,478</u> |

OSIG's overall liquidity increased during the years ended June 30, 2018, 2017 and 2016, with a net increase to cash and cash equivalents of \$262,652, \$468,754 and \$159,181, respectively. The cash provided by or used in operating activities is primarily related to receipts of member contributions, offset by the payment of claims, insurance premiums and management expenses. Cash provided by or used in investing activities relates to net purchases and sales of investments, offset by interest and dividend income received. Cash used in financing activities relates to capital asset purchases.

#### Capital Asset and Debt Administration

OSIG had no significant capital asset activity and no debt administration activity during the years ended June 30, 2018, 2017 or 2016.

#### Economic Factors and Premium Rates

OSIG's management considered many factors when developing the annual operating budget for the fiscal year ending June 30, 2019.

The budget for the fiscal year ending June 30, 2019, was developed based upon the following key assumptions:

- Premium contributions are based upon the projected losses incurred for the previous fiscal year. These contributions are expected to increase approximately 4.1 percent from the current year.
- Investment income is projected to be less than 1.0 percent of the market value of total investments.
- Forecasted claim losses are based upon actuarial assumptions.
- Reinsurance premiums are expected to remain consistent with current levels.

Oklahoma Schools Insurance Group

Statements of Net Position  
June 30, 2018 and 2017

|   | 2018                 | 2017                 |
|---|----------------------|----------------------|
| <b>Assets</b>   |                      |                      |
| Current assets:   |                      |                      |
| Cash and cash equivalents   | \$ 3,258,884         | \$ 2,996,232         |
| Investments   | 4,263,602            | 5,495,851            |
| Reinsurance receivable  | 961,957              | 619,729              |
| Accounts receivable   | 472,846              | -                    |
| Interest receivable   | 51,857               | 42,402               |
| Dividend receivable   | 27,021               | 25,131               |
| Prepaid expenses  | 12,627               | 13,099               |
| <b>Total current assets</b>   | <b>9,048,794</b>     | <b>9,192,444</b>     |
| Noncurrent assets:  |                      |                      |
| Investments   | 16,868,013           | 11,784,010           |
| Capital assets, net   | 13                   | 165                  |
| <b>Total assets</b>   | <b>\$ 25,916,820</b> | <b>\$ 20,976,619</b> |
| <b>Liabilities and Net Position</b>   |                      |                      |
| Current liabilities:  |                      |                      |
| Unpaid losses and loss adjustment expenses:   |                      |                      |
| Case reserves (less associated reinsurance recoverable of<br>\$13,802,170 and \$4,705,472 at 2018 and 2017, respectively) | \$ 8,918,371         | \$ 6,366,359         |
| Accrued expenses  | 173,376              | 81,959               |
| Prepaid member contributions  | 1,623,772            | 1,635,182            |
| Advanced reinsurance recoveries   | 1,427,965            | -                    |
| <b>Total current liabilities</b>  | <b>12,143,484</b>    | <b>8,083,500</b>     |
| Noncurrent liabilities:   |                      |                      |
| Unpaid losses and loss adjustment expenses:   |                      |                      |
| Incurred but not reported (IBNR) reserves   | 1,952,000            | 1,708,000            |
| <b>Total liabilities</b>  | <b>14,095,484</b>    | <b>9,791,500</b>     |
| Net position:   |                      |                      |
| Investment in capital assets  | 13                   | 165                  |
| Unrestricted  | 11,821,323           | 11,184,954           |
| <b>Total net position</b>   | <b>11,821,336</b>    | <b>11,185,119</b>    |
| <b>Total liabilities and net position</b>   | <b>\$ 25,916,820</b> | <b>\$ 20,976,619</b> |

See notes to financial statements.

**Oklahoma Schools Insurance Group**

**Statements of Revenues, Expenses, and Changes in Net Position  
Years Ended June 30, 2018 and 2017**

|   | 2018                 | 2017          |
|---|----------------------|---------------|
| Operating revenues:                         |                      |               |
| Member contributions                        | <b>\$ 26,291,720</b> | \$ 25,448,903 |
| Operating expenses:                         |                      |               |
| Losses and loss adjustment expenses, net    | <b>8,931,545</b>     | 9,966,761     |
| Insurance premiums                          | <b>11,204,265</b>    | 11,652,147    |
| Agent commissions                           | <b>2,631,850</b>     | 2,545,495     |
| Management fees                             | <b>2,103,338</b>     | 2,048,853     |
| Claims administration fees                  | <b>617,000</b>       | 517,423       |
| Executive director expenses                 | <b>105,277</b>       | 99,601        |
| Actuarial and accounting                    | <b>93,973</b>        | 85,961        |
| Other                                       | <b>99,692</b>        | 101,581       |
| <b>Total operating expenses</b>             | <b>25,786,940</b>    | 27,017,822    |
| <b>Operating income (loss)</b>              | <b>504,780</b>       | (1,568,919)   |
| Nonoperating revenues (expenses):           |                      |               |
| Investment income                           | <b>318,870</b>       | 231,647       |
| Net change in the fair value of investments | <b>(187,433)</b>     | (144,041)     |
| <b>Net nonoperating revenues (expenses)</b> | <b>131,437</b>       | 87,606        |
| <b>Change in net position</b>               | <b>636,217</b>       | (1,481,313)   |
| Net position at beginning of year           | <b>11,185,119</b>    | 12,666,432    |
| Net position at end of year                 | <b>\$ 11,821,336</b> | \$ 11,185,119 |

See notes to financial statements.

Oklahoma Schools Insurance Group

Statements of Cash Flows  
Years Ended June 30, 2018 and 2017

|   | 2018                       | 2017                       |
|---|----------------------------|----------------------------|
| Operating activities:   |                            |                            |
| Member contributions received   | \$ 24,656,538              | \$ 24,169,594              |
| Prepaid member contributions received   | 1,623,772                  | 1,635,182                  |
| Cash received from reinsurers   | 12,359,986                 | 6,741,528                  |
| Cash payments for insurance premiums, claims, management and administrative fees and other operating expenses | <u>(34,645,982)</u>        | <u>(32,548,373)</u>        |
| <b>Net cash provided by (used in) operating activities</b>  | <b><u>3,994,314</u></b>    | <b><u>(2,069)</u></b>      |
| Financing activities:   |                            |                            |
| Distributions paid to members   | -                          | (996,598)                  |
| <b>Net cash used in financing activities</b>  | <b><u>-</u></b>            | <b><u>(996,598)</u></b>    |
| Investing activities:   |                            |                            |
| Purchases of investments  | (10,000,000)               | (25,500,000)               |
| Proceeds from maturity and sales of investments   | 5,998,511                  | 26,743,404                 |
| Interest and dividend income received   | 269,827                    | 224,017                    |
| <b>Net cash provided by (used in) investing activities</b>  | <b><u>(3,731,662)</u></b>  | <b><u>1,467,421</u></b>    |
| <b>Net change in cash and cash equivalents</b>  | <b>262,652</b>             | <b>468,754</b>             |
| Cash and cash equivalents at beginning of year  | <u>2,996,232</u>           | <u>2,527,478</u>           |
| Cash and cash equivalents at end of year  | <b><u>\$ 3,258,884</u></b> | <b><u>\$ 2,996,232</u></b> |
| Reconciliation of operating income (loss) to net cash provided by operating activities:                       |                            |                            |
| Operating income (loss)   | \$ 504,780                 | \$ (1,568,919)             |
| Adjustments to reconcile operating income (loss) to net cash provided by operating activities:                |                            |                            |
| Depreciation expense  | 152                        | 151                        |
| Changes in assets and liabilities:  |                            |                            |
| Reinsurance receivable  | (342,228)                  | 1,883,692                  |
| Prepaid expenses  | 472                        | (472)                      |
| Accounts receivable   | (472,846)                  | 5,642                      |
| Accrued expenses  | 91,417                     | 23,162                     |
| Advanced reinsurance recoveries   | 1,427,965                  | -                          |
| Prepaid member contributions  | (11,410)                   | 355,873                    |
| Unpaid losses and loss adjustment expenses—case reserves and incurred but not reported (IBNR) reserves        | <u>2,796,012</u>           | <u>(701,198)</u>           |
| <b>Net cash provided by (used in) operating activities</b>  | <b><u>\$ 3,994,314</u></b> | <b><u>\$ (2,069)</u></b>   |

See notes to financial statements.

## Oklahoma Schools Insurance Group

### Notes to Financial Statements

---

#### Note 1. Organization and Significant Accounting Policies

**Organization:** Oklahoma Schools Insurance Group (OSIG) was established by an agreement with an effective date of July 1, 2001, and a duration of fifty years, unless sooner dissolved or extended. OSIG is an Interlocal Cooperation Act Agency of schools offering membership to public school districts in Oklahoma with a mission to provide quality, cost effective, risk management products and services to its members.

OSIG is governed by a seven-member Board of Trustees elected by and from representatives of its members. Trustee responsibilities include reviewing and ensuring compliance with OSIG's policies and services as contemplated in its establishing agreement and by-laws. Title to all assets acquired by OSIG is vested in it. Each participating member pays for all costs, premiums or other fees attributable to its respective participation in any plan, policy or service created in the establishing agreement and is responsible for its obligation under any contract entered into with OSIG. In the event of dissolution of OSIG, the funds and other assets not necessary to pay claims or the expenses of OSIG are to be distributed to the members in accordance with the by-laws as determined by the Board of Trustees.

**Financial statement presentation:** OSIG's financial statements are presented in accordance with the requirements of Governmental Accounting Standards Board (GASB) specific to enterprise fund activities. Under these requirements, OSIG is required to present a statement of net position classified between current and noncurrent assets and liabilities, a statement of revenues, expenses and changes in net position, with separate presentation for operating and nonoperating revenues and expenses and a statement of cash flows, using the direct method.

**Basis of accounting:** For financial reporting purposes, OSIG is considered a special-purpose government entity engaged only in business-type activities. Accordingly, OSIG's financial statements have been presented using the economic resources measurement focus and the accrual basis of accounting. Under the accrual basis, revenues are recognized when earned and expenses are recorded when an obligation has been incurred.

**Cash, cash equivalents and other deposits:** OSIG considers investments with original maturities of three months or less to be cash equivalents. OSIG had no cash equivalents at June 30, 2018 or 2017.

**Investments:** Investments, which include certificates of deposit and mortgage-backed securities obligations, are reported at fair value. Fair value is the last reported sales price at current exchange rates on a national exchange, as available, or estimated fair value as provided by the investment manager. All investments expected to be liquidated in the next fiscal year to cover claim payments are reported as current. Remaining investments are reported as noncurrent.

**Allowance for doubtful accounts:** Based on a review of the current status of existing receivables, OSIG's management determined that an allowance for doubtful accounts for reinsurance and accounts receivables at June 30, 2018 and 2017, was not necessary.

**Unpaid losses and loss adjustment expenses:** The provision for unpaid losses and loss adjustment expenses includes the estimated costs of investigating and settling all claims incurred as of the date of the statements of net position. Such amounts include estimates for case reserves and incurred but not reported (IBNR) claims and are determined on the basis of claims adjusters' evaluations and independent actuarial estimates. Unpaid losses and loss adjustment expenses are reported net of amounts that are expected to be recovered from excess carriers. Unpaid losses and loss adjustment expenses are not discounted for expected investment rates of return.

**Estimates:** The preparation of financial statements in conformity with accounting principles generally accepted in the United State of America requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

## Oklahoma Schools Insurance Group

### Notes to Financial Statements

---

#### Note 1. Organization and Significant Accounting Policies (Continued)

**Income taxes:** OSIG is a public entity organized under the laws of the state of Oklahoma and, as such, is considered to be an instrumentality of a political subdivision exempt from federal income taxes under Internal Revenue Code Section 115.

**Revenue recognition:** Insurance contracts with members are for a one-year period beginning July 1 through June 30. Member contributions are determined on a member-by-member basis and are due at the beginning of each contract period and are recognized as revenue over the period of the contract. OSIG's program administrator calculates each member's contribution using base rates provided by OSIG's insurance carriers and factors, to include underwriting considerations, administrative expenses, claims adjustment expenses and agent commissions. Prepaid member contributions are amounts received for which coverage has not yet been provided.

**Classification of revenues:** OSIG has classified its revenues as either operating or nonoperating revenues. Operating revenues include transactions that constitute OSIG's principal ongoing operations, such as member contributions. Nonoperating revenues consist of other revenue sources that are defined as nonoperating revenues, such as investment income.

**Custodial credit risk—deposits:** Custodial credit risk is the risk that in the event of bank failure, OSIG's deposits may not be returned to it. OSIG does not have a deposit policy for custodial credit risk. As of June 30, 2018 and 2017, OSIG had fully insured cash on deposits with financial institutions of approximately \$500,000. As of June 30, 2018, approximately \$7,020,000 of OSIG's bank balance of approximately \$7,520,000 (carrying amount of approximately \$7,299,000) was uninsured and uncollateralized and therefore exposed to custodial credit risk. As of June 30, 2017, approximately \$3,095,000 of OSIG's bank balance of approximately \$3,595,000 (carrying amount of approximately \$2,996,000) was uninsured and uncollateralized and therefore exposed to custodial credit risk.

#### Note 2. Deposits and Investments

**Custodial credit risk—investments:** For an investment, custodial credit risk is the risk that OSIG will not be able to recover the value of its investments that are in the possession of its safekeeping custodians. All of OSIG's investments are held by its agent in OSIG's name. Accordingly, no investments are subject to custodial credit risk. At June 30, 2018, OSIG held 10 negotiable certificates of deposit with an original maturity exceeding three months, totaling \$5,773,838. At June 30, 2017, OSIG held 17 negotiable certificates of deposit with an original maturity exceeding three months, totaling \$4,245,873. The certificates of deposit are fully insured by the Federal Deposit Insurance Corporation (FDIC).

**Credit risk:** OSIG's mortgage-backed securities may contain provisions that they are callable before maturity at the option of the issuer with call dates of less than one year. The balance of the June 30, 2018 and 2017 mortgage-backed securities are in Federal Farm Credit Bank, Federal Home Loan Bank, Fannie Mae, or Freddie Mac mortgage-backed securities, which total \$15,357,777 and \$13,033,988, respectively, and are rated AA+ by Standard & Poor's.

## Oklahoma Schools Insurance Group

### Notes to Financial Statements

#### Note 2. Deposits and Investments (Continued)

**Fair value hierarchy:** OSIG categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the assets. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs, including quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets in markets that are not active, and other market corroborated inputs; Level 3 inputs are significant unobservable inputs. The categorization of investments within the hierarchy is based upon the pricing transparency of the instrument and should not be perceived as the particular investment's risk.

OSIG has the following Level 2 fair value of investments as of June 30, 2018 and 2017:

|                             | 2018                 | 2017                 |
|-----------------------------|----------------------|----------------------|
| Certificates of deposit     | \$ 5,773,838         | \$ 4,245,873         |
| Mortgage-backed securities: |                      |                      |
| Federal Farm Credit Bank    | 5,523,753            | 4,629,718            |
| Federal Home Loan Bank      | 3,955,380            | 3,462,501            |
| Fannie Mae                  | 3,923,420            | 4,941,769            |
| Freddie Mac                 | 1,955,224            | -                    |
| Total                       | <u>\$ 21,131,615</u> | <u>\$ 17,279,861</u> |

Maturities of investments as of June 30, 2018, are as follows:

| Investment Type            | Investment Maturities (In Years) |                     |                      |             |              |
|----------------------------|----------------------------------|---------------------|----------------------|-------------|--------------|
|                            | Fair Value                       | Less Than 1         | 1-5                  | 6-10        | More Than 10 |
| Certificates of deposit    | \$ 5,773,838                     | \$ 2,269,592        | \$ 3,504,246         | \$ -        | \$ -         |
| Mortgage-backed securities | 15,357,777                       | 1,994,010           | 13,363,767           | -           | -            |
| Total                      | <u>\$ 21,131,615</u>             | <u>\$ 4,263,602</u> | <u>\$ 16,868,013</u> | <u>\$ -</u> | <u>\$ -</u>  |

Maturities of investments as of June 30, 2017, are as follows:

| Investment Type            | Investment Maturities (In Years) |                     |                      |             |              |
|----------------------------|----------------------------------|---------------------|----------------------|-------------|--------------|
|                            | Fair Value                       | Less Than 1         | 1-5                  | 6-10        | More Than 10 |
| Certificates of deposit    | \$ 4,245,873                     | \$ 2,499,741        | \$ 1,746,132         | \$ -        | \$ -         |
| Mortgage-backed securities | 13,033,988                       | 2,996,110           | 10,037,878           | -           | -            |
| Total                      | <u>\$ 17,279,861</u>             | <u>\$ 5,495,851</u> | <u>\$ 11,784,010</u> | <u>\$ -</u> | <u>\$ -</u>  |

All investments expected to be liquidated in the next fiscal year to cover claim payments are reported as current in the accompanying statements of net position. Remaining investments are reported as noncurrent.

## Oklahoma Schools Insurance Group

### Notes to Financial Statements

---

#### Note 2. Deposits and Investments (Continued)

**Interest rate risk:** OSIG does not have a formal policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates. The majority of OSIG's investments are in mortgage-backed securities, which are subject to risks associated with rising interest rates.

**Concentration of credit risk:** OSIG does not have a formal policy that limits the amount of an investment into a single issuer. Exposure to concentration of credit risk is considered to exist when investments in any one issuer represent a significant percent of total investments of OSIG (any over 5 percent are disclosed). Investments issued or explicitly guaranteed by the U.S. government and investments in mutual funds, external investment pools and other pooled investments are excluded from this consideration. As of June 30, 2018, OSIG held securities issued from the following unsecured issuers as a percentage of OSIG's total investments:

|                          | 2018   | 2017   |
|--------------------------|--------|--------|
| Federal Farm Credit Bank | 26.14% | 26.79% |
| Federal Home Loan Bank   | 18.72% | 20.04% |
| Fannie Mae               | 18.57% | 28.60% |
| Freddie Mac              | 9.25%  | 0.00%  |

#### Note 3. Administrative and Other Costs

For the years ended June 30, 2018 and 2017, the Board of Trustees contracted with Arthur J. Gallagher Risk Management Services (Arthur J. Gallagher) to serve as the program administrator. Under the terms of the contract with Arthur J. Gallagher, OSIG agreed to pay Arthur J. Gallagher a fee equal to 8 percent of member contributions for the years ended June 30, 2018 and 2017. Fees paid to Arthur J. Gallagher for the years ended June 30, 2018 and 2017, totaled approximately \$2,103,000 and \$2,049,000, respectively.

For the years ended June 30, 2018 and 2017, the Board of Trustees contracted with Alternative Service Concepts LLC (ASC) to be the third-party administrator responsible for claims processing. Fees paid to ASC for the years ended June 30, 2018 and 2017, totaled approximately \$617,000 and \$517,000, respectively. OSIG also pays a 10 percent commission to each member's insurance agent, which totaled approximately \$2,632,000 and \$2,545,000 for the years ended June 30, 2018 and 2017, respectively. Additionally, OSIG contracted with David Martin to serve as OSIG's executive director. Payments to David Martin for services rendered under the contract was approximately \$91,000 during the years ended June 30, 2018 and 2017.

#### Note 4. Unpaid Losses and Loss Adjustment Expenses

The coverage offered by OSIG is on an occurrence basis except educators' legal liability, which is afforded to members on a claims-made basis. The liability for unpaid losses and loss adjustment expenses is estimated, based upon an evaluation of reported claims and an estimate for IBNR claims. The IBNR reserve estimates expenses related to incidents which have already occurred, but have not yet been reported as a claim, and expected future development of claims already reported. The estimate is based on a study performed by an independent actuarial service with actual claims data as of June 30, 2018 and 2017. The accuracy of these estimates cannot be determined prior to the ultimate settlement of each claim. Accordingly, the ultimate cost of settling these claims may vary significantly from the liabilities recorded at year end and may do so in the near term.



## Oklahoma Schools Insurance Group

### Notes to Financial Statements

---

#### Note 4. Unpaid Losses and Loss Adjustment Expenses (Continued)

There is substantial liability for any additional reported claims that could be incurred by OSIG up to the maximum liability as defined under its excess insurance contracts.

At June 30, 2018 and 2017, the liability for unpaid losses and loss adjustment expenses excludes approximately \$13,802,000 and \$4,705,000, respectively, for unpaid claims expected to be recoverable from excess carriers.

The following represents changes in the liability of unpaid losses and loss adjustment expenses for OSIG:

|  | Year Ended June 30, 2018 |              |               |
|--|--------------------------|--------------|---------------|
|  | Case Reserves            | IBNR         | Total         |
| Net unpaid losses and loss adjustment expenses at beginning of year                      | \$ 6,366,359             | \$ 1,708,000 | \$ 8,074,359  |
| Incurred losses and loss adjustment expenses:  |                          |              |               |
| Provision for insured events of the current year   | 7,306,816                | 1,118,000    | 8,424,816     |
| Change in provision for insured events of prior years                                    | 1,380,729                | (874,000)    | 506,729       |
| Net incurred losses and loss adjustment expenses   | 8,687,545                | 244,000      | 8,931,545     |
| Payments:  |                          |              |               |
| Losses and loss adjustment expenses attributable to insured events of the current year   | 3,728,396                | -            | 3,728,396     |
| Losses and loss adjustment expenses attributable to insured events of prior years        | 2,407,137                | -            | 2,407,137     |
| Net payments   | 6,135,533                | -            | 6,135,533     |
| Unpaid losses and loss adjustment expenses at end of year, net of reinsurance receivable | \$ 8,918,371             | \$ 1,952,000 | \$ 10,870,371 |

The provision for unpaid losses and loss adjustment expenses increased by approximately \$507,000 in 2018 due to unfavorable development on case-basis reserves and expiration of IBNR risk on older policy years. The liability for unpaid losses and loss adjustment expenses at June 30, 2018 included approximately \$1,952,000 for IBNR claims.

## Oklahoma Schools Insurance Group

### Notes to Financial Statements

---

#### Note 4. Unpaid Losses and Loss Adjustment Expenses (Continued)

|  | Year Ended June 30, 2017 |                     |                     |
|--|--------------------------|---------------------|---------------------|
|  | Case<br>Reserves         | IBNR                | Total               |
| Net unpaid losses and loss adjustment expenses at beginning of year                      | \$ 6,777,557             | \$ 1,998,000        | \$ 8,775,557        |
| Incurred losses and loss adjustment expenses:  |                          |                     |                     |
| Provision for insured events of the current year   | 8,206,717                | 1,040,000           | 9,246,717           |
| Change in provision for insured events of prior years                                    | 2,050,044                | (1,330,000)         | 720,044             |
| Net incurred losses and loss adjustment expenses   | 10,256,761               | (290,000)           | 9,966,761           |
| Payments:  |                          |                     |                     |
| Losses and loss adjustment expenses attributable to insured events of the current year   | 4,862,059                | -                   | 4,862,059           |
| Losses and loss adjustment expenses attributable to insured events of prior years        | 5,805,900                | -                   | 5,805,900           |
| Net payments   | 10,667,959               | -                   | 10,667,959          |
| Unpaid losses and loss adjustment expenses at end of year, net of reinsurance receivable | <u>\$ 6,366,359</u>      | <u>\$ 1,708,000</u> | <u>\$ 8,074,359</u> |

The provision for unpaid losses and loss adjustment expenses increased by approximately \$720,000 in 2017 due to unfavorable development on case-basis reserves and expiration of IBNR risk on older policy years. The liability for unpaid losses and loss adjustment expenses at June 30, 2017 included approximately \$1,708,000 for IBNR claims.

## Oklahoma Schools Insurance Group

### Notes to Financial Statements

---

#### Note 5. Insurance Coverage

OSIG provides its members with property damage, automobile damage, general liability, auto liability, professional liability, boiler and machinery, school violent act protection and crime and cyber liability coverages. Claims have historically been paid with funding from the annual member contributions, with claims in excess of specified thresholds covered by stop-loss insurance coverage.

Thresholds for the years ended June 30, 2018 and 2017, were as follows:

|  | Per Occurrence | Aggregate |
|--|----------------|-----------|
| 2018:  |                |           |
| Property and automobile damage                 | \$ 250,000 *   | N/A       |
| Property and automobile damage—windstorm/hail  | 250,000 *      | N/A       |
| General, automobile and professional liability | 100,000        | 4,061,459 |
|  | Per Occurrence | Aggregate |
| 2017:  |                |           |
| Property and automobile damage                 | \$ 250,000 *   | N/A       |
| Property and automobile damage—windstorm/hail  | 250,000 *      | N/A       |
| General, automobile and professional liability | 100,000        | 4,142,262 |

\* Property insurance per occurrence reimbursements is subject to a corridor deductible of \$1,400,000. Each claim in excess of \$250,000 first must satisfy the \$250,000 per occurrence threshold, with amounts over \$250,000 applied toward the corridor deductible. No amounts are due under the agreement until the \$1,400,000 corridor deductible is satisfied.

The stop-loss contracts do not relieve OSIG from its obligation to its members.

Stop-loss insurance was not utilized for either the boiler and machinery or crime coverage. Boiler and machinery coverage was provided through the purchase of an insurance contract with a portion of member contributions. The boiler and machinery insurance contract had a required deductible per claim of \$1,000, which was passed through to the member filing the claim. Crime coverage is self-insured by OSIG, with a maximum limit on each claim of \$10,000 and deductibles per claim of \$1,000.

During the years ended June 30, 2018 and 2017, there was a net increase in recoverable claims cost of approximately \$11,356,420 and \$4,875,836, respectively.

#### Note 6. Commitments and Contingencies

As discussed in Note 5, OSIG utilizes stop-loss and boiler and machinery insurance contracts to minimize its exposure on certain types of claims. Failure of the insurance carrier to honor its obligation under the insurance agreements could result in losses to OSIG. OSIG's management evaluates the financial condition of its insurance carriers to minimize its exposure to significant losses and believes the carriers presently used are financially sound and will be able to meet their contractual obligations. OSIG, through Arthur J. Gallagher, only places coverage with companies rated A-VII or better by A.M. Best, an industry-standard rating company.

## **Required Supplementary Information**

## Oklahoma Schools Insurance Group

### 10-Year Loss Development

---

The following table illustrates how OSIG's earned premium revenues and investment income (net of reinsurance) compare to related costs of loss (net of loss assumed by reinsurers) and other expenses assumed by OSIG as of the end of each of the last ten years. The rows of the table are defined as follows:

- (1) This line shows the total of each of the fiscal year's earned premium revenues and investment revenues, net of costs for reinsurance.
- (2) This line shows each fiscal year's other administrative costs of OSIG, including overhead and claims expense not allocable to individual claims.
- (3) This line shows OSIG's incurred claims and allocated claim adjustment expenses (both paid and accrued) as originally reported at the end of the first year in which the event that triggered coverage under the contract occurred (policy year).
- (4) This section shows the cumulative amounts paid as of the end of successive years for each policy year.
- (5) This line shows the latest reestimated amount of losses assumed by reinsurers for each policy year.
- (6) This section shows how each policy years' incurred claims increased or decreased as of the end of successive years. This annual reestimation results from new information received on known claims, reevaluation of existing information on known claims, as well as emergence of new claims not previously reported.
- (7) This line compares the latest reestimated incurred claims amount originally established (line 3) and shows whether this latest estimate of claims cost is greater or less than originally thought. As data for individual policy years mature, the correlation between original estimates and reestimated amounts is commonly used to evaluate the accuracy of incurred claims currently recognized in less mature policy years. The columns of the table show data for successive policy years.

(Continued)

Oklahoma Schools Insurance Group

10-Year Loss Development

|  | 2018              | 2017              | 2016              | 2015              | 2014              | 2013              | 2012             | 2011              | 2010              | 2009              |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------------|-------------------|-------------------|-------------------|
| (1) Premiums and investment revenue, as originally reported at end of policy year:         |                   |                   |                   |                   |                   |                   |                  |                   |                   |                   |
| Earned   | \$ 26,423,157     | \$ 25,536,509     | \$ 23,935,709     | \$ 25,003,145     | \$ 24,339,336     | \$ 21,853,448     | \$ 22,232,030    | \$ 20,781,508     | \$ 23,237,066     | \$ 21,570,683     |
| Ceded  | 11,204,265        | 11,652,147        | 10,794,487        | 10,588,820        | 11,660,027        | 10,626,030        | 12,323,603       | 10,552,876        | 10,594,509        | 8,983,518         |
| <b>Net earned</b>  | <b>15,218,892</b> | <b>13,884,362</b> | <b>13,141,222</b> | <b>14,414,325</b> | <b>12,679,309</b> | <b>11,227,418</b> | <b>9,908,427</b> | <b>10,228,632</b> | <b>12,642,557</b> | <b>12,587,165</b> |
| (2) Unallocated expenses, as originally reported at end of policy year                     | 5,651,130         | 5,398,914         | 5,055,814         | 5,187,826         | 4,818,166         | 4,498,793         | 4,699,233        | 4,393,058         | 5,201,296         | 4,650,856         |
| (3) Estimated losses and expenses, end of policy year:                                     |                   |                   |                   |                   |                   |                   |                  |                   |                   |                   |
| Incurred   | 14,161,187        | 13,551,154        | 8,117,000         | 7,628,500         | 5,919,500         | 8,073,854         | 8,778,575        | 23,038,065        | 18,060,860        | 19,097,079        |
| Ceded  | 5,424,260         | 4,304,154         | 64,000            | 26,500            | 124,500           | 112,854           | 612,425          | 16,746,785        | 10,409,536        | 11,840,974        |
| <b>Net incurred</b>  | <b>8,736,927</b>  | <b>9,247,000</b>  | <b>8,053,000</b>  | <b>7,602,000</b>  | <b>5,795,000</b>  | <b>7,961,000</b>  | <b>8,166,150</b> | <b>6,291,280</b>  | <b>7,651,324</b>  | <b>7,256,105</b>  |
| (4) Net paid (cumulative) as of:   |                   |                   |                   |                   |                   |                   |                  |                   |                   |                   |
| End of policy year   | 3,728,396         | 4,862,059         | 2,843,847         | 2,810,778         | 2,044,045         | 3,050,569         | 2,930,550        | 2,873,326         | 3,985,526         | 3,778,804         |
| One year later   |                   | 6,605,071         | 6,027,267         | 5,054,326         | 3,734,202         | 5,902,181         | 5,381,794        | 4,215,360         | 5,858,976         | 5,422,138         |
| Two years later  |                   |                   | 6,947,359         | 6,305,373         | 5,080,503         | 6,236,599         | 5,949,150        | 4,736,117         | 5,780,460         | 6,420,644         |
| Three years later  |                   |                   |                   | 6,585,368         | 5,260,843         | 6,314,806         | 6,205,373        | 4,967,661         | 6,055,308         | 6,043,780         |
| Four years later   |                   |                   |                   |                   | 5,287,810         | 6,338,490         | 6,264,951        | 5,016,410         | 6,059,982         | 6,282,073         |
| Five years later   |                   |                   |                   |                   |                   | 6,392,520         | 6,323,238        | 6,201,990         | 6,054,947         | 6,329,282         |
| Six years later  |                   |                   |                   |                   |                   |                   | 6,426,126        | 6,212,042         | 6,574,266         | 6,384,667         |
| Seven years later  |                   |                   |                   |                   |                   |                   |                  | 6,216,944         | 6,828,356         | 7,144,359         |
| Eight years later  |                   |                   |                   |                   |                   |                   |                  |                   | 6,845,270         | 7,144,284         |
| Nine years later   |                   |                   |                   |                   |                   |                   |                  |                   |                   | 7,144,234         |
| (5) Reestimated ceded losses and expenses  | 5,424,260         | 6,850,831         | 2,743,796         | 1,641,270         | 860,576           | 1,102,317         | 2,328,390        | -                 | 12,918,636        | 11,253,214        |
| (6) Reestimated net incurred losses and expenses:  |                   |                   |                   |                   |                   |                   |                  |                   |                   |                   |
| End of policy year   | 8,736,927         | 9,247,000         | 8,053,000         | 7,602,000         | 5,795,000         | 7,961,000         | 8,166,150        | 6,291,280         | 7,651,324         | 7,256,105         |
| One year later   |                   | 9,545,793         | 8,141,000         | 7,164,000         | 5,678,000         | 7,207,000         | 7,486,000        | 5,968,360         | 7,607,000         | 7,208,780         |
| Two years later  |                   |                   | 8,258,607         | 7,561,000         | 5,679,000         | 6,752,000         | 6,700,000        | 5,437,360         | 6,399,460         | 7,365,000         |
| Three years later  |                   |                   |                   | 7,857,981         | 5,535,000         | 6,675,000         | 6,466,000        | 5,300,360         | 6,328,460         | 6,394,780         |
| Four years later   |                   |                   |                   |                   | 5,418,352         | 6,567,175         | 6,449,000        | 5,223,360         | 6,187,460         | 6,416,780         |
| Five years later   |                   |                   |                   |                   |                   | 6,501,151         | 6,443,489        | 6,268,472         | 6,149,460         | 6,388,780         |
| Six years later  |                   |                   |                   |                   |                   |                   | 6,462,489        | 5,119,360         | 6,839,518         | 6,384,667         |
| Seven years later  |                   |                   |                   |                   |                   |                   |                  | 6,254,472         | 6,107,460         | 7,144,359         |
| Eight years later  |                   |                   |                   |                   |                   |                   |                  |                   | 6,870,042         | 6,384,667         |
| Nine years later   |                   |                   |                   |                   |                   |                   |                  |                   |                   | 7,144,234         |
| (7) (Decrease) increase in estimated net incurred losses and expenses from end of policy ) | -                 | 298,793           | 205,607           | 255,981           | (376,648)         | (1,459,849)       | (1,703,661)      | (36,808)          | (781,282)         | (111,871)         |





# **Estimation of Unpaid Liabilities and IBNR**

---

Oklahoma Schools Insurance Group

---

March 23, 2018

Based on data evaluated as of January 31, 2018  
IBNR Projected as of June 30, 2018

---







# Estimation of Unpaid Liabilities and IBNR

---

Oklahoma Schools Insurance Group

---

March 23, 2018

Based on data evaluated as of January 31, 2018  
IBNR Projected as of June 30, 2018

*Prepared by:*

---

*Laura T. Sprouse, FCAS, MAAA*

*Select Actuarial Services  
28 White Bridge Road, Suite 205  
Nashville, Tennessee 37205-1428  
(615) 269-4469 ex 113  
(615) 269-4878 (fax)  
laura.sprouse@selectactuarial.com*

---



## **Table of Contents**

|           |  |
|-----------|--|
| Section 1 | Executive Summary                          |
| Section 2 | Introduction, Considerations & Definitions |
| Section 3 | Analysis & Conclusion                      |
| Section 4 | Automobile Liability                       |
| Section 5 | General Liability including E&O            |
| Section 6 | Property / Auto Physical Damage            |



## Executive Summary

The purpose of this report is to provide the Oklahoma Schools Insurance Group (OSIG) with an evaluation and projection of the losses and allocated adjustment expenses corresponding to its property and liability insurance exposures incurred through June 30, 2018. OSIG began offering automobile liability and physical damage and a variety of property and general liability insurance coverages to school districts in the State of Oklahoma beginning July 1, 2002. OSIG continues to add new members each year lending further stability to the Group. The specific objective of this analysis is to project reserves required to fund outstanding losses for the group as of June 30, 2018, based on data valued as of January 31, 2018.

Based on this analysis the results are as follows:

| <i>Projection of Required Reserves for Losses and Allocated Loss Adjustment Expenses as of June 30, 2018</i> |                      |                      |                         |
|--|----------------------|----------------------|-------------------------|
|  | <i>Case Reserves</i> | <i>IBNR Reserves</i> | <i>Required Reserve</i> |
| <b><i>Liability</i></b>  | \$4,740,000          | \$1,308,000          | \$6,048,000             |
| <b><i>Property</i></b>   | \$2,444,000          | \$507,000            | \$2,951,000             |
| <b><i>Total</i></b>  | <b>\$7,184,000</b>   | <b>\$1,815,000</b>   | <b>\$8,999,000</b>      |

Table A summarizes the results of this analysis. Table B shows IBNR requirements at various confidence levels to aid in the selection of a risk margin. Table C shows the change in experience from the previous actuarial report.

Throughout this report the term losses will refer to loss and allocated loss adjustment expenses.

## Assumptions

Unless otherwise stated, the figures in this report represent expected values. Key assumptions include:

1. Paid and reported loss development factors and reported claim development factors based on OSIG's experience supplemented with Oklahoma public entity experience, are predictive of future development of claims.
2. Exposures written through January 31, 2018, will be unchanged through the end of the year.

## Results of this Analysis

### Automobile Liability

Since the previous actuarial study as of June 30, 2017, reported losses have developed about \$156,000 less than expected overall for periods through 7/1/17-18. Greater than expected development on the 14-15 and 15-16 years was more than offset by improvement on the 16-17 and 17-18 years. The net change in ultimate losses was a decrease of \$171,000.

### General Liability including E&O

Since the previous actuarial study as of June 30, 2017, reported losses have developed close to expected overall. Experience by year was mixed. There was adverse some development on the years 11-12 and 14-15 through 16-17, but better than expected development on other years. The net change in ultimate losses was an increase of \$57,000.

### Combined Liability Reserves

The total ultimate losses for liability losses from 7/1/02-03 through 7/1/17-18 are \$33,578,000. Of this amount \$27,530,000 is expected to be paid by June 30, 2017, leaving \$6,048,000 in total outstanding losses. The case reserves are estimated to be \$4,740,000 and the IBNR reserves are \$1,308,000. The IBNR at the 75<sup>th</sup> percentile is \$1,813,000.

### Property and Auto Physical Damage

Since the previous actuarial study as of June 30, 2017, reported losses have developed greater than expected overall. There was some adverse development on the 16-17 and 17-18 years. There was a claim from late 16-17 that has now reached the \$250,000. So far in 17-18 we have two claims that have exceed the \$250,00 SIR including one claim over \$5,000,000. This claim will exhaust the \$1,400,000 corridor. In total, the net

change in ultimate losses through the 17-18 year is an increase of \$849,000.

The total outstanding losses for property and APD claims is estimated to be \$2,951,000, including \$2,444,000 and \$507,000 in IBNR. The IBNR at the 75<sup>th</sup> percentile is \$976,000. The IBNR is almost entirely associated with losses within the SIR, since the corridor has already been reached for three out of the last four policy years.





**Estimated Outstanding Losses for Liability  
Projected As of June 30, 2018**

| <i>Accident Period</i> | <i>Coverage</i> | (A)<br><i>Estimated Ultimate Losses</i> | (B)<br><i>Projected Paid Losses</i> | (C)<br><i>Projected Reported Losses</i> | (D)<br><i>Case Reserves</i> | (E)<br><i>IBNR Losses</i> | (F)<br><i>Outstanding Losses</i> |
|------------------------|-----------------|---|-------------------------------------|---|-----------------------------|---------------------------|----------------------------------|
| 2002/03                | AL              | \$65,087                                | \$65,087                            | \$65,087                                | \$0                         | \$0                       | \$0                              |
| 2003/04                | AL              | \$357,297                               | \$357,297                           | \$357,297                               | \$0                         | \$0                       | \$0                              |
| 2004/05                | AL              | \$618,336                               | \$618,336                           | \$618,336                               | \$0                         | \$0                       | \$0                              |
| 2005/06                | AL              | \$450,928                               | \$450,928                           | \$450,928                               | \$0                         | \$0                       | \$0                              |
| 2006/07                | AL              | \$535,205                               | \$535,205                           | \$535,205                               | \$0                         | \$0                       | \$0                              |
| 2007/08                | AL              | \$759,907                               | \$759,907                           | \$759,907                               | \$0                         | \$0                       | \$0                              |
| 2008/09                | AL              | \$1,423,346                             | \$1,423,346                         | \$1,423,346                             | \$0                         | \$0                       | \$0                              |
| 2009/10                | AL              | \$706,000                               | \$693,000                           | \$706,000                               | \$13,000                    | \$0                       | \$13,000                         |
| 2010/11                | AL              | \$843,000                               | \$843,000                           | \$843,000                               | \$0                         | \$0                       | \$0                              |
| 2011/12                | AL              | \$974,000                               | \$956,000                           | \$974,000                               | \$18,000                    | \$0                       | \$18,000                         |
| 2012/13                | AL              | \$626,000                               | \$626,000                           | \$626,000                               | \$0                         | \$0                       | \$0                              |
| 2013/14                | AL              | \$703,000                               | \$683,000                           | \$702,000                               | \$19,000                    | \$1,000                   | \$20,000                         |
| 2014/15                | AL              | \$1,174,000                             | \$965,000                           | \$1,168,000                             | \$203,000                   | \$6,000                   | \$209,000                        |
| 2015/16                | AL              | \$1,158,000                             | \$976,000                           | \$1,140,000                             | \$164,000                   | \$18,000                  | \$182,000                        |
| 2016/17                | AL              | \$1,166,000                             | \$929,000                           | \$1,103,000                             | \$174,000                   | \$63,000                  | \$237,000                        |
| 2017/18                | AL              | \$1,143,000                             | \$536,000                           | \$974,000                               | \$438,000                   | \$169,000                 | \$607,000                        |
|                        |                 | \$12,703,106                            | \$11,417,106                        | \$12,446,106                            | \$1,029,000                 | \$257,000                 | \$1,286,000                      |

|         |        |              |              |              |             |             |             |
|---------|--------|--------------|--------------|--------------|-------------|-------------|-------------|
| 2002/03 | GL/E&O | \$168,909    | \$168,909    | \$168,909    | \$0         | \$0         | \$0         |
| 2003/04 | GL/E&O | \$840,274    | \$840,274    | \$840,274    | \$0         | \$0         | \$0         |
| 2004/05 | GL/E&O | \$488,972    | \$488,972    | \$488,972    | \$0         | \$0         | \$0         |
| 2005/06 | GL/E&O | \$1,253,449  | \$1,253,449  | \$1,253,449  | \$0         | \$0         | \$0         |
| 2006/07 | GL/E&O | \$953,237    | \$953,237    | \$953,237    | \$0         | \$0         | \$0         |
| 2007/08 | GL/E&O | \$1,432,614  | \$1,432,614  | \$1,432,614  | \$0         | \$0         | \$0         |
| 2008/09 | GL/E&O | \$1,159,541  | \$1,159,541  | \$1,159,541  | \$0         | \$0         | \$0         |
| 2009/10 | GL/E&O | \$1,294,000  | \$1,277,000  | \$1,293,000  | \$16,000    | \$1,000     | \$17,000    |
| 2010/11 | GL/E&O | \$1,842,000  | \$1,811,000  | \$1,839,000  | \$28,000    | \$3,000     | \$31,000    |
| 2011/12 | GL/E&O | \$1,495,000  | \$1,478,000  | \$1,491,000  | \$13,000    | \$4,000     | \$17,000    |
| 2012/13 | GL/E&O | \$886,000    | \$779,000    | \$880,000    | \$101,000   | \$6,000     | \$107,000   |
| 2013/14 | GL/E&O | \$844,000    | \$753,000    | \$831,000    | \$78,000    | \$13,000    | \$91,000    |
| 2014/15 | GL/E&O | \$1,885,000  | \$1,452,000  | \$1,834,000  | \$382,000   | \$51,000    | \$433,000   |
| 2015/16 | GL/E&O | \$2,200,000  | \$1,373,000  | \$2,067,000  | \$694,000   | \$133,000   | \$827,000   |
| 2016/17 | GL/E&O | \$2,402,000  | \$769,000    | \$2,120,000  | \$1,351,000 | \$282,000   | \$1,633,000 |
| 2017/18 | GL/E&O | \$1,730,000  | \$124,000    | \$1,172,000  | \$1,048,000 | \$558,000   | \$1,606,000 |
|         |        | \$20,874,996 | \$16,112,996 | \$19,823,996 | \$3,711,000 | \$1,051,000 | \$4,762,000 |

| <b>Total Liability Losses Limited to Policy Aggregate Stop Loss</b> |                        |                                |                            |                                |                      |                    |                           |
|---|------------------------|--------------------------------|----------------------------|--------------------------------|----------------------|--------------------|---------------------------|
| <i>Accident Period</i>  | <i>Aggregate Limit</i> | <i>Ultimate Limited Losses</i> | <i>Limited Paid Losses</i> | <i>Limited Reported Losses</i> | <i>Case Reserves</i> | <i>IBNR Losses</i> | <i>Outstanding Losses</i> |
| Prior Years   |                        | \$10,507,103                   | \$10,507,103               | \$10,507,103                   | \$0                  | \$0                | \$0                       |
| 2009/10   | \$3,549,580            | \$2,000,000                    | \$1,970,000                | \$1,999,000                    | \$29,000             | \$1,000            | \$30,000                  |
| 2010/11   | \$3,869,920            | \$2,685,000                    | \$2,654,000                | \$2,682,000                    | \$28,000             | \$3,000            | \$31,000                  |
| 2011/12   | \$3,416,075            | \$2,469,000                    | \$2,434,000                | \$2,465,000                    | \$31,000             | \$4,000            | \$35,000                  |
| 2012/13   | \$2,788,172            | \$1,512,000                    | \$1,405,000                | \$1,506,000                    | \$101,000            | \$6,000            | \$107,000                 |
| 2013/14   | \$3,473,373            | \$1,547,000                    | \$1,436,000                | \$1,533,000                    | \$97,000             | \$14,000           | \$111,000                 |
| 2014/15   | \$3,994,646            | \$3,059,000                    | \$2,417,000                | \$3,002,000                    | \$585,000            | \$57,000           | \$642,000                 |
| 2015/16   | \$3,969,122            | \$3,358,000                    | \$2,349,000                | \$3,207,000                    | \$858,000            | \$151,000          | \$1,009,000               |
| 2016/17   | \$4,142,262            | \$3,568,000                    | \$1,698,000                | \$3,223,000                    | \$1,525,000          | \$345,000          | \$1,870,000               |
| 2017/18   | \$4,091,969            | \$2,873,000                    | \$660,000                  | \$2,146,000                    | \$1,486,000          | \$727,000          | \$2,213,000               |
| <b>Total</b>  |                        | <b>\$33,578,000</b>            | <b>\$27,530,000</b>        | <b>\$32,270,000</b>            | <b>\$4,740,000</b>   | <b>\$1,308,000</b> | <b>\$6,048,000</b>        |

**Percentile Distribution of IBNR  
 For Liability Coverages  
 Projected As of June 30, 2018**

| <i>percentile</i> | <i>Ultimate<br/>Losses</i> | <i>IBNR<br/>Reserve</i> |
|-------------------|----------------------------|-------------------------|
| Expected          | \$33,578,000               | \$1,308,000             |
| 20%               | \$32,564,000               | \$294,000               |
| 30%               | \$32,881,000               | \$611,000               |
| 40%               | \$33,147,000               | \$877,000               |
| 50%               | \$33,396,000               | \$1,126,000             |
| 60%               | \$33,656,000               | \$1,386,000             |
| 70%               | \$33,929,000               | \$1,659,000             |
| 75%               | \$34,083,000               | \$1,813,000             |
| 80%               | \$34,258,000               | \$1,988,000             |
| 85%               | \$34,447,000               | \$2,177,000             |
| 90%               | \$34,707,000               | \$2,437,000             |

|   |              |
|---|--------------|
| <i>Total Expected Ultimate Losses</i>               | \$33,578,000 |
| <i>Total Projected Paid Losses as of 06/30/18</i>   | \$27,530,000 |
| <i>Total Projected Case Reserves as of 06/30/18</i> | \$4,740,000  |
| <i>Total Projected IBNR Reserves as of 06/30/18</i> | \$1,308,000  |
| <i>Total Projected Outstanding as of 06/30/18</i>   | \$6,048,000  |

*Figures in this Table are limited to Aggregate Stop Loss Limits*

Comparison of Results with Previous Estimates as of 06/30/17

|                 | (A)                              | (B)                                | (C)                              | (D)                | (E)                                | (F)                              | (G)                |
|-----------------|----------------------------------|------------------------------------|----------------------------------|--------------------|------------------------------------|----------------------------------|--------------------|
| Accident Period | Actual Reported Losses 6/30/2017 | Expected Reported Losses 1/31/2018 | Actual Reported Losses 1/31/2018 | Percent Difference | Expected Ultimate Losses 6/30/2017 | Actual Ultimate Losses 1/31/2018 | Percent Difference |
| 2002/03         | \$233,996                        | \$233,996                          | \$233,996                        | 0.0%               | \$233,996                          | \$233,996                        | 0.0%               |
| 2003/04         | \$1,197,571                      | \$1,197,571                        | \$1,197,571                      | 0.0%               | \$1,197,571                        | \$1,197,571                      | 0.0%               |
| 2004/05         | \$1,107,309                      | \$1,107,309                        | \$1,107,309                      | 0.0%               | \$1,107,309                        | \$1,107,309                      | 0.0%               |
| 2005/06         | \$1,704,377                      | \$1,704,377                        | \$1,704,377                      | 0.0%               | \$1,704,377                        | \$1,704,377                      | 0.0%               |
| 2006/07         | \$1,488,442                      | \$1,488,442                        | \$1,488,442                      | 0.0%               | \$1,488,442                        | \$1,488,442                      | 0.0%               |
| 2007/08         | \$2,192,521                      | \$2,192,521                        | \$2,192,521                      | 0.0%               | \$2,192,521                        | \$2,192,521                      | 0.0%               |
| 2008/09         | \$2,582,887                      | \$2,582,887                        | \$2,582,887                      | 0.0%               | \$2,582,887                        | \$2,582,887                      | 0.0%               |
| 2009/10         | \$1,998,584                      | \$2,000,602                        | \$1,998,584                      | -0.1%              | \$2,004,000                        | \$2,000,000                      | -0.2%              |
| 2010/11         | \$2,681,419                      | \$2,687,618                        | \$2,681,419                      | -0.2%              | \$2,698,000                        | \$2,685,000                      | -0.5%              |
| 2011/12         | \$2,408,030                      | \$2,414,633                        | \$2,462,911                      | 2.0%               | \$2,425,000                        | \$2,469,000                      | 1.8%               |
| 2012/13         | \$1,513,681                      | \$1,523,323                        | \$1,503,662                      | -1.3%              | \$1,538,000                        | \$1,512,000                      | -1.7%              |
| 2013/14         | \$1,595,530                      | \$1,612,509                        | \$1,527,007                      | -5.3%              | \$1,639,000                        | \$1,547,000                      | -5.6%              |
| 2014/15         | \$2,724,041                      | \$2,777,047                        | \$2,979,812                      | 7.3%               | \$2,869,000                        | \$3,059,000                      | 6.6%               |
| 2015/16         | \$2,924,451                      | \$3,050,566                        | \$3,149,754                      | 3.3%               | \$3,274,000                        | \$3,358,000                      | 2.6%               |
| 2016/17         | \$2,848,835                      | \$3,085,301                        | \$3,094,546                      | 0.3%               | \$3,527,000                        | \$3,568,000                      | 1.2%               |
| 2017/18         |                                  | \$1,426,306                        | \$931,272                        | -34.7%             | \$3,211,000                        | \$2,873,000                      | -10.5%             |
| <b>Total</b>    | <b>\$29,201,672</b>              | <b>\$31,085,008</b>                | <b>\$30,836,069</b>              | <b>-0.8%</b>       | <b>\$33,692,103</b>                | <b>\$33,578,103</b>              | <b>-0.3%</b>       |

|                 | (A)                          | (B)                            | (C)                          | (D)                | (E)                                | (F)                              | (G)                |
|-----------------|------------------------------|--------------------------------|------------------------------|--------------------|------------------------------------|----------------------------------|--------------------|
| Accident Period | Actual Paid Losses 6/30/2017 | Expected Paid Losses 1/31/2018 | Actual Paid Losses 1/31/2018 | Percent Difference | Expected Ultimate Losses 6/30/2017 | Actual Ultimate Losses 1/31/2018 | Percent Difference |
| 2002/03         | \$233,996                    | \$233,996                      | \$233,996                    | 0.0%               | \$233,996                          | \$233,996                        | 0.0%               |
| 2003/04         | \$1,197,571                  | \$1,197,571                    | \$1,197,571                  | 0.0%               | \$1,197,571                        | \$1,197,571                      | 0.0%               |
| 2004/05         | \$1,107,309                  | \$1,107,309                    | \$1,107,309                  | 0.0%               | \$1,107,309                        | \$1,107,309                      | 0.0%               |
| 2005/06         | \$1,704,377                  | \$1,704,377                    | \$1,704,377                  | 0.0%               | \$1,704,377                        | \$1,704,377                      | 0.0%               |
| 2006/07         | \$1,488,442                  | \$1,488,442                    | \$1,488,442                  | 0.0%               | \$1,488,442                        | \$1,488,442                      | 0.0%               |
| 2007/08         | \$2,192,521                  | \$2,192,521                    | \$2,192,521                  | 0.0%               | \$2,192,521                        | \$2,192,521                      | 0.0%               |
| 2008/09         | \$2,582,887                  | \$2,582,887                    | \$2,582,887                  | 0.0%               | \$2,582,887                        | \$2,582,887                      | 0.0%               |
| 2009/10         | \$1,958,314                  | \$1,975,178                    | \$1,959,433                  | -0.8%              | \$2,004,000                        | \$2,000,000                      | -0.2%              |
| 2010/11         | \$2,642,570                  | \$2,662,256                    | \$2,643,180                  | -0.7%              | \$2,698,000                        | \$2,685,000                      | -0.5%              |
| 2011/12         | \$2,304,749                  | \$2,353,365                    | \$2,418,812                  | 2.8%               | \$2,425,000                        | \$2,469,000                      | 1.8%               |
| 2012/13         | \$1,309,315                  | \$1,400,749                    | \$1,359,673                  | -2.9%              | \$1,538,000                        | \$1,512,000                      | -1.7%              |
| 2013/14         | \$1,364,666                  | \$1,478,700                    | \$1,385,257                  | -6.3%              | \$1,639,000                        | \$1,547,000                      | -5.6%              |
| 2014/15         | \$1,893,356                  | \$2,288,800                    | \$2,119,657                  | -7.4%              | \$2,869,000                        | \$3,059,000                      | 6.6%               |
| 2015/16         | \$1,605,566                  | \$2,123,302                    | \$1,967,924                  | -7.3%              | \$3,274,000                        | \$3,358,000                      | 2.6%               |
| 2016/17         | \$780,676                    | \$1,273,630                    | \$1,314,443                  | 3.2%               | \$3,527,000                        | \$3,568,000                      | 1.2%               |
| 2017/18         |                              | \$382,628                      | \$246,480                    | -35.6%             | \$3,211,000                        | \$2,873,000                      | -10.5%             |
| <b>Total</b>    | <b>\$24,366,313</b>          | <b>\$26,445,710</b>            | <b>\$25,921,962</b>          | <b>-2.0%</b>       | <b>\$33,692,103</b>                | <b>\$33,578,103</b>              | <b>-0.3%</b>       |

(A) and (E) - From Previous actuarial report as of 06/30/17  
 (B) - Derived from (E) and (A) using loss development patterns  
 (C) - Exhibit I, limited to retention  
 (D) = [(C) / (B)] - 1  
 (F) - Exhibit VI  
 (G) = [(F) / (E)] - 1

**Estimated Outstanding Losses for Property Including APD  
 Projected As of June 30, 2018**

| Accident<br>Period | Coverage | SIR           | (A)                             | (B)                                    | (C)  | (D)                         | (E)                             | (F)                              |
|--------------------|----------|---------------|---------------------------------|--|--|-----------------------------|---------------------------------|----------------------------------|
|                    |          |               | Estimated<br>Ultimate<br>Losses | Projected<br>Limited<br>Paid<br>Losses | Projected<br>Limited<br>Reported<br>Losses | Limited<br>Case<br>Reserves | Limited<br>Unreported<br>Losses | Limited<br>Outstanding<br>Losses |
| 2002/03            | Prop/APD | \$100K/\$200k | \$312,045                       | \$312,045                              | \$312,045                                  | \$0                         | \$0                             | \$0                              |
| 2003/04            | Prop/APD | \$100K/\$200k | \$1,287,169                     | \$1,287,169                            | \$1,287,169                                | \$0                         | \$0                             | \$0                              |
| 2004/05            | Prop/APD | \$100K/\$200k | \$1,266,993                     | \$1,266,993                            | \$1,266,993                                | \$0                         | \$0                             | \$0                              |
| 2005/06            | Prop/APD | \$100K/\$200k | \$2,616,997                     | \$2,616,997                            | \$2,616,997                                | \$0                         | \$0                             | \$0                              |
| 2006/07            | Prop/APD | \$100K/\$200k | \$2,604,514                     | \$2,604,514                            | \$2,604,514                                | \$0                         | \$0                             | \$0                              |
| 2007/08            | Prop/APD | \$100K/\$200k | \$3,915,481                     | \$3,915,481                            | \$3,915,481                                | \$0                         | \$0                             | \$0                              |
| 2008/09            | Prop/APD | \$100K/\$200k | \$4,561,347                     | \$4,561,347                            | \$4,561,347                                | \$0                         | \$0                             | \$0                              |
| 2009/10            | Prop/APD | \$100K/\$200k | \$4,870,042                     | \$4,870,042                            | \$4,870,042                                | \$0                         | \$0                             | \$0                              |
| 2010/11            | Prop/APD | \$100K/\$200k | \$3,569,472                     | \$3,569,472                            | \$3,569,472                                | \$0                         | \$0                             | \$0                              |
|                    |          |               | \$25,004,059                    | \$25,004,059                           | \$25,004,059                               | \$0                         | \$0                             | \$0                              |

| <b>Losses Limited To Policy Aggregate Stop Loss</b> |                                 |               |                               |                           |                               |                  |                |                       |
|---|---------------------------------|---------------|-------------------------------|---------------------------|-------------------------------|------------------|----------------|-----------------------|
| Accident<br>Period                                  | Aggregate<br>Stop Loss<br>Limit | SIR           | Limited<br>Ultimate<br>Losses | Limited<br>Paid<br>Losses | Limited<br>Reported<br>Losses | Case<br>Reserves | IBNR<br>Losses | Outstanding<br>Losses |
| 2002/03   | \$976,411                       | \$100K/\$200k | \$312,045                     | \$312,045                 | \$312,045                     | \$0              | \$0            | \$0                   |
| 2003/04   | \$1,896,000                     | \$100K/\$200k | \$1,287,169                   | \$1,287,169               | \$1,287,169                   | \$0              | \$0            | \$0                   |
| 2004/05   | \$2,642,791                     | \$100K/\$200k | \$1,266,993                   | \$1,266,993               | \$1,266,993                   | \$0              | \$0            | \$0                   |
| 2005/06   | \$3,520,373                     | \$100K/\$200k | \$2,616,997                   | \$2,616,997               | \$2,616,997                   | \$0              | \$0            | \$0                   |
| 2006/07   | \$4,107,199                     | \$100K/\$200k | \$2,604,514                   | \$2,604,514               | \$2,604,514                   | \$0              | \$0            | \$0                   |
| 2007/08   | \$3,938,538                     | \$100K/\$200k | \$3,915,481                   | \$3,915,481               | \$3,915,481                   | \$0              | \$0            | \$0                   |
| 2008/09   | \$3,801,780                     | \$100K/\$200k | \$3,801,780                   | \$3,801,780               | \$3,801,780                   | \$0              | \$0            | \$0                   |
| 2009/10   | \$4,103,460                     | \$100K/\$200k | \$4,103,460                   | \$4,103,460               | \$4,103,460                   | \$0              | \$0            | \$0                   |
| 2010/11   | \$2,421,360                     | \$100K/\$200k | \$2,421,360                   | \$2,421,360               | \$2,421,360                   | \$0              | \$0            | \$0                   |
| 2011/12   | \$250,000 /\$2.7M corridor      |               | \$4,018,489                   | \$4,018,489               | \$4,018,489                   | \$0              | \$0            | \$0                   |
| 2012/13   | \$250,000 /\$2.4M corridor      |               | \$5,029,175                   | \$5,029,175               | \$5,029,175                   | \$0              | \$0            | \$0                   |
| 2013/14   | \$250,000 /\$1.4M corridor      |               | \$3,895,352                   | \$3,895,352               | \$3,895,352                   | \$0              | \$0            | \$0                   |
| 2014/15   | \$250,000 /\$1.4M corridor      |               | \$4,678,000                   | \$4,486,527               | \$4,669,469                   | \$182,942        | \$9,000        | \$191,000             |
| 2015/16   | \$250,000 /\$1.4M corridor      |               | \$4,837,000                   | \$4,764,861               | \$4,811,199                   | \$46,339         | \$26,000       | \$72,000              |
| 2016/17   | \$250,000 /\$1.4M corridor      |               | \$5,920,000                   | \$5,285,493               | \$5,816,737                   | \$531,244        | \$103,000      | \$635,000             |
| 2017/18   | \$250,000 /\$1.4M corridor      |               | \$6,351,000                   | \$4,297,985               | \$5,981,504                   | \$1,683,519      | \$369,000      | \$2,053,000           |
| <b>Total</b>  |                                 |               | \$57,059,000                  | \$54,108,000              | \$56,552,000                  | \$2,444,000      | \$507,000      | \$2,951,000           |

**Estimated Outstanding Losses SIR Losses versus Corridor  
 Projected As of June 30, 2018**

| Accident<br>Period           | SIR       | Corridor    | (A)                             | (B)                                    | (C)  | (D)                         | (E)                             | (F)                              |
|------------------------------|-----------|-------------|---------------------------------|--|--|-----------------------------|---------------------------------|----------------------------------|
|                              |           |             | Estimated<br>Ultimate<br>Losses | Projected<br>Limited<br>Paid<br>Losses | Projected<br>Limited<br>Reported<br>Losses | Limited<br>Case<br>Reserves | Limited<br>Unreported<br>Losses | Limited<br>Outstanding<br>Losses |
| <b>Stop Loss Years Total</b> |           |             | \$22,329,798                    | \$22,329,798                           | \$22,329,798                               | \$0                         | \$0                             | \$0                              |
| <b>SIR Losses</b>            |           |             |                                 |  |  |                             |                                 |                                  |
| 2011/12                      | \$250,000 |             | \$3,201,043                     | \$3,201,043                            | \$3,201,043                                | \$0                         | \$0                             | \$0                              |
| 2012/13                      | \$250,000 |             | \$2,629,175                     | \$2,629,175                            | \$2,629,175                                | \$0                         | \$0                             | \$0                              |
| 2013/14                      | \$250,000 |             | \$2,495,352                     | \$2,495,352                            | \$2,495,352                                | \$0                         | \$0                             | \$0                              |
| 2014/15                      | \$250,000 |             | \$3,491,913                     | \$3,418,995                            | \$3,491,913                                | \$72,918                    | \$0                             | \$73,000                         |
| 2015/16                      | \$250,000 |             | \$3,437,000                     | \$3,364,861                            | \$3,411,199                                | \$46,339                    | \$26,000                        | \$72,000                         |
| 2016/17                      | \$250,000 |             | \$4,520,000                     | \$3,885,493                            | \$4,416,737                                | \$531,244                   | \$103,000                       | \$635,000                        |
| 2017/18                      | \$250,000 |             | \$4,951,000                     | \$2,897,985                            | \$4,581,504                                | \$1,683,519                 | \$369,000                       | \$2,053,000                      |
| <b>Corridor Losses</b>       |           |             |                                 |  |  |                             |                                 |                                  |
| 2011/12                      |           | \$2,700,000 | \$817,446                       | \$817,446                              | \$817,446                                  | \$0                         | \$0                             | \$0                              |
| 2012/13                      |           | \$2,400,000 | \$2,400,000                     | \$2,400,000                            | \$2,400,000                                | \$0                         | \$0                             | \$0                              |
| 2013/14                      |           | \$1,400,000 | \$1,400,000                     | \$1,400,000                            | \$1,400,000                                | \$0                         | \$0                             | \$0                              |
| 2014/15                      |           | \$1,400,000 | \$1,186,087                     | \$1,067,532                            | \$1,177,557                                | \$110,024                   | \$9,000                         | \$118,000                        |
| 2015/16                      |           | \$1,400,000 | \$1,400,000                     | \$1,400,000                            | \$1,400,000                                | \$0                         | \$0                             | \$0                              |
| 2016/17                      |           | \$1,400,000 | \$1,400,000                     | \$1,400,000                            | \$1,400,000                                | \$0                         | \$0                             | \$0                              |
| 2017/18                      |           | \$1,400,000 | \$1,400,000                     | \$1,400,000                            | \$1,400,000                                | \$0                         | \$0                             | \$0                              |
| <b>Total</b>                 |           |             | \$57,059,000                    | \$54,108,000                           | \$56,552,000                               | \$2,444,000                 | \$507,000                       | \$2,951,000                      |

**Percentile Distribution of IBNR  
 For Property Coverages  
 Projected As of June 30, 2018**

| <i>percentile</i> | <i>Ultimate<br/>Losses</i> | <i>IBNR<br/>Reserve</i> |
|-------------------|----------------------------|-------------------------|
| Expected          | \$57,059,000               | \$507,000               |
| 20%               | \$56,367,000               | -\$185,000              |
| 30%               | \$56,600,000               | \$48,000                |
| 40%               | \$56,812,000               | \$260,000               |
| 50%               | \$57,000,000               | \$448,000               |
| 60%               | \$57,196,000               | \$644,000               |
| 70%               | \$57,413,000               | \$861,000               |
| 75%               | \$57,528,000               | \$976,000               |
| 80%               | \$57,661,000               | \$1,109,000             |
| 85%               | \$57,821,000               | \$1,269,000             |
| 90%               | \$58,040,000               | \$1,488,000             |

|   |              |
|---|--------------|
| <i>Total Expected Ultimate Losses</i>               | \$57,059,000 |
| <i>Total Projected Paid Losses as of 06/30/18</i>   | \$54,108,000 |
| <i>Total Projected Case Reserves as of 06/30/18</i> | \$2,444,000  |
| <i>Total Projected IBNR Reserves as of 06/30/18</i> | \$507,000    |
| <i>Total Projected Outstanding as of 06/30/18</i>   | \$2,951,000  |

*Figures in this Table are limited to Aggregate Stop Loss Limits*

**Comparison of Results with Previous Estimates as of 06/30/17**

| Accident<br>Period | (A)<br>Actual<br>Reported<br>Losses<br>6/30/2017 | (B)<br>Projected<br>Reported<br>Losses<br>1/31/2018 | (C)<br>Actual<br>Reported<br>Losses<br>1/31/2018 | (D)<br>Percent<br>Difference | (E)<br>Expected<br>Ultimate<br>Losses<br>6/30/2017 | (F)<br>Actual<br>Ultimate<br>Losses<br>1/31/2018 | (G)<br>Percent<br>Difference |
|--------------------|--|---|--|------------------------------|--|--|------------------------------|
| 2002/03            | \$312,045  | \$312,045   | \$312,045  | 0.0%                         | \$312,045  | \$312,045  | 0.0%                         |
| 2003/04            | \$1,287,169                                      | \$1,287,169   | \$1,287,169                                      | 0.0%                         | \$1,287,169  | \$1,287,169                                      | 0.0%                         |
| 2004/05            | \$1,266,993                                      | \$1,266,993   | \$1,266,993                                      | 0.0%                         | \$1,266,993  | \$1,266,993                                      | 0.0%                         |
| 2005/06            | \$2,618,047                                      | \$2,618,047   | \$2,616,997                                      | 0.0%                         | \$2,618,692  | \$2,616,997                                      | -0.1%                        |
| 2006/07            | \$2,604,514                                      | \$2,604,514   | \$2,604,514                                      | 0.0%                         | \$2,604,514  | \$2,604,514                                      | 0.0%                         |
| 2007/08            | \$3,915,481                                      | \$3,915,481   | \$3,915,481                                      | 0.0%                         | \$3,915,481  | \$3,915,481                                      | 0.0%                         |
| 2008/09            | \$4,561,397                                      | \$4,561,397   | \$4,561,347                                      | 0.0%                         | \$4,561,472  | \$4,561,347                                      | 0.0%                         |
| 2009/10            | \$4,870,042                                      | \$4,870,042   | \$4,870,042                                      | 0.0%                         | \$4,835,518  | \$4,870,042                                      | 0.7%                         |
| 2010/11            | \$3,569,472                                      | \$3,569,472   | \$3,569,472                                      | 0.0%                         | \$3,569,472  | \$3,569,472                                      | 0.0%                         |
| 2011/12            | \$4,018,489                                      | \$4,018,489   | \$4,018,489                                      | 0.0%                         | \$4,018,489  | \$4,018,489                                      | 0.0%                         |
| 2012/13            | \$5,029,175                                      | \$5,029,175   | \$5,029,175                                      | 0.0%                         | \$5,029,175  | \$5,029,175                                      | 0.0%                         |
| 2013/14            | \$3,896,177                                      | \$3,896,131   | \$3,895,352                                      | 0.0%                         | \$3,896,000  | \$3,895,352                                      | 0.0%                         |
| 2014/15            | \$4,662,017                                      | \$4,672,133   | \$4,662,027                                      | -0.2%                        | \$4,692,000  | \$4,678,000                                      | -0.3%                        |
| 2015/16            | \$4,830,061                                      | \$4,848,285   | \$4,794,734                                      | -1.1%                        | \$4,867,000  | \$4,837,000                                      | -0.6%                        |
| 2016/17            | \$5,357,883                                      | \$5,669,649   | \$5,751,577                                      | 1.4%                         | \$5,720,000  | \$5,920,000                                      | 3.5%                         |
| 2017/18            |  | \$2,090,053   | \$4,061,279                                      | 94.3%                        | \$5,673,000  | \$6,351,000                                      | 12.0%                        |
| <b>Total</b>       | <b>\$52,798,959</b>                              | <b>\$55,229,074</b>                                 | <b>\$57,216,691</b>                              | <b>3.6%</b>                  | <b>\$58,867,019</b>                                | <b>\$59,733,074</b>                              | <b>1.5%</b>                  |

(A) and (E) - From Previous actuarial report as of 06/30/2017  
 Losses below \$250,000 SIR plus Corridor Losses for 11-12 through 16-17  
 (B) - Derived from (A) and (E) using loss development patterns  
 (C) - Exhibit I, limited to retention  
 (D) = [(C) / (B)] - 1  
 (F) - Exhibit VI  
 (G) = [(F) / (E)] - 1





---

## Introduction

Select Actuarial Services has prepared this report for Oklahoma Schools Insurance Group at the request of Ms. Jennifer McKenzie, Arthur J. Gallagher Risk Services. The specific objective of this report is to estimate ultimate and outstanding losses and allocated adjustment expenses for OSIG's property and liability experience through June 30, 2018, using data valued as of January 31, 2018.

This report is an actuarial analysis of data, conditions, and practices communicated as of March 1, 2018, to Select Actuarial Services as described in the section entitled "Considerations." While Select Actuarial Services believes these communications to be reliable, it has not attempted to audit the information and cannot guarantee the accuracy of any information supplied. However, the data have been reviewed for reasonableness and consistency through comparison with the data used in previous actuarial reports. The estimates in this report are based upon appropriate actuarial assumptions and procedures described in the section of this report entitled "Analysis." Select Actuarial Services assumes no responsibility for any loss or damage that might arise from the use of or reliance upon this report other than for the purposes set forth herein.

This report was prepared for the use of and is only to be relied upon by the management of Oklahoma Schools Insurance Group. This report also may be provided to OSIG's auditors and insurance brokers. No portion of the report may be provided to any other party without Select Actuarial Services' prior written consent. In the event such consent is provided, the report must be provided in its entirety. We recommend that any such party have its own actuary review this report to ensure that the party understands the assumptions and uncertainties inherent in our estimates.

Laura Sprouse is a Fellow of the Casualty Actuarial Society and a Member of the American Academy of Actuaries. She meets the Qualification Standards of the American Academy of Actuaries to render actuarial opinions for property/casualty reserves. This report is prepared in accordance with Actuarial Standards of Practice No. 36 and 43.

---

## Considerations

Actuarial methods for performing a reserve evaluation can only be identified in light of the coverage involved, claims information available, and other considerations. Key considerations motivating the selection of techniques employed in this analysis are set forth below.

## Coverages

OSIG began writing automobile liability and physical damage, property and other liability coverage for school districts in the State of Oklahoma on July 1, 2002. For liability claims OSIG retains \$100,000 (loss and ALE combined) above the member deductibles, which vary by member by year. OSIG is further protected by aggregate coverage. These aggregate retentions are shown in Table A for liability.

OSIG retained \$100,000 in losses plus all expenses for most property claims for years through 7/1/10-11. Wind/hail claims were subject to a \$200,000 retention. Property losses over multiple school districts due to the same storm are considered a single occurrence. OSIG also had aggregate protection or stop loss limits for policy years through 7/1/10-11.

Beginning with the 7/1/11-12 policy year the property coverage has been restructured to include a corridor deductible for losses in excess of \$250,000 per claim. Also, the \$250,000 SIR is applied to ground up losses of all types of perils so that OSIG retains \$250,000 less the member deductibles. The corridor deductible has varied in size and is currently \$1,400,000.

|  | Liability SIR | Property SIR                   | Property Corridor |
|--|---------------|--------------------------------|-------------------|
| <i>7/1/02-6/30/11</i>                  | \$100,000     | \$200k wind/hail<br>\$100k AOP | NA                |
| <i>7/1/11-12</i>                       | \$100,000     | \$250,000 all perils           | \$2,700,000       |
| <i>7/1/12-13</i>                       | \$100,000     | \$250,000 all perils           | \$2,400,000       |
| <i>7/1/13-14 through<br/>7/1/17-18</i> | \$100,000     | \$250,000 all perils           | \$1,400,000       |

## Available Data

Jennifer McKenzie provided a loss listing as of January 31, 2018, which served as the basis for our analysis. The loss listing reflects amounts above the member deductibles and includes both losses and allocated adjustment expenses. "Losses" and "losses and allocated adjustment expenses" are used interchangeably in this report. Losses were provided by coverage

type: automobile liability, auto physical damage, general liability and E&O, and property. Vehicle counts, Student population and Total Insured Values for each member were also provided.

## **Development and Reporting Patterns**

Since annual evaluations of OSIG data are available, we have used this historical experience to build loss development triangles to observe OSIG's own development experience. This experience is still somewhat sparse, and displays volatility from year to year. Thus, we have weighted OSIG experience with a benchmark pattern based on Oklahoma public entity experience. Accordingly, the development factors used reflect the application of the Oklahoma tort claims act.

For property and APD claims we have calculated development factors for unlimited losses, as well as for losses capped to \$250,000 for pure losses.

## **Actuarial Central Estimate**

The estimates of ultimate losses at the "expected" level in this analysis are actuarial central estimates - estimates that represent an expected value over the range of reasonably possible outcomes. Such a range of reasonably possible outcomes may not include all conceivable outcomes. For example, it would not include conceivable extreme events where the contribution of such events to an expected value estimate is not reliably measurable.

## **Loss Models**

Statistical distributions are often used by the insurance industry to model the loss generating process. A lognormal distribution is selected for each policy year and line of business. The parameters for these distributions are based on the variation in the reported loss development triangles. The distributions for all years are combined using a Monte Carlo simulation. This process randomly generates 10,000 sample years. The confidence levels for the IBNR estimate are based on these outcomes.

## **Subrogation and Recoveries**

Subrogation and recoveries are assumed to be reflected in the primary loss reports. Accordingly, no explicit reductions for collateral sources have been incorporated into the estimates.

## Definitions

**Accident Period:** All of the events with occurrence dates during a period specified make up the corresponding accident period. The dollars associated with those events total the accident period's losses, even though they may be paid long after the end of the accident period. Losses are grouped by accident period throughout our analyses.

**Ultimate Losses:** The total amount that will eventually be paid on all losses for a particular accident period. Our estimate of the ultimate losses for an accident period is the sum of the paid losses, the case reserves, and the IBNR reserve.

**Paid Losses:** Dollars paid as of the latest available evaluation on losses incurred through the latest available evaluation.

**Case Reserves:** Reserves established on individual claims by the claims adjusters, as of the latest available evaluation. The case reserve plus the amount paid to date represents the adjuster's best estimate of the ultimate value of a particular claim.

**Reported Losses:** Paid losses plus case reserves as of the latest available evaluation.

**IBNR Reserve:** ("Incurred **B**ut **N**ot **R**eported") This is the dollar amount which we have estimated will be added to the reported losses between the date when the losses were compiled and final settlement of all claims for the accident period. Some of these additional dollars will be added to claims which are already known and currently open but which will finally cost more than they are currently reserved for. Other of these dollars are associated with claims which are known and closed but will be reopened before final closure. The balance of the IBNR reserve is for late-reported events.

**Outstanding Losses:** The losses not yet paid. Outstanding losses equal the difference between the ultimate losses and the paid losses. They are also the sum of the case reserves and the IBNR reserve.

**Loss Development:** The change in the paid losses or the reported losses over time. As more information is provided, individual claim estimates get closer and closer to the ultimate value of the claims. The increase in the total reported losses through time is the reported loss development. Similarly, as losses are paid out over time, the increase in total paid losses is the paid loss development.

---

## **Analysis**

Actuarial procedures employed to project ultimate and outstanding losses consist of a number of steps. Exhibits representing the various steps in the process are explained in this section of the report. The procedures used to analyze the automobile liability, general liability and E&O, and property & auto physical damage coverages are analogous except where noted.

### **Exhibit I**

Exhibit I displays paid and reported losses as of January 31, 2018. Claims are grouped by occurrence, and claims with no payment are excluded.

### **Exhibit II**

Exhibit II displays a listing of all occurrences which, after the application of development factors, exceed the retention in effect during each claim's accident period. The amount of paid and reported losses inside the corridor is also calculated here.

### **Exhibit III**

Exhibit III shows the estimation of ultimate losses using paid and reported loss development techniques. The calculations estimate ultimate losses limited to the per occurrence retention. The methods are based on the paid and reported losses shown in Exhibit I and development factors from Appendix A. Claims that are expected to develop above the retention are first subtracted from the data. The balance of the losses is developed to ultimate by multiplying by the development factor, and then a provision for the large losses is added back.

For property and APD only the reported method is used to estimate ultimate losses. For 7/1/11-12 and subsequent years we calculate the ultimate losses for losses limited to \$250,000 and unlimited in order to estimate the losses within the SIR and losses in the corridor.

## **Exhibit IV**

The selected loss rate for 7/1/18-19 from the forecast report is detrended to the 7/1/17-18 level and multiplied by the exposures to derive estimates of ultimate losses for that year. These results are used in the Bornhuetter-Ferguson method in Exhibit V.

## **Exhibit V**

Exhibit V calculates ultimate losses using the Bornhuetter/Ferguson technique, which blends the prior estimate of ultimate losses from the analysis as of June 30, 2016, with the current paid and reported losses. This method places less emphasis on current reported and paid values and tends to dampen swings in estimates, especially for immature years.

For property and APD, only the reported method is used to estimate ultimate losses. For 7/1/11-12 and forward we calculate the ultimate losses for losses limited to \$250,000 and unlimited in order to estimate the losses within the SIR and losses in the corridor.

## **Exhibit VI**

The results of these estimation methods are compared in Exhibit VI. A selection of our best estimate of the ultimate cost for each occurrence period is made based on the reasonableness of the various estimates when compared to loss experience to date, and the reasonableness of the estimates of ultimate and resulting unreported losses from year to year.

For property and APD, ultimate losses are selected for losses limited to \$250,000 per occurrence and on an unlimited basis. The losses excess of \$250,000 are calculated by subtraction, and then capped to the corridor.

## **Exhibit VII**

In order to track trends in the experience and provide a check of reasonableness, Exhibit VII calculates the average ultimate claim size and loss rate (ultimate losses divided by exposure) for each year.

## **Exhibit VIII**

In Exhibit VIII, paid losses are subtracted from estimated ultimate losses to estimate outstanding losses as of the current valuation. Similarly, reported losses are subtracted from estimated ultimate losses to estimate the unreported portion (IBNR) of the outstanding losses.

Projected outstanding and unreported (IBNR) losses as of June 30, 2017, are also displayed. Paid and reported losses are first projected to June 30 values, then subtracted from the ultimate losses to calculate the projected outstanding and unreported amounts as of year end. The IBNR calculated in this exhibit, plus a risk margin as calculated in Table B, should form the basis for OSIG's year end IBNR provision.

## **Exhibit IX**

Exhibit IX-A and IX-B provide a comparison of the current experience with that of the previous analyses as of June 30, 2017, and January 31, 2018. Using the data and assumptions from the prior reports, reported and paid losses are projected to the current date. The projected losses are compared to the actual current experience to observe changes in experience. Also shown is a comparison of the selected ultimate losses from the previous reports to the current estimates. These exhibits provide a check of reasonableness to our analysis.

## **Appendix A**

The loss development factors are chosen based on OSIG's own experience, weighted with Oklahoma public entity experience for stability and credibility. The selected factors are fit to a curve in order to extrapolate factors at maturities other than those displayed in the triangle.

For Property and APD, we have derived reported loss development factors for losses limited to \$250,000 and unlimited losses using triangles created on the same basis. In order to project the future payment of losses we have derived factors based on the patterns implied by the selected ultimate losses both limited to \$250,000 and unlimited.





---

## Automobile Liability Exhibits

The “Analysis” section of this report presents a discussion of the following exhibits:

|              |   |
|--------------|---|
| Exhibit I    | Summary of Experience   |
| Exhibit II   | Large Claim Listing   |
| Exhibit III  | Loss Development Methods  |
| Exhibit IV   | Forecast for Current Year   |
| Exhibit V    | Bornhuetter-Ferguson Methods  |
| Exhibit VI   | Summary and Selection of Ultimate Losses                            |
| Exhibit VII  | Average Claim Size  |
| Exhibit VIII | Outstanding Losses as of 1/31/2018<br>and Projected as of 6/30/2018 |
| Appendix A   | Loss Development Factors<br>and Triangles                           |



**Summary of Loss Data as of January 31, 2018**  
**Total Experience Net of Member Deductibles**

| (A)<br>Accident<br>Period | (B)<br>Evaluation<br>Date | (C)<br>Maturity<br>(months) | (D)<br>Total<br>Claims | (E)<br>Open<br>Claims | (F)<br>Net Loss<br>and Expense<br>Payments | (G)<br>Net Loss<br>and Expense<br>Reserves | (H)<br>Net Loss<br>and Expense<br>Incurred | (I)<br>Vehicles |
|---------------------------|---------------------------|-----------------------------|------------------------|-----------------------|--|--|--|-----------------|
| 7/1/02-03                 | 1/31/2018                 | 187                         | 24                     | 0                     | \$65,087                                   | \$0  | \$65,087                                   |                 |
| 7/1/03-04                 | 1/31/2018                 | 175                         | 81                     | 0                     | \$433,514                                  | \$0  | \$433,514                                  |                 |
| 7/1/04-05                 | 1/31/2018                 | 163                         | 109                    | 0                     | \$1,097,512                                | \$0  | \$1,097,512                                | 5,046           |
| 7/1/05-06                 | 1/31/2018                 | 151                         | 134                    | 0                     | \$450,928                                  | \$0  | \$450,928                                  | 6,391           |
| 7/1/06-07                 | 1/31/2018                 | 139                         | 145                    | 0                     | \$549,344                                  | \$0  | \$549,344                                  | 7,017           |
| 7/1/07-08                 | 1/31/2018                 | 127                         | 178                    | 0                     | \$759,907                                  | \$0  | \$759,907                                  | 7,753           |
| 7/1/08-09                 | 1/31/2018                 | 115                         | 207                    | 0                     | \$1,465,586                                | \$0  | \$1,465,586                                | 7,641           |
| 7/1/09-10                 | 1/31/2018                 | 103                         | 182                    | 1                     | \$687,646                                  | \$18,440                                   | \$706,085                                  | 8,309           |
| 7/1/10-11                 | 1/31/2018                 | 91                          | 187                    | 0                     | \$882,016                                  | \$0  | \$882,016                                  | 9,022           |
| 7/1/11-12                 | 1/31/2018                 | 79                          | 177                    | 1                     | \$947,823                                  | \$25,762                                   | \$973,586                                  | 6,650           |
| 7/1/12-13                 | 1/31/2018                 | 67                          | 162                    | 0                     | \$661,103                                  | \$0  | \$661,103                                  | 6,979           |
| 7/1/13-14                 | 1/31/2018                 | 55                          | 185                    | 1                     | \$704,429                                  | \$27,177                                   | \$731,606                                  | 7,460           |
| 7/1/14-15                 | 1/31/2018                 | 43                          | 226                    | 8                     | \$1,047,450                                | \$381,455                                  | \$1,428,905                                | 9,047           |
| 7/1/15-16                 | 1/31/2018                 | 31                          | 226                    | 7                     | \$889,240                                  | \$342,696                                  | \$1,231,937                                | 9,517           |
| 7/1/16-17                 | 1/31/2018                 | 19                          | 208                    | 18                    | \$859,884                                  | \$249,647                                  | \$1,109,530                                | 10,334          |
| 7/1/17-18                 | 1/31/2018                 | 7                           | 113                    | 85                    | \$217,543                                  | \$328,612                                  | \$546,156                                  | 10,013          |
| 7/1/18-19                 |                           |                             |                        |                       |  |  |  | 10,046          |
|                           |                           |                             | 2544                   | 121                   | \$11,719,012                               | \$1,373,790                                | \$13,092,802                               | 121,225         |

- Loss and policy information provided by Jennifer McKenzie, Arthur J. Gallagher
- Claims are grouped by occurrence, claims with \$0 incurred are excluded
- Losses are net of member deductibles

Summary of Large Claim Information

| Occurrence # | School                      | Policy Year | Loss Date  | Status | Net Paid    | Net Incurred | SIR       | Excess Recoveries | Excess Paid | Excess Incurred | Severity Factor | Ultimate Net |
|--------------|-----------------------------|-------------|------------|--------|-------------|--------------|-----------|-------------------|-------------|-----------------|-----------------|--------------|
| 000203       | NEWKIRK PUBLIC SCHOOLS      | 7/1/03-04   | 1/30/2004  | Closed | \$176,217   | \$176,217    | \$100,000 | \$76,217          | \$76,217    | \$76,217        | 1.000           | \$176,217    |
| 000513       | CHICKASKA PUBLIC SCHOOL     | 7/1/04-05   | 12/20/2004 | Closed | \$129,748   | \$129,748    | \$100,000 | \$29,748          | \$29,748    | \$29,748        | 1.000           | \$129,748    |
| 000596       | RIPLEY PUBLIC SCHOOLS       | 7/1/04-05   | 3/29/2005  | Closed | \$549,427   | \$549,427    | \$100,000 | \$449,427         | \$449,427   | \$449,427       | 1.000           | \$549,427    |
| 001433       | VELMA-ALMA ISD #5           | 7/1/06-07   | 12/20/2006 | Closed | \$114,139   | \$114,139    | \$100,000 | \$14,139          | \$14,139    | \$14,139        | 1.000           | \$114,140    |
| 002940       | CANEY VALLEY PUBLIC SCHOOL  | 7/1/08-09   | 5/7/2009   | Closed | \$106,504   | \$106,504    | \$100,000 | \$6,504           | \$6,504     | \$6,504         | 1.000           | \$106,506    |
| 002638       | ALTUS PUBLIC SCHOOL         | 7/1/08-09   | 11/14/2008 | Closed | \$104,466   | \$104,466    | \$100,000 | \$4,466           | \$4,466     | \$4,466         | 1.000           | \$104,467    |
| 002678       | CHICKASKA PUBLIC SCHOOL     | 7/1/08-09   | 12/15/2008 | Closed | \$131,271   | \$131,271    | \$100,000 | \$31,271          | \$31,271    | \$31,271        | 1.000           | \$131,272    |
| 90075        | PAOLI ISD                   | 7/1/10-11   | 8/18/2010  | Closed | \$134,999   | \$134,999    | \$100,000 | \$34,999          | \$34,999    | \$34,999        | 1.000           | \$135,011    |
| 90305        | GUTHRIE PUBLIC SCHOOLS      | 7/1/10-11   | 12/8/2010  | Closed | \$103,684   | \$103,684    | \$100,000 | \$3,684           | \$3,684     | \$3,684         | 1.000           | \$103,693    |
| 91477        | LAWTON BOARD OF EDUCATION   | 7/1/12-13   | 9/19/2012  | Closed | \$135,786   | \$135,786    | \$100,000 | \$35,786          | \$35,786    | \$35,786        | 1.001           | \$135,897    |
| 92239        | PUTNAM CITY ISD             | 7/1/13-14   | 1/7/2014   | Closed | \$130,707   | \$130,707    | \$100,000 | \$30,707          | \$30,707    | \$30,707        | 1.003           | \$131,040    |
| 93063        | MIDWEST CITY-DEL CITY ISD   | 7/1/14-15   | 4/20/2015  | Open   | \$178,945   | \$258,150    | \$100,000 | \$0               | \$78,945    | \$158,150       | 1.007           | \$259,862    |
| 93008        | WESTERN HEIGHTS ISD         | 7/1/14-15   | 3/23/2015  | Closed | \$206,102   | \$206,102    | \$100,000 | \$106,072         | \$106,072   | \$106,072       | 1.007           | \$207,469    |
| 93477        | HAYWOOD ISD                 | 7/1/15-16   | 11/19/2015 | Open   | \$75,266    | \$202,250    | \$100,000 | \$0               | \$0         | \$102,250       | 1.024           | \$207,046    |
| 94052        | PUTNAM CITY ISD             | 7/1/16-17   | 9/29/2016  | Open   | \$126,307   | \$126,307    | \$100,000 | \$0               | \$26,307    | \$26,307        | 1.080           | \$136,418    |
| 94363        | ADAIR ISD                   | 7/1/16-17   | 3/23/2017  | Open   | \$18,040    | \$118,040    | \$100,000 | \$0               | \$0         | \$18,040        | 1.080           | \$127,489    |
| 94562        | BROKEN ARROW PUBLIC SCHOOLS | 7/1/17-18   | 7/10/2017  | Open   | \$0         | \$115,000    | \$100,000 | \$0               | \$0         | \$15,000        | 1.206           | \$138,732    |
|              |                             |             |            |        | \$2,421,610 | \$2,842,798  |           | \$823,021         | \$928,273   | \$1,142,768     |                 |              |

- Loss and policy information provided by Jennifer McKenzie, Gallagher-Bryce

Excess paid and incurred losses for closed claims are equal to the excess recoveries, or amounts over SIR if no recovery yet  
Excess paid and incurred losses for open claims are amounts in excess of SIR regardless of recoveries.

**Calculation of Limited Losses**

| <i>Policy Period</i> | <i>(A)<br/>Retention</i> | <i>(B)<br/>Unlimited<br/>Paid<br/>Losses</i> | <i>(C)<br/>Unlimited<br/>Reported<br/>Losses</i> | <i>(D)<br/>Paid<br/>Excess of<br/>Primary</i> | <i>(E)<br/>Reported<br/>Excess of<br/>Primary</i> | <i>(F)<br/>Paid<br/>Limited to<br/>Primary</i> | <i>(G)<br/>Reported<br/>Limited to<br/>Primary</i> |
|----------------------|--------------------------|--|--|---|---|--|--|
| 7/1/02-03            | \$100,000                | \$65,087                                     | \$65,087   | \$0   | \$0   | \$65,087                                       | \$65,087   |
| 7/1/03-04            | \$100,000                | \$433,514                                    | \$433,514  | \$76,217                                      | \$76,217  | \$357,297                                      | \$357,297  |
| 7/1/04-05            | \$100,000                | \$1,097,512                                  | \$1,097,512                                      | \$479,175                                     | \$479,175   | \$618,336                                      | \$618,336  |
| 7/1/05-06            | \$100,000                | \$450,928                                    | \$450,928  | \$0   | \$0   | \$450,928                                      | \$450,928  |
| 7/1/06-07            | \$100,000                | \$549,344                                    | \$549,344  | \$14,139                                      | \$14,139  | \$535,205                                      | \$535,205  |
| 7/1/07-08            | \$100,000                | \$759,907                                    | \$759,907  | \$0   | \$0   | \$759,907                                      | \$759,907  |
| 7/1/08-09            | \$100,000                | \$1,465,586                                  | \$1,465,586                                      | \$42,241                                      | \$42,241  | \$1,423,346                                    | \$1,423,346  |
| 7/1/09-10            | \$100,000                | \$687,646                                    | \$706,085  | \$0   | \$0   | \$687,646                                      | \$706,085  |
| 7/1/10-11            | \$100,000                | \$882,016                                    | \$882,016  | \$38,683                                      | \$38,683  | \$843,333                                      | \$843,333  |
| 7/1/11-12            | \$100,000                | \$947,823                                    | \$973,586  | \$0   | \$0   | \$947,823                                      | \$973,586  |
| 7/1/12-13            | \$100,000                | \$661,103                                    | \$661,103  | \$35,786                                      | \$35,786  | \$625,317                                      | \$625,317  |
| 7/1/13-14            | \$100,000                | \$704,429                                    | \$731,606  | \$30,707                                      | \$30,707  | \$673,722                                      | \$700,899  |
| 7/1/14-15            | \$100,000                | \$1,047,450                                  | \$1,428,905                                      | \$185,017                                     | \$264,222   | \$862,433                                      | \$1,164,683  |
| 7/1/15-16            | \$100,000                | \$889,240                                    | \$1,231,937                                      | \$0   | \$102,250   | \$889,240                                      | \$1,129,687  |
| 7/1/16-17            | \$100,000                | \$859,884                                    | \$1,109,530                                      | \$26,307                                      | \$44,347  | \$833,576                                      | \$1,065,183  |
| 7/1/17-18            | \$100,000                | \$217,543                                    | \$546,156  | \$0   | \$15,000  | \$217,543                                      | \$531,156  |
| <b>Total</b>         |                          | \$11,719,012                                 | \$13,092,802                                     | \$928,273                                     | \$1,142,768                                       | \$10,790,739                                   | \$11,950,035                                       |

(A) and (B) - Exhibit I-A

(D) and (E) - Excess amounts from claims in Exhibit II, page 1

(F) = (B) - (D)

(G) = (C) - (E)

**Estimated Ultimate Losses Limited to OSIG Retentions  
Using Loss Development Methods**

| <i>Accident Period</i> | (A)<br><i>Reported Losses</i> | (B)<br><i>Reported on Large Losses</i> | (C)<br><i>Reported Develop. Factor</i> | (D)<br><i>Ultimate on Small Claims</i> | (E)<br><i>Provision for Large Claims</i> | (F)<br><i>Estimated Ultimate Losses</i> |
|------------------------|-------------------------------|--|--|--|--|---|
| 7/1/02-03              | \$65,087                      | \$0                                    | 1.000                                  | \$65,087                               | \$0                                      | \$65,000                                |
| 7/1/03-04              | \$433,514                     | \$176,217                              | 1.000                                  | \$257,297                              | \$100,000                                | \$357,000                               |
| 7/1/04-05              | \$1,097,512                   | \$679,175                              | 1.000                                  | \$418,336                              | \$200,000                                | \$618,000                               |
| 7/1/05-06              | \$450,928                     | \$0                                    | 1.000                                  | \$450,928                              | \$0                                      | \$451,000                               |
| 7/1/06-07              | \$549,344                     | \$114,139                              | 1.000                                  | \$435,206                              | \$100,000                                | \$535,000                               |
| 7/1/07-08              | \$759,907                     | \$0                                    | 1.000                                  | \$759,910                              | \$0                                      | \$760,000                               |
| 7/1/08-09              | \$1,465,586                   | \$342,241                              | 1.000                                  | \$1,123,357                            | \$300,000                                | \$1,423,000                             |
| 7/1/09-10              | \$706,085                     | \$0                                    | 1.000                                  | \$706,106                              | \$0                                      | \$706,000                               |
| 7/1/10-11              | \$882,016                     | \$238,683                              | 1.000                                  | \$643,389                              | \$200,000                                | \$843,000                               |
| 7/1/11-12              | \$973,586                     | \$0                                    | 1.000                                  | \$973,844                              | \$0                                      | \$974,000                               |
| 7/1/12-13              | \$661,103                     | \$135,786                              | 1.001                                  | \$525,746                              | \$100,000                                | \$626,000                               |
| 7/1/13-14              | \$731,606                     | \$130,707                              | 1.003                                  | \$602,429                              | \$100,000                                | \$702,000                               |
| 7/1/14-15              | \$1,428,905                   | \$464,252                              | 1.008                                  | \$972,411                              | \$200,281                                | \$1,173,000                             |
| 7/1/15-16              | \$1,231,937                   | \$202,250                              | 1.026                                  | \$1,056,217                            | \$100,200                                | \$1,156,000                             |
| 7/1/16-17              | \$1,109,530                   | \$244,347                              | 1.084                                  | \$937,627                              | \$200,682                                | \$1,138,000                             |
| <b>Total</b>           | <b>\$12,546,647</b>           | <b>\$2,727,798</b>                     |  | <b>\$9,927,890</b>                     | <b>\$1,601,162</b>                       | <b>\$11,527,000</b>                     |

| <i>Accident Period</i> | (A)<br><i>Paid Losses</i> | (B)<br><i>Paid on Large Losses</i> | (C)<br><i>Paid Develop. Factor</i> | (D)<br><i>Ultimate on Small Claims</i> | (E)<br><i>Provision for Large Claims</i> | (F)<br><i>Estimated Ultimate Losses</i> |
|------------------------|---------------------------|------------------------------------|------------------------------------|--|--|---|
| 7/1/02-03              | \$65,087                  | \$0                                | 1.000                              | \$65,088                               | \$0                                      | \$65,000                                |
| 7/1/03-04              | \$433,514                 | \$176,217                          | 1.000                              | \$257,300                              | \$100,000                                | \$357,000                               |
| 7/1/04-05              | \$1,097,512               | \$679,175                          | 1.000                              | \$418,344                              | \$200,000                                | \$618,000                               |
| 7/1/05-06              | \$450,928                 | \$0                                | 1.000                              | \$450,943                              | \$0                                      | \$451,000                               |
| 7/1/06-07              | \$549,344                 | \$114,139                          | 1.000                              | \$435,235                              | \$100,000                                | \$535,000                               |
| 7/1/07-08              | \$759,907                 | \$0                                | 1.000                              | \$760,013                              | \$0                                      | \$760,000                               |
| 7/1/08-09              | \$1,465,586               | \$342,241                          | 1.000                              | \$1,123,674                            | \$300,000                                | \$1,424,000                             |
| 7/1/09-10              | \$687,646                 | \$0                                | 1.001                              | \$688,083                              | \$0                                      | \$688,000                               |
| 7/1/10-11              | \$882,016                 | \$238,683                          | 1.001                              | \$644,253                              | \$200,000                                | \$844,000                               |
| 7/1/11-12              | \$947,823                 | \$0                                | 1.003                              | \$950,989                              | \$0                                      | \$951,000                               |
| 7/1/12-13              | \$661,103                 | \$135,786                          | 1.008                              | \$529,585                              | \$100,000                                | \$630,000                               |
| 7/1/13-14              | \$704,429                 | \$130,707                          | 1.021                              | \$585,585                              | \$100,000                                | \$686,000                               |
| 7/1/14-15              | \$1,047,450               | \$385,047                          | 1.055                              | \$699,052                              | \$200,281                                | \$899,000                               |
| 7/1/15-16              | \$889,240                 | \$75,266                           | 1.157                              | \$941,380                              | \$100,200                                | \$1,042,000                             |
| 7/1/16-17              | \$859,884                 | \$144,347                          | 1.471                              | \$1,052,796                            | \$200,682                                | \$1,253,000                             |
| <b>Total</b>           | <b>\$11,501,469</b>       | <b>\$2,421,610</b>                 |                                    | <b>\$9,602,318</b>                     | <b>\$1,601,162</b>                       | <b>\$11,203,000</b>                     |

- (A) - Exhibit I
- (B) - Exhibit II
- (C) - Appendix A
- (D) = [(A) - (B)] x (C)
- (E) = # large x SIR x ccdf
- (F) = (D) + (E)

***Estimate Ultimate Losses based on Forecast***

| <i>Accident<br/>Period</i> | <i>(A)<br/>Exposure</i> | <i>(B)<br/>Detrended<br/>Loss Rate</i> | <i>(C)<br/>Forecast</i> |
|----------------------------|-------------------------|--|-------------------------|
| <i>7/1/17-18</i>           | 10,013                  | \$114                                  | \$1,143,000             |
| <i>7/1/18-19</i>           | 10,046                  | \$117                                  | \$1,178,000             |

*(A) - Exhibit I*

*(B) - From Forecast, detrended*

*(C) = (A) x (B)*



**Estimated Ultimate Losses Limited to OSIG Retention  
Using Bornhuetter-Ferguson Method**

| Accident Period | (A)<br>Prior<br>Ultimate or<br>Forecast | (B)<br>Reported<br>Develop.<br>Factor | (C)<br>Expected %<br>Unreported | (D)<br>Expected<br>Unreported<br>Losses | (E)<br>Limited<br>Reported<br>Losses | (F)<br>Estimated<br>Ultimate<br>Losses |
|-----------------|---|---------------------------------------|---------------------------------|---|--------------------------------------|--|
| 7/1/02-03       | \$65,087                                | 1.000                                 | 0%                              | \$0                                     | \$65,087                             | \$65,000                               |
| 7/1/03-04       | \$357,297                               | 1.000                                 | 0%                              | \$0                                     | \$357,297                            | \$357,000                              |
| 7/1/04-05       | \$618,336                               | 1.000                                 | 0%                              | \$0                                     | \$618,336                            | \$618,000                              |
| 7/1/05-06       | \$450,928                               | 1.000                                 | 0%                              | \$0                                     | \$450,928                            | \$451,000                              |
| 7/1/06-07       | \$535,205                               | 1.000                                 | 0%                              | \$1                                     | \$535,205                            | \$535,000                              |
| 7/1/07-08       | \$759,907                               | 1.000                                 | 0%                              | \$3                                     | \$759,907                            | \$760,000                              |
| 7/1/08-09       | \$1,423,346                             | 1.000                                 | 0%                              | \$14                                    | \$1,423,346                          | \$1,423,000                            |
| 7/1/09-10       | \$707,000                               | 1.000                                 | 0%                              | \$21                                    | \$706,085                            | \$706,000                              |
| 7/1/10-11       | \$846,000                               | 1.000                                 | 0%                              | \$74                                    | \$843,333                            | \$843,000                              |
| 7/1/11-12       | \$1,008,000                             | 1.000                                 | 0%                              | \$268                                   | \$973,586                            | \$974,000                              |
| 7/1/12-13       | \$633,000                               | 1.001                                 | 0%                              | \$517                                   | \$625,317                            | \$626,000                              |
| 7/1/13-14       | \$713,000                               | 1.003                                 | 0%                              | \$1,811                                 | \$700,899                            | \$703,000                              |
| 7/1/14-15       | \$1,140,000                             | 1.008                                 | 1%                              | \$9,096                                 | \$1,164,683                          | \$1,174,000                            |
| 7/1/15-16       | \$1,131,000                             | 1.026                                 | 3%                              | \$28,409                                | \$1,129,687                          | \$1,158,000                            |
| 7/1/16-17       | \$1,303,000                             | 1.084                                 | 8%                              | \$100,674                               | \$1,065,183                          | \$1,166,000                            |
| 7/1/17-18       | \$1,143,000                             | 2.083                                 | 52%                             | \$594,277                               | \$531,156                            | \$1,125,000                            |
| <b>Total</b>    | <b>\$12,834,106</b>                     |                                       |                                 | <b>\$735,162</b>                        | <b>\$11,950,035</b>                  | <b>\$12,684,000</b>                    |

| Accident Period | (A)<br>Prior<br>Ultimate or<br>Forecast | (B)<br>Paid<br>Develop.<br>Factor | (C)<br>Expected %<br>Unpaid | (D)<br>Expected<br>Unpaid<br>Losses | (E)<br>Limited<br>Paid<br>Losses | (F)<br>Estimated<br>Ultimate<br>Losses |
|-----------------|---|-----------------------------------|-----------------------------|-------------------------------------|----------------------------------|--|
| 7/1/02-03       | \$65,087                                | 1.000                             | 0%                          | \$0                                 | \$65,087                         | \$65,000                               |
| 7/1/03-04       | \$357,297                               | 1.000                             | 0%                          | \$3                                 | \$357,297                        | \$357,000                              |
| 7/1/04-05       | \$618,336                               | 1.000                             | 0%                          | \$11                                | \$618,336                        | \$618,000                              |
| 7/1/05-06       | \$450,928                               | 1.000                             | 0%                          | \$15                                | \$450,928                        | \$451,000                              |
| 7/1/06-07       | \$535,205                               | 1.000                             | 0%                          | \$36                                | \$535,205                        | \$535,000                              |
| 7/1/07-08       | \$759,907                               | 1.000                             | 0%                          | \$106                               | \$759,907                        | \$760,000                              |
| 7/1/08-09       | \$1,423,346                             | 1.000                             | 0%                          | \$417                               | \$1,423,346                      | \$1,424,000                            |
| 7/1/09-10       | \$707,000                               | 1.001                             | 0%                          | \$449                               | \$687,646                        | \$688,000                              |
| 7/1/10-11       | \$846,000                               | 1.001                             | 0%                          | \$1,209                             | \$843,333                        | \$845,000                              |
| 7/1/11-12       | \$1,008,000                             | 1.003                             | 0%                          | \$3,356                             | \$947,823                        | \$951,000                              |
| 7/1/12-13       | \$633,000                               | 1.008                             | 1%                          | \$5,102                             | \$625,317                        | \$630,000                              |
| 7/1/13-14       | \$713,000                               | 1.021                             | 2%                          | \$14,445                            | \$673,722                        | \$688,000                              |
| 7/1/14-15       | \$1,140,000                             | 1.055                             | 5%                          | \$59,767                            | \$862,433                        | \$922,000                              |
| 7/1/15-16       | \$1,131,000                             | 1.157                             | 14%                         | \$153,069                           | \$889,240                        | \$1,042,000                            |
| 7/1/16-17       | \$1,303,000                             | 1.471                             | 32%                         | \$417,411                           | \$833,576                        | \$1,251,000                            |
| 7/1/17-18       | \$1,143,000                             | 3.746                             | 73%                         | \$837,896                           | \$217,543                        | \$1,055,000                            |
| <b>Total</b>    | <b>\$12,834,106</b>                     |                                   |                             | <b>\$1,493,292</b>                  | <b>\$10,790,739</b>              | <b>\$12,282,000</b>                    |

(A) - Exhibit VI, or IV for 7/1/17-18

(B) - Appendix A

(C) = 1 - 1/(B)

(D) = (A) \* (C)

(E) - Exhibit I, limited to SIR

(F) = (D) + (E)

**Summary and Selection of Ultimate Limited Loss Estimates**

| <i>Accident<br/>Period</i> | <i>(A)<br/>Prior<br/>Ultimate<br/>or<br/>Forecast</i> | <i>(B)<br/>Reported<br/>Loss<br/>Development<br/>Method</i> | <i>(C)<br/>Paid<br/>Loss<br/>Development<br/>Method</i> | <i>(D)<br/>Expected<br/>Unreported<br/>Method</i> | <i>(E)<br/>Expected<br/>Unpaid<br/>Method</i> | <i>(F)<br/>Selected<br/>Ultimate<br/>Loss<br/>Estimate</i> |
|----------------------------|---|---|---|---|---|--|
| 7/1/02-03                  | \$65,087  | \$65,000  | \$65,000  | \$65,000  | \$65,000                                      | \$65,087   |
| 7/1/03-04                  | \$357,297   | \$357,000   | \$357,000   | \$357,000   | \$357,000                                     | \$357,297  |
| 7/1/04-05                  | \$618,336   | \$618,000   | \$618,000   | \$618,000   | \$618,000                                     | \$618,336  |
| 7/1/05-06                  | \$450,928   | \$451,000   | \$451,000   | \$451,000   | \$451,000                                     | \$450,928  |
| 7/1/06-07                  | \$535,205   | \$535,000   | \$535,000   | \$535,000   | \$535,000                                     | \$535,205  |
| 7/1/07-08                  | \$759,907   | \$760,000   | \$760,000   | \$760,000   | \$760,000                                     | \$759,907  |
| 7/1/08-09                  | \$1,423,346   | \$1,423,000   | \$1,424,000   | \$1,423,000                                       | \$1,424,000                                   | \$1,423,346  |
| 7/1/09-10                  | \$707,000   | \$706,000   | \$688,000   | \$706,000   | \$688,000                                     | \$706,000  |
| 7/1/10-11                  | \$846,000   | \$843,000   | \$844,000   | \$843,000   | \$845,000                                     | \$843,000  |
| 7/1/11-12                  | \$1,008,000   | \$974,000   | \$951,000   | \$974,000   | \$951,000                                     | \$974,000  |
| 7/1/12-13                  | \$633,000   | \$626,000   | \$630,000   | \$626,000   | \$630,000                                     | \$626,000  |
| 7/1/13-14                  | \$713,000   | \$702,000   | \$686,000   | \$703,000   | \$688,000                                     | \$703,000  |
| 7/1/14-15                  | \$1,140,000   | \$1,173,000   | \$899,000   | \$1,174,000                                       | \$922,000                                     | \$1,174,000  |
| 7/1/15-16                  | \$1,131,000   | \$1,156,000   | \$1,042,000   | \$1,158,000                                       | \$1,042,000                                   | \$1,158,000  |
| 7/1/16-17                  | \$1,303,000   | \$1,138,000   | \$1,253,000   | \$1,166,000                                       | \$1,251,000                                   | \$1,166,000  |
| 7/1/17-18                  | \$1,183,000   |   |   | \$1,125,000                                       | \$1,055,000                                   | \$1,143,000  |
| <b>Total</b>               | <b>\$12,874,106</b>                                   | <b>\$11,527,000</b>   | <b>\$11,203,000</b>                                     | <b>\$12,684,000</b>                               | <b>\$12,282,000</b>                           | <b>\$12,703,106</b>  |

(A) - From Previous Report as of 06/30/2017

(B) and (C) - Exhibit III

(D) and (E) - Exhibit V

(F) - Selected as Noted:

Limited Reported Losses for 02-03 through 08-09

(D) for 09-10 through 16-17

New Forecast for 7/1/17-18

**Average Ultimate Claim Sizes**

|                        | (A)                    | (B)                               | (C)                              | (D)                              | (E)                                     | (F)                        | (G)              |
|------------------------|------------------------|-----------------------------------|----------------------------------|----------------------------------|---|----------------------------|------------------|
| <i>Accident Period</i> | <i>Reported Claims</i> | <i>Reported Claim Development</i> | <i>Estimated Ultimate Claims</i> | <i>Estimated Ultimate Losses</i> | <i>Estimated Average Ultimate Claim</i> | <i>Exposure (Vehicles)</i> | <i>Loss Rate</i> |
| 7/1/02-03              | 24                     | 1.000                             | 24.0                             | \$65,087                         | \$2,700                                 |                            |                  |
| 7/1/03-04              | 81                     | 1.000                             | 81.0                             | \$357,297                        | \$4,400                                 |                            |                  |
| 7/1/04-05              | 109                    | 1.000                             | 109.0                            | \$618,336                        | \$5,700                                 | 5,046                      | \$123            |
| 7/1/05-06              | 134                    | 1.000                             | 134.0                            | \$450,928                        | \$3,400                                 | 6,391                      | \$71             |
| 7/1/06-07              | 145                    | 1.000                             | 145.0                            | \$535,205                        | \$3,700                                 | 7,017                      | \$76             |
| 7/1/07-08              | 178                    | 1.000                             | 178.0                            | \$759,907                        | \$4,300                                 | 7,753                      | \$98             |
| 7/1/08-09              | 207                    | 1.000                             | 207.0                            | \$1,423,346                      | \$6,900                                 | 7,641                      | \$186            |
| 7/1/09-10              | 182                    | 1.000                             | 182.0                            | \$706,000                        | \$3,900                                 | 8,309                      | \$85             |
| 7/1/10-11              | 187                    | 1.000                             | 187.0                            | \$843,000                        | \$4,500                                 | 9,022                      | \$93             |
| 7/1/11-12              | 177                    | 1.000                             | 177.0                            | \$974,000                        | \$5,500                                 | 6,650                      | \$146            |
| 7/1/12-13              | 162                    | 1.000                             | 162.0                            | \$626,000                        | \$3,900                                 | 6,979                      | \$90             |
| 7/1/13-14              | 185                    | 1.000                             | 185.0                            | \$703,000                        | \$3,800                                 | 7,460                      | \$94             |
| 7/1/14-15              | 226                    | 1.001                             | 226.3                            | \$1,174,000                      | \$5,200                                 | 9,047                      | \$130            |
| 7/1/15-16              | 226                    | 1.002                             | 226.5                            | \$1,158,000                      | \$5,100                                 | 9,517                      | \$122            |
| 7/1/16-17              | 208                    | 1.003                             | 208.7                            | \$1,166,000                      | \$5,600                                 | 10,334                     | \$113            |
| 7/1/17-18              | 113                    | 1.727                             | 205.0                            | \$1,143,000                      | \$5,600                                 | 10,013                     | \$114            |
| 7/1/18-19              |                        |                                   | 219.4                            | \$1,178,000                      | \$5,400                                 | 10,046                     | \$117            |
| <b>Total</b>           | <b>2544</b>            |                                   | <b>2856.89135</b>                | <b>\$13,881,106</b>              | <b>\$4,900</b>                          | <b>121,225</b>             | <b>\$115</b>     |

- 7/1/18-19 from forecast

(A) - Exhibit I

(B) - Appendix A

(C) = (A) x (B)

(D) = Exhibit VI

(E) = (D) / (C)

(F) - Exhibit I, provided by OSIG

(G) = (D) / (F)

**Estimated Outstanding Losses**

| Accident Period                      | (A)<br>Estimated Ultimate Losses | (B)<br>Limited Paid Losses | (C)<br>Limited Reported Losses | (D)<br>Limited Case Reserves | (E)<br>IBNR Losses | (F)<br>Outstanding Losses |
|--------------------------------------|----------------------------------|----------------------------|--------------------------------|------------------------------|--------------------|---------------------------|
| <b>As of January 31, 2018</b>        |                                  |                            |                                |                              |                    |                           |
| 7/1/02-03                            | \$65,087                         | \$65,087                   | \$65,087                       | \$0                          | \$0                | \$0                       |
| 7/1/03-04                            | \$357,297                        | \$357,297                  | \$357,297                      | \$0                          | \$0                | \$0                       |
| 7/1/04-05                            | \$618,336                        | \$618,336                  | \$618,336                      | \$0                          | \$0                | \$0                       |
| 7/1/05-06                            | \$450,928                        | \$450,928                  | \$450,928                      | \$0                          | \$0                | \$0                       |
| 7/1/06-07                            | \$535,205                        | \$535,205                  | \$535,205                      | \$0                          | \$0                | \$0                       |
| 7/1/07-08                            | \$759,907                        | \$759,907                  | \$759,907                      | \$0                          | \$0                | \$0                       |
| 7/1/08-09                            | \$1,423,346                      | \$1,423,346                | \$1,423,346                    | \$0                          | \$0                | \$0                       |
| 7/1/09-10                            | \$706,000                        | \$687,646                  | \$706,085                      | \$18,440                     | \$0                | \$18,000                  |
| 7/1/10-11                            | \$843,000                        | \$843,333                  | \$843,333                      | \$0                          | \$0                | \$0                       |
| 7/1/11-12                            | \$974,000                        | \$947,823                  | \$973,586                      | \$25,762                     | \$0                | \$26,000                  |
| 7/1/12-13                            | \$626,000                        | \$625,317                  | \$625,317                      | \$0                          | \$1,000            | \$1,000                   |
| 7/1/13-14                            | \$703,000                        | \$673,722                  | \$700,899                      | \$27,177                     | \$2,000            | \$29,000                  |
| 7/1/14-15                            | \$1,174,000                      | \$862,433                  | \$1,164,683                    | \$302,250                    | \$9,000            | \$312,000                 |
| 7/1/15-16                            | \$1,158,000                      | \$889,240                  | \$1,129,687                    | \$240,447                    | \$28,000           | \$269,000                 |
| 7/1/16-17                            | \$1,166,000                      | \$833,576                  | \$1,065,183                    | \$231,607                    | \$101,000          | \$332,000                 |
| 7/1/17-1/31/18                       | \$667,000                        | \$217,543                  | \$531,156                      | \$313,612                    | \$136,000          | \$449,000                 |
| <b>Total</b>                         | <b>\$12,227,000</b>              | <b>\$10,790,739</b>        | <b>\$11,950,035</b>            | <b>\$1,159,296</b>           | <b>\$277,000</b>   | <b>\$1,436,000</b>        |
| 2/1-6/30/18                          | \$476,000                        |                            |                                |                              |                    |                           |
| <b>Projected as of June 30, 2018</b> |                                  |                            |                                |                              |                    |                           |
| 7/1/02-03                            | \$65,087                         | \$65,087                   | \$65,087                       | \$0                          | \$0                | \$0                       |
| 7/1/03-04                            | \$357,297                        | \$357,297                  | \$357,297                      | \$0                          | \$0                | \$0                       |
| 7/1/04-05                            | \$618,336                        | \$618,336                  | \$618,336                      | \$0                          | \$0                | \$0                       |
| 7/1/05-06                            | \$450,928                        | \$450,928                  | \$450,928                      | \$0                          | \$0                | \$0                       |
| 7/1/06-07                            | \$535,205                        | \$535,205                  | \$535,205                      | \$0                          | \$0                | \$0                       |
| 7/1/07-08                            | \$759,907                        | \$759,907                  | \$759,907                      | \$0                          | \$0                | \$0                       |
| 7/1/08-09                            | \$1,423,346                      | \$1,423,346                | \$1,423,346                    | \$0                          | \$0                | \$0                       |
| 7/1/09-10                            | \$706,000                        | \$693,000                  | \$706,000                      | \$13,000                     | \$0                | \$13,000                  |
| 7/1/10-11                            | \$843,000                        | \$843,000                  | \$843,000                      | \$0                          | \$0                | \$0                       |
| 7/1/11-12                            | \$974,000                        | \$956,000                  | \$974,000                      | \$18,000                     | \$0                | \$18,000                  |
| 7/1/12-13                            | \$626,000                        | \$626,000                  | \$626,000                      | \$0                          | \$0                | \$0                       |
| 7/1/13-14                            | \$703,000                        | \$683,000                  | \$702,000                      | \$19,000                     | \$1,000            | \$20,000                  |
| 7/1/14-15                            | \$1,174,000                      | \$965,000                  | \$1,168,000                    | \$203,000                    | \$6,000            | \$209,000                 |
| 7/1/15-16                            | \$1,158,000                      | \$976,000                  | \$1,140,000                    | \$164,000                    | \$18,000           | \$182,000                 |
| 7/1/16-17                            | \$1,166,000                      | \$929,000                  | \$1,103,000                    | \$174,000                    | \$63,000           | \$237,000                 |
| 7/1/17-18                            | \$1,143,000                      | \$536,000                  | \$974,000                      | \$438,000                    | \$169,000          | \$607,000                 |
| <b>Total</b>                         | <b>\$12,703,000</b>              | <b>\$11,417,106</b>        | <b>\$12,446,106</b>            | <b>\$1,029,000</b>           | <b>\$257,000</b>   | <b>\$1,286,000</b>        |

**Total Estimated IBNR as of June 30, 2018 \$257,000**

(A) - Exhibit VI

(B) and (C) - Exhibit V as of 1/31/18

Projected as of 6/30/18 using LDFs

(D) = (C) - (B)

(E) = (A) - (C)

(F) = (A) - (B)

**Comparison of Results with Previous Estimates as of 6/30/17**

| Accident<br>Period | (A)                                       | (B)   | (C)                                       | (D)                   | (E)   | (F)                                       | (G)                   |
|--------------------|---|---|---|-----------------------|---|---|-----------------------|
|                    | Actual<br>Reported<br>Losses<br>6/30/2017 | Expected<br>Reported<br>Losses<br>1/31/2018 | Actual<br>Reported<br>Losses<br>1/31/2018 | Percent<br>Difference | Expected<br>Ultimate<br>Losses<br>6/30/2017 | Actual<br>Ultimate<br>Losses<br>1/31/2018 | Percent<br>Difference |
| 7/1/02-03          | \$65,087                                  | \$65,087                                    | \$65,087                                  | 0.0%                  | \$65,087                                    | \$65,087                                  | 0.0%                  |
| 7/1/03-04          | \$357,297                                 | \$357,297                                   | \$357,297                                 | 0.0%                  | \$357,297                                   | \$357,297                                 | 0.0%                  |
| 7/1/04-05          | \$618,336                                 | \$618,336                                   | \$618,336                                 | 0.0%                  | \$618,336                                   | \$618,336                                 | 0.0%                  |
| 7/1/05-06          | \$450,928                                 | \$450,928                                   | \$450,928                                 | 0.0%                  | \$450,928                                   | \$450,928                                 | 0.0%                  |
| 7/1/06-07          | \$535,205                                 | \$535,205                                   | \$535,205                                 | 0.0%                  | \$535,205                                   | \$535,205                                 | 0.0%                  |
| 7/1/07-08          | \$759,907                                 | \$759,907                                   | \$759,907                                 | 0.0%                  | \$759,907                                   | \$759,907                                 | 0.0%                  |
| 7/1/08-09          | \$1,423,346                               | \$1,423,346                                 | \$1,423,346                               | 0.0%                  | \$1,423,346                                 | \$1,423,346                               | 0.0%                  |
| 7/1/09-10          | \$706,085                                 | \$706,517                                   | \$706,085                                 | -0.1%                 | \$707,000                                   | \$706,000                                 | -0.1%                 |
| 7/1/10-11          | \$843,333                                 | \$844,602                                   | \$843,333                                 | -0.2%                 | \$846,000                                   | \$843,000                                 | -0.4%                 |
| 7/1/11-12          | \$1,003,435                               | \$1,005,625                                 | \$973,586                                 | -3.2%                 | \$1,008,000                                 | \$974,000                                 | -3.4%                 |
| 7/1/12-13          | \$625,317                                 | \$629,031                                   | \$625,317                                 | -0.6%                 | \$633,000                                   | \$626,000                                 | -1.1%                 |
| 7/1/13-14          | \$701,213                                 | \$706,950                                   | \$700,899                                 | -0.9%                 | \$713,000                                   | \$703,000                                 | -1.4%                 |
| 7/1/14-15          | \$1,122,893                               | \$1,131,244                                 | \$1,164,683                               | 3.0%                  | \$1,140,000                                 | \$1,174,000                               | 3.0%                  |
| 7/1/15-16          | \$1,071,277                               | \$1,100,172                                 | \$1,129,687                               | 2.7%                  | \$1,131,000                                 | \$1,158,000                               | 2.4%                  |
| 7/1/16-17          | \$1,119,606                               | \$1,204,313                                 | \$1,065,183                               | -11.6%                | \$1,303,000                                 | \$1,166,000                               | -10.5%                |
| 7/1/17-18          |   | \$567,926                                   | \$531,156                                 | -6.5%                 | \$1,183,000                                 | \$1,143,000                               | -3.4%                 |
| <b>Total</b>       | <b>\$11,403,266</b>                       | <b>\$12,106,487</b>                         | <b>\$11,950,035</b>                       | <b>-1.3%</b>          | <b>\$12,874,106</b>                         | <b>\$12,703,106</b>                       | <b>-1.3%</b>          |

| Accident<br>Period | (A)                                   | (B)                                     | (C)                                   | (D)                   | (E)   | (F)                                       | (G)                   |
|--------------------|---------------------------------------|---|---------------------------------------|-----------------------|---|---|-----------------------|
|                    | Actual<br>Paid<br>Losses<br>6/30/2017 | Expected<br>Paid<br>Losses<br>1/31/2018 | Actual<br>Paid<br>Losses<br>1/31/2018 | Percent<br>Difference | Expected<br>Ultimate<br>Losses<br>6/30/2017 | Actual<br>Ultimate<br>Losses<br>1/31/2018 | Percent<br>Difference |
| 7/1/02-03          | \$65,087                              | \$65,087                                | \$65,087                              | 0.0%                  | \$65,087                                    | \$65,087                                  | 0.0%                  |
| 7/1/03-04          | \$357,297                             | \$357,297                               | \$357,297                             | 0.0%                  | \$357,297                                   | \$357,297                                 | 0.0%                  |
| 7/1/04-05          | \$618,336                             | \$618,336                               | \$618,336                             | 0.0%                  | \$618,336                                   | \$618,336                                 | 0.0%                  |
| 7/1/05-06          | \$450,928                             | \$450,928                               | \$450,928                             | 0.0%                  | \$450,928                                   | \$450,928                                 | 0.0%                  |
| 7/1/06-07          | \$535,205                             | \$535,205                               | \$535,205                             | 0.0%                  | \$535,205                                   | \$535,205                                 | 0.0%                  |
| 7/1/07-08          | \$759,907                             | \$759,907                               | \$759,907                             | 0.0%                  | \$759,907                                   | \$759,907                                 | 0.0%                  |
| 7/1/08-09          | \$1,423,346                           | \$1,423,346                             | \$1,423,346                           | 0.0%                  | \$1,423,346                                 | \$1,423,346                               | 0.0%                  |
| 7/1/09-10          | \$687,068                             | \$695,455                               | \$687,646                             | -1.1%                 | \$707,000                                   | \$706,000                                 | -0.1%                 |
| 7/1/10-11          | \$843,333                             | \$844,472                               | \$843,333                             | -0.1%                 | \$846,000                                   | \$843,000                                 | -0.4%                 |
| 7/1/11-12          | \$948,005                             | \$973,997                               | \$947,823                             | -2.7%                 | \$1,008,000                                 | \$974,000                                 | -3.4%                 |
| 7/1/12-13          | \$625,317                             | \$628,683                               | \$625,317                             | -0.5%                 | \$633,000                                   | \$626,000                                 | -1.1%                 |
| 7/1/13-14          | \$674,036                             | \$691,144                               | \$673,722                             | -2.5%                 | \$713,000                                   | \$703,000                                 | -1.4%                 |
| 7/1/14-15          | \$756,681                             | \$921,242                               | \$862,433                             | -6.4%                 | \$1,140,000                                 | \$1,174,000                               | 3.0%                  |
| 7/1/15-16          | \$780,728                             | \$918,325                               | \$889,240                             | -3.2%                 | \$1,131,000                                 | \$1,158,000                               | 2.4%                  |
| 7/1/16-17          | \$544,386                             | \$777,875                               | \$833,576                             | 7.2%                  | \$1,303,000                                 | \$1,166,000                               | -10.5%                |
| 7/1/17-18          |                                       | \$302,687                               | \$217,543                             | -28.1%                | \$1,183,000                                 | \$1,143,000                               | -3.4%                 |
| <b>Total</b>       | <b>\$10,069,659</b>                   | <b>\$10,963,986</b>                     | <b>\$10,790,739</b>                   | <b>-1.6%</b>          | <b>\$12,874,106</b>                         | <b>\$12,703,106</b>                       | <b>-1.3%</b>          |

(A) and (E) - From Previous actuarial report as of 06/30/2017  
 (B) - Derived from (E) and (A) using loss development patterns  
 (C) - Exhibit I, limited to retention  
 (D) = [(C) / (B)] - 1  
 (F) - Exhibit VI  
 (G) = [(F) / (E)] - 1

**Comparison of Results with Previous Estimates as of 01/31/17**

|              | (A)                 | (B)                 | (C)                 | (D)          | (E)                 | (F)                 | (G)          |
|--------------|---------------------|---------------------|---------------------|--------------|---------------------|---------------------|--------------|
|              | Actual              | Expected            | Actual              |              | Expected            | Actual              |              |
| Accident     | Reported            | Reported            | Reported            | Percent      | Ultimate            | Ultimate            | Percent      |
| Period       | Losses              | Losses              | Losses              | Difference   | Losses              | Losses              | Difference   |
|              | 1/31/2017           | 1/31/2018           | 1/31/2018           |              | 1/31/2017           | 1/31/2018           |              |
| 7/1/02-03    | \$65,087            | \$65,087            | \$65,087            | 0.0%         | \$65,087            | \$65,087            | 0.0%         |
| 7/1/03-04    | \$357,297           | \$357,297           | \$357,297           | 0.0%         | \$357,297           | \$357,297           | 0.0%         |
| 7/1/04-05    | \$618,336           | \$618,336           | \$618,336           | 0.0%         | \$618,336           | \$618,336           | 0.0%         |
| 7/1/05-06    | \$450,928           | \$450,928           | \$450,928           | 0.0%         | \$450,928           | \$450,928           | 0.0%         |
| 7/1/06-07    | \$535,205           | \$535,205           | \$535,205           | 0.0%         | \$535,205           | \$535,205           | 0.0%         |
| 7/1/07-08    | \$759,907           | \$759,907           | \$759,907           | 0.0%         | \$759,907           | \$759,907           | 0.0%         |
| 7/1/08-09    | \$1,423,346         | \$1,423,346         | \$1,423,346         | 0.0%         | \$1,423,346         | \$1,423,346         | 0.0%         |
| 7/1/09-10    | \$706,085           | \$706,695           | \$706,085           | -0.1%        | \$707,000           | \$706,000           | -0.1%        |
| 7/1/10-11    | \$843,333           | \$845,121           | \$843,333           | -0.2%        | \$846,000           | \$843,000           | -0.4%        |
| 7/1/11-12    | \$1,003,435         | \$1,006,514         | \$973,586           | -3.3%        | \$1,008,000         | \$974,000           | -3.4%        |
| 7/1/12-13    | \$625,317           | \$630,530           | \$625,317           | -0.8%        | \$633,000           | \$626,000           | -1.1%        |
| 7/1/13-14    | \$701,213           | \$709,248           | \$700,899           | -1.2%        | \$713,000           | \$703,000           | -1.4%        |
| 7/1/14-15    | \$1,014,986         | \$1,032,055         | \$1,164,683         | 12.9%        | \$1,040,000         | \$1,174,000         | 12.9%        |
| 7/1/15-16    | \$1,063,849         | \$1,129,416         | \$1,129,687         | 0.0%         | \$1,161,000         | \$1,158,000         | -0.3%        |
| 7/1/16-17    | \$582,850           | \$1,127,872         | \$1,065,183         | -5.6%        | \$1,223,000         | \$1,166,000         | -4.7%        |
| 7/1/17-18    |                     | \$604,891           | \$531,156           | -12.2%       | \$1,260,000         | \$1,143,000         | -9.3%        |
| <b>Total</b> | <b>\$10,751,174</b> | <b>\$12,002,449</b> | <b>\$11,950,035</b> | <b>-0.4%</b> | <b>\$12,801,106</b> | <b>\$12,703,106</b> | <b>-0.8%</b> |

|              | (A)                | (B)                 | (C)                 | (D)          | (E)                 | (F)                 | (G)          |
|--------------|--------------------|---------------------|---------------------|--------------|---------------------|---------------------|--------------|
|              | Actual             | Expected            | Actual              |              | Expected            | Actual              |              |
| Accident     | Paid               | Paid                | Paid                | Percent      | Ultimate            | Ultimate            | Percent      |
| Period       | Losses             | Losses              | Losses              | Difference   | Losses              | Losses              | Difference   |
|              | 1/31/2017          | 1/31/2018           | 1/31/2018           |              | 1/31/2017           | 1/31/2018           |              |
| 7/1/02-03    | \$65,087           | \$65,087            | \$65,087            | 0.0%         | \$65,087            | \$65,087            | 0.0%         |
| 7/1/03-04    | \$357,297          | \$357,297           | \$357,297           | 0.0%         | \$357,297           | \$357,297           | 0.0%         |
| 7/1/04-05    | \$618,336          | \$618,336           | \$618,336           | 0.0%         | \$618,336           | \$618,336           | 0.0%         |
| 7/1/05-06    | \$450,928          | \$450,928           | \$450,928           | 0.0%         | \$450,928           | \$450,928           | 0.0%         |
| 7/1/06-07    | \$535,205          | \$535,205           | \$535,205           | 0.0%         | \$535,205           | \$535,205           | 0.0%         |
| 7/1/07-08    | \$759,907          | \$759,907           | \$759,907           | 0.0%         | \$759,907           | \$759,907           | 0.0%         |
| 7/1/08-09    | \$1,423,346        | \$1,423,346         | \$1,423,346         | 0.0%         | \$1,423,346         | \$1,423,346         | 0.0%         |
| 7/1/09-10    | \$687,068          | \$699,215           | \$687,646           | -1.7%        | \$707,000           | \$706,000           | -0.1%        |
| 7/1/10-11    | \$843,333          | \$844,978           | \$843,333           | -0.2%        | \$846,000           | \$843,000           | -0.4%        |
| 7/1/11-12    | \$942,874          | \$983,479           | \$947,823           | -3.6%        | \$1,008,000         | \$974,000           | -3.4%        |
| 7/1/12-13    | \$625,317          | \$630,144           | \$625,317           | -0.8%        | \$633,000           | \$626,000           | -1.1%        |
| 7/1/13-14    | \$674,036          | \$698,489           | \$673,722           | -3.5%        | \$713,000           | \$703,000           | -1.4%        |
| 7/1/14-15    | \$661,336          | \$892,850           | \$862,433           | -3.4%        | \$1,040,000         | \$1,174,000         | 12.9%        |
| 7/1/15-16    | \$693,602          | \$954,107           | \$889,240           | -6.8%        | \$1,161,000         | \$1,158,000         | -0.3%        |
| 7/1/16-17    | \$279,975          | \$780,887           | \$833,576           | 6.7%         | \$1,223,000         | \$1,166,000         | -4.7%        |
| 7/1/17-18    |                    | \$322,388           | \$217,543           | -32.5%       | \$1,260,000         | \$1,143,000         | -9.3%        |
| <b>Total</b> | <b>\$9,617,646</b> | <b>\$11,016,643</b> | <b>\$10,790,739</b> | <b>-2.1%</b> | <b>\$12,801,106</b> | <b>\$12,703,106</b> | <b>-0.8%</b> |

(A) and (E) - From Previous actuarial report as of 1/31/2017  
 (B) - Derived from (E) and (A) using loss development patterns  
 (C) - Exhibit I, limited to retention  
 (D) = [(C) / (B)] - 1  
 (F) - Exhibit VI  
 (G) = [(F) / (E)] - 1

**Estimation of Cumulative Reported Loss Development Factors  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |               |          |         |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------------|----------|---------|---------|---------------|---------------------------|
|                               |                             | X'<br>LN(1/(X+C))                 | Y'<br>LN(Y-1) | (X')^2   | (Y')^2  | X' x Y' | X             | Cumulative<br>Factor<br>Y |
| 12                            | <b>1.161</b>                | -6.8690                           | -1.8250       | 47.183   | 3.3306  | 12.5360 | <b>187</b>    | <b>1.000</b>              |
| 24                            | <b>1.056</b>                | -6.8814                           | -2.8886       | 47.354   | 8.3442  | 19.8779 | <b>175</b>    | <b>1.000</b>              |
| 36                            | <b>1.015</b>                | -6.8937                           | -4.1964       | 47.522   | 17.6096 | 28.9284 | <b>163</b>    | <b>1.000</b>              |
| 48                            | <b>1.005</b>                | -6.9058                           | -5.2983       | 47.689   | 28.0722 | 36.5889 | <b>151</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |          |         |         | <b>139</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |          |         |         | <b>127</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |          |         |         | <b>115</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |          |         |         | <b>103</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |          |         |         | <b>91</b>     | <b>1.000</b>              |
|                               |                             |                                   |               |          |         |         | <b>79</b>     | <b>1.000</b>              |
|                               |                             |                                   |               |          |         |         | <b>67</b>     | <b>1.001</b>              |
| Sum                           |                             | -27.5498                          | -14.2083      | 189.7491 | 57.3566 | 97.9311 | <b>55</b>     | <b>1.003</b>              |
| Average                       |                             | -6.8875                           | -3.5521       | 47.4373  | 14.3392 | 24.4828 | <b>43</b>     | <b>1.008</b>              |
|                               |                             |                                   |               |          |         |         | <b>31</b>     | <b>1.026</b>              |
|                               |                             |                                   |               |          |         |         | <b>19</b>     | <b>1.084</b>              |
|                               |                             |                                   |               |          |         |         | <b>7</b>      | <b>2.083</b>              |

|     |            |       |         |
|-----|------------|-------|---------|
| N = | 4          |       |         |
| A = | 7.792E+284 |       |         |
| B = | 95.759     | R^2 = | 0.99837 |
| C = | 950        |       |         |

\* - Appendix A4

**Estimation of Cumulative Paid Loss Development Factors  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |               |          |         |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------------|----------|---------|---------|---------------|---------------------------|
|                               |                             | X'<br>LN(1/(X+C))                 | Y'<br>LN(Y-1) | (X')^2   | (Y')^2  | X' x Y' | X             | Cumulative<br>Factor<br>Y |
| 12                            | <b>1.918</b>                | -5.2311                           | -0.0850       | 27.364   | 0.0072  | 0.4449  | <b>187</b>    | <b>1.000</b>              |
| 24                            | <b>1.313</b>                | -5.2933                           | -1.1615       | 28.019   | 1.3492  | 6.1484  | <b>175</b>    | <b>1.000</b>              |
| 36                            | <b>1.088</b>                | -5.3519                           | -2.4308       | 28.642   | 5.9089  | 13.0094 | <b>163</b>    | <b>1.000</b>              |
| 48                            | <b>1.042</b>                | -5.4072                           | -3.1818       | 29.238   | 10.1238 | 17.2045 | <b>151</b>    | <b>1.000</b>              |
| 60                            | <b>1.013</b>                | -5.4596                           | -4.3173       | 29.807   | 18.6389 | 23.5706 | <b>139</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |          |         |         | <b>127</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |          |         |         | <b>115</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |          |         |         | <b>103</b>    | <b>1.001</b>              |
|                               |                             |                                   |               |          |         |         | <b>91</b>     | <b>1.001</b>              |
|                               |                             |                                   |               |          |         |         | <b>79</b>     | <b>1.003</b>              |
|                               |                             |                                   |               |          |         |         | <b>67</b>     | <b>1.008</b>              |
| Sum                           |                             | -26.7430                          | -11.1765      | 143.0705 | 36.0280 | 60.3777 | <b>55</b>     | <b>1.021</b>              |
| Average                       |                             | -5.3486                           | -2.2353       | 28.6141  | 7.2056  | 12.0755 | <b>43</b>     | <b>1.055</b>              |
|                               |                             |                                   |               |          |         |         | <b>31</b>     | <b>1.157</b>              |
|                               |                             |                                   |               |          |         |         | <b>19</b>     | <b>1.471</b>              |
|                               |                             |                                   |               |          |         |         | <b>7</b>      | <b>3.746</b>              |

|            |                  |                       |
|------------|------------------|-----------------------|
| <b>N =</b> | <b>5</b>         |                       |
| <b>A =</b> | <b>4.943E+41</b> |                       |
| <b>B =</b> | <b>18.367</b>    | <b>R^2 = 0.996337</b> |
| <b>C =</b> | <b>175</b>       |                       |

\* - Appendix A5



**Estimation of Cumulative Reported Claim Development Factors  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |               |         |         |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------------|---------|---------|---------|---------------|---------------------------|
|                               |                             | X'<br>LN(1/(X+C))                 | Y'<br>LN(Y-1) | (X')^2  | (Y')^2  | X' x Y' | X             | Cumulative<br>Factor<br>Y |
| 12                            | <b>1.006</b>                | -2.4849                           | -5.1822       | 6.175   | 26.8550 | 12.8772 | <b>187</b>    | <b>1.000</b>              |
| 24                            | <b>1.003</b>                | -3.1781                           | -5.9354       | 10.100  | 35.2292 | 18.8631 | <b>175</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |         |         |         | <b>163</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |         |         |         | <b>151</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |         |         |         | <b>139</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |         |         |         | <b>127</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |         |         |         | <b>115</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |         |         |         | <b>103</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |         |         |         | <b>91</b>     | <b>1.000</b>              |
|                               |                             |                                   |               |         |         |         | <b>79</b>     | <b>1.000</b>              |
|                               |                             |                                   |               |         |         |         | <b>67</b>     | <b>1.000</b>              |
| Sum                           |                             | -5.6630                           | -11.1176      | 16.2748 | 62.0842 | 31.7403 | <b>55</b>     | <b>1.000</b>              |
| Average                       |                             | -2.8315                           | -5.5588       | 8.1374  | 31.0421 | 15.8702 | <b>43</b>     | <b>1.001</b>              |
|                               |                             |                                   |               |         |         |         | <b>31</b>     | <b>1.002</b>              |
|                               |                             |                                   |               |         |         |         | <b>19</b>     | <b>1.003</b>              |
|                               |                             |                                   |               |         |         |         | <b>7</b>      | <b>1.727</b>              |

|     |           |       |         |
|-----|-----------|-------|---------|
| N = | 2         |       |         |
| A = | 8.359E-02 |       |         |
| B = | 1.087     | R^2 = | 1.00000 |
| C = | 0         |       |         |

\* - Appendix A6

**Analysis of Reported Loss Development**  
**Total Loss and ALAE Net of Member Deductibles**

| Year      | Reported Losses and ALAE as of (months): |             |             |             |             |             |             |             |             |             |
|-----------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|           | 12                                       | 24          | 36          | 48          | 60          | 72          | 84          | 96          | 108         | 120         |
| 7/1/04-05 | \$1,047,750                              | \$1,095,895 | \$1,133,243 | \$1,145,262 | \$1,145,262 | \$1,145,262 | \$1,097,512 | \$1,097,512 | \$1,097,512 | \$1,097,512 |
| 7/1/05-06 | \$456,117                                | \$547,145   | \$662,524   | \$632,070   | \$450,928   | \$450,928   | \$450,928   | \$450,928   | \$450,928   | \$450,928   |
| 7/1/06-07 | \$890,604                                | \$608,898   | \$583,493   | \$524,344   | \$549,344   | \$549,344   | \$549,344   | \$549,344   | \$549,344   | \$549,344   |
| 7/1/07-08 | \$847,622                                | \$783,605   | \$855,237   | \$856,228   | \$856,441   | \$759,907   | \$759,907   | \$759,907   | \$759,907   | \$759,907   |
| 7/1/08-09 | \$1,417,952                              | \$1,726,246 | \$1,741,617 | \$1,664,608 | \$1,594,733 | \$1,576,121 | \$1,465,586 | \$1,465,586 | \$1,465,586 |             |
| 7/1/09-10 | \$941,486                                | \$765,020   | \$725,671   | \$725,680   | \$701,085   | \$706,085   | \$706,085   | \$706,085   |             |             |
| 7/1/10-11 | \$942,102                                | \$880,763   | \$858,871   | \$882,516   | \$882,516   | \$882,016   | \$882,016   |             |             |             |
| 7/1/11-12 | \$987,456                                | \$965,945   | \$1,000,368 | \$1,002,546 | \$1,003,435 | \$1,003,435 |             |             |             |             |
| 7/1/12-13 | \$777,945                                | \$702,440   | \$663,518   | \$661,103   | \$661,103   |             |             |             |             |             |
| 7/1/13-14 | \$878,884                                | \$737,621   | \$731,921   | \$731,921   |             |             |             |             |             |             |
| 7/1/14-15 | \$909,436                                | \$947,227   | \$1,251,043 |             |             |             |             |             |             |             |
| 7/1/15-16 | \$1,112,258                              | \$1,173,527 |             |             |             |             |             |             |             |             |
| 7/1/16-17 | \$1,204,106                              |             |             |             |             |             |             |             |             |             |

| Year      | Age-to-Age Factors |       |       |       |       |       |       |        |         |         |
|-----------|--------------------|-------|-------|-------|-------|-------|-------|--------|---------|---------|
|           | 12:24              | 24:36 | 36:48 | 48:60 | 60:72 | 72:84 | 84:96 | 96:108 | 108:120 | 120:ult |
| 7/1/04-05 | 1.046              | 1.034 | 1.011 | 1.000 | 1.000 | 0.958 | 1.000 | 1.000  | 1.000   |         |
| 7/1/05-06 | 1.200              | 1.211 | 0.954 | 0.713 | 1.000 | 1.000 | 1.000 | 1.000  | 1.000   |         |
| 7/1/06-07 | 0.684              | 0.958 | 0.899 | 1.048 | 1.000 | 1.000 | 1.000 | 1.000  | 1.000   |         |
| 7/1/07-08 | 0.924              | 1.091 | 1.001 | 1.000 | 0.887 | 1.000 | 1.000 | 1.000  | 1.000   |         |
| 7/1/08-09 | 1.217              | 1.009 | 0.956 | 0.958 | 0.988 | 0.930 | 1.000 | 1.000  |         |         |
| 7/1/09-10 | 0.813              | 0.949 | 1.000 | 0.966 | 1.007 | 1.000 | 1.000 |        |         |         |
| 7/1/10-11 | 0.935              | 0.975 | 1.028 | 1.000 | 0.999 | 1.000 |       |        |         |         |
| 7/1/11-12 | 0.978              | 1.036 | 1.002 | 1.001 | 1.000 |       |       |        |         |         |
| 7/1/12-13 | 0.903              | 0.945 | 0.996 | 1.000 |       |       |       |        |         |         |
| 7/1/13-14 | 0.839              | 0.992 | 1.000 |       |       |       |       |        |         |         |
| 7/1/14-15 | 1.042              | 1.321 |       |       |       |       |       |        |         |         |
| 7/1/15-16 | 1.055              |       |       |       |       |       |       |        |         |         |

|                   |              |              |              |              |              |              |              |              |              |              |
|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Average           | 0.970        | 1.047        | 0.985        | 0.965        | 0.985        | 0.984        | 1.000        | 1.000        | 1.000        |              |
| Wtd. Avg.         | 0.975        | 1.046        | 0.985        | 0.969        | 0.985        | 0.974        | 1.000        | 1.000        | 1.000        |              |
| Industry          | 1.456        | 1.165        | 1.065        | 1.028        | 1.013        | 1.007        | 1.003        | 1.002        | 1.001        | 1.002        |
| OK Benchmark      | 1.347        | 1.092        | 1.023        | 1.010        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| Prior             | 1.100        | 1.040        | 1.010        | 1.005        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
|                   | 12           | 24           | 36           | 48           | 60           | 72           | 84           | 96           | 108          | 120          |
| Selected          | 1.100        | 1.040        | 1.010        | 1.005        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| <b>Cumulative</b> | <b>1.161</b> | <b>1.056</b> | <b>1.015</b> | <b>1.005</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> |

**Analysis of Paid Loss Development**  
**Total Loss and ALAE Net of Member Deductibles**

| Year      | Paid Losses and ALAE as of (months): |             |             |             |             |             |             |             |             |             |
|-----------|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|           | 12                                   | 24          | 36          | 48          | 60          | 72          | 84          | 96          | 108         | 120         |
| 7/1/04-05 | \$373,545                            | \$848,811   | \$1,035,459 | \$1,095,262 | \$1,095,262 | \$1,097,512 | \$1,097,512 | \$1,097,512 | \$1,097,512 | \$1,097,512 |
| 7/1/05-06 | \$245,922                            | \$315,713   | \$386,966   | \$415,031   | \$450,928   | \$450,928   | \$450,928   | \$450,928   | \$450,928   | \$450,928   |
| 7/1/06-07 | \$306,414                            | \$364,626   | \$488,241   | \$524,344   | \$549,344   | \$549,344   | \$549,344   | \$549,344   | \$549,344   | \$549,344   |
| 7/1/07-08 | \$382,647                            | \$542,781   | \$699,055   | \$711,020   | \$726,360   | \$759,907   | \$759,907   | \$759,907   | \$759,907   | \$759,907   |
| 7/1/08-09 | \$527,674                            | \$1,042,468 | \$1,233,445 | \$1,312,558 | \$1,427,617 | \$1,439,750 | \$1,465,586 | \$1,465,586 | \$1,465,586 |             |
| 7/1/09-10 | \$454,322                            | \$567,769   | \$662,046   | \$677,216   | \$682,330   | \$686,578   | \$687,068   | \$687,068   |             |             |
| 7/1/10-11 | \$398,166                            | \$711,060   | \$836,794   | \$882,516   | \$882,516   | \$882,016   | \$882,016   |             |             |             |
| 7/1/11-12 | \$636,923                            | \$793,177   | \$875,075   | \$935,985   | \$940,184   | \$948,005   |             |             |             |             |
| 7/1/12-13 | \$384,700                            | \$492,970   | \$661,008   | \$661,103   | \$661,103   |             |             |             |             |             |
| 7/1/13-14 | \$489,337                            | \$688,008   | \$703,536   | \$704,744   |             |             |             |             |             |             |
| 7/1/14-15 | \$489,849                            | \$598,952   | \$825,663   |             |             |             |             |             |             |             |
| 7/1/15-16 | \$612,592                            | \$780,728   |             |             |             |             |             |             |             |             |
| 7/1/16-17 | \$544,386                            |             |             |             |             |             |             |             |             |             |

| Year              | Age-to-Age Factors |              |              |              |              |              |              |              |              |              |
|-------------------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                   | 12:24              | 24:36        | 36:48        | 48:60        | 60:72        | 72:84        | 84:96        | 96:108       | 108:120      | 120:ult      |
| 7/1/04-05         | 2.272              | 1.220        | 1.058        | 1.000        | 1.002        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| 7/1/05-06         | 1.284              | 1.226        | 1.073        | 1.086        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| 7/1/06-07         | 1.190              | 1.339        | 1.074        | 1.048        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| 7/1/07-08         | 1.418              | 1.288        | 1.017        | 1.022        | 1.046        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| 7/1/08-09         | 1.976              | 1.183        | 1.064        | 1.088        | 1.008        | 1.018        | 1.000        | 1.000        |              |              |
| 7/1/09-10         | 1.250              | 1.166        | 1.023        | 1.008        | 1.006        | 1.001        | 1.000        |              |              |              |
| 7/1/10-11         | 1.786              | 1.177        | 1.055        | 1.000        | 0.999        | 1.000        |              |              |              |              |
| 7/1/11-12         | 1.245              | 1.103        | 1.070        | 1.004        | 1.008        |              |              |              |              |              |
| 7/1/12-13         | 1.281              | 1.341        | 1.000        | 1.000        |              |              |              |              |              |              |
| 7/1/13-14         | 1.406              | 1.023        | 1.002        |              |              |              |              |              |              |              |
| 7/1/14-15         | 1.223              | 1.379        |              |              |              |              |              |              |              |              |
| 7/1/15-16         | 1.274              |              |              |              |              |              |              |              |              |              |
| Average           | 1.467              | 1.222        | 1.043        | 1.028        | 1.009        | 1.003        | 1.000        | 1.000        | 1.000        |              |
| Wtd. Avg.         | 1.461              | 1.207        | 1.045        | 1.028        | 1.009        | 1.004        | 1.000        | 1.000        | 1.000        |              |
| Industry          | 2.205              | 1.510        | 1.215        | 1.095        | 1.045        | 1.023        | 1.012        | 1.007        | 1.004        | 1.008        |
| OK benchmark      | 1.724              | 1.372        | 1.054        | 1.040        | 1.018        | 1.004        | 1.000        | 1.000        | 1.000        | 1.000        |
| Prior             | 1.501              | 1.215        | 1.060        | 1.031        | 1.009        | 1.005        | 1.000        | 1.000        | 1.000        | 1.000        |
|                   | 12                 | 24           | 36           | 48           | 60           | 72           | 84           | 96           | 108          | 120          |
| Selected          | 1.461              | 1.207        | 1.045        | 1.028        | 1.009        | 1.004        | 1.000        | 1.000        | 1.000        | 1.000        |
| <b>Cumulative</b> | <b>1.918</b>       | <b>1.313</b> | <b>1.088</b> | <b>1.042</b> | <b>1.013</b> | <b>1.004</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> |

**Analysis of Reported Occurrences**

| Year      | Reported Claims as of (months): |     |     |     |     |     |     |     |     |     |
|-----------|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|           | 12                              | 24  | 36  | 48  | 60  | 72  | 84  | 96  | 108 | 120 |
| 7/1/04-05 |                                 | 108 | 109 | 109 | 109 | 109 | 109 | 109 | 109 | 109 |
| 7/1/05-06 | 133                             | 134 | 135 | 134 | 134 | 134 | 134 | 134 | 134 | 134 |
| 7/1/06-07 | 142                             | 143 | 145 | 145 | 145 | 145 | 145 | 145 | 145 | 145 |
| 7/1/07-08 | 172                             | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 | 178 |
| 7/1/08-09 | 205                             | 207 | 207 | 207 | 207 | 207 | 207 | 207 | 207 |     |
| 7/1/09-10 | 183                             | 182 | 182 | 182 | 182 | 182 | 182 | 182 |     |     |
| 7/1/10-11 | 182                             | 187 | 188 | 188 | 188 | 187 | 187 |     |     |     |
| 7/1/11-12 | 177                             | 178 | 177 | 177 | 177 | 177 |     |     |     |     |
| 7/1/12-13 | 163                             | 164 | 164 | 162 | 162 |     |     |     |     |     |
| 7/1/13-14 | 196                             | 185 | 185 | 185 |     |     |     |     |     |     |
| 7/1/14-15 | 228                             | 225 | 226 |     |     |     |     |     |     |     |
| 7/1/15-16 | 225                             | 227 |     |     |     |     |     |     |     |     |
| 7/1/16-17 | 213                             |     |     |     |     |     |     |     |     |     |

| Year              | Age-to-Age Factors |              |              |              |              |              |              |              |              |              |
|-------------------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                   | 12:24              | 24:36        | 36:48        | 48:60        | 60:72        | 72:84        | 84:96        | 96:108       | 108:120      | 120:ult      |
| 7/1/04-05         |                    | 1.009        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| 7/1/05-06         | 1.008              | 1.007        | 0.993        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| 7/1/06-07         | 1.007              | 1.014        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| 7/1/07-08         | 1.035              | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| 7/1/08-09         | 1.010              | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| 7/1/09-10         | 0.995              | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |              |              |              |
| 7/1/10-11         | 1.027              | 1.005        | 1.000        | 1.000        | 0.995        | 1.000        |              |              |              |              |
| 7/1/11-12         | 1.006              | 0.994        | 1.000        | 1.000        | 1.000        |              |              |              |              |              |
| 7/1/12-13         | 1.006              | 1.000        | 0.988        | 1.000        |              |              |              |              |              |              |
| 7/1/13-14         | 0.944              | 1.000        | 1.000        |              |              |              |              |              |              |              |
| 7/1/14-15         | 0.987              | 1.004        |              |              |              |              |              |              |              |              |
| 7/1/15-16         | 1.009              |              |              |              |              |              |              |              |              |              |
| Average           | 1.003              | 1.003        | 0.998        | 1.000        | 0.999        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| Wtd. Avg.         | 1.002              | 1.003        | 0.998        | 1.000        | 0.999        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| OK benchmark      | 1.128              | 1.005        | 1.002        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| Prior             | 1.002              | 1.002        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
|                   | 12                 | 24           | 36           | 48           | 60           | 72           | 84           | 96           | 108          | 120          |
| Selected          | 1.003              | 1.003        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| <b>Cumulative</b> | <b>1.006</b>       | <b>1.003</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> |

**Derivation of Lognomoral Parameters  
Based on Reported Loss Development**

| Year          | Natural Logarithm of Age to Age Factors |           |           |           |           |           |           |           |            |         |
|---------------|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|---------|
|               | 12:24                                   | 24:36     | 36:48     | 48:60     | 60:72     | 72:84     | 84:96     | 96:108    | 108:120    | 120:ult |
| 7/1/04-05     | 0.045                                   | 0.034     | 0.011     | 0.000     | 0.000     | -0.043    | 0.000     | 0.000     | 0.000      | 0.000   |
| 7/1/05-06     | 0.182                                   | 0.191     | -0.047    |           | 0.000     | 0.000     | 0.000     | 0.000     | 0.000      | 0.000   |
| 7/1/06-07     |   | -0.043    | -0.107    | 0.047     | 0.000     | 0.000     | 0.000     | 0.000     | 0.000      | 0.000   |
| 7/1/07-08     | -0.079                                  | 0.087     | 0.001     | 0.000     | -0.120    | 0.000     | 0.000     | 0.000     | 0.000      | 0.000   |
| 7/1/08-09     | 0.197                                   | 0.009     | -0.045    | -0.043    | -0.012    | -0.073    | 0.000     | 0.000     |            |         |
| 7/1/09-10     | -0.208                                  | -0.053    | 0.000     | -0.034    | 0.007     | 0.000     | 0.000     |           |            |         |
| 7/1/10-11     | -0.067                                  | -0.025    | 0.027     | 0.000     | -0.001    | 0.000     |           |           |            |         |
| 7/1/11-12     | -0.022                                  | 0.035     | 0.002     | 0.001     | 0.000     |           |           |           |            |         |
| 7/1/12-13     | -0.102                                  | -0.057    | -0.004    | 0.000     |           |           |           |           |            |         |
| 7/1/13-14     | -0.175                                  | -0.008    | 0.000     |           |           |           |           |           |            |         |
| 7/1/14-15     | 0.041                                   | 0.278     |           |           |           |           |           |           |            |         |
| 7/1/15-16     | 0.054                                   |           |           |           |           |           |           |           |            |         |
|               | <u>12</u>                               | <u>24</u> | <u>36</u> | <u>48</u> | <u>60</u> | <u>72</u> | <u>84</u> | <u>96</u> | <u>108</u> |         |
| Variance      | 0.017                                   | 0.011     | 0.002     | 0.001     | 0.002     | 0.001     | 0.000     | 0.000     | 0.000      |         |
| Cum. Variance | 0.034                                   | 0.016     | 0.005     | 0.003     | 0.003     | 0.001     | 0.000     | 0.000     | 0.000      |         |
| SD            | 0.183                                   | 0.128     | 0.070     | 0.058     | 0.052     | 0.029     | 0.000     | 0.000     | 0.000      |         |

---

## General Liability Exhibits

The “Analysis” section of this report presents a discussion of the following exhibits:

|              |   |
|--------------|---|
| Exhibit I    | Summary of Experience   |
| Exhibit II   | Large Claim Listing   |
| Exhibit III  | Loss Development Methods  |
| Exhibit IV   | Forecast for Current Year   |
| Exhibit V    | Bornhuetter-Ferguson Methods  |
| Exhibit VI   | Summary and Selection of Ultimate Losses                            |
| Exhibit VII  | Average Claim Size  |
| Exhibit VIII | Outstanding Losses as of 1/31/2018<br>and Projected as of 6/30/2018 |
| Appendix A   | Loss Development Factors<br>and Triangles                           |



**Summary of Loss Data as of January 31, 2018**  
**Total Experience Net of Member Deductibles**

| (A)<br>Accident<br>Period | (B)<br>Evaluation<br>Date | (C)<br>Maturity<br>(months) | (D)<br>Total<br>Claims | (E)<br>Open<br>Claims | (E)<br>Loss<br>and Expense<br>Payments | (F)<br>Loss<br>and Expense<br>Reserves | (G)<br>Loss<br>and Expense<br>Incurred | (H)<br>Students |
|---------------------------|---------------------------|-----------------------------|------------------------|-----------------------|--|--|--|-----------------|
| 7/1/02-03                 | 1/31/2018                 | 187                         | 28                     | 0                     | \$168,909                              | \$0                                    | \$168,909                              |                 |
| 7/1/03-04                 | 1/31/2018                 | 175                         | 88                     | 0                     | \$848,061                              | \$0                                    | \$848,061                              |                 |
| 7/1/04-05                 | 1/31/2018                 | 163                         | 115                    | 0                     | \$525,685                              | \$0                                    | \$525,685                              | 198,498         |
| 7/1/05-06                 | 1/31/2018                 | 151                         | 136                    | 0                     | \$1,330,178                            | \$0                                    | \$1,330,178                            | 249,419         |
| 7/1/06-07                 | 1/31/2018                 | 139                         | 132                    | 0                     | \$1,351,835                            | \$0                                    | \$1,351,835                            | 267,684         |
| 7/1/07-08                 | 1/31/2018                 | 127                         | 163                    | 0                     | \$1,501,995                            | \$0                                    | \$1,501,995                            | 308,999         |
| 7/1/08-09                 | 1/31/2018                 | 115                         | 155                    | 0                     | \$2,172,804                            | \$0                                    | \$2,172,804                            | 313,473         |
| 7/1/09-10                 | 1/31/2018                 | 103                         | 144                    | 1                     | \$1,503,488                            | \$20,710                               | \$1,524,198                            | 314,947         |
| 7/1/10-11                 | 1/31/2018                 | 91                          | 110                    | 1                     | \$2,396,523                            | \$38,239                               | \$2,434,762                            | 346,136         |
| 7/1/11-12                 | 1/31/2018                 | 79                          | 87                     | 2                     | \$3,699,378                            | \$18,337                               | \$3,717,715                            | 272,584         |
| 7/1/12-13                 | 1/31/2018                 | 67                          | 109                    | 5                     | \$1,054,824                            | \$148,989                              | \$1,203,814                            | 282,168         |
| 7/1/13-14                 | 1/31/2018                 | 55                          | 86                     | 3                     | \$833,374                              | \$114,572                              | \$947,947                              | 318,604         |
| 7/1/14-15                 | 1/31/2018                 | 43                          | 116                    | 11                    | \$1,551,489                            | \$562,405                              | \$2,113,894                            | 373,449         |
| 7/1/15-16                 | 1/31/2018                 | 31                          | 121                    | 26                    | \$1,078,684                            | \$1,045,383                            | \$2,124,067                            | 376,559         |
| 7/1/16-17                 | 1/31/2018                 | 19                          | 131                    | 49                    | \$480,867                              | \$2,511,496                            | \$2,992,363                            | 393,268         |
| 7/1/17-18                 | 1/31/2018                 | 7                           | 50                     | 37                    | \$28,936                               | \$371,180                              | \$400,116                              | 376,303         |
| 7/1/18-19                 |                           |                             |                        |                       |  |  |  | 377,140         |
|                           |                           |                             | 1,771                  | 135                   | \$20,527,029                           | \$4,831,312                            | \$25,358,341                           | 4,769,231       |

- Loss and policy information provided by Jennifer McKenzie, Arthur J. Gallagher
- Claims are grouped by occurrence, exclude claims with \$0 incurred
- Losses are net of member deductibles



Summary of Large Claim Information

| Occurrence #  | School                          | Loss Date  | Status | Net Paid    | Net Incurred | SIR       | Excess Recoveries | Excess Paid | Excess Reported | Severity Factor | Ultimate Net |
|---------------|---------------------------------|------------|--------|-------------|--------------|-----------|-------------------|-------------|-----------------|-----------------|--------------|
| 00286         | BOISE CITY ISD                  | 5/3/2004   | Closed | \$107,737   | \$107,737    | \$100,000 | \$7,787           | \$7,787     | \$7,787         | 1.000           | \$107,738    |
| 00709         | HARDESTY PUBLIC SCHOOLS         | 9/1/2004   | Closed | \$136,712   | \$136,712    | \$100,000 | \$36,712          | \$36,712    | \$36,712        | 1.000           | \$136,716    |
| 00919         | MANNFORD PUBLIC SCHOOLS         | 10/31/2005 | Closed | \$139,329   | \$139,329    | \$100,000 | \$39,329          | \$39,329    | \$39,329        | 1.000           | \$139,336    |
| 00951         | GORE INDEPENDENT SCHOOL DIST.#6 | 1/9/2006   | Closed | \$137,400   | \$137,400    | \$100,000 | \$37,400          | \$37,400    | \$37,400        | 1.000           | \$137,407    |
| 01194         | OLOGAH TALALA ISD               | 7/7/2006   | Closed | \$104,657   | \$104,657    | \$100,000 | \$4,657           | \$4,657     | \$4,657         | 1.000           | \$104,668    |
| 01213         | POCOLA PUBLIC SCHOOLS           | 7/26/2006  | Closed | \$113,021   | \$113,021    | \$100,000 | \$13,021          | \$13,021    | \$13,021        | 1.000           | \$113,033    |
| 02076         | DEER CREEK ISD                  | 4/6/2007   | Closed | \$470,603   | \$470,603    | \$100,000 | \$370,603         | \$370,603   | \$370,603       | 1.000           | \$470,652    |
| 01955         | MIDWAY PUBLIC SCHOOLS           | 5/15/2007  | Closed | \$110,316   | \$110,316    | \$100,000 | \$10,316          | \$10,316    | \$10,316        | 1.000           | \$110,328    |
| 02387         | KIAMICHI TECHNOLOGY CENTER      | 7/31/2007  | Closed | \$102,095   | \$102,095    | \$100,000 | \$2,095           | \$2,095     | \$2,095         | 1.000           | \$102,117    |
| 02047         | POTEAU ISD                      | 10/19/2007 | Closed | \$109,798   | \$109,798    | \$100,000 | \$9,798           | \$9,798     | \$9,798         | 1.000           | \$109,821    |
| 01968         | GUTHRIE PUBLIC SCHOOLS          | 11/2/2007  | Closed | \$121,452   | \$121,452    | \$100,000 | \$26,452          | \$26,452    | \$26,452        | 1.000           | \$121,478    |
| 02250         | BLANCHARD PUBLIC SCHOOLS        | 4/25/2008  | Closed | \$131,036   | \$131,036    | \$100,000 | \$31,036          | \$31,036    | \$31,036        | 1.000           | \$131,065    |
| 02595         | BYNG SCHOOL DISTRICT I-16       | 10/20/2008 | Closed | \$1,075,745 | \$1,075,745  | \$100,000 | \$975,745         | \$975,745   | \$975,745       | 1.000           | \$1,076,231  |
| 02711         | SHAWNEE PUBLIC SCHOOL           | 1/13/2009  | Closed | \$124,447   | \$124,447    | \$100,000 | \$24,447          | \$24,447    | \$24,447        | 1.000           | \$124,504    |
| 03297         | BIXBY PUBLIC SCHOOL             | 5/28/2009  | Closed | \$113,070   | \$113,070    | \$100,000 | \$13,070          | \$13,070    | \$13,070        | 1.000           | \$113,121    |
| 03267         | INDIANOLA ISD #25               | 11/4/2009  | Closed | \$107,144   | \$107,144    | \$100,000 | \$7,144           | \$7,144     | \$7,144         | 1.001           | \$107,246    |
| 03567         | OLOGAH TALALA ISD               | 2/18/2010  | Closed | \$117,345   | \$117,345    | \$100,000 | \$19,845          | \$19,845    | \$19,845        | 1.001           | \$117,456    |
| 90906         | MOUNDS PUBLIC SCHOOLS           | 5/10/2010  | Closed | \$304,711   | \$304,711    | \$100,000 | \$204,711         | \$204,711   | \$204,711       | 1.001           | \$304,999    |
| 90236         | ARDMORE ISD #19                 | 10/25/2010 | Closed | \$290,942   | \$290,942    | \$100,000 | \$190,942         | \$190,942   | \$190,942       | 1.002           | \$291,523    |
| 90838         | TAHLEQUAH PUBLIC SCHOOL         | 6/30/2011  | Closed | \$280,047   | \$280,047    | \$100,000 | \$180,047         | \$180,047   | \$180,047       | 1.002           | \$280,607    |
| 90297         | LAWTON BOARD OF EDUCATION ISD#8 | 12/6/2010  | Closed | \$157,221   | \$157,221    | \$100,000 | \$62,221          | \$62,221    | \$62,221        | 1.002           | \$157,535    |
| 90708         | CHOUTEAU MAZIE SCHOOL DISTRICT  | 3/22/2011  | Closed | \$141,522   | \$141,522    | \$100,000 | \$41,522          | \$41,522    | \$41,522        | 1.002           | \$141,805    |
| 90118         | JAY PUBLIC SCHOOLS              | 9/1/2010   | Closed | \$136,645   | \$136,645    | \$100,000 | \$36,645          | \$36,645    | \$36,645        | 1.002           | \$136,918    |
| 90205         | HOMINY BOARD OF EDUCATION       | 10/14/2010 | Closed | \$123,444   | \$123,444    | \$100,000 | \$23,444          | \$23,444    | \$23,444        | 1.002           | \$123,690    |
| 90519         | VERDIGRIS ISD #8                | 3/11/2011  | Closed | \$122,502   | \$122,502    | \$100,000 | \$22,502          | \$22,502    | \$22,502        | 1.002           | \$122,747    |
| 90084         | PUTNAM CITY ISD                 | 8/22/2010  | Closed | \$115,615   | \$115,615    | \$100,000 | \$15,615          | \$15,615    | \$15,615        | 1.002           | \$115,846    |
| 90054         | CANTON ISD                      | 7/29/2010  | Closed | \$114,574   | \$114,574    | \$100,000 | \$17,074          | \$17,074    | \$17,074        | 1.002           | \$114,804    |
| 90313         | BOSWELL PUBLIC SCHOOL           | 12/14/2010 | Closed | \$104,163   | \$104,163    | \$100,000 | \$6,663           | \$6,663     | \$6,663         | 1.002           | \$104,371    |
| 91040         | MCLLOUD ISD                     | 11/11/2011 | Closed | \$1,708,795 | \$1,708,795  | \$200,000 | \$1,508,795       | \$1,508,795 | \$1,508,795     | 1.004           | \$1,716,050  |
| 91388         | NOWATA ISD                      | 10/25/2011 | Closed | \$443,010   | \$443,010    | \$100,000 | \$343,010         | \$343,010   | \$343,010       | 1.004           | \$444,891    |
| 91564         | LAWTON BOARD OF EDUCATION ISD#8 | 5/28/2012  | Closed | \$210,533   | \$210,533    | \$100,000 | \$110,533         | \$110,533   | \$110,533       | 1.004           | \$211,427    |
| 91405         | FAIRLAND ISD                    | 4/20/2012  | Closed | \$263,443   | \$263,443    | \$100,000 | \$163,443         | \$163,443   | \$163,443       | 1.004           | \$264,561    |
| 91014         | PADEN PUBLIC SCHOOL             | 10/13/2011 | Closed | \$153,190   | \$153,190    | \$100,000 | \$53,190          | \$53,190    | \$53,190        | 1.004           | \$153,841    |
| 91394         | ALTUS ISD                       | 9/1/2011   | Closed | \$149,418   | \$149,418    | \$100,000 | \$49,418          | \$49,418    | \$49,418        | 1.004           | \$150,052    |
| 91445         | CHOUTEAU MAZIE SCHOOL DISTRICT  | 8/29/2012  | Closed | \$420,468   | \$420,468    | \$100,000 | \$320,468         | \$320,468   | \$320,468       | 1.009           | \$424,282    |
| 91791         | LUTHER PUBLIC SCHOOLS           | 10/25/2012 | Open   | \$68,679    | \$105,000    | \$100,000 | \$0               | \$0         | \$5,000         | 1.009           | \$105,952    |
| 92222         | SPIRO PUBLIC SCHOOLS            | 12/23/2013 | Closed | \$145,266   | \$145,266    | \$100,000 | \$45,266          | \$45,266    | \$45,266        | 1.019           | \$148,094    |
| 92867         | HOLLIS ISD                      | 4/4/2014   | Closed | \$176,221   | \$176,221    | \$100,000 | \$76,221          | \$76,221    | \$76,221        | 1.019           | \$179,651    |
| 92382         | BROKEN ARROW PUBLIC SCHOOLS     | 1/29/2014  | Closed | \$100,352   | \$100,352    | \$100,000 | \$352             | \$352       | \$352           | 1.019           | \$102,305    |
| 92999         | SAPULPA ISD                     | 3/2/2015   | Closed | \$240,862   | \$240,862    | \$100,000 | \$140,862         | \$140,862   | \$140,862       | 1.042           | \$250,960    |
| 93289         | JAY PUBLIC SCHOOLS              | 3/22/2015  | Closed | \$211,827   | \$211,827    | \$100,000 | \$111,827         | \$111,827   | \$111,827       | 1.042           | \$220,707    |
| 93143         | POTEAU ISD                      | 5/15/2015  | Closed | \$141,576   | \$141,576    | \$100,000 | \$41,576          | \$41,576    | \$41,576        | 1.042           | \$147,511    |
| 93031         | YUKON PUBLIC SCHOOLS            | 1/16/2015  | Open   | \$17,058    | \$104,500    | \$100,000 | \$0               | \$0         | \$4,500         | 1.042           | \$108,881    |
| P625-15-93017 | WESTERN HEIGHTS ISD             | 1/9/2015   | Open   | \$6,804     | \$97,169     | \$100,000 | \$0               | \$0         | \$0             | 1.042           | \$101,242    |
| 93680         | ARDMORE ISD #19                 | 3/7/2016   | Open   | \$92,066    | \$170,000    | \$100,000 | \$0               | \$0         | \$70,000        | 1.090           | \$185,235    |
| 94063         | KIAMICHI TECHNOLOGY CENTER      | 3/24/2016  | Open   | \$51,960    | \$127,000    | \$100,000 | \$0               | \$0         | \$27,000        | 1.090           | \$138,381    |
| 94194         | HARTSHORNE PUBLIC SCHOOL        | 12/9/2015  | Open   | \$8,889     | \$104,000    | \$100,000 | \$0               | \$0         | \$4,000         | 1.090           | \$113,320    |
| 94446         | VIAN PUBLIC SCHOOLS             | 5/5/2016   | Open   | \$0         | \$103,000    | \$100,000 | \$0               | \$0         | \$3,000         | 1.090           | \$112,230    |
| 94280         | PERRY ISD                       | 1/27/2017  | Open   | \$50,400    | \$1,053,000  | \$100,000 | \$0               | \$0         | \$953,000       | 1.181           | \$1,243,313  |
| 94748         | KANSAS SCHOOL DISTRICT          | 4/5/2017   | Open   | \$12,346    | \$110,000    | \$100,000 | \$0               | \$0         | \$10,000        | 1.181           | \$129,881    |
| P625-16-94291 | MORRIS ISD #3                   | 12/16/2016 | Open   | \$52,546    | \$97,000     | \$100,000 | \$0               | \$0         | \$0             | 1.181           | \$114,531    |
| P625-16-93885 | TENKILLER SCHOOL                | 7/8/2016   | Open   | \$55,449    | \$87,000     | \$100,000 | \$0               | \$0         | \$0             | 1.181           | \$102,724    |
|               |                                 |            |        | \$9,994,453 | \$11,735,925 |           | \$5,395,807       | \$5,395,807 | \$6,472,307     |                 |              |

- Loss and policy information provided by Jennifer McKenzie, Arthur J. Gallagher

Excess paid and incurred losses for closed claims are equal to the excess recoveries, or amounts over SIR if no recovery yet  
Excess paid and incurred losses for open claims are amounts in excess of SIR regardless of recoveries.

**Calculation of Limited Losses**

| <i>Policy Period</i> | <i>(A)<br/>Retention</i> | <i>(B)<br/>Unlimited<br/>Paid<br/>Losses</i> | <i>(C)<br/>Unlimited<br/>Reported<br/>Losses</i> | <i>(D)<br/>Paid<br/>Excess of<br/>Primary</i> | <i>(E)<br/>Reported<br/>Excess of<br/>Primary</i> | <i>(F)<br/>Paid<br/>Limited to<br/>Primary</i> | <i>(G)<br/>Reported<br/>Limited to<br/>Primary</i> |
|----------------------|--------------------------|--|--|---|---|--|--|
| 7/1/02-03            | \$100,000                | \$168,909                                    | \$168,909  | \$0   | \$0   | \$168,909                                      | \$168,909  |
| 7/1/03-04            | \$100,000                | \$848,061                                    | \$848,061  | \$7,787                                       | \$7,787   | \$840,274                                      | \$840,274  |
| 7/1/04-05            | \$100,000                | \$525,685                                    | \$525,685  | \$36,712                                      | \$36,712  | \$488,972                                      | \$488,972  |
| 7/1/05-06            | \$100,000                | \$1,330,178                                  | \$1,330,178                                      | \$76,729                                      | \$76,729  | \$1,253,449                                    | \$1,253,449  |
| 7/1/06-07            | \$100,000                | \$1,351,835                                  | \$1,351,835                                      | \$398,598                                     | \$398,598   | \$953,237                                      | \$953,237  |
| 7/1/07-08            | \$100,000                | \$1,501,995                                  | \$1,501,995                                      | \$69,380                                      | \$69,380  | \$1,432,614                                    | \$1,432,614  |
| 7/1/08-09            | \$100,000                | \$2,172,804                                  | \$2,172,804                                      | \$1,013,263                                   | \$1,013,263                                       | \$1,159,541                                    | \$1,159,541  |
| 7/1/09-10            | \$100,000                | \$1,503,488                                  | \$1,524,198                                      | \$231,700                                     | \$231,700   | \$1,271,788                                    | \$1,292,498  |
| 7/1/10-11            | \$100,000                | \$2,396,523                                  | \$2,434,762                                      | \$596,676                                     | \$596,676   | \$1,799,847                                    | \$1,838,086  |
| 7/1/11-12            | \$100,000                | \$3,699,378                                  | \$3,717,715                                      | \$2,228,390                                   | \$2,228,390                                       | \$1,470,989                                    | \$1,489,325  |
| 7/1/12-13            | \$100,000                | \$1,054,824                                  | \$1,203,814                                      | \$320,468                                     | \$325,468   | \$734,356                                      | \$878,345  |
| 7/1/13-14            | \$100,000                | \$833,374                                    | \$947,947  | \$121,839                                     | \$121,839   | \$711,535                                      | \$826,108  |
| 7/1/14-15            | \$100,000                | \$1,551,489                                  | \$2,113,894                                      | \$294,265                                     | \$298,765   | \$1,257,224                                    | \$1,815,129  |
| 7/1/15-16            | \$100,000                | \$1,078,684                                  | \$2,124,067                                      | \$0   | \$104,000   | \$1,078,684                                    | \$2,020,067  |
| 7/1/16-17            | \$100,000                | \$480,867                                    | \$2,992,363                                      | \$0   | \$963,000   | \$480,867                                      | \$2,029,363  |
| 7/1/17-18            | \$100,000                | \$28,936                                     | \$400,116  | \$0   | \$0   | \$28,936                                       | \$400,116  |
| <i>Total</i>         |                          | \$20,527,029                                 | \$25,358,341                                     | \$5,395,807                                   | \$6,472,307                                       | \$15,131,223                                   | \$18,886,034                                       |

(A) and (B) - Exhibit I-A

(D) and (E) - Excess amounts from claims in Exhibit II, page 1

(F) = (B) - (D)

(G) = (C) - (E)

**Estimated Ultimate Losses Limited to OSIG Retentions  
Using Loss Development Methods**

| Accident Period | (A)<br>Net Reported Losses | (B)<br>Net Reported on Large Losses | (C)<br>Reported Develop. Factor | (D)<br>Ultimate on Small Claims | (E)<br>Provision for Large Claims | (F)<br>Estimated Ultimate Net Losses |
|-----------------|----------------------------|-------------------------------------|---------------------------------|---------------------------------|-----------------------------------|--------------------------------------|
| 7/1/02-03       | \$168,909                  | \$0                                 | 1.000                           | \$168,910                       | \$0                               | \$169,000                            |
| 7/1/03-04       | \$848,061                  | \$107,737                           | 1.000                           | \$740,333                       | \$100,000                         | \$840,000                            |
| 7/1/04-05       | \$525,685                  | \$136,712                           | 1.000                           | \$388,982                       | \$100,000                         | \$489,000                            |
| 7/1/05-06       | \$1,330,178                | \$276,729                           | 1.000                           | \$1,053,502                     | \$200,000                         | \$1,254,000                          |
| 7/1/06-07       | \$1,351,835                | \$798,598                           | 1.000                           | \$553,295                       | \$400,000                         | \$953,000                            |
| 7/1/07-08       | \$1,501,995                | \$464,380                           | 1.000                           | \$1,037,838                     | \$400,000                         | \$1,438,000                          |
| 7/1/08-09       | \$2,172,804                | \$1,313,263                         | 1.000                           | \$859,929                       | \$300,000                         | \$1,160,000                          |
| 7/1/09-10       | \$1,524,198                | \$529,200                           | 1.001                           | \$995,940                       | \$300,000                         | \$1,296,000                          |
| 7/1/10-11       | \$2,434,762                | \$1,586,676                         | 1.002                           | \$849,781                       | \$1,000,000                       | \$1,850,000                          |
| 7/1/11-12       | \$3,717,715                | \$2,928,390                         | 1.004                           | \$792,677                       | \$700,000                         | \$1,493,000                          |
| 7/1/12-13       | \$1,203,814                | \$525,468                           | 1.009                           | \$684,499                       | \$200,000                         | \$884,000                            |
| 7/1/13-14       | \$947,947                  | \$421,838                           | 1.019                           | \$536,366                       | \$300,009                         | \$836,000                            |
| 7/1/14-15       | \$2,113,894                | \$795,934                           | 1.042                           | \$1,373,536                     | \$500,118                         | \$1,874,000                          |
| 7/1/15-16       | \$2,124,067                | \$504,000                           | 1.092                           | \$1,768,733                     | \$400,789                         | \$2,170,000                          |
| 7/1/16-17       | \$2,992,363                | \$1,347,000                         | 1.201                           | \$1,976,024                     | \$406,854                         | \$2,383,000                          |
| <b>Total</b>    | <b>\$24,958,225</b>        | <b>\$11,735,925</b>                 |                                 | <b>\$13,780,344</b>             | <b>\$5,307,770</b>                | <b>\$19,089,000</b>                  |

| Accident Period | (A)<br>Net Paid Losses | (B)<br>Net Paid on Large Losses | (C)<br>Paid Develop. Factor | (D)<br>Ultimate on Small Claims | (E)<br>Provision for Large Claims | (F)<br>Estimated Ultimate Net Losses |
|-----------------|------------------------|---------------------------------|-----------------------------|---------------------------------|-----------------------------------|--------------------------------------|
| 7/1/02-03       | \$168,909              | \$0                             | 1.000                       | \$168,924                       | \$0                               | \$169,000                            |
| 7/1/03-04       | \$848,061              | \$107,737                       | 1.000                       | \$740,430                       | \$100,000                         | \$840,000                            |
| 7/1/04-05       | \$525,685              | \$136,712                       | 1.000                       | \$389,061                       | \$100,000                         | \$489,000                            |
| 7/1/05-06       | \$1,330,178            | \$276,729                       | 1.000                       | \$1,053,841                     | \$200,000                         | \$1,254,000                          |
| 7/1/06-07       | \$1,351,835            | \$798,598                       | 1.001                       | \$553,585                       | \$400,000                         | \$954,000                            |
| 7/1/07-08       | \$1,501,995            | \$464,380                       | 1.001                       | \$1,038,755                     | \$400,000                         | \$1,439,000                          |
| 7/1/08-09       | \$2,172,804            | \$1,313,263                     | 1.002                       | \$861,261                       | \$300,000                         | \$1,161,000                          |
| 7/1/09-10       | \$1,503,488            | \$529,200                       | 1.004                       | \$978,007                       | \$300,000                         | \$1,278,000                          |
| 7/1/10-11       | \$2,396,523            | \$1,586,676                     | 1.008                       | \$816,070                       | \$1,000,000                       | \$1,816,000                          |
| 7/1/11-12       | \$3,699,378            | \$2,928,390                     | 1.016                       | \$783,706                       | \$700,000                         | \$1,484,000                          |
| 7/1/12-13       | \$1,054,824            | \$489,147                       | 1.038                       | \$587,313                       | \$200,000                         | \$787,000                            |
| 7/1/13-14       | \$833,374              | \$421,838                       | 1.097                       | \$451,651                       | \$300,009                         | \$752,000                            |
| 7/1/14-15       | \$1,551,489            | \$618,127                       | 1.280                       | \$1,194,397                     | \$500,118                         | \$1,695,000                          |
| 7/1/15-16       | \$1,078,684            | \$152,915                       | 1.935                       | \$1,791,336                     | \$400,789                         | \$2,192,000                          |
| 7/1/16-17       | \$480,867              | \$170,741                       | 4.836                       | \$1,499,911                     | \$406,854                         | \$1,907,000                          |
| <b>Total</b>    | <b>\$20,498,093</b>    | <b>\$9,994,453</b>              |                             | <b>\$12,908,247</b>             | <b>\$5,307,770</b>                | <b>\$18,217,000</b>                  |

(A) - Exhibit I  
 (B) - Exhibit II  
 (C) - Appendix A  
 (D) = [(A) - (B)] x (C)  
 (E) = # large x SIR x ccdf  
 (F) = (D) + (E)

***Estimated Ultimate Losses Based on Forecast***

| <i>Accident<br/>Period</i> | <i>(A)<br/>Exposure</i> | <i>(B)<br/>Detrended<br/>Loss Rate</i> | <i>(C)<br/>Forecast</i> |
|----------------------------|-------------------------|--|-------------------------|
| <i>7/1/17-18</i>           | 376,303                 | \$5.24                                 | \$1,970,000             |
| <i>7/1/18-19</i>           | 377,140                 | \$5.33                                 | \$2,009,000             |

*(A) - Exhibit I*

*(B) - From Forecast, detrended*

*(C) = (A) x (B)*

**Estimated Ultimate Losses Limited to OSIG Retention  
Using Bornhuetter-Ferguson Method**

|              | (A)<br>Prior<br>Ultimate or<br>Forecast | (B)<br>Reported<br>Develop.<br>Factor | (C)<br>Expected %<br>Unreported | (D)<br>Expected<br>Unreported<br>Losses | (E)<br>Limited<br>Reported<br>Losses | (F)<br>Estimated<br>Ultimate<br>Losses |
|--------------|---|---------------------------------------|---------------------------------|---|--------------------------------------|--|
| 7/1/02-03    | \$168,909                               | 1.000                                 | 0%                              | \$1                                     | \$168,909                            | \$169,000                              |
| 7/1/03-04    | \$840,274                               | 1.000                                 | 0%                              | \$10                                    | \$840,274                            | \$840,000                              |
| 7/1/04-05    | \$488,972                               | 1.000                                 | 0%                              | \$12                                    | \$488,972                            | \$489,000                              |
| 7/1/05-06    | \$1,253,449                             | 1.000                                 | 0%                              | \$63                                    | \$1,253,449                          | \$1,254,000                            |
| 7/1/06-07    | \$953,237                               | 1.000                                 | 0%                              | \$99                                    | \$953,237                            | \$953,000                              |
| 7/1/07-08    | \$1,432,614                             | 1.000                                 | 0%                              | \$309                                   | \$1,432,614                          | \$1,433,000                            |
| 7/1/08-09    | \$1,159,541                             | 1.000                                 | 0%                              | \$523                                   | \$1,159,541                          | \$1,160,000                            |
| 7/1/09-10    | \$1,297,000                             | 1.001                                 | 0%                              | \$1,227                                 | \$1,292,498                          | \$1,294,000                            |
| 7/1/10-11    | \$1,852,000                             | 1.002                                 | 0%                              | \$3,695                                 | \$1,838,086                          | \$1,842,000                            |
| 7/1/11-12    | \$1,417,000                             | 1.004                                 | 0%                              | \$5,991                                 | \$1,489,325                          | \$1,495,000                            |
| 7/1/12-13    | \$905,000                               | 1.009                                 | 1%                              | \$8,136                                 | \$878,345                            | \$886,000                              |
| 7/1/13-14    | \$926,000                               | 1.019                                 | 2%                              | \$17,710                                | \$826,108                            | \$844,000                              |
| 7/1/14-15    | \$1,729,000                             | 1.042                                 | 4%                              | \$69,959                                | \$1,815,129                          | \$1,885,000                            |
| 7/1/15-16    | \$2,143,000                             | 1.092                                 | 8%                              | \$180,124                               | \$2,020,067                          | \$2,200,000                            |
| 7/1/16-17    | \$2,224,000                             | 1.201                                 | 17%                             | \$372,156                               | \$2,029,363                          | \$2,402,000                            |
| 7/1/17-18    | \$1,970,000                             | 2.358                                 | 58%                             | \$1,134,549                             | \$400,116                            | \$1,535,000                            |
| <b>Total</b> | <b>\$20,759,996</b>                     |                                       |                                 | <b>\$1,794,563</b>                      | <b>\$18,886,034</b>                  | <b>\$20,681,000</b>                    |

|              | (A)<br>Prior<br>Ultimate or<br>Forecast | (B)<br>Paid<br>Develop.<br>Factor | (C)<br>Expected %<br>Unpaid | (D)<br>Expected<br>Unpaid<br>Losses | (E)<br>Limited<br>Paid<br>Losses | (F)<br>Estimated<br>Ultimate<br>Losses |
|--------------|---|-----------------------------------|-----------------------------|-------------------------------------|----------------------------------|--|
| 7/1/02-03    | \$168,909                               | 1.000                             | 0%                          | \$16                                | \$168,909                        | \$169,000                              |
| 7/1/03-04    | \$840,274                               | 1.000                             | 0%                          | \$120                               | \$840,274                        | \$840,000                              |
| 7/1/04-05    | \$488,972                               | 1.000                             | 0%                          | \$111                               | \$488,972                        | \$489,000                              |
| 7/1/05-06    | \$1,253,449                             | 1.000                             | 0%                          | \$467                               | \$1,253,449                      | \$1,254,000                            |
| 7/1/06-07    | \$953,237                               | 1.001                             | 0%                          | \$599                               | \$953,237                        | \$954,000                              |
| 7/1/07-08    | \$1,432,614                             | 1.001                             | 0%                          | \$1,574                             | \$1,432,614                      | \$1,434,000                            |
| 7/1/08-09    | \$1,159,541                             | 1.002                             | 0%                          | \$2,316                             | \$1,159,541                      | \$1,162,000                            |
| 7/1/09-10    | \$1,297,000                             | 1.004                             | 0%                          | \$4,932                             | \$1,271,788                      | \$1,277,000                            |
| 7/1/10-11    | \$1,852,000                             | 1.008                             | 1%                          | \$14,122                            | \$1,799,847                      | \$1,814,000                            |
| 7/1/11-12    | \$1,417,000                             | 1.016                             | 2%                          | \$22,993                            | \$1,470,989                      | \$1,494,000                            |
| 7/1/12-13    | \$905,000                               | 1.038                             | 4%                          | \$33,338                            | \$734,356                        | \$768,000                              |
| 7/1/13-14    | \$926,000                               | 1.097                             | 9%                          | \$82,245                            | \$711,535                        | \$794,000                              |
| 7/1/14-15    | \$1,729,000                             | 1.280                             | 22%                         | \$377,872                           | \$1,257,224                      | \$1,635,000                            |
| 7/1/15-16    | \$2,143,000                             | 1.935                             | 48%                         | \$1,035,490                         | \$1,078,684                      | \$2,114,000                            |
| 7/1/16-17    | \$2,224,000                             | 4.836                             | 79%                         | \$1,764,159                         | \$480,867                        | \$2,245,000                            |
| 7/1/17-18    | \$1,970,000                             | 26.252                            | 96%                         | \$1,894,959                         | \$28,936                         | \$1,924,000                            |
| <b>Total</b> | <b>\$20,759,996</b>                     |                                   |                             | <b>\$5,235,313</b>                  | <b>\$15,131,223</b>              | <b>\$20,367,000</b>                    |

(A) - Exhibit VI, IV for 7/1/17-18

(B) - Appendix A

(C) = 1 - 1/(B)

(D) = (A) \* (C)

(E) - Exhibit I, limited to SIR

(F) = (D) + (E)

**Summary and Selection of Ultimate Limited Loss Estimates**

| <i>Accident<br/>Period</i> | <i>(A)<br/>Prior<br/>Ultimate<br/>or<br/>Forecast</i> | <i>(B)<br/>Reported<br/>Loss<br/>Development<br/>Method</i> | <i>(C)<br/>Paid<br/>Loss<br/>Development<br/>Method</i> | <i>(D)<br/>Expected<br/>Unreported<br/>Method</i> | <i>(E)<br/>Expected<br/>Unpaid<br/>Method</i> | <i>(F)<br/>Selected<br/>Ultimate<br/>Loss<br/>Estimate</i> |
|----------------------------|---|---|---|---|---|--|
| 7/1/02-03                  | \$168,909   | \$169,000   | \$169,000   | \$169,000   | \$169,000                                     | \$168,909  |
| 7/1/03-04                  | \$840,274   | \$840,000   | \$840,000   | \$840,000   | \$840,000                                     | \$840,274  |
| 7/1/04-05                  | \$488,972   | \$489,000   | \$489,000   | \$489,000   | \$489,000                                     | \$488,972  |
| 7/1/05-06                  | \$1,253,449   | \$1,254,000   | \$1,254,000   | \$1,254,000                                       | \$1,254,000                                   | \$1,253,449  |
| 7/1/06-07                  | \$953,237   | \$953,000   | \$954,000   | \$953,000   | \$954,000                                     | \$953,237  |
| 7/1/07-08                  | \$1,432,614   | \$1,438,000   | \$1,439,000   | \$1,433,000                                       | \$1,434,000                                   | \$1,432,614  |
| 7/1/08-09                  | \$1,159,541   | \$1,160,000   | \$1,161,000   | \$1,160,000                                       | \$1,162,000                                   | \$1,159,541  |
| 7/1/09-10                  | \$1,297,000   | \$1,296,000   | \$1,278,000   | \$1,294,000                                       | \$1,277,000                                   | \$1,294,000  |
| 7/1/10-11                  | \$1,852,000   | \$1,850,000   | \$1,816,000   | \$1,842,000                                       | \$1,814,000                                   | \$1,842,000  |
| 7/1/11-12                  | \$1,417,000   | \$1,493,000   | \$1,484,000   | \$1,495,000                                       | \$1,494,000                                   | \$1,495,000  |
| 7/1/12-13                  | \$905,000   | \$884,000   | \$787,000   | \$886,000   | \$768,000                                     | \$886,000  |
| 7/1/13-14                  | \$926,000   | \$836,000   | \$752,000   | \$844,000   | \$794,000                                     | \$844,000  |
| 7/1/14-15                  | \$1,729,000   | \$1,874,000   | \$1,695,000   | \$1,885,000                                       | \$1,635,000                                   | \$1,885,000  |
| 7/1/15-16                  | \$2,143,000   | \$2,170,000   | \$2,192,000   | \$2,200,000                                       | \$2,114,000                                   | \$2,200,000  |
| 7/1/16-17                  | \$2,224,000   | \$2,383,000   | \$1,907,000   | \$2,402,000                                       | \$2,245,000                                   | \$2,402,000  |
| 7/1/17-18                  | \$2,028,000   |   |   | \$1,535,000                                       | \$1,924,000                                   | \$1,730,000  |
| <b>Total</b>               | <b>\$20,817,996</b>                                   | <b>\$19,089,000</b>   | <b>\$18,217,000</b>                                     | <b>\$20,681,000</b>                               | <b>\$20,367,000</b>                           | <b>\$20,874,996</b>  |

(A) - From Previous Report as of 06/30/17  
 (B) and (C) - Exhibit III  
 (D) and (E) - Exhibit V  
 (F) - Selected as noted  
 Limited reported Losses for 02-03 through 08-09  
 (D) for 09-10 through 16-17  
 Average of (D) and (E) for 17-18

**Average Ultimate Claim Sizes**

|                    | (A)                | (B)                              | (C)                             | (D)                             | (E)                                       | (F)                    | (G)           |
|--------------------|--------------------|----------------------------------|---------------------------------|---------------------------------|---|------------------------|---------------|
| Accident<br>Period | Reported<br>Claims | Reported<br>Claim<br>Development | Estimated<br>Ultimate<br>Claims | Estimated<br>Ultimate<br>Losses | Estimated<br>Average<br>Ultimate<br>Claim | Exposure<br>(Students) | Loss<br>Rate  |
| 7/1/02-03          | 28                 | 1.000                            | 28.0                            | \$168,909                       | \$6,000                                   |                        |               |
| 7/1/03-04          | 88                 | 1.000                            | 88.0                            | \$840,274                       | \$9,500                                   |                        |               |
| 7/1/04-05          | 115                | 1.000                            | 115.0                           | \$488,972                       | \$4,300                                   | 198,498                | \$2.46        |
| 7/1/05-06          | 136                | 1.000                            | 136.0                           | \$1,253,449                     | \$9,200                                   | 249,419                | \$5.03        |
| 7/1/06-07          | 132                | 1.000                            | 132.0                           | \$953,237                       | \$7,200                                   | 267,684                | \$3.56        |
| 7/1/07-08          | 163                | 1.000                            | 163.0                           | \$1,432,614                     | \$8,800                                   | 308,999                | \$4.64        |
| 7/1/08-09          | 155                | 1.000                            | 155.0                           | \$1,159,541                     | \$7,500                                   | 313,473                | \$3.70        |
| 7/1/09-10          | 144                | 1.000                            | 144.0                           | \$1,294,000                     | \$9,000                                   | 314,947                | \$4.11        |
| 7/1/10-11          | 110                | 1.000                            | 110.0                           | \$1,842,000                     | \$16,700                                  | 346,136                | \$5.32        |
| 7/1/11-12          | 87                 | 1.000                            | 87.0                            | \$1,495,000                     | \$17,200                                  | 272,584                | \$5.48        |
| 7/1/12-13          | 109                | 1.000                            | 109.0                           | \$886,000                       | \$8,100                                   | 282,168                | \$3.14        |
| 7/1/13-14          | 86                 | 1.000                            | 86.0                            | \$844,000                       | \$9,800                                   | 318,604                | \$2.65        |
| 7/1/14-15          | 116                | 1.000                            | 116.0                           | \$1,885,000                     | \$16,200                                  | 373,449                | \$5.05        |
| 7/1/15-16          | 121                | 1.002                            | 121.2                           | \$2,200,000                     | \$18,100                                  | 376,559                | \$5.84        |
| 7/1/16-17          | 131                | 1.017                            | 133.2                           | \$2,402,000                     | \$18,000                                  | 393,268                | \$6.11        |
| 7/1/17-18          | 50                 | 1.882                            | 101.4                           | \$1,730,000                     | \$17,100                                  | 376,303                | \$4.60        |
| 7/1/18-19          |                    |                                  | 109.9                           | \$2,009,000                     | \$18,300                                  | 377,140                | \$5.33        |
| <b>Total</b>       | <b>1,771</b>       |                                  | <b>1,934.8</b>                  | <b>\$22,883,996</b>             | <b>\$11,800</b>                           | <b>4,769,231</b>       | <b>\$4.80</b> |

- Results for 7/1/18-19 are from Forecast Report

- (A) - Exhibit I
- (B) - Appendix A
- (C) = (A) x (B)
- (D) = Exhibit VI
- (E) = (D) / (C)
- (F) - Exhibit I, provided by OSIG
- (G) = (D) / (F)

**Estimated Outstanding Losses**

| Accident Period | (A)<br>Estimated Ultimate Losses | (B)<br>Limited Paid Losses | (C)<br>Limited Reported Losses | (D)<br>Limited Case Reserves | (E)<br>IBNR Losses | (F)<br>Outstanding Losses |
|-----------------|----------------------------------|----------------------------|--------------------------------|------------------------------|--------------------|---------------------------|
|-----------------|----------------------------------|----------------------------|--------------------------------|------------------------------|--------------------|---------------------------|

**As of January 31, 2018**

|                |                     |                     |                     |                    |                    |                    |
|----------------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|
| 7/1/02-03      | \$168,909           | \$168,909           | \$168,909           | \$0                | \$0                | \$0                |
| 7/1/03-04      | \$840,274           | \$840,274           | \$840,274           | \$0                | \$0                | \$0                |
| 7/1/04-05      | \$488,972           | \$488,972           | \$488,972           | \$0                | \$0                | \$0                |
| 7/1/05-06      | \$1,253,449         | \$1,253,449         | \$1,253,449         | \$0                | \$0                | \$0                |
| 7/1/06-07      | \$953,237           | \$953,237           | \$953,237           | \$0                | \$0                | \$0                |
| 7/1/07-08      | \$1,432,614         | \$1,432,614         | \$1,432,614         | \$0                | \$0                | \$0                |
| 7/1/08-09      | \$1,159,541         | \$1,159,541         | \$1,159,541         | \$0                | \$0                | \$0                |
| 7/1/09-10      | \$1,294,000         | \$1,271,788         | \$1,292,498         | \$20,710           | \$2,000            | \$22,000           |
| 7/1/10-11      | \$1,842,000         | \$1,799,847         | \$1,838,086         | \$38,239           | \$4,000            | \$42,000           |
| 7/1/11-12      | \$1,495,000         | \$1,470,989         | \$1,489,325         | \$18,337           | \$6,000            | \$24,000           |
| 7/1/12-13      | \$886,000           | \$734,356           | \$878,345           | \$143,989          | \$8,000            | \$152,000          |
| 7/1/13-14      | \$844,000           | \$711,535           | \$826,108           | \$114,572          | \$18,000           | \$132,000          |
| 7/1/14-15      | \$1,885,000         | \$1,257,224         | \$1,815,129         | \$557,905          | \$70,000           | \$628,000          |
| 7/1/15-16      | \$2,200,000         | \$1,078,684         | \$2,020,067         | \$941,383          | \$180,000          | \$1,121,000        |
| 7/1/16-17      | \$2,402,000         | \$480,867           | \$2,029,363         | \$1,548,496        | \$373,000          | \$1,921,000        |
| 7/1/17-1/31/18 | \$1,009,000         | \$28,936            | \$400,116           | \$371,180          | \$609,000          | \$980,000          |
| <b>Total</b>   | <b>\$20,153,996</b> | <b>\$15,131,223</b> | <b>\$18,886,034</b> | <b>\$3,754,812</b> | <b>\$1,270,000</b> | <b>\$5,022,000</b> |

2/1-6/30/18 \$721,000

**Projected as of June 30, 2018**

|              |                     |                     |                     |                    |                    |                    |
|--------------|---------------------|---------------------|---------------------|--------------------|--------------------|--------------------|
| 7/1/02-03    | \$168,909           | \$168,909           | \$168,909           | \$0                | \$0                | \$0                |
| 7/1/03-04    | \$840,274           | \$840,274           | \$840,274           | \$0                | \$0                | \$0                |
| 7/1/04-05    | \$488,972           | \$488,972           | \$488,972           | \$0                | \$0                | \$0                |
| 7/1/05-06    | \$1,253,449         | \$1,253,449         | \$1,253,449         | \$0                | \$0                | \$0                |
| 7/1/06-07    | \$953,237           | \$953,237           | \$953,237           | \$0                | \$0                | \$0                |
| 7/1/07-08    | \$1,432,614         | \$1,432,614         | \$1,432,614         | \$0                | \$0                | \$0                |
| 7/1/08-09    | \$1,159,541         | \$1,159,541         | \$1,159,541         | \$0                | \$0                | \$0                |
| 7/1/09-10    | \$1,294,000         | \$1,277,000         | \$1,293,000         | \$16,000           | \$1,000            | \$17,000           |
| 7/1/10-11    | \$1,842,000         | \$1,811,000         | \$1,839,000         | \$28,000           | \$3,000            | \$31,000           |
| 7/1/11-12    | \$1,495,000         | \$1,478,000         | \$1,491,000         | \$13,000           | \$4,000            | \$17,000           |
| 7/1/12-13    | \$886,000           | \$779,000           | \$880,000           | \$101,000          | \$6,000            | \$107,000          |
| 7/1/13-14    | \$844,000           | \$753,000           | \$831,000           | \$78,000           | \$13,000           | \$91,000           |
| 7/1/14-15    | \$1,885,000         | \$1,452,000         | \$1,834,000         | \$382,000          | \$51,000           | \$433,000          |
| 7/1/15-16    | \$2,200,000         | \$1,373,000         | \$2,067,000         | \$694,000          | \$133,000          | \$827,000          |
| 7/1/16-17    | \$2,402,000         | \$769,000           | \$2,120,000         | \$1,351,000        | \$282,000          | \$1,633,000        |
| 7/1/17-18    | \$1,730,000         | \$124,000           | \$1,172,000         | \$1,048,000        | \$558,000          | \$1,606,000        |
| <b>Total</b> | <b>\$20,874,996</b> | <b>\$16,112,996</b> | <b>\$19,823,996</b> | <b>\$3,711,000</b> | <b>\$1,051,000</b> | <b>\$4,762,000</b> |

**Total Estimated IBNR as of June 30, 2018 \$1,051,000**

(A) - Exhibit VI

(B) and (C) - Exhibit V as of 1/31/18

Projected as of 6/30/18 using LDFs

(D) = (C) - (B)

(E) = (A) - (C)

(F) = (A) - (B)



**Comparison of Results with Previous Estimates as of 06/30/17**

|              | (A)<br>Actual<br>Reported<br>Losses<br>6/30/2017 | (B)<br>Projected<br>Reported<br>Losses<br>1/31/2018 | (C)<br>Actual<br>Reported<br>Losses<br>1/31/2018 | (D)<br>Percent<br>Difference | (E)<br>Expected<br>Ultimate<br>Losses<br>6/30/2017 | (F)<br>Actual<br>Ultimate<br>Losses<br>1/31/2018 | (G)<br>Percent<br>Difference |
|--------------|--|---|--|------------------------------|--|--|------------------------------|
| 7/1/02-03    | \$168,909  | \$168,909   | \$168,909  | 0.0%                         | \$168,909  | \$168,909  | 0.0%                         |
| 7/1/03-04    | \$840,274  | \$840,274   | \$840,274  | 0.0%                         | \$840,274  | \$840,274  | 0.0%                         |
| 7/1/04-05    | \$488,972  | \$488,972   | \$488,972  | 0.0%                         | \$488,972  | \$488,972  | 0.0%                         |
| 7/1/05-06    | \$1,253,449                                      | \$1,253,449   | \$1,253,449                                      | 0.0%                         | \$1,253,449  | \$1,253,449                                      | 0.0%                         |
| 7/1/06-07    | \$953,237  | \$953,237   | \$953,237  | 0.0%                         | \$953,237  | \$953,237  | 0.0%                         |
| 7/1/07-08    | \$1,432,614                                      | \$1,432,614   | \$1,432,614                                      | 0.0%                         | \$1,432,614  | \$1,432,614                                      | 0.0%                         |
| 7/1/08-09    | \$1,159,541                                      | \$1,159,541   | \$1,159,541                                      | 0.0%                         | \$1,159,541  | \$1,159,541                                      | 0.0%                         |
| 7/1/09-10    | \$1,292,498                                      | \$1,294,085   | \$1,292,498                                      | -0.1%                        | \$1,297,000  | \$1,294,000                                      | -0.2%                        |
| 7/1/10-11    | \$1,838,086                                      | \$1,843,016   | \$1,838,086                                      | -0.3%                        | \$1,852,000  | \$1,842,000                                      | -0.5%                        |
| 7/1/11-12    | \$1,404,595                                      | \$1,409,008   | \$1,489,325                                      | 5.7%                         | \$1,417,000  | \$1,495,000                                      | 5.5%                         |
| 7/1/12-13    | \$888,365  | \$894,291   | \$878,345  | -1.8%                        | \$905,000  | \$886,000  | -2.1%                        |
| 7/1/13-14    | \$894,316  | \$905,559   | \$826,108  | -8.8%                        | \$926,000  | \$844,000  | -8.9%                        |
| 7/1/14-15    | \$1,601,147                                      | \$1,645,803   | \$1,815,129                                      | 10.3%                        | \$1,729,000  | \$1,885,000                                      | 9.0%                         |
| 7/1/15-16    | \$1,853,174                                      | \$1,950,393   | \$2,020,067                                      | 3.6%                         | \$2,143,000  | \$2,200,000                                      | 2.7%                         |
| 7/1/16-17    | \$1,729,228                                      | \$1,880,988   | \$2,029,363                                      | 7.9%                         | \$2,224,000  | \$2,402,000                                      | 8.0%                         |
| 7/1/17-18    |  | \$858,380   | \$400,116  | -53.4%                       | \$2,028,000  | \$1,730,000                                      | -14.7%                       |
| <b>Total</b> | <b>\$17,798,406</b>                              | <b>\$18,978,521</b>                                 | <b>\$18,886,034</b>                              | <b>-0.5%</b>                 | <b>\$20,817,996</b>                                | <b>\$20,874,996</b>                              | <b>0.3%</b>                  |

|              | (A)<br>Actual<br>Paid<br>Losses<br>6/30/2017 | (B)<br>Projected<br>Paid<br>Losses<br>1/31/2018 | (C)<br>Actual<br>Paid<br>Losses<br>1/31/2018 | (D)<br>Percent<br>Difference | (E)<br>Expected<br>Ultimate<br>Losses<br>6/30/2017 | (F)<br>Actual<br>Ultimate<br>Losses<br>1/31/2018 | (G)<br>Percent<br>Difference |
|--------------|--|---|--|------------------------------|--|--|------------------------------|
| 7/1/02-03    | \$168,909                                    | \$168,909                                       | \$168,909                                    | 0.0%                         | \$168,909  | \$168,909  | 0.0%                         |
| 7/1/03-04    | \$840,274                                    | \$840,274                                       | \$840,274                                    | 0.0%                         | \$840,274  | \$840,274  | 0.0%                         |
| 7/1/04-05    | \$488,972                                    | \$488,972                                       | \$488,972                                    | 0.0%                         | \$488,972  | \$488,972  | 0.0%                         |
| 7/1/05-06    | \$1,253,449                                  | \$1,253,449                                     | \$1,253,449                                  | 0.0%                         | \$1,253,449  | \$1,253,449                                      | 0.0%                         |
| 7/1/06-07    | \$953,237                                    | \$953,237                                       | \$953,237                                    | 0.0%                         | \$953,237  | \$953,237  | 0.0%                         |
| 7/1/07-08    | \$1,432,614                                  | \$1,432,614                                     | \$1,432,614                                  | 0.0%                         | \$1,432,614  | \$1,432,614                                      | 0.0%                         |
| 7/1/08-09    | \$1,159,541                                  | \$1,159,541                                     | \$1,159,541                                  | 0.0%                         | \$1,159,541  | \$1,159,541                                      | 0.0%                         |
| 7/1/09-10    | \$1,271,245                                  | \$1,279,724                                     | \$1,271,788                                  | -0.6%                        | \$1,297,000  | \$1,294,000                                      | -0.2%                        |
| 7/1/10-11    | \$1,799,237                                  | \$1,817,784                                     | \$1,799,847                                  | -1.0%                        | \$1,852,000  | \$1,842,000                                      | -0.5%                        |
| 7/1/11-12    | \$1,356,744                                  | \$1,379,368                                     | \$1,470,989                                  | 6.6%                         | \$1,417,000  | \$1,495,000                                      | 5.5%                         |
| 7/1/12-13    | \$683,999                                    | \$772,066                                       | \$734,356                                    | -4.9%                        | \$905,000  | \$886,000  | -2.1%                        |
| 7/1/13-14    | \$690,630                                    | \$787,556                                       | \$711,535                                    | -9.7%                        | \$926,000  | \$844,000  | -8.9%                        |
| 7/1/14-15    | \$1,136,675                                  | \$1,367,558                                     | \$1,257,224                                  | -8.1%                        | \$1,729,000  | \$1,885,000                                      | 9.0%                         |
| 7/1/15-16    | \$824,838                                    | \$1,204,977                                     | \$1,078,684                                  | -10.5%                       | \$2,143,000  | \$2,200,000                                      | 2.7%                         |
| 7/1/16-17    | \$236,290                                    | \$495,755                                       | \$480,867                                    | -3.0%                        | \$2,224,000  | \$2,402,000                                      | 8.0%                         |
| 7/1/17-18    |  | \$79,941  | \$28,936                                     | -63.8%                       | \$2,028,000  | \$1,730,000                                      | -14.7%                       |
| <b>Total</b> | <b>\$14,296,654</b>                          | <b>\$15,481,724</b>                             | <b>\$15,131,223</b>                          | <b>-2.3%</b>                 | <b>\$20,817,996</b>                                | <b>\$20,874,996</b>                              | <b>0.3%</b>                  |

(A) and (E) - From Previous actuarial report as of 06/30/2017  
 (B) - Derived from (E) and (A) using loss development patterns  
 (C) - Exhibit I, limited to retention  
 (D) = [(C) / (B)] - 1  
 (F) - Exhibit VI  
 (G) = [(F) / (E)] - 1

**Comparison of Results with Previous Estimates as of 01/31/17**

| Accident<br>Period | (A)                                       | (B)  | (C)                                       | (D)                   | (E)   | (F)                                       | (G)                   |
|--------------------|---|--|---|-----------------------|---|---|-----------------------|
|                    | Actual<br>Reported<br>Losses<br>1/31/2017 | Projected<br>Reported<br>Losses<br>1/31/2018 | Actual<br>Reported<br>Losses<br>1/31/2018 | Percent<br>Difference | Expected<br>Ultimate<br>Losses<br>1/31/2017 | Actual<br>Ultimate<br>Losses<br>1/31/2018 | Percent<br>Difference |
| 7/1/02-03          | \$168,909                                 | \$168,909                                    | \$168,909                                 | 0.0%                  | \$168,909                                   | \$168,909                                 | 0.0%                  |
| 7/1/03-04          | \$840,274                                 | \$840,274                                    | \$840,274                                 | 0.0%                  | \$840,274                                   | \$840,274                                 | 0.0%                  |
| 7/1/04-05          | \$488,972                                 | \$488,972                                    | \$488,972                                 | 0.0%                  | \$488,972                                   | \$488,972                                 | 0.0%                  |
| 7/1/05-06          | \$1,253,449                               | \$1,253,449                                  | \$1,253,449                               | 0.0%                  | \$1,253,449                                 | \$1,253,449                               | 0.0%                  |
| 7/1/06-07          | \$953,237                                 | \$953,237                                    | \$953,237                                 | 0.0%                  | \$953,237                                   | \$953,237                                 | 0.0%                  |
| 7/1/07-08          | \$1,432,614                               | \$1,432,614                                  | \$1,432,614                               | 0.0%                  | \$1,432,614                                 | \$1,432,614                               | 0.0%                  |
| 7/1/08-09          | \$1,159,541                               | \$1,159,541                                  | \$1,159,541                               | 0.0%                  | \$1,159,541                                 | \$1,159,541                               | 0.0%                  |
| 7/1/09-10          | \$1,292,498                               | \$1,294,865                                  | \$1,292,498                               | -0.2%                 | \$1,297,000                                 | \$1,294,000                               | -0.2%                 |
| 7/1/10-11          | \$1,838,086                               | \$1,845,433                                  | \$1,838,086                               | -0.4%                 | \$1,852,000                                 | \$1,842,000                               | -0.5%                 |
| 7/1/11-12          | \$1,404,595                               | \$1,411,165                                  | \$1,489,325                               | 5.5%                  | \$1,417,000                                 | \$1,495,000                               | 5.5%                  |
| 7/1/12-13          | \$955,172                                 | \$966,168                                    | \$878,345                                 | -9.1%                 | \$975,000                                   | \$886,000                                 | -9.1%                 |
| 7/1/13-14          | \$894,316                                 | \$917,965                                    | \$826,108                                 | -10.0%                | \$936,000                                   | \$844,000                                 | -9.8%                 |
| 7/1/14-15          | \$1,856,732                               | \$1,922,330                                  | \$1,815,129                               | -5.6%                 | \$2,004,000                                 | \$1,885,000                               | -5.9%                 |
| 7/1/15-16          | \$1,924,046                               | \$2,098,968                                  | \$2,020,067                               | -3.8%                 | \$2,293,000                                 | \$2,200,000                               | -4.1%                 |
| 7/1/16-17          | \$776,370                                 | \$1,641,692                                  | \$2,029,363                               | 23.6%                 | \$1,974,000                                 | \$2,402,000                               | 21.7%                 |
| 7/1/17-18          |   | \$901,130                                    | \$400,116                                 | -55.6%                | \$2,129,000                                 | \$1,730,000                               | -18.7%                |
| <b>Total</b>       | <b>\$17,238,813</b>                       | <b>\$19,296,712</b>                          | <b>\$18,886,034</b>                       | <b>-2.1%</b>          | <b>\$21,173,996</b>                         | <b>\$20,874,996</b>                       | <b>-1.4%</b>          |

| Accident<br>Period | (A)                                   | (B)                                      | (C)                                   | (D)                   | (E)   | (F)                                       | (G)                   |
|--------------------|---------------------------------------|--|---------------------------------------|-----------------------|---|---|-----------------------|
|                    | Actual<br>Paid<br>Losses<br>1/31/2017 | Projected<br>Paid<br>Losses<br>1/31/2018 | Actual<br>Paid<br>Losses<br>1/31/2018 | Percent<br>Difference | Expected<br>Ultimate<br>Losses<br>1/31/2017 | Actual<br>Ultimate<br>Losses<br>1/31/2018 | Percent<br>Difference |
| 7/1/02-03          | \$168,909                             | \$168,909                                | \$168,909                             | 0.0%                  | \$168,909                                   | \$168,909                                 | 0.0%                  |
| 7/1/03-04          | \$840,274                             | \$840,274                                | \$840,274                             | 0.0%                  | \$840,274                                   | \$840,274                                 | 0.0%                  |
| 7/1/04-05          | \$488,972                             | \$488,972                                | \$488,972                             | 0.0%                  | \$488,972                                   | \$488,972                                 | 0.0%                  |
| 7/1/05-06          | \$1,253,449                           | \$1,253,449                              | \$1,253,449                           | 0.0%                  | \$1,253,449                                 | \$1,253,449                               | 0.0%                  |
| 7/1/06-07          | \$953,237                             | \$953,237                                | \$953,237                             | 0.0%                  | \$953,237                                   | \$953,237                                 | 0.0%                  |
| 7/1/07-08          | \$1,432,614                           | \$1,432,614                              | \$1,432,614                           | 0.0%                  | \$1,432,614                                 | \$1,432,614                               | 0.0%                  |
| 7/1/08-09          | \$1,159,541                           | \$1,159,541                              | \$1,159,541                           | 0.0%                  | \$1,159,541                                 | \$1,159,541                               | 0.0%                  |
| 7/1/09-10          | \$1,271,845                           | \$1,284,460                              | \$1,271,788                           | -1.0%                 | \$1,297,000                                 | \$1,294,000                               | -0.2%                 |
| 7/1/10-11          | \$1,797,388                           | \$1,826,349                              | \$1,799,847                           | -1.5%                 | \$1,852,000                                 | \$1,842,000                               | -0.5%                 |
| 7/1/11-12          | \$1,316,195                           | \$1,372,638                              | \$1,470,989                           | 7.2%                  | \$1,417,000                                 | \$1,495,000                               | 5.5%                  |
| 7/1/12-13          | \$675,010                             | \$940,374                                | \$734,356                             | -21.9%                | \$975,000                                   | \$886,000                                 | -9.1%                 |
| 7/1/13-14          | \$573,337                             | \$855,683                                | \$711,535                             | -16.8%                | \$936,000                                   | \$844,000                                 | -9.8%                 |
| 7/1/14-15          | \$936,607                             | \$1,578,738                              | \$1,257,224                           | -20.4%                | \$2,004,000                                 | \$1,885,000                               | -5.9%                 |
| 7/1/15-16          | \$680,832                             | \$1,206,357                              | \$1,078,684                           | -10.6%                | \$2,293,000                                 | \$2,200,000                               | -4.1%                 |
| 7/1/16-17          | \$78,481                              | \$420,246                                | \$480,867                             | 14.4%                 | \$1,974,000                                 | \$2,402,000                               | 21.7%                 |
| 7/1/17-18          |                                       | \$83,922                                 | \$28,936                              | -65.5%                | \$2,129,000                                 | \$1,730,000                               | -18.7%                |
| <b>Total</b>       | <b>\$13,626,692</b>                   | <b>\$15,865,764</b>                      | <b>\$15,131,223</b>                   | <b>-4.6%</b>          | <b>\$21,173,996</b>                         | <b>\$20,874,996</b>                       | <b>-1.4%</b>          |

(A) and (E) - From Previous actuarial report as of 01/31/2017  
(B) - Derived from (E) and (A) using loss development patterns  
(C) - Exhibit I, limited to retention  
(D) = [(C) / (B)] - 1  
(F) - Exhibit VI  
(G) = [(F) / (E)] - 1

**Estimation of Cumulative Reported Loss Development Factors  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |               |          |         |          | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------------|----------|---------|----------|---------------|---------------------------|
|                               |                             | X'<br>LN(1/(X+C))                 | Y'<br>LN(Y-1) | (X')^2   | (Y')^2  | X' x Y'  | X             | Cumulative<br>Factor<br>Y |
| 12                            | <b>1.303</b>                | -7.2876                           | -1.1956       | 53.109   | 1.4296  | 8.7133   | <b>187</b>    | <b>1.000</b>              |
| 24                            | <b>1.151</b>                | -7.2957                           | -1.8905       | 53.228   | 3.5740  | 13.7927  | <b>175</b>    | <b>1.000</b>              |
| 36                            | <b>1.063</b>                | -7.3038                           | -2.7626       | 53.346   | 7.6321  | 20.1778  | <b>163</b>    | <b>1.000</b>              |
| 48                            | <b>1.033</b>                | -7.3119                           | -3.4183       | 53.464   | 11.6844 | 24.9939  | <b>151</b>    | <b>1.000</b>              |
| 60                            | <b>1.016</b>                | -7.3199                           | -4.1559       | 53.580   | 17.2715 | 30.4206  | <b>139</b>    | <b>1.000</b>              |
| 72                            | <b>1.006</b>                | -7.3278                           | -5.1317       | 53.696   | 26.3346 | 37.6041  | <b>127</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |          |         |          | <b>115</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |          |         |          | <b>103</b>    | <b>1.001</b>              |
|                               |                             |                                   |               |          |         |          | <b>91</b>     | <b>1.002</b>              |
|                               |                             |                                   |               |          |         |          | <b>79</b>     | <b>1.004</b>              |
|                               |                             |                                   |               |          |         |          | <b>67</b>     | <b>1.009</b>              |
| Sum                           |                             | -43.8467                          | -18.5547      | 320.4229 | 67.9262 | 135.7024 | <b>55</b>     | <b>1.019</b>              |
| Average                       |                             | -7.3078                           | -3.0924       | 53.4038  | 11.3210 | 22.6171  | <b>43</b>     | <b>1.042</b>              |
|                               |                             |                                   |               |          |         |          | <b>31</b>     | <b>1.092</b>              |
|                               |                             |                                   |               |          |         |          | <b>19</b>     | <b>1.201</b>              |
|                               |                             |                                   |               |          |         |          | <b>7</b>      | <b>2.358</b>              |

|     |            |       |          |
|-----|------------|-------|----------|
| N = | 6          |       |          |
| A = | 2.863E+304 |       |          |
| B = | 96.354     | R^2 = | 0.996733 |
| C = | 1450       |       |          |

\* - Appendix A4

**Estimation of Cumulative Paid Loss Development Factors  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |               |          |         |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------------|----------|---------|---------|---------------|---------------------------|
|                               |                             | X'<br>LN(1/(X+C))                 | Y'<br>LN(Y-1) | (X')^2   | (Y')^2  | X' x Y' | X             | Cumulative<br>Factor<br>Y |
| 12                            | <b>12.186</b>               | -4.0604                           | 2.4147        | 16.487   | 5.8306  | -9.8046 | <b>187</b>    | <b>1.000</b>              |
| 24                            | <b>2.607</b>                | -4.2485                           | 0.4744        | 18.050   | 0.2251  | -2.0155 | <b>175</b>    | <b>1.000</b>              |
| 36                            | <b>1.523</b>                | -4.4067                           | -0.6479       | 19.419   | 0.4198  | 2.8550  | <b>163</b>    | <b>1.000</b>              |
| 48                            | <b>1.227</b>                | -4.5433                           | -1.4821       | 20.642   | 2.1965  | 6.7335  | <b>151</b>    | <b>1.000</b>              |
| 60                            | <b>1.066</b>                | -4.6634                           | -2.7132       | 21.748   | 7.3615  | 12.6529 | <b>139</b>    | <b>1.001</b>              |
| 72                            | <b>1.027</b>                | -4.7707                           | -3.6126       | 22.759   | 13.0506 | 17.2344 | <b>127</b>    | <b>1.001</b>              |
| 84                            | <b>1.011</b>                | -4.8675                           | -4.5203       | 23.693   | 20.4327 | 22.0025 | <b>115</b>    | <b>1.002</b>              |
|                               |                             |                                   |               |          |         |         | <b>103</b>    | <b>1.004</b>              |
|                               |                             |                                   |               |          |         |         | <b>91</b>     | <b>1.008</b>              |
|                               |                             |                                   |               |          |         |         | <b>79</b>     | <b>1.016</b>              |
|                               |                             |                                   |               |          |         |         | <b>67</b>     | <b>1.038</b>              |
| Sum                           |                             | -31.5606                          | -10.0869      | 142.7976 | 49.5168 | 49.6582 | <b>55</b>     | <b>1.097</b>              |
| Average                       |                             | -4.5087                           | -1.4410       | 20.3997  | 7.0738  | 7.0940  | <b>43</b>     | <b>1.280</b>              |
|                               |                             |                                   |               |          |         |         | <b>31</b>     | <b>1.935</b>              |
|                               |                             |                                   |               |          |         |         | <b>19</b>     | <b>4.836</b>              |
|                               |                             |                                   |               |          |         |         | <b>7</b>      | <b>26.252</b>             |

|     |           |       |          |
|-----|-----------|-------|----------|
| N = | 7         |       |          |
| A = | 4.912E+15 |       |          |
| B = | 8.333     | R^2 = | 0.995680 |
| C = | 46        |       |          |

\* - Appendix A5

**Estimation of Cumulative Reported Claim Development Factors  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |          |          |         |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|----------|----------|---------|---------|---------------|---------------------------|
|                               |                             | X'                                | Y'       | (X')^2   | (Y')^2  | X' x Y' | X             | Cumulative<br>Factor<br>Y |
|                               |                             | LN(1/(X+C))                       | LN(Y-1)  |          |         |         |               |                           |
| 12                            | 1.061                       | -6.4003                           | -2.7930  | 40.963   | 7.8008  | 17.8759 | 187           | 1.000                     |
| 24                            | 1.007                       | -6.4200                           | -4.9583  | 41.216   | 24.5847 | 31.8322 | 175           | 1.000                     |
| 36                            | 1.001                       | -6.4394                           | -7.1237  | 41.465   | 50.7467 | 45.8718 | 163           | 1.000                     |
|                               |                             |                                   |          |          |         |         | 151           | 1.000                     |
|                               |                             |                                   |          |          |         |         | 139           | 1.000                     |
|                               |                             |                                   |          |          |         |         | 127           | 1.000                     |
|                               |                             |                                   |          |          |         |         | 115           | 1.000                     |
|                               |                             |                                   |          |          |         |         | 103           | 1.000                     |
|                               |                             |                                   |          |          |         |         | 91            | 1.000                     |
|                               |                             |                                   |          |          |         |         | 79            | 1.000                     |
|                               |                             |                                   |          |          |         |         | 67            | 1.000                     |
| Sum                           |                             | -19.2596                          | -14.8750 | 123.6449 | 83.1322 | 95.5799 | 55            | 1.000                     |
| Average                       |                             | -6.4199                           | -4.9583  | 41.2150  | 27.7107 | 31.8600 | 43            | 1.000                     |
|                               |                             |                                   |          |          |         |         | 31            | 1.002                     |
|                               |                             |                                   |          |          |         |         | 19            | 1.017                     |
|                               |                             |                                   |          |          |         |         | 7             | 1.882                     |

|     |            |       |          |
|-----|------------|-------|----------|
| N = | 3          |       |          |
| A = | 5.030E+306 |       |          |
| B = | 110.776    | R^2 = | 0.999968 |
| C = | 590        |       |          |

\* - Appendix A6

**Analysis of Reported Loss Development**  
**Reported Losses and ALAE Net of Member Deductibles**

| Year      | Reported Losses and ALAE as of (months): |             |             |             |             |             |             |             |             |             |
|-----------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|           | 12                                       | 24          | 36          | 48          | 60          | 72          | 84          | 96          | 108         | 120         |
| 7/1/04-05 | \$334,164                                | \$494,404   | \$546,889   | \$667,336   | \$536,764   | \$525,685   | \$525,685   | \$525,685   | \$525,685   | \$525,685   |
| 7/1/05-06 | \$816,923                                | \$1,112,049 | \$1,229,274 | \$1,405,786 | \$1,398,668 | \$1,318,468 | \$1,335,203 | \$1,330,178 | \$1,330,178 | \$1,330,178 |
| 7/1/06-07 | \$980,380                                | \$1,099,400 | \$1,048,254 | \$1,108,562 | \$1,328,586 | \$1,351,525 | \$1,411,197 | \$1,411,197 | \$1,351,835 | \$1,351,835 |
| 7/1/07-08 | \$1,546,988                              | \$1,678,303 | \$1,820,948 | \$1,681,989 | \$1,578,663 | \$1,528,365 | \$1,501,995 | \$1,501,995 | \$1,501,995 | \$1,501,995 |
| 7/1/08-09 | \$1,818,383                              | \$1,498,349 | \$1,690,273 | \$1,328,980 | \$1,211,633 | \$1,303,460 | \$2,248,460 | \$2,172,804 | \$2,172,804 |             |
| 7/1/09-10 | \$1,911,271                              | \$1,672,753 | \$1,443,458 | \$1,751,670 | \$1,603,126 | \$1,564,138 | \$1,524,198 | \$1,524,198 |             |             |
| 7/1/10-11 | \$2,532,003                              | \$2,683,693 | \$2,774,100 | \$2,589,243 | \$2,532,090 | \$2,434,762 | \$2,434,762 |             |             |             |
| 7/1/11-12 | \$1,927,480                              | \$2,611,099 | \$3,751,625 | \$3,977,466 | \$3,919,928 | \$3,747,985 |             |             |             |             |
| 7/1/12-13 | \$1,311,489                              | \$1,442,277 | \$1,150,970 | \$1,348,515 | \$1,213,833 |             |             |             |             |             |
| 7/1/13-14 | \$1,136,920                              | \$1,270,561 | \$1,003,224 | \$1,041,935 |             |             |             |             |             |             |
| 7/1/14-15 | \$1,195,898                              | \$1,507,077 | \$1,985,502 |             |             |             |             |             |             |             |
| 7/1/15-16 | \$1,726,427                              | \$1,880,174 |             |             |             |             |             |             |             |             |
| 7/1/16-17 | \$2,362,228                              |             |             |             |             |             |             |             |             |             |

| Year                | Age-to-Age Factors |              |              |              |              |              |              |              |              |              |
|---------------------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                     | 12:24              | 24:36        | 36:48        | 48:60        | 60:72        | 72:84        | 84:96        | 96:108       | 108:120      | 120:ult      |
| 7/1/04-05           | 1.480              | 1.106        | 1.220        | 0.804        | 0.979        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| 7/1/05-06           | 1.361              | 1.105        | 1.144        | 0.995        | 0.943        | 1.013        | 0.996        | 1.000        | 1.000        |              |
| 7/1/06-07           | 1.121              | 0.953        | 1.058        | 1.198        | 1.017        | 1.044        | 1.000        | 0.958        | 1.000        |              |
| 7/1/07-08           | 1.085              | 1.085        | 0.924        | 0.939        | 0.968        | 0.983        | 1.000        | 1.000        | 1.000        |              |
| 7/1/08-09           | 0.824              | 1.128        | 0.786        | 0.912        | 1.076        | 1.725        | 0.966        | 1.000        |              |              |
| 7/1/09-10           | 0.875              | 0.863        | 1.214        | 0.915        | 0.976        | 0.974        | 1.000        |              |              |              |
| 7/1/10-11           | 1.060              | 1.034        | 0.933        | 0.978        | 0.962        | 1.000        |              |              |              |              |
| 7/1/11-12           | 1.355              | 1.437        | 1.060        | 0.986        | 0.956        |              |              |              |              |              |
| 7/1/12-13           | 1.100              | 0.798        | 1.172        | 0.900        |              |              |              |              |              |              |
| 7/1/13-14           | 1.118              | 0.790        | 1.039        |              |              |              |              |              |              |              |
| 7/1/14-15           | 1.260              | 1.317        |              |              |              |              |              |              |              |              |
| 7/1/15-16           | 1.089              |              |              |              |              |              |              |              |              |              |
| <b>Average</b>      | 1.144              | 1.056        | 1.055        | 0.959        | 0.985        | 1.106        | 0.994        | 0.992        | 1.000        |              |
| <b>Wtd. Avg.</b>    | 1.099              | 1.081        | 1.027        | 0.966        | 0.976        | 1.095        | 0.991        | 0.991        | 1.000        |              |
| <b>Industry</b>     | 1.893              | 1.364        | 1.183        | 1.104        | 1.064        | 1.042        | 1.029        | 1.020        | 1.015        | 1.071        |
| <b>OK Benchmark</b> | 2.083              | 1.191        | 0.907        | 0.959        | 0.953        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| <b>Prior</b>        | 1.119              | 1.085        | 1.032        | 1.017        | 1.010        | 1.006        | 1.000        | 1.000        | 1.000        | 1.000        |
|                     | 12                 | 24           | 36           | 48           | 60           | 72           | 84           | 96           | 108          | 120          |
| <b>Selected</b>     | 1.132              | 1.083        | 1.029        | 1.017        | 1.010        | 1.006        | 1.000        | 1.000        | 1.000        | 1.000        |
| <b>Cumulative</b>   | <b>1.303</b>       | <b>1.151</b> | <b>1.063</b> | <b>1.033</b> | <b>1.016</b> | <b>1.006</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> |

**Analysis of Paid Loss Development**  
**Paid Losses and ALAE Net of Member Deductibles**

| Year      | Paid Losses and ALAE as of (months): |             |             |             |             |             |             |             |             |             |
|-----------|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|           | 12                                   | 24          | 36          | 48          | 60          | 72          | 84          | 96          | 108         | 120         |
| 7/1/04-05 | \$135,749                            | \$315,927   | \$386,597   | \$490,920   | \$536,764   | \$525,685   | \$525,685   | \$525,685   | \$525,685   | \$525,685   |
| 7/1/05-06 | \$231,455                            | \$584,973   | \$771,010   | \$1,092,719 | \$1,312,650 | \$1,313,442 | \$1,330,178 | \$1,330,178 | \$1,330,178 | \$1,330,178 |
| 7/1/06-07 | \$322,617                            | \$678,216   | \$787,689   | \$943,320   | \$1,208,914 | \$1,271,236 | \$1,344,837 | \$1,351,835 | \$1,351,835 | \$1,351,835 |
| 7/1/07-08 | \$170,163                            | \$665,391   | \$1,286,746 | \$1,455,173 | \$1,501,494 | \$1,501,995 | \$1,501,995 | \$1,501,995 | \$1,501,995 | \$1,501,995 |
| 7/1/08-09 | \$158,208                            | \$609,160   | \$939,799   | \$984,969   | \$1,127,969 | \$1,163,044 | \$2,170,476 | \$2,172,804 | \$2,172,804 |             |
| 7/1/09-10 | \$297,737                            | \$767,474   | \$1,041,914 | \$1,347,942 | \$1,505,891 | \$1,496,609 | \$1,503,479 | \$1,502,945 |             |             |
| 7/1/10-11 | \$201,545                            | \$1,303,203 | \$2,109,602 | \$2,299,143 | \$2,347,892 | \$2,385,861 | \$2,395,912 |             |             |             |
| 7/1/11-12 | \$128,159                            | \$704,902   | \$1,700,471 | \$2,356,202 | \$3,580,758 | \$3,685,134 |             |             |             |             |
| 7/1/12-13 | \$148,090                            | \$496,864   | \$655,081   | \$980,783   | \$1,004,467 |             |             |             |             |             |
| 7/1/13-14 | \$70,272                             | \$359,375   | \$563,792   | \$811,678   |             |             |             |             |             |             |
| 7/1/14-15 | \$131,121                            | \$604,571   | \$1,391,247 |             |             |             |             |             |             |             |
| 7/1/15-16 | \$275,027                            | \$824,838   |             |             |             |             |             |             |             |             |
| 7/1/16-17 | \$236,290                            |             |             |             |             |             |             |             |             |             |

| Year                | Age-to-Age Factors |              |              |              |              |              |              |              |              |              |
|---------------------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                     | 12:24              | 24:36        | 36:48        | 48:60        | 60:72        | 72:84        | 84:96        | 96:108       | 108:120      | 120:ult      |
| 7/1/04-05           | 2.327              | 1.224        | 1.270        | 1.093        | 0.979        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| 7/1/05-06           | 2.527              | 1.318        | 1.417        | 1.201        | 1.001        | 1.013        | 1.000        | 1.000        | 1.000        |              |
| 7/1/06-07           | 2.102              | 1.161        | 1.198        | 1.282        | 1.052        | 1.058        | 1.005        | 1.000        | 1.000        |              |
| 7/1/07-08           | 3.910              | 1.934        | 1.131        | 1.032        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| 7/1/08-09           | 3.850              | 1.543        | 1.048        | 1.145        | 1.031        | 1.866        | 1.001        | 1.000        |              |              |
| 7/1/09-10           | 2.578              | 1.358        | 1.294        | 1.117        | 0.994        | 1.005        | 1.000        |              |              |              |
| 7/1/10-11           | 6.466              | 1.619        | 1.090        | 1.021        | 1.016        | 1.004        |              |              |              |              |
| 7/1/11-12           | 5.500              | 2.412        | 1.386        | 1.520        | 1.029        |              |              |              |              |              |
| 7/1/12-13           | 3.355              | 1.318        | 1.497        | 1.024        |              |              |              |              |              |              |
| 7/1/13-14           | 5.114              | 1.569        | 1.440        |              |              |              |              |              |              |              |
| 7/1/14-15           | 4.611              | 2.301        |              |              |              |              |              |              |              |              |
| 7/1/15-16           | 2.999              |              |              |              |              |              |              |              |              |              |
| <b>Average</b>      | 3.778              | 1.614        | 1.277        | 1.159        | 1.013        | 1.135        | 1.001        | 1.000        | 1.000        |              |
| <b>Wtd. Avg.</b>    | 3.487              | 1.641        | 1.246        | 1.182        | 1.017        | 1.115        | 1.001        | 1.000        | 1.000        |              |
| <b>Industry</b>     | 2.697              | 1.682        | 1.345        | 1.195        | 1.119        | 1.077        | 1.052        | 1.037        | 1.027        | 1.116        |
| <b>OK benchmark</b> | 2.640              | 1.901        | 1.307        | 1.099        | 1.038        | 1.016        | 1.008        | 1.003        | 1.000        | 1.000        |
| <b>Prior</b>        | 5.009              | 1.712        | 1.236        | 1.120        | 1.038        | 1.016        | 1.008        | 1.003        | 1.000        | 1.000        |
|                     | 12                 | 24           | 36           | 48           | 60           | 72           | 84           | 96           | 108          | 120          |
| <b>Selected</b>     | 4.674              | 1.712        | 1.241        | 1.151        | 1.038        | 1.016        | 1.008        | 1.003        | 1.000        | 1.000        |
| <b>Cumulative</b>   | <b>12.186</b>      | <b>2.607</b> | <b>1.523</b> | <b>1.227</b> | <b>1.066</b> | <b>1.027</b> | <b>1.011</b> | <b>1.003</b> | <b>1.000</b> | <b>1.000</b> |

**Analysis of Reported Occurrences**

| Year      | Reported Claims as of (months): |     |     |     |     |     |     |     |     |     |
|-----------|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|           | 12                              | 24  | 36  | 48  | 60  | 72  | 84  | 96  | 108 | 120 |
| 7/1/04-05 |                                 | 115 | 116 | 116 | 116 | 115 | 115 | 115 | 115 | 115 |
| 7/1/05-06 | 114                             | 136 | 137 | 138 | 136 | 136 | 136 | 136 | 136 | 136 |
| 7/1/06-07 | 128                             | 132 | 133 | 132 | 132 | 132 | 132 | 132 | 132 | 132 |
| 7/1/07-08 | 148                             | 161 | 164 | 164 | 163 | 163 | 163 | 163 | 163 | 163 |
| 7/1/08-09 | 146                             | 155 | 155 | 155 | 155 | 155 | 155 | 155 | 155 |     |
| 7/1/09-10 | 139                             | 143 | 144 | 144 | 144 | 144 | 144 | 144 |     |     |
| 7/1/10-11 | 108                             | 109 | 109 | 110 | 110 | 110 | 110 |     |     |     |
| 7/1/11-12 | 89                              | 87  | 87  | 87  | 87  | 87  |     |     |     |     |
| 7/1/12-13 | 110                             | 109 | 109 | 109 | 109 |     |     |     |     |     |
| 7/1/13-14 | 83                              | 85  | 86  | 86  |     |     |     |     |     |     |
| 7/1/14-15 | 103                             | 116 | 116 |     |     |     |     |     |     |     |
| 7/1/15-16 | 120                             | 122 |     |     |     |     |     |     |     |     |
| 7/1/16-17 | 125                             |     |     |     |     |     |     |     |     |     |

| Year                | Age-to-Age Factors |              |              |              |              |              |              |              |              |              |
|---------------------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                     | 12:24              | 24:36        | 36:48        | 48:60        | 60:72        | 72:84        | 84:96        | 96:108       | 108:120      | 120:ult      |
| 7/1/04-05           |                    | 1.009        | 1.000        | 1.000        | 0.991        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| 7/1/05-06           | 1.193              | 1.007        | 1.007        | 0.986        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| 7/1/06-07           | 1.031              | 1.008        | 0.992        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| 7/1/07-08           | 1.088              | 1.019        | 1.000        | 0.994        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| 7/1/08-09           | 1.062              | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| 7/1/09-10           | 1.029              | 1.007        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |              |              |              |
| 7/1/10-11           | 1.009              | 1.000        | 1.009        | 1.000        | 1.000        | 1.000        |              |              |              |              |
| 7/1/11-12           | 0.978              | 1.000        | 1.000        | 1.000        | 1.000        |              |              |              |              |              |
| 7/1/12-13           | 0.991              | 1.000        | 1.000        | 1.000        |              |              |              |              |              |              |
| 7/1/13-14           | 1.024              | 1.012        | 1.000        |              |              |              |              |              |              |              |
| 7/1/14-15           | 1.126              | 1.000        |              |              |              |              |              |              |              |              |
| 7/1/15-16           | 1.017              |              |              |              |              |              |              |              |              |              |
| <b>Average</b>      | 1.050              | 1.006        | 1.001        | 0.998        | 0.999        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| <b>Wtd. Avg.</b>    | 1.052              | 1.006        | 1.001        | 0.997        | 0.999        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| <b>OK benchmark</b> | 1.303              | 1.016        | 1.005        | 1.002        | 1.001        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| <b>Prior</b>        | 1.056              | 1.006        | 1.001        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
|                     | 12                 | 24           | 36           | 48           | 60           | 72           | 84           | 96           | 108          | 120          |
| <b>Selected</b>     | 1.054              | 1.006        | 1.001        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| <b>Cumulative</b>   | <b>1.061</b>       | <b>1.007</b> | <b>1.001</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> |



**Derivation of Lognomoral Parameters  
 Based on Reported Loss Development**

| Year          | Natural Logarithm of Age to Age Factors |           |           |           |           |           |           |           |            |         |
|---------------|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|---------|
|               | 12:24                                   | 24:36     | 36:48     | 48:60     | 60:72     | 72:84     | 84:96     | 96:108    | 108:120    | 120:ult |
| 7/1/04-05     | 0.392                                   | 0.101     | 0.199     | -0.218    | -0.021    | 0.000     | 0.000     | 0.000     | 0.000      |         |
| 7/1/05-06     | 0.308                                   | 0.100     | 0.134     | -0.005    | -0.059    | 0.013     | -0.004    | 0.000     | 0.000      |         |
| 7/1/06-07     | 0.115                                   | -0.048    | 0.056     | 0.181     | 0.017     | 0.043     | 0.000     | -0.043    | 0.000      |         |
| 7/1/07-08     | 0.081                                   | 0.082     | -0.079    | -0.063    | -0.032    | -0.017    | 0.000     | 0.000     | 0.000      |         |
| 7/1/08-09     | -0.194                                  | 0.121     | -0.240    | -0.092    | 0.073     | 0.545     | -0.034    | 0.000     |            |         |
| 7/1/09-10     | -0.133                                  | -0.147    | 0.194     | -0.089    | -0.025    | -0.026    | 0.000     |           |            |         |
| 7/1/10-11     | 0.058                                   | 0.033     | -0.069    | -0.022    | -0.039    | 0.000     |           |           |            |         |
| 7/1/11-12     | 0.304                                   | 0.362     | 0.058     | -0.015    | -0.045    |           |           |           |            |         |
| 7/1/12-13     | 0.095                                   | -0.226    | 0.158     | -0.105    |           |           |           |           |            |         |
| 7/1/13-14     | 0.111                                   | -0.236    | 0.038     |           |           |           |           |           |            |         |
| 7/1/14-15     | 0.231                                   | 0.276     |           |           |           |           |           |           |            |         |
| 7/1/15-16     | 0.085                                   |           |           |           |           |           |           |           |            |         |
|               | <u>12</u>                               | <u>24</u> | <u>36</u> | <u>48</u> | <u>60</u> | <u>72</u> | <u>84</u> | <u>96</u> | <u>108</u> |         |
| Variance      | 0.030                                   | 0.036     | 0.020     | 0.012     | 0.010     | 0.005     | 0.005     | 0.000     | 0.000      |         |
| Cum. Variance | 0.118                                   | 0.088     | 0.052     | 0.032     | 0.020     | 0.010     | 0.005     | 0.000     | 0.000      |         |
| SD            | 0.343                                   | 0.297     | 0.227     | 0.179     | 0.143     | 0.102     | 0.073     | 0.019     | 0.000      |         |

---

## Property with Auto Physical Damage Exhibits

The “Analysis” section of this report presents a discussion of the following exhibits:

|              |   |
|--------------|---|
| Exhibit I    | Summary of Experience   |
| Exhibit II   | Large Claim Listing   |
| Exhibit III  | Loss Development Methods  |
| Exhibit IV   | Forecast for Current Year   |
| Exhibit V    | Bornhuetter-Ferguson Methods  |
| Exhibit VI   | Summary and Selection of Ultimate Losses                            |
| Exhibit VII  | Average Claim Size  |
| Exhibit VIII | Outstanding Losses as of 1/31/2018<br>and Projected as of 6/30/2018 |
| Appendix A   | Loss Development Factors<br>and Triangles                           |



**Summary of Loss Data as of January 31, 2018**  
**Total Experience Net of Deductibles**

| (A)             | (B)             | (C)               | (D)          | (E)         | (F)           | (G)          | (H)                       | (I)                       | (J)            |                     |
|-----------------|-----------------|-------------------|--------------|-------------|---------------|--------------|---------------------------|---------------------------|----------------|---------------------|
| Accident Period | Evaluation Date | Maturity (months) | Total Claims | Open Claims | Loss Payment  | Loss Reserve | Expense and Legal Payment | Expense and Legal Reserve | Total Reported | Total Insured Value |
| 7/1/02-03       | 1/31/2018       | 187               | 24           | 0           | \$282,938     | \$0          | \$29,106                  | \$0                       | \$312,045      |                     |
| 7/1/03-04       | 1/31/2018       | 175               | 104          | 0           | \$2,447,356   | \$0          | \$66,143                  | \$0                       | \$2,513,499    |                     |
| 7/1/04-05       | 1/31/2018       | 163               | 122          | 0           | \$1,235,815   | \$0          | \$69,782                  | \$0                       | \$1,305,598    | \$3,756,688,926     |
| 7/1/05-06       | 1/31/2018       | 151               | 190          | 0           | \$3,080,547   | \$0          | \$142,157                 | \$0                       | \$3,222,704    | \$5,058,376,762     |
| 7/1/06-07       | 1/31/2018       | 139               | 232          | 0           | \$7,508,252   | \$0          | \$164,672                 | \$0                       | \$7,672,924    | \$6,396,402,749     |
| 7/1/07-08       | 1/31/2018       | 127               | 255          | 0           | \$27,287,989  | \$0          | \$261,094                 | \$0                       | \$27,549,083   | \$7,053,258,491     |
| 7/1/08-09       | 1/31/2018       | 115               | 211          | 0           | \$14,558,473  | \$0          | \$226,138                 | \$0                       | \$14,784,611   | \$7,478,044,795     |
| 7/1/09-10       | 1/31/2018       | 103               | 266          | 0           | \$17,140,491  | \$0          | \$250,287                 | \$0                       | \$17,390,777   | \$7,801,896,787     |
| 7/1/10-11       | 1/31/2018       | 91                | 225          | 0           | \$26,419,286  | \$0          | \$52,656                  | \$0                       | \$26,471,942   | \$8,214,036,469     |
| 7/1/11-12       | 1/31/2018       | 79                | 173          | 0           | \$3,946,066   | \$0          | \$72,423                  | \$0                       | \$4,018,489    | \$6,347,461,637     |
| 7/1/12-13       | 1/31/2018       | 67                | 162          | 0           | \$6,097,006   | \$0          | \$39,448                  | \$0                       | \$6,136,455    | \$6,526,038,633     |
| 7/1/13-14       | 1/31/2018       | 55                | 157          | 0           | \$4,537,170   | \$0          | \$53,119                  | \$0                       | \$4,590,290    | \$8,356,362,827     |
| 7/1/14-15       | 1/31/2018       | 43                | 206          | 1           | \$4,301,799   | \$250,000    | \$110,228                 | \$0                       | \$4,662,027    | \$8,137,357,454     |
| 7/1/15-16       | 1/31/2018       | 31                | 180          | 5           | \$5,139,389   | \$133,680    | \$146,667                 | \$15,966                  | \$5,435,702    | \$8,295,479,409     |
| 7/1/16-17       | 1/31/2018       | 19                | 233          | 24          | \$5,924,246   | \$3,164,104  | \$154,910                 | \$39,903                  | \$9,283,163    | \$9,500,793,518     |
| 7/1/17-18       | 1/31/2018       | 7                 | 120          | 57          | \$1,659,531   | \$6,116,979  | \$33,947                  | \$103,922                 | \$7,914,379    | \$9,011,886,407     |
| 7/1/18-19       |                 |                   |              |             |               |              |                           |                           |                | \$9,053,414,500     |
|                 |                 |                   | 2860         | 87          | \$131,566,354 | \$9,664,763  | \$1,872,778               | \$159,791                 | \$143,263,686  | \$110,987,499,364   |

- Loss and policy information provided by Jennifer McKenzie, Arthur J. Gallagher
- Claims are grouped by occurrence, and exclude claims with \$0 incurred
- Losses are net of member deductibles



**Losses over SIR**

| CAT# or Occ#                                     | Loss Date  | Claim Status | Coverage | Paid          |               | Reported    |           | Excess Recoveries | Excess Paid        | Excess Reported    | Severity Factor | Net Ultimate |
|--|------------|--------------|----------|---------------|---------------|-------------|-----------|-------------------|--------------------|--------------------|-----------------|--------------|
|  |            |              |          | Pure Losses   | Pure Losses   | Pure Losses | SIR       |                   |                    |                    |                 |              |
| 91234  | 4/15/2012  | Closed       | Any      | \$485,893     | \$485,893     | \$250,000   | \$2,500   |                   | \$238,393          | \$238,393          | 1.000           | \$485,893    |
| 91287  | 5/4/2012   | Closed       | Any      | \$483,077     | \$483,077     | \$250,000   | \$12,000  |                   | \$245,077          | \$245,077          | 1.000           | \$483,077    |
| 90999  | 11/7/2011  | Closed       | Any      | \$426,749     | \$426,749     | \$250,000   | \$9,000   |                   | \$185,749          | \$185,749          | 1.000           | \$426,749    |
| 91351  | 5/29/2012  | Closed       | Any      | \$340,228     | \$340,228     | \$250,000   | \$58,000  |                   | \$148,228          | \$148,228          | 1.000           | \$340,228    |
| <i>Total Excess Losses for 11/12</i>             |            |              |          |               |               |             |           |                   | \$817,446          | \$817,446          |                 |              |
| <i>Applied to \$2,700,000 Corridor for 11/12</i> |            |              |          |               |               |             |           |                   | <b>\$817,446</b>   | <b>\$817,446</b>   |                 |              |
| 0052   | 4/26/2013  | Closed       | Any      | \$1,670,786   | \$1,670,786   | \$250,000   | \$103,000 |                   | \$1,523,786        | \$1,523,786        | 1.000           | \$1,670,786  |
| 0054   | 5/30/2013  | Closed       | Any      | \$1,003,799   | \$1,003,799   | \$250,000   | \$265,000 |                   | \$1,018,799        | \$1,018,799        | 1.000           | \$1,003,799  |
| 91392  | 7/14/2012  | Closed       | Any      | \$570,302     | \$570,302     | \$250,000   | \$15,000  |                   | \$335,302          | \$335,302          | 1.000           | \$570,302    |
| 91814  | 4/18/2013  | Closed       | Any      | \$454,242     | \$454,242     | \$250,000   | \$5,000   |                   | \$209,242          | \$209,242          | 1.000           | \$454,242    |
| 91861  | 4/22/2013  | Closed       | Any      | \$473,316     | \$473,316     | \$250,000   | \$10,000  |                   | \$233,316          | \$233,316          | 1.000           | \$473,316    |
| 91393  | 7/16/2012  | Closed       | Any      | \$431,334     | \$431,334     | \$250,000   | \$5,500   |                   | \$186,834          | \$186,834          | 1.000           | \$431,334    |
| <i>Total Excess Losses for 12/13</i>             |            |              |          |               |               |             |           |                   | \$3,507,280        | \$3,507,280        |                 |              |
| <i>Applied to \$2,400,000 Corridor for 12/13</i> |            |              |          |               |               |             |           |                   | <b>\$2,400,000</b> | <b>\$2,400,000</b> |                 |              |
| <i>Insured Excess of Corridor</i>                |            |              |          |               |               |             |           |                   | \$1,107,280        | \$1,107,280        |                 |              |
| 92546  | 6/28/2014  | Closed       | Any      | \$2,284,671   | \$2,284,671   | \$250,000   | \$5,000   |                   | \$2,039,671        | \$2,039,671        | 1.001           | \$2,286,484  |
| 92144  | 11/6/2013  | Closed       | Any      | \$300,267     | \$300,267     | \$250,000   | \$5,000   |                   | \$55,267           | \$55,267           | 1.001           | \$300,506    |
| <i>Total Excess Losses for 13/14</i>             |            |              |          |               |               |             |           |                   | \$2,094,938        | \$2,094,938        |                 |              |
| <i>Applied to \$1,400,000 Corridor for 13/14</i> |            |              |          |               |               |             |           |                   | <b>\$1,400,000</b> | <b>\$1,400,000</b> |                 |              |
| <i>Insured excess of Corridor</i>                |            |              |          |               |               |             |           |                   | \$694,938          | \$694,938          |                 |              |
| 0061   | 5/19/2015  | Closed       | Any      | \$620,862     | \$620,862     | \$250,000   | \$12,500  |                   | \$383,362          | \$383,362          | 1.003           | \$623,012    |
| 0055   | 3/25/2015  | Closed       | Any      | \$515,661     | \$515,661     | \$250,000   | \$71,000  |                   | \$336,661          | \$336,661          | 1.003           | \$517,447    |
| 0056   | 5/6/2015   | Closed       | Any      | \$406,091     | \$406,091     | \$250,000   | \$21,000  |                   | \$177,091          | \$177,091          | 1.003           | \$407,497    |
| 0062   | 3/31/2015  | Open         | Any      | \$129,396     | \$379,396     | \$250,000   | \$19,000  |                   | \$0                | \$148,396          | 1.003           | \$380,710    |
| 93164  | 4/11/2015  | Closed       | Any      | \$331,500     | \$331,500     | \$250,000   | \$10,000  |                   | \$91,500           | \$91,500           | 1.003           | \$332,648    |
| 92831  | 12/3/2014  | Closed       | Any      | \$271,103     | \$271,103     | \$250,000   | \$12,000  |                   | \$33,103           | \$33,103           | 1.003           | \$272,042    |
| <i>Total Excess Losses for 14/15</i>             |            |              |          |               |               |             |           |                   | \$1,021,718        | \$1,170,114        |                 |              |
| <i>Applied to \$1,400,000 Corridor for 14/15</i> |            |              |          |               |               |             |           |                   | <b>\$1,021,718</b> | <b>\$1,170,114</b> |                 |              |
| <i>Insured excess of Corridor</i>                |            |              |          |               |               |             |           |                   | \$0                | \$0                |                 |              |
| 0059   | 5/9/2016   | Open         | Any      | \$1,182,853   | \$1,230,443   | \$250,000   | \$30,000  |                   | \$962,853          | \$1,010,443        | 1.017           | \$1,251,702  |
| 0063   | 11/17/2015 | Closed       | Any      | \$792,926     | \$792,926     | \$250,000   | \$15,000  |                   | \$557,926          | \$557,926          | 1.017           | \$806,626    |
| 0058   | 4/29/2016  | Closed       | Any      | \$645,098     | \$645,098     | \$250,000   | \$37,500  |                   | \$432,598          | \$432,598          | 1.017           | \$656,244    |
| 94123  | 5/13/2016  | Open         | Any      | \$245,566     | \$280,000     | \$250,000   | \$10,000  |                   | \$5,566            | \$40,000           | 1.017           | \$284,838    |
| <i>Total Excess Losses for 15/16</i>             |            |              |          |               |               |             |           |                   | \$1,958,944        | \$2,040,967        |                 |              |
| <i>Applied to \$1,400,000 Corridor for 15/16</i> |            |              |          |               |               |             |           |                   | <b>\$1,400,000</b> | <b>\$1,400,000</b> |                 |              |
| <i>Insured excess of Corridor</i>                |            |              |          |               |               |             |           |                   | \$558,944          | \$640,967          |                 |              |
| 0060   | 7/14/2016  | Open         | Any      | \$2,204,078   | \$3,451,450   | \$250,000   | \$102,500 |                   | \$2,056,578        | \$3,303,950        | 1.101           | \$3,800,986  |
| 0064   | 5/27/2017  | Open         | Any      | \$386,572     | \$1,306,894   | \$250,000   | \$81,000  |                   | \$217,572          | \$1,137,894        | 1.101           | \$1,439,246  |
| 93959  | 8/23/2016  | Closed       | Any      | \$458,500     | \$458,500     | \$250,000   | \$5,000   |                   | \$213,500          | \$213,500          | 1.101           | \$504,933    |
| 94217  | 12/19/2016 | Open         | Any      | \$347,321     | \$361,020     | \$250,000   | \$2,500   |                   | \$99,821           | \$113,520          | 1.101           | \$397,581    |
| 94256  | 11/16/2016 | Open         | Any      | \$0           | \$300,000     | \$250,000   | \$50,000  |                   | \$0                | \$100,000          | 1.101           | \$330,382    |
| 0065   | 6/17/2017  | Closed       | Any      | \$302,722     | \$302,722     | \$250,000   | \$10,000  |                   | \$62,722           | \$62,722           | 1.101           | \$333,379    |
| <i>Total Excess Losses for 16/17</i>             |            |              |          |               |               |             |           |                   | \$2,650,193        | \$4,931,586        |                 |              |
| <i>Applied to \$1,400,000 Corridor for 16/17</i> |            |              |          |               |               |             |           |                   | <b>\$1,400,000</b> | <b>\$1,400,000</b> |                 |              |
| <i>Insured excess of Corridor</i>                |            |              |          |               |               |             |           |                   | \$1,250,193        | \$3,531,586        |                 |              |
| 94628  | 8/29/2017  | Open         | Any      | \$260,968     | \$5,344,000   | \$250,000   | \$2,500   |                   | \$13,468           | \$5,096,500        | 1.358           | \$7,257,218  |
| 94879  | 1/11/2018  | Open         | Any      | \$349,375     | \$394,100     | \$250,000   | \$12,500  |                   | \$111,875          | \$156,600          | 1.358           | \$535,193    |
| <i>Total Excess Losses for 17/18</i>             |            |              |          |               |               |             |           |                   | \$125,343          | \$5,253,100        |                 |              |
| <i>Applied to \$1,400,000 Corridor for 17/18</i> |            |              |          |               |               |             |           |                   | <b>\$125,343</b>   | <b>\$1,400,000</b> |                 |              |
| <i>Insured excess of Corridor</i>                |            |              |          |               |               |             |           |                   | \$0                | \$3,853,100        |                 |              |
|  |            |              |          | \$103,244,217 | \$111,185,390 |             |           | \$76,213,724      | \$88,394,986       | \$96,034,555       |                 |              |

- Loss and policy information provided by Jennifer McKenzie, Arthur J. Gallagher

Excess paid and incurred losses for closed claims are equal to the excess recoveries, or amounts over SIR if no recovery yet  
Excess paid and incurred losses for open claims are amounts in excess of SIR regardless of recoveries.

**Calculation of Limited Losses**

| <i>Policy Period</i> | <i>(A)<br/>Per Occurrence SIR</i> | <i>(B)<br/>Unlimited Paid Loss &amp; ALAE</i> | <i>(C)<br/>Unlimited Reported Loss &amp; ALAE</i> | <i>(D)<br/>Paid Excess of SIR</i> | <i>(E)<br/>Reported Excess of SIR</i> | <i>(F)<br/>Paid Limited to SIR</i> | <i>(G)<br/>Reported Limited to SIR</i> |
|----------------------|-----------------------------------|---|---|-----------------------------------|---------------------------------------|------------------------------------|--|
| 7/1/02-03            | \$100k/\$200k                     | \$312,045                                     | \$312,045   | \$0                               | \$0                                   | \$312,045                          | \$312,045                              |
| 7/1/03-04            | \$100k/\$200k                     | \$2,513,499                                   | \$2,513,499                                       | \$1,226,330                       | \$1,226,330                           | \$1,287,169                        | \$1,287,169                            |
| 7/1/04-05            | \$100k/\$200k                     | \$1,305,598                                   | \$1,305,598                                       | \$38,605                          | \$38,605                              | \$1,266,993                        | \$1,266,993                            |
| 7/1/05-06            | \$100k/\$200k                     | \$3,222,704                                   | \$3,222,704                                       | \$605,708                         | \$605,708                             | \$2,616,997                        | \$2,616,997                            |
| 7/1/06-07            | \$100k/\$200k                     | \$7,672,924                                   | \$7,672,924                                       | \$5,068,410                       | \$5,068,410                           | \$2,604,514                        | \$2,604,514                            |
| 7/1/07-08            | \$100k/\$200k                     | \$27,549,083                                  | \$27,549,083                                      | \$23,633,602                      | \$23,633,602                          | \$3,915,481                        | \$3,915,481                            |
| 7/1/08-09            | \$100k/\$200k                     | \$14,784,611                                  | \$14,784,611                                      | \$10,223,263                      | \$10,223,263                          | \$4,561,347                        | \$4,561,347                            |
| 7/1/09-10            | \$100k/\$200k                     | \$17,390,777                                  | \$17,390,777                                      | \$12,520,736                      | \$12,520,736                          | \$4,870,042                        | \$4,870,042                            |
| 7/1/10-11            | \$100k/\$200k                     | \$26,471,942                                  | \$26,471,942                                      | \$22,902,470                      | \$22,902,470                          | \$3,569,472                        | \$3,569,472                            |
| 7/1/11-12            | \$250,000                         | \$4,018,489                                   | \$4,018,489                                       | \$817,446                         | \$817,446                             | \$3,201,043                        | \$3,201,043                            |
| 7/1/12-13            | \$250,000                         | \$6,136,455                                   | \$6,136,455                                       | \$3,507,280                       | \$3,507,280                           | \$2,629,175                        | \$2,629,175                            |
| 7/1/13-14            | \$250,000                         | \$4,590,290                                   | \$4,590,290                                       | \$2,094,938                       | \$2,094,938                           | \$2,495,352                        | \$2,495,352                            |
| 7/1/14-15            | \$250,000                         | \$4,412,027                                   | \$4,662,027                                       | \$1,021,718                       | \$1,170,114                           | \$3,390,309                        | \$3,491,913                            |
| 7/1/15-16            | \$250,000                         | \$5,286,056                                   | \$5,435,702                                       | \$1,958,944                       | \$2,040,967                           | \$3,327,112                        | \$3,394,734                            |
| 7/1/16-17            | \$250,000                         | \$6,079,156                                   | \$9,283,163                                       | \$2,650,193                       | \$4,931,586                           | \$3,428,963                        | \$4,351,577                            |
| 7/1/17-18            | \$250,000                         | \$1,693,478                                   | \$7,914,379                                       | \$125,343                         | \$5,253,100                           | \$1,568,135                        | \$2,661,279                            |
| <b>Total</b>         |                                   | \$133,439,132                                 | \$143,263,686                                     | \$88,394,986                      | \$96,034,555                          | \$45,044,147                       | \$47,229,131                           |

| <i>Period</i> | <i>Corridor</i> | <i>Paid</i> | <i>Reported</i> |
|---------------|-----------------|-------------|-----------------|
| 7/1/11-12     | \$2,700,000     | \$817,446   | \$817,446       |
| 7/1/12-13     | \$2,400,000     | \$2,400,000 | \$2,400,000     |
| 7/1/13-14     | \$1,400,000     | \$1,400,000 | \$1,400,000     |
| 7/1/14-15     | \$1,400,000     | \$1,021,718 | \$1,170,114     |
| 7/1/15-16     | \$1,400,000     | \$1,400,000 | \$1,400,000     |
| 7/1/16-17     | \$1,400,000     | \$1,400,000 | \$1,400,000     |
| 7/1/17-18     | \$1,400,000     | \$125,343   | \$1,400,000     |

(B) and (C) - Exhibit I

(D) and (E) - Excess amount from claims in Exhibit II, page 1

(F) = (B) - (D)

(G) = (C) - (E)

**Estimated Ultimate Losses  
Using Loss Development Methods**

**Limited to \$250,000 SIR**

|                        | (A)                        | (B)                           | (C)                            | (D)                             | (E)                            |
|------------------------|----------------------------|-------------------------------|--------------------------------|---------------------------------|--------------------------------|
| <i>Accident Period</i> | <i>Net Reported Losses</i> | <i>Excess on Large Losses</i> | <i>Limited Reported Losses</i> | <i>Reported Develop. Factor</i> | <i>Limited Ultimate Losses</i> |
| 7/1/11-12              | \$4,018,489                | \$817,446                     | \$3,201,043                    | 1.000                           | \$3,201,000                    |
| 7/1/12-13              | \$6,136,455                | \$3,507,280                   | \$2,629,175                    | 1.000                           | \$2,629,000                    |
| 7/1/13-14              | \$4,590,290                | \$2,094,938                   | \$2,495,352                    | 1.000                           | \$2,495,000                    |
| 7/1/14-15              | \$4,662,027                | \$1,170,114                   | \$3,491,913                    | 1.004                           | \$3,505,000                    |
| 7/1/15-16              | \$5,435,702                | \$2,040,967                   | \$3,394,734                    | 1.012                           | \$3,436,000                    |
| 7/1/16-17              | \$9,283,163                | \$4,931,586                   | \$4,351,577                    | 1.041                           | \$4,528,000                    |
| 7/1/17-18              | \$7,914,379                | \$5,253,100                   | \$2,661,279                    | 1.897                           | \$5,049,000                    |
| <b>Total</b>           | <b>\$42,040,504</b>        | <b>\$19,815,431</b>           | <b>\$22,225,072</b>            |                                 | <b>\$24,843,000</b>            |

**Unlimited Losses**

|                        | (F)                              | (G)                                       | (H)                              |
|------------------------|----------------------------------|---|----------------------------------|
| <i>Accident Period</i> | <i>Unlimited Reported Losses</i> | <i>Unlimited Reported Develop. Factor</i> | <i>Unlimited Ultimate Losses</i> |
| 7/1/11-12              | \$4,018,489                      | 1.000                                     | \$4,018,000                      |
| 7/1/12-13              | \$6,136,455                      | 1.000                                     | \$6,136,000                      |
| 7/1/13-14              | \$4,590,290                      | 1.001                                     | \$4,594,000                      |
| 7/1/14-15              | \$4,662,027                      | 1.003                                     | \$4,678,000                      |
| 7/1/15-16              | \$5,435,702                      | 1.017                                     | \$5,530,000                      |
| 7/1/16-17              | \$9,283,163                      | 1.101                                     | \$10,223,000                     |
| 7/1/17-18              | \$7,914,379                      | 2.522                                     | \$19,960,000                     |
| <b>Total</b>           | <b>\$42,040,504</b>              |   | <b>\$55,139,000</b>              |

- (A) and (F) - Exhibit I
- (B) - Exhibit II
- (C) = (A) - (B)
- (D) and (G) = Appendix A
- (E) = (C) \* (D)
- (H) = (F) \* (G)



**Estimate of Ultimates based on Forecast**

| <i>Accident<br/>Period</i> | <i>Exposure</i> | <i>APD<br/>Limited to<br/>\$250,000</i> | <i>Property<br/>Limited to<br/>\$250,000</i> | <i>Corridor</i> | <i>Total<br/>Retained</i> | <i>Insured Above<br/>Corridor</i> | <i>Total Cost<br/>Limited to<br/>\$10,000,000</i> |
|----------------------------|-----------------|---|--|-----------------|---------------------------|-----------------------------------|---|
| 7/1/17-18                  | \$9,011,886,407 | \$765,000                               | \$4,078,000                                  | \$1,400,000     | \$6,243,000               | \$6,939,000                       | \$13,182,000                                      |
| 7/1/18-19                  | \$9,053,414,500 | \$763,000                               | \$4,077,000                                  | \$1,400,000     | \$6,240,000               | \$6,939,000                       | \$13,179,000                                      |
|                            |                 | \$0.008                                 | \$0.045                                      | \$0.016         | \$0.069                   | \$0.077                           | \$0.146   |
|                            | Rate per \$100  | \$0.008                                 | \$0.045                                      | \$0.015         | \$0.069                   | \$0.077                           | \$0.146   |

*From current forecast, detrended*

**Estimated Ultimate Losses  
Using Bornhuetter-Ferguson Method**

**Limited to \$250,000 SIR**

|                        | (A)                               | (B)                             | (C)                          | (D)                               | (E)                    | (F)                              |
|------------------------|-----------------------------------|---------------------------------|------------------------------|-----------------------------------|------------------------|----------------------------------|
| <i>Accident Period</i> | <i>Prior Ultimate or Forecast</i> | <i>Reported Develop. Factor</i> | <i>Expected % Unreported</i> | <i>Expected Unreported Losses</i> | <i>Reported Losses</i> | <i>Estimated Ultimate Losses</i> |
| 7/1/11-12              | \$3,201,043                       | 1.000                           | 0%                           | \$0                               | \$3,201,043            | \$3,201,000                      |
| 7/1/12-13              | \$2,629,175                       | 1.000                           | 0%                           | \$0                               | \$2,629,175            | \$2,629,000                      |
| 7/1/13-14              | \$2,496,000                       | 1.000                           | 0%                           | \$0                               | \$2,495,352            | \$2,495,000                      |
| 7/1/14-15              | \$3,492,000                       | 1.004                           | 0%                           | \$13,000                          | \$3,491,913            | \$3,505,000                      |
| 7/1/15-16              | \$3,467,000                       | 1.012                           | 1%                           | \$42,000                          | \$3,394,734            | \$3,437,000                      |
| 7/1/16-17              | \$4,320,000                       | 1.041                           | 4%                           | \$168,000                         | \$4,351,577            | \$4,520,000                      |
| 7/1/17-18              | \$4,843,000                       | 1.897                           | 47%                          | \$2,290,000                       | \$2,661,279            | \$4,951,000                      |
| <b>Total</b>           | <b>\$24,448,218</b>               |                                 |                              | <b>\$2,513,000</b>                | <b>\$22,225,072</b>    | <b>\$24,738,000</b>              |

**Unlimited Losses**

|                        | (G)                               | (H)                             | (I)                          | (J)                               | (K)                    | (L)                              |
|------------------------|-----------------------------------|---------------------------------|------------------------------|-----------------------------------|------------------------|----------------------------------|
| <i>Accident Period</i> | <i>Prior Ultimate or Forecast</i> | <i>Reported Develop. Factor</i> | <i>Expected % Unreported</i> | <i>Expected Unreported Losses</i> | <i>Reported Losses</i> | <i>Estimated Ultimate Losses</i> |
| 7/1/11-12              | \$4,018,489                       | 1.000                           | 0%                           | \$0                               | \$4,018,489            | \$4,018,000                      |
| 7/1/12-13              | \$6,136,455                       | 1.000                           | 0%                           | \$0                               | \$6,136,455            | \$6,136,000                      |
| 7/1/13-14              | \$4,604,000                       | 1.001                           | 0%                           | \$4,000                           | \$4,590,290            | \$4,594,000                      |
| 7/1/14-15              | \$4,744,000                       | 1.003                           | 0%                           | \$16,000                          | \$4,662,027            | \$4,678,000                      |
| 7/1/15-16              | \$6,369,000                       | 1.017                           | 2%                           | \$108,000                         | \$5,435,702            | \$5,544,000                      |
| 7/1/16-17              | \$12,423,000                      | 1.101                           | 9%                           | \$1,142,000                       | \$9,283,163            | \$10,425,000                     |
| 7/1/17-18              | \$13,182,000                      | 2.522                           | 60%                          | \$7,955,000                       | \$7,914,379            | \$15,869,000                     |
| <b>Total</b>           | <b>\$51,476,944</b>               |                                 |                              | <b>\$9,225,000</b>                | <b>\$42,040,504</b>    | <b>\$51,264,000</b>              |

(A) and (G) - Exhibit VI or IV for 17-18

(B) and (H) - Appendix A

(C) =  $1 - 1/(B)$

(D) = (A) \* (C)

(E) - Exhibit I, limited to \$250,000

(F) = (D) + (E)

(I) =  $1 - 1/(H)$

(J) = (G) \* (I)

(K) - Exhibit I

(L) = (J) + (K)

**Summary and Selection of Ultimate Limited Loss Estimates**

| <i>Accident<br/>Period</i> | <i>SIR</i>    | <i>(A)<br/>Prior<br/>Ultimate<br/>or<br/>Forecast</i> | <i>(D)<br/>Selected<br/>Ultimate<br/>Loss<br/>Estimate</i> |
|----------------------------|---------------|---|--|
| 7/1/02-03                  | \$100k/\$200k | \$312,045   | \$312,045  |
| 7/1/03-04                  | \$100k/\$200k | \$1,287,169   | \$1,287,169  |
| 7/1/04-05                  | \$100k/\$200k | \$1,266,993   | \$1,266,993  |
| 7/1/05-06                  | \$100k/\$200k | \$2,618,047   | \$2,616,997  |
| 7/1/06-07                  | \$100k/\$200k | \$2,604,514   | \$2,604,514  |
| 7/1/07-08                  | \$100k/\$200k | \$3,915,481   | \$3,915,481  |
| 7/1/08-09                  | \$100k/\$200k | \$4,561,397   | \$4,561,347  |
| 7/1/09-10                  | \$100k/\$200k | \$4,870,042   | \$4,870,042  |
| 7/1/10-11                  | \$100k/\$200k | \$3,569,472   | \$3,569,472  |
| <i>Total</i>               |               | \$25,005,159  | \$25,004,059   |

(A) - From previous report dated 6/30/17

(D) - Selected as noted:

*Limited Reported Losses for all years*

**Summary and Selection of Ultimate Limited Loss Estimates**

| Accident Period  | SIR/ Corridor | (A)<br>Prior Selection or Forecast | (B)<br>Reported Loss Development Method | (C)<br>Expected Unreported Method | (D)<br>Selected Ultimate Loss Estimate |
|--|---------------|------------------------------------|---|-----------------------------------|--|
| <b>Limited to SIR</b>  |               |                                    |   |                                   |  |
| 7/1/11-12  | \$250,000     | \$3,201,043                        | \$3,201,000                             | \$3,201,000                       | \$3,201,043                            |
| 7/1/12-13  | \$250,000     | \$2,629,175                        | \$2,629,000                             | \$2,629,000                       | \$2,629,175                            |
| 7/1/13-14  | \$250,000     | \$2,496,000                        | \$2,495,000                             | \$2,495,000                       | \$2,495,352                            |
| 7/1/14-15  | \$250,000     | \$3,492,000                        | \$3,505,000                             | \$3,505,000                       | \$3,491,913                            |
| 7/1/15-16  | \$250,000     | \$3,467,000                        | \$3,436,000                             | \$3,437,000                       | \$3,437,000                            |
| 7/1/16-17  | \$250,000     | \$4,320,000                        | \$4,528,000                             | \$4,520,000                       | \$4,520,000                            |
| 7/1/17-18  | \$250,000     | \$4,843,000                        | \$5,049,000                             | \$4,951,000                       | \$4,951,000                            |
| <b>Unlimited Losses</b>  |               |                                    |   |                                   |  |
| 7/1/11-12  |               | \$4,018,489                        | \$4,018,000                             | \$4,018,000                       | \$4,018,489                            |
| 7/1/12-13  |               | \$6,136,455                        | \$6,136,000                             | \$6,136,000                       | \$6,136,455                            |
| 7/1/13-14  |               | \$4,604,000                        | \$4,594,000                             | \$4,594,000                       | \$4,590,290                            |
| 7/1/14-15  |               | \$4,744,000                        | \$4,678,000                             | \$4,678,000                       | \$4,678,000                            |
| 7/1/15-16  |               | \$6,369,000                        | \$5,530,000                             | \$5,544,000                       | \$5,544,000                            |
| 7/1/16-17  |               | \$12,423,000                       | \$10,223,000                            | \$10,425,000                      | \$10,425,000                           |
| 7/1/17-18  |               | \$13,182,000                       | \$19,960,000                            | \$15,869,000                      | \$13,182,000                           |
| <b>Difference in Unlimited and Limited, Capped at Corridor</b> |               |                                    |   |                                   |  |
| 7/1/11-12  | \$2,700,000   | \$817,446                          | \$817,000                               | \$817,000                         | \$817,446                              |
| 7/1/12-13  | \$2,400,000   | \$2,400,000                        | \$2,400,000                             | \$2,400,000                       | \$2,400,000                            |
| 7/1/13-14  | \$1,400,000   | \$1,400,000                        | \$1,400,000                             | \$1,400,000                       | \$1,400,000                            |
| 7/1/14-15  | \$1,400,000   | \$1,200,000                        | \$1,173,000                             | \$1,173,000                       | \$1,186,087                            |
| 7/1/15-16  | \$1,400,000   | \$1,400,000                        | \$1,400,000                             | \$1,400,000                       | \$1,400,000                            |
| 7/1/16-17  | \$1,400,000   | \$1,400,000                        | \$1,400,000                             | \$1,400,000                       | \$1,400,000                            |
| 7/1/17-18  | \$1,400,000   | \$1,400,000                        | \$1,400,000                             | \$1,400,000                       | \$1,400,000                            |
| <b>Total Retained Losses (SIR Losses Plus Corridor)</b>        |               |                                    |   |                                   |  |
| 7/1/11-12  |               | \$4,018,489                        |   |                                   | \$4,018,489                            |
| 7/1/12-13  |               | \$5,029,175                        |   |                                   | \$5,029,175                            |
| 7/1/13-14  |               | \$3,896,000                        |   |                                   | \$3,895,352                            |
| 7/1/14-15  |               | \$4,692,000                        |   |                                   | \$4,678,000                            |
| 7/1/15-16  |               | \$4,867,000                        |   |                                   | \$4,837,000                            |
| 7/1/16-17  |               | \$5,720,000                        |   |                                   | \$5,920,000                            |
| 7/1/17-18  |               | \$6,243,000                        |   |                                   | \$6,351,000                            |

(A) - From previous report as of 6/30/17, as of 1/31/17 for unlimited, Forecast from IV

(B) - Exhibit III

(C) - Exhibit V

(D) - Selected as noted:

Limited to \$250,000:

Limited reported losses from 11-12 through 14-15

Column (C) for 15-16 through 17-18

Unlimited Losses:

Limited reported losses from 11-12 through 13-14

Column (C) for 14-15 through 16-17

Column (A) for 17-18

**Average Ultimate Claim Sizes**

|                        | (A)                         | (B)                               | (C)                                   | (D)                                      | (E)  | (F)                                 | (G)              |
|------------------------|-----------------------------|-----------------------------------|---------------------------------------|--|--|-------------------------------------|------------------|
| <i>Accident Period</i> | <i>Reported Occurrences</i> | <i>Reported Claim Development</i> | <i>Estimated Ultimate Occurrences</i> | <i>Estimated Ultimate Limited Losses</i> | <i>Average Ultimate Limited Occurrence</i> | <i>Exposure Total Insured Value</i> | <i>Loss Rate</i> |
| 7/1/02-03              | 24                          | 1.000                             | 24.0                                  | \$312,045                                | \$13,000                                   |                                     |                  |
| 7/1/03-04              | 104                         | 1.000                             | 104.0                                 | \$1,287,169                              | \$12,400                                   |                                     |                  |
| 7/1/04-05              | 122                         | 1.000                             | 122.0                                 | \$1,266,993                              | \$10,400                                   | \$3,756,688,926                     | \$0.034          |
| 7/1/05-06              | 190                         | 1.000                             | 190.0                                 | \$2,616,997                              | \$13,800                                   | \$5,058,376,762                     | \$0.052          |
| 7/1/06-07              | 232                         | 1.000                             | 232.0                                 | \$2,604,514                              | \$11,200                                   | \$6,396,402,749                     | \$0.041          |
| 7/1/07-08              | 255                         | 1.000                             | 255.0                                 | \$3,915,481                              | \$15,400                                   | \$7,053,258,491                     | \$0.056          |
| 7/1/08-09              | 211                         | 1.000                             | 211.0                                 | \$4,561,347                              | \$21,600                                   | \$7,478,044,795                     | \$0.061          |
| 7/1/09-10              | 266                         | 1.000                             | 266.0                                 | \$4,870,042                              | \$18,300                                   | \$7,801,896,787                     | \$0.062          |
| 7/1/10-11              | 225                         | 1.000                             | 225.0                                 | \$3,569,472                              | \$15,900                                   | \$8,214,036,469                     | \$0.043          |
| 7/1/11-12              | 173                         | 1.000                             | 173.0                                 | \$4,018,489                              | \$23,200                                   | \$6,347,461,637                     | \$0.063          |
| 7/1/12-13              | 162                         | 1.000                             | 162.0                                 | \$5,029,175                              | \$31,000                                   | \$6,526,038,633                     | \$0.077          |
| 7/1/13-14              | 157                         | 1.000                             | 157.0                                 | \$3,895,352                              | \$24,800                                   | \$8,356,362,827                     | \$0.047          |
| 7/1/14-15              | 206                         | 1.000                             | 206.0                                 | \$4,678,000                              | \$22,700                                   | \$8,137,357,454                     | \$0.057          |
| 7/1/15-16              | 180                         | 1.000                             | 180.0                                 | \$4,837,000                              | \$26,900                                   | \$8,295,479,409                     | \$0.058          |
| 7/1/16-17              | 233                         | 1.000                             | 233.0                                 | \$5,920,000                              | \$25,400                                   | \$9,500,793,518                     | \$0.062          |
| 7/1/17-18              | 120                         | 1.857                             | 222.9                                 | \$6,351,000                              | \$28,500                                   | \$9,011,886,407                     | \$0.070          |
| 7/1/18-19              |                             |                                   | 270.4                                 | \$6,240,000                              | \$23,100                                   | \$9,053,414,500                     | \$0.069          |
| <b>Total</b>           | <b>2860</b>                 |                                   | <b>3,233.3</b>                        | <b>\$65,973,074</b>                      | <b>\$20,400</b>                            | <b>\$110,987,499,364</b>            | <b>\$0.059</b>   |

- Results for 7/1/18-19 from Forecast

(A) - Exhibit I

(B) - Appendix A

(C) = (A) x (B)

(D) = Exhibit VI

(E) = (D) / (C)

(F) - Exhibit I, provided by OSIG

(G) = (D) / (F) \* 100

**Estimated Outstanding Losses**

| Accident Period                      | SIR                        | (A)<br>Limited<br>Ultimate<br>Losses | (B)<br>Limited<br>Paid<br>Losses | (C)<br>Limited<br>Reported<br>Losses | (D)<br>Limited<br>Case<br>Reserves | (E)<br>IBNR<br>Losses | (F)<br>Outstanding<br>Losses |
|--------------------------------------|----------------------------|--------------------------------------|----------------------------------|--------------------------------------|------------------------------------|-----------------------|------------------------------|
| <b>As of January 31, 2018</b>        |                            |                                      |                                  |                                      |                                    |                       |                              |
| 7/1/02-03                            | \$100k/\$200k              | \$312,045                            | \$312,045                        | \$312,045                            | \$0                                | \$0                   | \$0                          |
| 7/1/03-04                            | \$100k/\$200k              | \$1,287,169                          | \$1,287,169                      | \$1,287,169                          | \$0                                | \$0                   | \$0                          |
| 7/1/04-05                            | \$100k/\$200k              | \$1,266,993                          | \$1,266,993                      | \$1,266,993                          | \$0                                | \$0                   | \$0                          |
| 7/1/05-06                            | \$100k/\$200k              | \$2,616,997                          | \$2,616,997                      | \$2,616,997                          | \$0                                | \$0                   | \$0                          |
| 7/1/06-07                            | \$100k/\$200k              | \$2,604,514                          | \$2,604,514                      | \$2,604,514                          | \$0                                | \$0                   | \$0                          |
| 7/1/07-08                            | \$100k/\$200k              | \$3,915,481                          | \$3,915,481                      | \$3,915,481                          | \$0                                | \$0                   | \$0                          |
| 7/1/08-09                            | \$100k/\$200k              | \$4,561,347                          | \$4,561,347                      | \$4,561,347                          | \$0                                | \$0                   | \$0                          |
| 7/1/09-10                            | \$100k/\$200k              | \$4,870,042                          | \$4,870,042                      | \$4,870,042                          | \$0                                | \$0                   | \$0                          |
| 7/1/10-11                            | \$100k/\$200k              | \$3,569,472                          | \$3,569,472                      | \$3,569,472                          | \$0                                | \$0                   | \$0                          |
| 7/1/11-12                            | \$250,000 /\$2.7M corridor | \$4,018,489                          | \$4,018,489                      | \$4,018,489                          | \$0                                | \$0                   | \$0                          |
| 7/1/12-13                            | \$250,000 /\$2.4M corridor | \$5,029,175                          | \$5,029,175                      | \$5,029,175                          | \$0                                | \$0                   | \$0                          |
| 7/1/13-14                            | \$250,000 /\$1.4M corridor | \$3,895,352                          | \$3,895,352                      | \$3,895,352                          | \$0                                | \$0                   | \$0                          |
| 7/1/14-15                            | \$250,000 /\$1.4M corridor | \$4,678,000                          | \$4,412,027                      | \$4,662,027                          | \$250,000                          | \$16,000              | \$266,000                    |
| 7/1/15-16                            | \$250,000 /\$1.4M corridor | \$4,837,000                          | \$4,727,112                      | \$4,794,734                          | \$67,622                           | \$42,000              | \$110,000                    |
| 7/1/16-17                            | \$250,000 /\$1.4M corridor | \$5,920,000                          | \$4,828,963                      | \$5,751,577                          | \$922,614                          | \$168,000             | \$1,091,000                  |
| 7/1/17-1/31/18                       | \$250,000 /\$1.4M corridor | \$4,288,000                          | \$1,693,478                      | \$4,061,279                          | \$2,367,801                        | \$227,000             | \$2,595,000                  |
| <b>Total</b>                         |                            | <b>\$57,670,074</b>                  | <b>\$53,608,654</b>              | <b>\$57,216,691</b>                  | <b>\$3,608,037</b>                 | <b>\$453,000</b>      | <b>\$4,062,000</b>           |
| <b>Projected as of June 30, 2018</b> |                            |                                      |                                  |                                      |                                    |                       |                              |
| All Prior Years                      | \$100k/\$200k              | \$25,004,059                         | \$25,004,059                     | \$25,004,059                         | \$0                                | \$0                   | \$0                          |
| 7/1/11-12                            | \$250,000 /\$2.7M corridor | \$4,018,489                          | \$4,018,489                      | \$4,018,489                          | \$0                                | \$0                   | \$0                          |
| 7/1/12-13                            | \$250,000 /\$2.4M corridor | \$5,029,175                          | \$5,029,175                      | \$5,029,175                          | \$0                                | \$0                   | \$0                          |
| 7/1/13-14                            | \$250,000 /\$1.4M corridor | \$3,895,352                          | \$3,895,352                      | \$3,895,352                          | \$0                                | \$0                   | \$0                          |
| 7/1/14-15                            | \$250,000 /\$1.4M corridor | \$4,678,000                          | \$4,486,527                      | \$4,669,469                          | \$183,000                          | \$9,000               | \$191,000                    |
| 7/1/15-16                            | \$250,000 /\$1.4M corridor | \$4,837,000                          | \$4,764,861                      | \$4,811,199                          | \$46,000                           | \$26,000              | \$72,000                     |
| 7/1/16-17                            | \$250,000 /\$1.4M corridor | \$5,920,000                          | \$5,285,493                      | \$5,816,737                          | \$531,000                          | \$103,000             | \$635,000                    |
| 7/1/17-18                            | \$250,000 /\$1.4M corridor | \$6,351,000                          | \$4,297,985                      | \$5,981,504                          | \$1,684,000                        | \$369,000             | \$2,053,000                  |
| <b>Total</b>                         |                            | <b>\$59,733,000</b>                  | <b>\$56,781,940</b>              | <b>\$59,225,983</b>                  | <b>\$2,444,000</b>                 | <b>\$507,000</b>      | <b>\$2,951,000</b>           |

**Total Estimated IBNR as of June 30, 2018 \$507,000**

(A) - Exhibit VI

(B) and (C) - Exhibit V for 01/31/18

Projected as of 06/30/18 using LDFs

(D) = (C) - (B)

(E) = (A) - (C)

(F) = (A) - (B)

**Estimated Outstanding Losses for SIR and Corridor**

| Accident<br>Period                   | SIR       | Corridor    | (A)                           | (B)                       | (C)                           | (D)                         | (E)            | (F)                   |
|--------------------------------------|-----------|-------------|-------------------------------|---------------------------|-------------------------------|-----------------------------|----------------|-----------------------|
|                                      |           |             | Limited<br>Ultimate<br>Losses | Limited<br>Paid<br>Losses | Limited<br>Reported<br>Losses | Limited<br>Case<br>Reserves | IBNR<br>Losses | Outstanding<br>Losses |
| <b>As of January 31, 2018</b>        |           |             |                               |                           |                               |                             |                |                       |
| <b>Stop Loss Years Total</b>         |           |             | \$25,004,059                  | \$25,004,059              | \$25,004,059                  | \$0                         | \$0            | \$0                   |
| <b>SIR Losses</b>                    |           |             |                               |                           |                               |                             |                |                       |
| 7/1/11-12                            | \$250,000 |             | \$3,201,043                   | \$3,201,043               | \$3,201,043                   | \$0                         | \$0            | \$0                   |
| 7/1/12-13                            | \$250,000 |             | \$2,629,175                   | \$2,629,175               | \$2,629,175                   | \$0                         | \$0            | \$0                   |
| 7/1/13-14                            | \$250,000 |             | \$2,495,352                   | \$2,495,352               | \$2,495,352                   | \$0                         | \$0            | \$0                   |
| 7/1/14-15                            | \$250,000 |             | \$3,491,913                   | \$3,390,309               | \$3,491,913                   | \$102,000                   | \$0            | \$102,000             |
| 7/1/15-16                            | \$250,000 |             | \$3,437,000                   | \$3,327,112               | \$3,394,734                   | \$68,000                    | \$42,000       | \$110,000             |
| 7/1/16-17                            | \$250,000 |             | \$4,520,000                   | \$3,428,963               | \$4,351,577                   | \$923,000                   | \$168,000      | \$1,091,000           |
| 7/1/17-1/31/18                       | \$250,000 |             | \$2,888,000                   | \$1,568,135               | \$2,661,279                   | \$1,093,000                 | \$227,000      | \$1,320,000           |
| <b>Corridor Losses</b>               |           |             |                               |                           |                               |                             |                |                       |
| 7/1/11-12                            |           | \$2,700,000 | \$817,446                     | \$817,446                 | \$817,446                     | \$0                         | \$0            | \$0                   |
| 7/1/12-13                            |           | \$2,400,000 | \$2,400,000                   | \$2,400,000               | \$2,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/13-14                            |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/14-15                            |           | \$1,400,000 | \$1,186,087                   | \$1,021,718               | \$1,170,114                   | \$148,000                   | \$16,000       | \$164,000             |
| 7/1/15-16                            |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/16-17                            |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/17-1/31/18                       |           | \$1,400,000 | \$1,400,000                   | \$125,343                 | \$1,400,000                   | \$1,275,000                 | \$0            | \$1,275,000           |
| <b>Total</b>                         |           |             | \$57,670,000                  | \$53,609,000              | \$57,217,000                  | \$3,609,000                 | \$453,000      | \$4,062,000           |
| <b>Projected as of June 30, 2018</b> |           |             |                               |                           |                               |                             |                |                       |
| <b>Stop Loss Years Total</b>         |           |             | \$25,004,059                  | \$25,004,059              | \$25,004,059                  | \$0                         | \$0            | \$0                   |
| <b>SIR Losses</b>                    |           |             |                               |                           |                               |                             |                |                       |
| 7/1/11-12                            | \$250,000 |             | \$3,201,043                   | \$3,201,043               | \$3,201,043                   | \$0                         | \$0            | \$0                   |
| 7/1/12-13                            | \$250,000 |             | \$2,629,175                   | \$2,629,175               | \$2,629,175                   | \$0                         | \$0            | \$0                   |
| 7/1/13-14                            | \$250,000 |             | \$2,495,352                   | \$2,495,352               | \$2,495,352                   | \$0                         | \$0            | \$0                   |
| 7/1/14-15                            | \$250,000 |             | \$3,491,913                   | \$3,418,995               | \$3,491,913                   | \$73,000                    | \$0            | \$73,000              |
| 7/1/15-16                            | \$250,000 |             | \$3,437,000                   | \$3,364,861               | \$3,411,199                   | \$46,000                    | \$26,000       | \$72,000              |
| 7/1/16-17                            | \$250,000 |             | \$4,520,000                   | \$3,885,493               | \$4,416,737                   | \$531,000                   | \$103,000      | \$635,000             |
| 7/1/17-18                            | \$250,000 |             | \$4,951,000                   | \$2,897,985               | \$4,581,504                   | \$1,684,000                 | \$369,000      | \$2,053,000           |
| <b>Corridor Losses</b>               |           |             |                               |                           |                               |                             |                |                       |
| 7/1/11-12                            |           | \$2,700,000 | \$817,446                     | \$817,446                 | \$817,446                     | \$0                         | \$0            | \$0                   |
| 7/1/12-13                            |           | \$2,400,000 | \$2,400,000                   | \$2,400,000               | \$2,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/13-14                            |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/14-15                            |           | \$1,400,000 | \$1,186,087                   | \$1,067,532               | \$1,177,557                   | \$110,000                   | \$9,000        | \$119,000             |
| 7/1/15-16                            |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/16-17                            |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/17-1/31/18                       |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| <b>Total</b>                         |           |             | \$59,733,000                  | \$56,782,000              | \$59,226,000                  | \$2,444,000                 | \$507,000      | \$2,952,000           |

**Total Estimated IBNR as of June 30, 2018 \$507,000**

**Comparison of Results with Previous Estimates as of 6/30/17**

| Accident<br>Period | (A)<br>Actual<br>Reported<br>Losses<br>6/30/2017 | (B)<br>Projected<br>Reported<br>Losses<br>1/31/2018 | (C)<br>Actual<br>Reported<br>Losses<br>1/31/2018 | (D)<br>Percent<br>Difference | (E)<br>Expected<br>Ultimate<br>Losses<br>6/30/2017 | (F)<br>Actual<br>Ultimate<br>Losses<br>1/31/2018 | (G)<br>Percent<br>Difference |
|--------------------|--|---|--|------------------------------|--|--|------------------------------|
| 7/1/02-03          | \$312,045  | \$312,045   | \$312,045  | 0.0%                         | \$312,045  | \$312,045  | 0.0%                         |
| 7/1/03-04          | \$1,287,169                                      | \$1,287,169   | \$1,287,169                                      | 0.0%                         | \$1,287,169  | \$1,287,169                                      | 0.0%                         |
| 7/1/04-05          | \$1,266,993                                      | \$1,266,993   | \$1,266,993                                      | 0.0%                         | \$1,266,993  | \$1,266,993                                      | 0.0%                         |
| 7/1/05-06          | \$2,618,047                                      | \$2,618,047   | \$2,616,997                                      | 0.0%                         | \$2,618,047  | \$2,616,997                                      | 0.0%                         |
| 7/1/06-07          | \$2,604,514                                      | \$2,604,514   | \$2,604,514                                      | 0.0%                         | \$2,604,514  | \$2,604,514                                      | 0.0%                         |
| 7/1/07-08          | \$3,915,481                                      | \$3,915,481   | \$3,915,481                                      | 0.0%                         | \$3,915,481  | \$3,915,481                                      | 0.0%                         |
| 7/1/08-09          | \$4,561,397                                      | \$4,561,397   | \$4,561,347                                      | 0.0%                         | \$4,561,397  | \$4,561,347                                      | 0.0%                         |
| 7/1/09-10          | \$4,870,042                                      | \$4,870,042   | \$4,870,042                                      | 0.0%                         | \$4,870,042  | \$4,870,042                                      | 0.0%                         |
| 7/1/10-11          | \$3,569,472                                      | \$3,569,472   | \$3,569,472                                      | 0.0%                         | \$3,569,472  | \$3,569,472                                      | 0.0%                         |
| 7/1/11-12          | \$3,201,043                                      | \$3,201,043   | \$3,201,043                                      | 0.0%                         | \$3,201,043  | \$3,201,043                                      | 0.0%                         |
| 7/1/12-13          | \$2,629,175                                      | \$2,629,175   | \$2,629,175                                      | 0.0%                         | \$2,629,175  | \$2,629,175                                      | 0.0%                         |
| 7/1/13-14          | \$2,496,177                                      | \$2,496,122   | \$2,495,352                                      | 0.0%                         | \$2,496,000  | \$2,495,352                                      | 0.0%                         |
| 7/1/14-15          | \$3,491,903                                      | \$3,491,934   | \$3,491,913                                      | 0.0%                         | \$3,492,000  | \$3,491,913                                      | 0.0%                         |
| 7/1/15-16          | \$3,430,061                                      | \$3,442,474   | \$3,394,734                                      | -1.4%                        | \$3,467,000  | \$3,437,000                                      | -0.9%                        |
| 7/1/16-17          | \$3,957,883                                      | \$4,084,083   | \$4,351,577                                      | 6.5%                         | \$4,320,000  | \$4,520,000                                      | 4.6%                         |
| 7/1/17-18          |  | \$2,430,546   | \$2,661,279                                      | 9.5%                         | \$4,273,000  | \$4,951,000                                      | 15.9%                        |
| <b>Total</b>       | <b>\$44,211,399</b>                              | <b>\$46,780,535</b>                                 | <b>\$47,229,131</b>                              | <b>1.0%</b>                  | <b>\$48,883,377</b>                                | <b>\$49,729,541</b>                              | <b>1.7%</b>                  |

(A) and (E) - From Previous actuarial report as of 6/30/2017

Limited to \$250,000 for years since 11-12

(B) - Derived from (A) and (E) using loss development patterns

(C) - Exhibit I, limited to retention

(D) = [(C) / (B)] - 1

(F) - Exhibit VI

(G) = [(F) / (E)] - 1



**Comparison of Results with Previous Estimates as of 06/30/17**

| Accident<br>Period | (A)<br>Actual<br>Reported<br>Losses<br>6/30/2017 | (B)<br>Projected<br>Reported<br>Losses<br>1/31/2018 | (C)<br>Actual<br>Reported<br>Losses<br>1/31/2018 | (D)<br>Percent<br>Difference | (E)<br>Expected<br>Ultimate<br>Losses<br>6/30/2017 | (F)<br>Actual<br>Ultimate<br>Losses<br>1/31/2018 | (G)<br>Percent<br>Difference |
|--------------------|--|---|--|------------------------------|--|--|------------------------------|
| 7/1/02-03          | \$312,045  | \$312,045   | \$312,045  | 0.0%                         | \$312,045  | \$312,045  | 0.0%                         |
| 7/1/03-04          | \$1,287,169                                      | \$1,287,169   | \$1,287,169                                      | 0.0%                         | \$1,287,169  | \$1,287,169                                      | 0.0%                         |
| 7/1/04-05          | \$1,266,993                                      | \$1,266,993   | \$1,266,993                                      | 0.0%                         | \$1,266,993  | \$1,266,993                                      | 0.0%                         |
| 7/1/05-06          | \$2,618,047                                      | \$2,618,047   | \$2,616,997                                      | 0.0%                         | \$2,618,692  | \$2,616,997                                      | -0.1%                        |
| 7/1/06-07          | \$2,604,514                                      | \$2,604,514   | \$2,604,514                                      | 0.0%                         | \$2,604,514  | \$2,604,514                                      | 0.0%                         |
| 7/1/07-08          | \$3,915,481                                      | \$3,915,481   | \$3,915,481                                      | 0.0%                         | \$3,915,481  | \$3,915,481                                      | 0.0%                         |
| 7/1/08-09          | \$4,561,397                                      | \$4,561,397   | \$4,561,347                                      | 0.0%                         | \$4,561,472  | \$4,561,347                                      | 0.0%                         |
| 7/1/09-10          | \$4,870,042                                      | \$4,870,042   | \$4,870,042                                      | 0.0%                         | \$4,835,518  | \$4,870,042                                      | 0.7%                         |
| 7/1/10-11          | \$3,569,472                                      | \$3,569,472   | \$3,569,472                                      | 0.0%                         | \$3,569,472  | \$3,569,472                                      | 0.0%                         |
| 7/1/11-12          | \$4,018,489                                      | \$4,018,489   | \$4,018,489                                      | 0.0%                         | \$4,018,489  | \$4,018,489                                      | 0.0%                         |
| 7/1/12-13          | \$5,029,175                                      | \$5,029,175   | \$5,029,175                                      | 0.0%                         | \$5,029,175  | \$5,029,175                                      | 0.0%                         |
| 7/1/13-14          | \$3,896,177                                      | \$3,896,131   | \$3,895,352                                      | 0.0%                         | \$3,896,000  | \$3,895,352                                      | 0.0%                         |
| 7/1/14-15          | \$4,662,017                                      | \$4,672,133   | \$4,662,027                                      | -0.2%                        | \$4,692,000  | \$4,678,000                                      | -0.3%                        |
| 7/1/15-16          | \$4,830,061                                      | \$4,848,285   | \$4,794,734                                      | -1.1%                        | \$4,867,000  | \$4,837,000                                      | -0.6%                        |
| 7/1/16-17          | \$5,357,883                                      | \$5,669,649   | \$5,751,577                                      | 1.4%                         | \$5,720,000  | \$5,920,000                                      | 3.5%                         |
| 7/1/17-18          |  | \$2,090,053   | \$4,061,279                                      | 94.3%                        | \$5,673,000  | \$6,351,000                                      | 12.0%                        |
| <b>Total</b>       | <b>\$52,798,959</b>                              | <b>\$55,229,074</b>                                 | <b>\$57,216,691</b>                              | <b>3.6%</b>                  | <b>\$58,867,019</b>                                | <b>\$59,733,074</b>                              | <b>1.5%</b>                  |

(A) and (E) - From Previous actuarial report as of 06/30/2017

Includes Corridor Losses for years since 17-18

(B) - Derived from (A) and (E) using loss development patterns

(C) - Exhibit I, limited to retention

(D) = [(C) / (B)] - 1

(F) - Exhibit VI

(G) = [(F) / (E)] - 1

**Estimation of Cumulative Reported Loss Development Factors  
 Losses Limited to \$250,000 per Occurrence  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months of Maturity<br>X | Cumulative Factors<br>Y* | Transformed Values for Regression |               |          |         |         | Fitted Values |                        |
|-------------------------|--------------------------|-----------------------------------|---------------|----------|---------|---------|---------------|------------------------|
|                         |                          | X'<br>LN(1/(X+C))                 | Y'<br>LN(Y-1) | (X')^2   | (Y')^2  | X' x Y' | X             | Cumulative Factor<br>Y |
| 12                      | 1.078                    | -6.8156                           | -2.5447       | 46.453   | 6.4755  | 17.3437 | 187           | 1.000                  |
| 24                      | 1.027                    | -6.8287                           | -3.6067       | 46.631   | 13.0086 | 24.6294 | 175           | 1.000                  |
| 36                      | 1.007                    | -6.8416                           | -4.9618       | 46.808   | 24.6199 | 33.9470 | 163           | 1.000                  |
|                         |                          |                                   |               |          |         |         | 151           | 1.000                  |
|                         |                          |                                   |               |          |         |         | 139           | 1.000                  |
|                         |                          |                                   |               |          |         |         | 127           | 1.000                  |
|                         |                          |                                   |               |          |         |         | 115           | 1.000                  |
|                         |                          |                                   |               |          |         |         | 103           | 1.000                  |
|                         |                          |                                   |               |          |         |         | 91            | 1.000                  |
|                         |                          |                                   |               |          |         |         | 79            | 1.000                  |
|                         |                          |                                   |               |          |         |         | 67            | 1.000                  |
| Sum                     |                          | -20.4860                          | -11.1133      | 139.8920 | 44.1040 | 75.9202 | 55            | 1.000                  |
| Average                 |                          | -6.8287                           | -3.7044       | 46.6307  | 14.7013 | 25.3067 | 43            | 1.004                  |
|                         |                          |                                   |               |          |         |         | 31            | 1.012                  |
|                         |                          |                                   |               |          |         |         | 19            | 1.041                  |
|                         |                          |                                   |               |          |         |         | 7             | 1.897                  |

|     |            |       |         |
|-----|------------|-------|---------|
| N = | 3          |       |         |
| A = | 1.920E+274 |       |         |
| B = | 93.029     | R^2 = | 0.99459 |
| C = | 900        |       |         |

\* - Appendix A4, Page 1

**Estimation of Cumulative Reported Loss Development Factors  
 Unlimited Reported Losses  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months of Maturity<br>X | Cumulative Factors<br>Y* | Transformed Values for Regression |               |         |         |         | Fitted Values |                        |
|-------------------------|--------------------------|-----------------------------------|---------------|---------|---------|---------|---------------|------------------------|
|                         |                          | X'<br>LN(1/(X+C))                 | Y'<br>LN(Y-1) | (X')^2  | (Y')^2  | X' x Y' | X             | Cumulative Factor<br>Y |
| 12                      | <b>1.294</b>             | -4.6728                           | -1.2258       | 21.835  | 1.5026  | 5.7279  | <b>187</b>    | <b>1.000</b>           |
| 24                      | <b>1.057</b>             | -4.7791                           | -2.8584       | 22.840  | 8.1704  | 13.6606 | <b>175</b>    | <b>1.000</b>           |
| 36                      | <b>1.007</b>             | -4.8752                           | -4.9604       | 23.768  | 24.6057 | 24.1830 | <b>163</b>    | <b>1.000</b>           |
| 48                      | <b>1.002</b>             | -4.9628                           | -6.2146       | 24.630  | 38.6214 | 30.8421 | <b>151</b>    | <b>1.000</b>           |
|                         |                          |                                   |               |         |         |         | <b>139</b>    | <b>1.000</b>           |
|                         |                          |                                   |               |         |         |         | <b>127</b>    | <b>1.000</b>           |
|                         |                          |                                   |               |         |         |         | <b>115</b>    | <b>1.000</b>           |
|                         |                          |                                   |               |         |         |         | <b>103</b>    | <b>1.000</b>           |
|                         |                          |                                   |               |         |         |         | <b>91</b>     | <b>1.000</b>           |
|                         |                          |                                   |               |         |         |         | <b>79</b>     | <b>1.000</b>           |
|                         |                          |                                   |               |         |         |         | <b>67</b>     | <b>1.000</b>           |
| Sum                     |                          | -19.2900                          | -15.2592      | 93.0727 | 72.9001 | 74.4137 | <b>55</b>     | <b>1.001</b>           |
| Average                 |                          | -4.8225                           | -3.8148       | 23.2682 | 18.2250 | 18.6034 | <b>43</b>     | <b>1.003</b>           |
|                         |                          |                                   |               |         |         |         | <b>31</b>     | <b>1.017</b>           |
|                         |                          |                                   |               |         |         |         | <b>19</b>     | <b>1.101</b>           |
|                         |                          |                                   |               |         |         |         | <b>7</b>      | <b>2.522</b>           |

|            |                  |              |                |
|------------|------------------|--------------|----------------|
| <b>N =</b> | <b>4</b>         |              |                |
| <b>A =</b> | <b>2.236E+35</b> |              |                |
| <b>B =</b> | <b>17.669</b>    | <b>R^2 =</b> | <b>0.99377</b> |
| <b>C =</b> | <b>95</b>        |              |                |

\* - Appendix A4, page 2

**Implied Payment Pattern for Limited Losses  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |         |         |         |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------|---------|---------|---------|---------------|---------------------------|
|                               |                             | X'                                | Y'      | (X')^2  | (Y')^2  | X' x Y' | X             | Cumulative<br>Factor<br>Y |
|                               |                             | LN(1/(X+C))                       | LN(Y-1) |         |         |         |               |                           |
|                               |                             |                                   |         |         |         |         | <b>79</b>     | <b>1.000</b>              |
|                               |                             |                                   |         |         |         |         | <b>67</b>     | <b>1.006</b>              |
|                               |                             |                                   |         |         |         |         | <b>55</b>     | <b>1.010</b>              |
| 43                            | <b>1.030</b>                | -3.8918                           | -3.5076 | 15.146  | 12.3032 | 13.6509 | <b>43</b>     | <b>1.022</b>              |
| 31                            | <b>1.033</b>                | -3.6109                           | -3.4104 | 13.039  | 11.6308 | 12.3147 | <b>31</b>     | <b>1.059</b>              |
| 19                            | <b>1.318</b>                | -3.2189                           | -1.1451 | 10.361  | 1.3113  | 3.6860  | <b>19</b>     | <b>1.231</b>              |
| 7                             | <b>3.157</b>                | -2.5649                           | 0.7688  | 6.579   | 0.5911  | -1.9720 | <b>7</b>      | <b>3.245</b>              |
| Sum                           |                             | -13.2866                          | -7.2943 | 45.1251 | 25.8365 | 27.6796 |               |                           |
| Average                       |                             | -3.3216                           | -1.8236 | 11.2813 | 6.4591  | 6.9199  |               |                           |

|            |                  |              |                 |
|------------|------------------|--------------|-----------------|
| <b>N =</b> | <b>4</b>         |              |                 |
| <b>A =</b> | <b>1.684E+04</b> |              |                 |
| <b>B =</b> | <b>3.479</b>     | <b>R^2 =</b> | <b>0.957615</b> |
| <b>C =</b> | <b>6</b>         |              |                 |

\* - Limited Ultimate Losses / Limited Paid Losses

**Implied Payment Pattern for Unlimited Losses  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |         |         |         |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------|---------|---------|---------|---------------|---------------------------|
|                               |                             | X'                                | Y'      | (X')^2  | (Y')^2  | X' x Y' | X             | Cumulative<br>Factor<br>Y |
|                               |                             | LN(1/(X+C))                       | LN(Y-1) |         |         |         |               |                           |
|                               |                             |                                   |         |         |         |         | <b>79</b>     | <b>1.000</b>              |
|                               |                             |                                   |         |         |         |         | <b>67</b>     | <b>1.000</b>              |
|                               |                             |                                   |         |         |         |         | <b>55</b>     | <b>1.019</b>              |
| 43                            | <b>1.060</b>                | -3.8067                           | -2.8087 | 14.491  | 7.8888  | 10.6917 | <b>43</b>     | <b>1.040</b>              |
| 31                            | <b>1.049</b>                | -3.4965                           | -3.0201 | 12.226  | 9.1209  | 10.5598 | <b>31</b>     | <b>1.108</b>              |
| 19                            | <b>1.715</b>                | -3.0445                           | -0.3356 | 9.269   | 0.1127  | 1.0219  | <b>19</b>     | <b>1.465</b>              |
| 7                             | <b>7.784</b>                | -2.1972                           | 1.9146  | 4.828   | 3.6656  | -4.2067 | <b>7</b>      | <b>8.137</b>              |
| Sum                           |                             | -12.5449                          | -4.2499 | 40.8132 | 20.7879 | 18.0667 |               |                           |
| Average                       |                             | -3.1362                           | -1.0625 | 10.2033 | 5.1970  | 4.5167  |               |                           |

|            |                  |              |                 |
|------------|------------------|--------------|-----------------|
| <b>N =</b> | <b>4</b>         |              |                 |
| <b>A =</b> | <b>8.521E+03</b> |              |                 |
| <b>B =</b> | <b>3.224</b>     | <b>R^2 =</b> | <b>0.938878</b> |
| <b>C =</b> | <b>2</b>         |              |                 |

\* - Based on Ratio of Ultimate Unlimited Losses to Unlimited Paid Losses

**Estimation of Cumulative Reported Claim Development Factors  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |         |        |        |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------|--------|--------|---------|---------------|---------------------------|
|                               |                             | X'                                | Y'      | (X')^2 | (Y')^2 | X' x Y' | X             | Cumulative<br>Factor<br>Y |
|                               |                             | LN(1/(X+C))                       | LN(Y-1) |        |        |         |               |                           |
| 12                            | 1.000                       |                                   |         |        |        |         | 187           | 1.000                     |
| 24                            | 1.000                       |                                   |         |        |        |         | 175           | 1.000                     |
|                               |                             |                                   |         |        |        |         | 163           | 1.000                     |
|                               |                             |                                   |         |        |        |         | 151           | 1.000                     |
|                               |                             |                                   |         |        |        |         | 139           | 1.000                     |
|                               |                             |                                   |         |        |        |         | 127           | 1.000                     |
|                               |                             |                                   |         |        |        |         | 115           | 1.000                     |
|                               |                             |                                   |         |        |        |         | 103           | 1.000                     |
|                               |                             |                                   |         |        |        |         | 91            | 1.000                     |
|                               |                             |                                   |         |        |        |         | 79            | 1.000                     |
|                               |                             |                                   |         |        |        |         | 67            | 1.000                     |
| Sum                           |                             | 0.0000                            | 0.0000  | 0.0000 | 0.0000 | 0.0000  | 55            | 1.000                     |
| Average                       |                             | 0.0000                            | 0.0000  | 0.0000 | 0.0000 | 0.0000  | 43            | 1.000                     |
|                               |                             |                                   |         |        |        |         | 31            | 1.000                     |
|                               |                             |                                   |         |        |        |         | 19            | 1.000                     |
|                               |                             |                                   |         |        |        |         | 7             | 1.857                     |

|     |       |
|-----|-------|
| N = | 2     |
| A = |       |
| B = | R^2 = |
| C = |       |

\* - Appendix A6

**Analysis of Reported Loss Development**  
**Pure Loss Limited to \$250,000 ALAE unlimited**

| <i>Limited Reported Losses and ALAE as of (months):</i> |             |             |             |             |             |             |             |             |             |             |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Year  | 12          | 24          | 36          | 48          | 60          | 72          | 84          | 96          | 108         | 120         |
| 7/1/04-05   |             |             |             |             |             |             | \$1,305,598 | \$1,305,598 | \$1,305,598 | \$1,305,598 |
| 7/1/05-06   |             |             |             |             |             | \$2,912,297 | \$2,912,297 | \$2,912,297 | \$2,912,297 | \$2,912,297 |
| 7/1/06-07   |             |             |             |             | \$2,801,109 | \$2,794,881 | \$2,794,881 | \$2,794,881 | \$2,794,881 | \$2,794,881 |
| 7/1/07-08   |             |             |             | \$5,083,453 | \$5,097,217 | \$5,097,217 | \$5,097,217 | \$5,097,217 | \$5,097,217 | \$5,097,217 |
| 7/1/08-09   |             |             | \$5,799,194 | \$5,831,587 | \$5,900,011 | \$5,897,574 | \$5,897,276 | \$5,897,026 | \$5,897,026 |             |
| 7/1/09-10   |             | \$5,643,910 | \$5,633,310 | \$5,639,110 | \$5,639,110 | \$5,639,110 | \$5,909,210 | \$5,909,210 |             |             |
| 7/1/10-11   | \$5,333,937 | \$4,814,020 | \$4,639,787 | \$4,830,071 | \$4,835,277 | \$4,835,277 | \$4,835,277 |             |             |             |
| 7/1/11-12   | \$3,532,085 | \$3,363,887 | \$3,271,113 | \$3,282,543 | \$3,282,543 | \$3,201,043 |             |             |             |             |
| 7/1/12-13   | \$3,149,150 | \$2,937,773 | \$3,011,624 | \$3,042,344 | \$2,629,175 |             |             |             |             |             |
| 7/1/13-14   | \$2,524,519 | \$2,329,236 | \$2,545,000 | \$2,496,177 |             |             |             |             |             |             |
| 7/1/14-15   | \$3,537,706 | \$3,700,538 | \$3,491,903 |             |             |             |             |             |             |             |
| 7/1/15-16   | \$3,246,383 | \$3,430,061 |             |             |             |             |             |             |             |             |
| 7/1/16-17   | \$3,957,883 |             |             |             |             |             |             |             |             |             |

| <i>Age-to-Age Factors</i> |              |              |              |              |              |              |              |              |              |              |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Year                      | 12:24        | 24:36        | 36:48        | 48:60        | 60:72        | 72:84        | 84:96        | 96:108       | 108:120      | 120:ult      |
| 7/1/04-05                 |              |              |              |              |              |              | 1.000        | 1.000        | 1.000        | 1.000        |
| 7/1/05-06                 |              |              |              |              |              | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| 7/1/06-07                 |              |              |              |              | 0.998        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| 7/1/07-08                 |              |              |              | 1.003        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| 7/1/08-09                 |              |              | 1.006        | 1.012        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| 7/1/09-10                 |              | 0.998        | 1.001        | 1.000        | 1.000        | 1.048        | 1.000        |              |              |              |
| 7/1/10-11                 | 0.903        | 0.964        | 1.041        | 1.001        | 1.000        | 1.000        |              |              |              |              |
| 7/1/11-12                 | 0.952        | 0.972        | 1.003        | 1.000        | 0.975        |              |              |              |              |              |
| 7/1/12-13                 | 0.933        | 1.025        | 1.010        | 0.864        |              |              |              |              |              |              |
| 7/1/13-14                 | 0.923        | 1.093        | 0.981        |              |              |              |              |              |              |              |
| 7/1/14-15                 | 1.046        | 0.944        |              |              |              |              |              |              |              |              |
| 7/1/15-16                 | 1.057        |              |              |              |              |              |              |              |              |              |
| <b>Average</b>            | 0.969        | 0.999        | 1.007        | 0.980        | 0.995        | 1.008        | 1.000        | 1.000        | 1.000        |              |
| <b>Wtd. Average</b>       | 0.965        | 0.991        | 1.009        | 0.988        | 0.997        | 1.010        | 1.000        | 1.000        | 1.000        |              |
| <b>OK Benchmark</b>       | 1.083        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| <b>Prior</b>              | 1.010        | 1.006        | 1.004        | 1.001        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
|                           | 12           | 24           | 36           | 48           | 60           | 72           | 84           | 96           | 108          | 120          |
| <b>Selected</b>           | 1.050        | 1.020        | 1.007        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| <b>Cumulative</b>         | <b>1.078</b> | <b>1.027</b> | <b>1.007</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> |

**Analysis of Unlimited Reported Loss Development  
 Total Experience Net of Member Deductibles**

| Year      | Unlimited Reported Losses and ALAE as of (months): |              |              |              |              |              |              |              |              |              |
|-----------|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|           | 12   | 24           | 36           | 48           | 60           | 72           | 84           | 96           | 108          | 120          |
| 7/1/04-05 | \$1,368,113  | \$1,280,634  | \$1,304,691  | \$1,304,691  | \$1,304,691  | \$1,304,691  | \$1,305,598  | \$1,305,598  | \$1,305,598  | \$1,305,598  |
| 7/1/05-06 | \$3,110,731  | \$3,128,836  | \$3,224,284  | \$3,224,400  | \$3,224,400  | \$3,224,400  | \$3,224,400  | \$3,224,400  | \$3,224,400  | \$3,224,400  |
| 7/1/06-07 | \$6,628,583  | \$8,027,416  | \$7,594,525  | \$7,688,597  | \$7,676,617  | \$7,672,924  | \$7,672,924  | \$7,672,924  | \$7,672,924  | \$7,672,924  |
| 7/1/07-08 | \$29,183,950                                       | \$32,191,764 | \$27,838,808 | \$27,549,083 | \$27,549,083 | \$27,549,083 | \$27,549,083 | \$27,549,083 | \$27,549,083 | \$27,549,083 |
| 7/1/08-09 | \$14,390,753                                       | \$15,321,794 | \$14,550,076 | \$14,727,379 | \$14,787,721 | \$14,785,284 | \$14,784,986 | \$14,784,736 | \$14,784,661 |              |
| 7/1/09-10 | \$13,583,620                                       | \$18,081,798 | \$17,074,377 | \$17,109,070 | \$17,109,070 | \$17,109,070 | \$17,429,170 | \$17,390,777 |              |              |
| 7/1/10-11 | \$18,938,242                                       | \$29,188,873 | \$27,961,920 | \$26,296,810 | \$26,471,942 | \$26,471,942 | \$26,471,942 |              |              |              |
| 7/1/11-12 | \$4,269,177  | \$4,298,833  | \$4,007,059  | \$4,018,489  | \$4,018,489  | \$4,018,489  |              |              |              |              |
| 7/1/12-13 | \$5,180,489  | \$6,310,374  | \$6,225,528  | \$6,146,124  | \$6,136,455  |              |              |              |              |              |
| 7/1/13-14 | \$2,684,519  | \$3,549,504  | \$4,629,938  | \$4,590,290  |              |              |              |              |              |              |
| 7/1/14-15 | \$4,080,491  | \$4,423,676  | \$4,662,017  |              |              |              |              |              |              |              |
| 7/1/15-16 | \$3,782,538  | \$5,700,632  |              |              |              |              |              |              |              |              |
| 7/1/16-17 | \$8,750,280  |              |              |              |              |              |              |              |              |              |

| Year                | Age-to-Age Factors |              |              |              |              |              |              |              |              |              |
|---------------------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                     | 12:24              | 24:36        | 36:48        | 48:60        | 60:72        | 72:84        | 84:96        | 96:108       | 108:120      | 120:         |
| 7/1/04-05           | 0.936              | 1.019        | 1.000        | 1.000        | 1.000        | 1.001        | 1.000        | 1.000        | 1.000        | 1.000        |
| 7/1/05-06           | 1.006              | 1.031        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| 7/1/06-07           | 1.211              | 0.946        | 1.012        | 0.998        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| 7/1/07-08           | 1.103              | 0.865        | 0.990        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| 7/1/08-09           | 1.065              | 0.950        | 1.012        | 1.004        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| 7/1/09-10           | 1.331              | 0.944        | 1.002        | 1.000        | 1.000        | 1.019        | 0.998        |              |              |              |
| 7/1/10-11           | 1.541              | 0.958        | 0.940        | 1.007        | 1.000        | 1.000        |              |              |              |              |
| 7/1/11-12           | 1.007              | 0.932        | 1.003        | 1.000        | 1.000        |              |              |              |              |              |
| 7/1/12-13           | 1.218              | 0.987        | 0.987        | 0.998        |              |              |              |              |              |              |
| 7/1/13-14           | 1.322              | 1.304        | 0.991        |              |              |              |              |              |              |              |
| 7/1/14-15           | 1.084              | 1.054        |              |              |              |              |              |              |              |              |
| 7/1/15-16           | 1.507              |              |              |              |              |              |              |              |              |              |
| <b>Average</b>      | 1.194              | 0.999        | 0.994        | 1.001        | 1.000        | 1.003        | 1.000        | 1.000        | 1.000        | 1.000        |
| <b>Wtd. Average</b> | 1.227              | 0.947        | 0.985        | 1.002        | 1.000        | 1.003        | 0.999        | 1.000        | 1.000        | 1.000        |
| <b>OK Benchmark</b> | 1.083              | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| <b>Prior</b>        | 1.220              | 1.006        | 1.004        | 1.002        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
|                     | 12                 | 24           | 36           | 48           | 60           | 72           | 84           | 96           | 108          | 120          |
| <b>Selected</b>     | 1.223              | 1.050        | 1.005        | 1.002        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| <b>Cumulative</b>   | <b>1.294</b>       | <b>1.057</b> | <b>1.007</b> | <b>1.002</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> |



**Analysis of Report Occurrences**

| Year      | Reported Occurrences as of (months): |     |     |     |     |     |     |     |     |     |
|-----------|--------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|           | 12                                   | 24  | 36  | 48  | 60  | 72  | 84  | 96  | 108 | 120 |
| 7/1/04-05 |                                      |     | 124 | 124 | 124 | 124 | 124 | 124 | 122 | 122 |
| 7/1/05-06 |                                      | 194 | 182 | 191 | 191 | 191 | 191 | 190 | 190 | 190 |
| 7/1/06-07 | 260                                  | 237 | 241 | 237 | 236 | 236 | 232 | 232 | 232 | 232 |
| 7/1/07-08 | 232                                  | 260 | 260 | 263 | 264 | 255 | 255 | 255 | 255 | 255 |
| 7/1/08-09 | 231                                  | 213 | 216 | 218 | 211 | 211 | 211 | 211 | 211 | 211 |
| 7/1/09-10 | 256                                  | 269 | 271 | 265 | 265 | 265 | 266 | 266 |     |     |
| 7/1/10-11 | 232                                  | 230 | 223 | 224 | 225 | 225 | 225 |     |     |     |
| 7/1/11-12 | 172                                  | 173 | 173 | 173 | 173 | 173 |     |     |     |     |
| 7/1/12-13 | 167                                  | 161 | 161 | 162 | 162 |     |     |     |     |     |
| 7/1/13-14 | 150                                  | 157 | 158 | 157 |     |     |     |     |     |     |
| 7/1/14-15 | 218                                  | 207 | 205 |     |     |     |     |     |     |     |
| 7/1/15-16 | 179                                  | 180 |     |     |     |     |     |     |     |     |
| 7/1/16-17 | 231                                  |     |     |     |     |     |     |     |     |     |

| Year                | Age-to-Age Factors |              |              |              |              |              |              |              |              |              |
|---------------------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                     | 12:24              | 24:36        | 36:48        | 48:60        | 60:72        | 72:84        | 84:96        | 96:108       | 108:120      | 120:ult      |
| 7/1/04-05           |                    |              | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 0.984        | 1.000        |              |
| 7/1/05-06           |                    | 0.938        | 1.049        | 1.000        | 1.000        | 1.000        | 0.995        | 1.000        | 1.000        |              |
| 7/1/06-07           | 0.912              | 1.017        | 0.983        | 0.996        | 1.000        | 0.983        | 1.000        | 1.000        | 1.000        |              |
| 7/1/07-08           | 1.121              | 1.000        | 1.012        | 1.004        | 0.966        | 1.000        | 1.000        | 1.000        | 1.000        |              |
| 7/1/08-09           | 0.922              | 1.014        | 1.009        | 0.968        | 1.000        | 1.000        | 1.000        | 1.000        |              |              |
| 7/1/09-10           | 1.051              | 1.007        | 0.978        | 1.000        | 1.000        | 1.004        | 1.000        |              |              |              |
| 7/1/10-11           | 0.991              | 0.970        | 1.004        | 1.004        | 1.000        | 1.000        |              |              |              |              |
| 7/1/11-12           | 1.006              | 1.000        | 1.000        | 1.000        | 1.000        |              |              |              |              |              |
| 7/1/12-13           | 0.964              | 1.000        | 1.006        | 1.000        |              |              |              |              |              |              |
| 7/1/13-14           | 1.047              | 1.006        | 0.994        |              |              |              |              |              |              |              |
| 7/1/14-15           | 0.950              | 0.990        |              |              |              |              |              |              |              |              |
| 7/1/15-16           | 1.006              |              |              |              |              |              |              |              |              |              |
| <b>Average</b>      | 0.997              | 0.994        | 1.004        | 0.997        | 0.996        | 0.998        | 0.999        | 0.997        | 1.000        |              |
| <b>Wtd. Average</b> | 0.994              | 0.995        | 0.998        | 0.996        | 0.994        | 0.998        | 0.999        | 0.998        | 1.000        |              |
| <b>OK benchmark</b> | 1.083              | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| <b>Prior</b>        | 1.000              | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| <b>Selected</b>     | 1.000              | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        | 1.000        |
| <b>Cumulative</b>   | <b>1.000</b>       | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> | <b>1.000</b> |

August 24, 2018

Ms. Jennifer McKenzie  
 Oklahoma Schools Insurance Group  
 Arthur J. Gallagher Risk Management Services, Inc.  
 1300 S. Main  
 Tulsa, OK 74119

RE: OSIG Actuarial Update as of 6/30/18

Dear Jennifer,

The purpose of this review is to update the IBNR estimate as of June 30, 2018, based on the actual loss data for the Oklahoma Schools Insurance Group (OSIG) as of June 30, 2018, and to revise the forecast ultimate losses for 7/1/18-19 based on the exposures written on July 1, 2018. I have compared the current data to the data used in the prior actuarial report as of January 31, 2018, and the projected paid and reported losses as of June 30, 2018. For those accident periods where actual losses deviated from expected losses by a significant amount, the ultimate losses for those periods were increased or decreased accordingly. Since IBNR is calculated as the difference in the ultimate losses and the limited reported losses, the level of IBNR may fluctuate although ultimate losses may be relatively stable, or vice versa. Changes in ultimate losses generally track the changes in reported and paid losses compared to expectations. The change in ultimate losses (before applying the aggregate stop loss limits) is shown below.

| <b>Change in Selected Ultimate Losses for years 02/03 through 17/18<br/>Compared to Report as of 1/31/18</b> |                   |
|--|-------------------|
| Automobile Liability   | \$0               |
| General Liability with E&O   | -\$525,000        |
| Property including APD   | -\$236,000        |
| <b>Total</b>   | <b>-\$761,000</b> |

The comparisons of the actual versus expected reported losses as of June 30, 2018, are shown in Table 1 for each line. We have selected a new estimate of ultimate losses based upon the comparison of actual versus expected losses. The change in the ultimate losses is given in terms of a dollar amount as well as an overall percentage change. Experience since the previous actuarial report is better than expected in total. Ultimate losses for liability were decreased \$525,000 in total including decreases for general liability of \$300,000 in the 17-18 year, \$100,000 for 15-16 and smaller decreases on years 14-15, 12-13 and 11-12. Experience for automobile

liability varied by year, but experience in total was close to expected. Adjustments to ultimate losses on individual years had an offsetting effect, so that there was \$0 overall change.

There was an increase in excess property losses in the 14-15 year, and we now expect that OSIG will exceed the corridor deductible of \$1,400,000 for that year. The 17-18 year property claims are better than expected, and the ultimate losses were decreased for this year. In total, ultimate losses for Property were decreased by \$236,000.

The IBNR is calculated in Table A and in Table 2 for each line of business as the difference in the selected ultimate losses and the limited reported losses as of June 30, 2018.

| <b>OSIG Reserve Estimates as of June 30, 2018</b> |                    |                    |
|---|--------------------|--------------------|
|   | <i>Liability</i>   | <i>Property</i>    |
| <i>Case Reserves</i>                              | \$5,064,000        | \$3,427,000        |
| <i>IBNR Reserves</i>                              | \$1,340,000        | \$612,000          |
| <b><i>Total Reserve</i></b>                       | <b>\$6,405,000</b> | <b>\$4,038,000</b> |

The Liability reserves are higher than the projected based on 1/31/18 data. This is because even though the reported and paid losses are less than projected in the prior study, the ultimate losses were also reduced, but not by the same degree. For property, there is \$1,376,000 in case reserves for claims in the corridor and \$2,051,000 in the SIR layer. No IBNR is needed for the excess losses since the corridor has been exceeded. All IBNR for property claims is related to losses within the \$250,000 SIR.

We adjusted the forecast losses for 7/1/18-19 for the change in the amount of exposures to be underwritten in this period. The selected loss rates from the 1/31/18 study were applied to the current exposure estimates to derive the ultimate losses for the 7/1/18-19 year. The liability losses are capped at the \$100,000 deductible.

| <b>Forecast losses for OSIG's Liability Program 7/1/18-19</b> |                        |  |
|---|------------------------|--|
|   | <i>Ultimate Losses</i> | <i>Loss Rate</i>                             |
| <i>Automobile Liability</i>                                   | \$1,291,000            | \$117 per vehicle<br>or (\$2.88 per student) |
| <i>General Liability (including E&amp;O)</i>                  | \$2,388,000            | \$5.33 per student                           |
| <b><i>Total Forecast</i></b>                                  | <b>\$3,679,000</b>     | <b>\$8.21 per student</b>                    |

The Property forecast for 7/1/18-19 is shown below. We expect that OSIG will utilize the full \$1,400,000 corridor deductible again this year. The portion of the \$7,543,000 property forecast associated with Auto Physical Damage claims is \$826,000. The rates per \$100 TIV have changed slightly for property. This is because the APD losses which are all assumed to be included in the SIR layer are projected using vehicle counts. In addition, the corridor is spread over a larger exposure base than before.

| <b>Forecast losses for OSIG's Property Program 7/1/18-19</b> |                        |                              |
|--|------------------------|------------------------------|
|  | <i>Ultimate Losses</i> | <i>Loss Rate</i>             |
| <i>Losses within the \$250,000 Deductible</i>                | \$6,143,000            | \$0.052 per \$100 TIV        |
| <i>Corridor deductible</i>                                   | \$1,400,000            | \$0.012 per \$100 TIV        |
| <b><i>Total Forecast</i></b>                                 | <b>\$7,543,000</b>     | <b>\$0.064 per \$100 TIV</b> |

Table A summarizes the IBNR and Outstanding losses for Liability and Property. Table B shows the IBNR for each of Liability and Property at various confidence levels. Table C shows the comparison of experience between 1/31/18 and 6/30/18. The updated loss projection for the 7/1/18-19 year is in Table D.

If you or your auditors have any questions, I would be happy to answer them. As always, it has been a pleasure serving you and the Oklahoma Schools Insurance Group.

Sincerely,

Laura T. Sprouse, FCAS, MAAA

**Estimated Outstanding Losses for Liability  
As of June 30, 2018**

| Accident<br>Period | Coverage | (A)                             | (B)                       | (C)                           | (D)              | (E)            | (F)                   |
|--------------------|----------|---------------------------------|---------------------------|-------------------------------|------------------|----------------|-----------------------|
|                    |          | Estimated<br>Ultimate<br>Losses | Limited<br>Paid<br>Losses | Limited<br>Reported<br>Losses | Case<br>Reserves | IBNR<br>Losses | Outstanding<br>Losses |
| 2002/03            | AL       | \$65,087                        | \$65,087                  | \$65,087                      | \$0              | \$0            | \$0                   |
| 2003/04            | AL       | \$357,297                       | \$357,297                 | \$357,297                     | \$0              | \$0            | \$0                   |
| 2004/05            | AL       | \$618,336                       | \$618,336                 | \$618,336                     | \$0              | \$0            | \$0                   |
| 2005/06            | AL       | \$450,928                       | \$450,928                 | \$450,928                     | \$0              | \$0            | \$0                   |
| 2006/07            | AL       | \$535,205                       | \$535,205                 | \$535,205                     | \$0              | \$0            | \$0                   |
| 2007/08            | AL       | \$759,907                       | \$759,907                 | \$759,907                     | \$0              | \$0            | \$0                   |
| 2008/09            | AL       | \$1,423,346                     | \$1,423,346               | \$1,423,346                   | \$0              | \$0            | \$0                   |
| 2009/10            | AL       | \$706,000                       | \$703,413                 | \$703,413                     | \$0              | \$3,000        | \$3,000               |
| 2010/11            | AL       | \$843,000                       | \$843,333                 | \$843,333                     | \$0              | \$0            | \$0                   |
| 2011/12            | AL       | \$974,000                       | \$947,823                 | \$973,586                     | \$25,762         | \$0            | \$26,000              |
| 2012/13            | AL       | \$626,000                       | \$625,317                 | \$625,317                     | \$0              | \$1,000        | \$1,000               |
| 2013/14            | AL       | \$678,000                       | \$674,842                 | \$674,842                     | \$0              | \$3,000        | \$3,000               |
| 2014/15            | AL       | \$1,224,000                     | \$874,245                 | \$1,221,735                   | \$347,490        | \$2,000        | \$350,000             |
| 2015/16            | AL       | \$1,183,000                     | \$924,765                 | \$1,159,787                   | \$235,022        | \$23,000       | \$258,000             |
| 2016/17            | AL       | \$1,166,000                     | \$853,354                 | \$1,124,122                   | \$270,769        | \$42,000       | \$313,000             |
| 2017/18            | AL       | \$1,093,000                     | \$390,369                 | \$925,038                     | \$534,669        | \$168,000      | \$703,000             |
|                    |          | \$12,703,000                    | \$11,048,000              | \$12,461,000                  | \$1,414,000      | \$242,000      | \$1,657,000           |

|         |        |              |              |              |             |             |             |
|---------|--------|--------------|--------------|--------------|-------------|-------------|-------------|
| 2002/03 | GL/E&O | \$168,909    | \$168,909    | \$168,909    | \$0         | \$0         | \$0         |
| 2003/04 | GL/E&O | \$840,274    | \$840,274    | \$840,274    | \$0         | \$0         | \$0         |
| 2004/05 | GL/E&O | \$488,972    | \$488,972    | \$488,972    | \$0         | \$0         | \$0         |
| 2005/06 | GL/E&O | \$1,253,449  | \$1,253,449  | \$1,253,449  | \$0         | \$0         | \$0         |
| 2006/07 | GL/E&O | \$953,237    | \$953,237    | \$953,237    | \$0         | \$0         | \$0         |
| 2007/08 | GL/E&O | \$1,432,614  | \$1,432,614  | \$1,432,614  | \$0         | \$0         | \$0         |
| 2008/09 | GL/E&O | \$1,159,541  | \$1,159,541  | \$1,159,541  | \$0         | \$0         | \$0         |
| 2009/10 | GL/E&O | \$1,294,000  | \$1,271,815  | \$1,292,498  | \$20,683    | \$2,000     | \$22,000    |
| 2010/11 | GL/E&O | \$1,842,000  | \$1,804,139  | \$1,838,086  | \$33,947    | \$4,000     | \$38,000    |
| 2011/12 | GL/E&O | \$1,470,000  | \$1,459,814  | \$1,459,814  | \$0         | \$10,000    | \$10,000    |
| 2012/13 | GL/E&O | \$861,000    | \$738,029    | \$847,052    | \$109,023   | \$14,000    | \$123,000   |
| 2013/14 | GL/E&O | \$844,000    | \$716,792    | \$821,705    | \$104,913   | \$22,000    | \$127,000   |
| 2014/15 | GL/E&O | \$1,810,000  | \$1,297,850  | \$1,737,044  | \$439,194   | \$73,000    | \$512,000   |
| 2015/16 | GL/E&O | \$2,100,000  | \$1,219,220  | \$1,937,319  | \$718,099   | \$163,000   | \$881,000   |
| 2016/17 | GL/E&O | \$2,402,000  | \$740,062    | \$2,103,443  | \$1,363,380 | \$299,000   | \$1,662,000 |
| 2017/18 | GL/E&O | \$1,430,000  | \$56,435     | \$917,464    | \$861,030   | \$513,000   | \$1,374,000 |
|         |        | \$20,350,000 | \$15,601,000 | \$19,251,000 | \$3,650,000 | \$1,100,000 | \$4,749,000 |

| <b>Total Liability Losses Limited to Policy Aggregate Stop Loss</b> |                    |                               |                           |                               |                    |                    |                       |
|---|--------------------|-------------------------------|---------------------------|-------------------------------|--------------------|--------------------|-----------------------|
| Accident<br>Period  | Aggregate<br>Limit | Ultimate<br>Limited<br>Losses | Limited<br>Paid<br>Losses | Limited<br>Reported<br>Losses | Case<br>Reserves   | IBNR<br>Losses     | Outstanding<br>Losses |
| Prior   |                    | \$10,507,103                  | \$10,507,103              | \$10,507,103                  | \$0                | \$0                | \$0                   |
| 2009/10   | \$3,549,580        | \$2,000,000                   | \$1,975,228               | \$1,995,911                   | \$20,683           | \$4,000            | \$25,000              |
| 2010/11   | \$3,869,920        | \$2,685,000                   | \$2,647,472               | \$2,681,419                   | \$33,947           | \$4,000            | \$38,000              |
| 2011/12   | \$3,416,075        | \$2,444,000                   | \$2,407,637               | \$2,433,399                   | \$25,762           | \$11,000           | \$36,000              |
| 2012/13   | \$2,788,172        | \$1,487,000                   | \$1,363,345               | \$1,472,369                   | \$109,023          | \$15,000           | \$124,000             |
| 2013/14   | \$3,473,373        | \$1,522,000                   | \$1,391,633               | \$1,496,546                   | \$104,913          | \$25,000           | \$130,000             |
| 2014/15   | \$3,994,646        | \$3,034,000                   | \$2,172,095               | \$2,958,779                   | \$786,684          | \$75,000           | \$862,000             |
| 2015/16   | \$4,017,890        | \$3,283,000                   | \$2,143,984               | \$3,097,106                   | \$953,121          | \$186,000          | \$1,139,000           |
| 2016/17   | \$4,147,089        | \$3,568,000                   | \$1,593,416               | \$3,227,565                   | \$1,634,149        | \$340,000          | \$1,975,000           |
| 2017/18   | \$4,271,645        | \$2,523,000                   | \$446,804                 | \$1,842,502                   | \$1,395,699        | \$680,000          | \$2,076,000           |
| <b>Total</b>  |                    | <b>\$33,053,000</b>           | <b>\$26,649,000</b>       | <b>\$31,713,000</b>           | <b>\$5,064,000</b> | <b>\$1,340,000</b> | <b>\$6,405,000</b>    |

**Percentile Distribution of IBNR  
 For Liability Coverages  
 As of June 30, 2018**

| <i>percentile</i> | <i>Ultimate<br/>Losses</i> | <i>IBNR<br/>Reserve</i> | <i>Total<br/>Reserve</i> |
|-------------------|----------------------------|-------------------------|--------------------------|
| Expected          | \$33,053,000               | \$1,340,000             | \$6,405,000              |
| 40%               | \$32,649,000               | \$936,000               | \$6,000,000              |
| 50%               | \$32,896,000               | \$1,183,000             | \$6,247,000              |
| 55%               | \$33,011,000               | \$1,298,000             | \$6,362,000              |
| 60%               | \$33,141,000               | \$1,428,000             | \$6,492,000              |
| 65%               | \$33,275,000               | \$1,562,000             | \$6,626,000              |
| 75%               | \$33,558,000               | \$1,845,000             | \$6,909,000              |
| 85%               | \$33,894,000               | \$2,181,000             | \$7,245,000              |
| 90%               | \$34,146,000               | \$2,433,000             | \$7,497,000              |
| 95%               | \$34,501,000               | \$2,788,000             | \$7,852,000              |

|  |              |
|--|--------------|
| <i>Total Expected Ultimate Losses</i>    | \$33,053,000 |
| <i>Total Paid Losses as of 6/30/18</i>   | \$26,649,000 |
| <i>Total Case Reserves as of 6/30/18</i> | \$5,064,000  |
| <i>Total IBNR Reserves as of 6/30/18</i> | \$1,340,000  |
| <i>Total Outstanding as of 6/30/18</i>   | \$6,405,000  |

*Figures in this Table are limited to Aggregate Stop Loss Limits*

Comparison of Results with Previous Estimates as of 1/31/18

| Accident Period | (A)                              | (B)                                | (C)                              | (D)                | (E)                                | (F)                              | (G)                 |                    |
|-----------------|----------------------------------|------------------------------------|----------------------------------|--------------------|------------------------------------|----------------------------------|---------------------|--------------------|
|                 | Actual Reported Losses 1/31/2018 | Expected Reported Losses 6/30/2018 | Actual Reported Losses 6/30/2018 | Percent Difference | Expected Ultimate Losses 1/31/2018 | Actual Ultimate Losses 6/30/2018 | Year-End Adjustment | Percent Difference |
| 2008/09         | \$2,582,887                      | \$2,582,887                        | \$2,582,887                      | 0.0%               | \$2,582,887                        | \$2,582,887                      | \$0                 | 0.0%               |
| 2009/10         | \$1,998,584                      | \$1,998,952                        | \$1,995,911                      | -0.2%              | \$2,000,000                        | \$2,000,000                      | \$0                 | 0.0%               |
| 2010/11         | \$2,681,419                      | \$2,682,344                        | \$2,681,419                      | 0.0%               | \$2,685,000                        | \$2,685,000                      | \$0                 | 0.0%               |
| 2011/12         | \$2,462,911                      | \$2,464,592                        | \$2,433,399                      | -1.3%              | \$2,469,000                        | \$2,444,000                      | -\$25,000           | -1.0%              |
| 2012/13         | \$1,503,662                      | \$1,505,984                        | \$1,472,369                      | -2.2%              | \$1,512,000                        | \$1,487,000                      | -\$25,000           | -1.7%              |
| 2013/14         | \$1,527,007                      | \$1,532,626                        | \$1,496,546                      | -2.4%              | \$1,547,000                        | \$1,522,000                      | -\$25,000           | -1.6%              |
| 2014/15         | \$2,979,812                      | \$3,002,024                        | \$2,958,779                      | -1.4%              | \$3,059,000                        | \$3,034,000                      | -\$25,000           | -0.8%              |
| 2015/16         | \$3,149,754                      | \$3,207,288                        | \$3,097,106                      | -3.4%              | \$3,358,000                        | \$3,283,000                      | -\$75,000           | -2.2%              |
| 2016/17         | \$3,094,546                      | \$3,222,744                        | \$3,227,565                      | 0.1%               | \$3,568,000                        | \$3,568,000                      | \$0                 | 0.0%               |
| 2017/18         | \$931,272                        | \$2,146,334                        | \$1,842,502                      | -14.2%             | \$2,873,000                        | \$2,523,000                      | -\$350,000          | -12.2%             |
| <b>Total</b>    | <b>\$22,911,853</b>              | <b>\$24,345,775</b>                | <b>\$23,788,483</b>              | <b>-2.3%</b>       | <b>\$25,653,887</b>                | <b>\$25,128,887</b>              | <b>-\$525,000</b>   | <b>-2.0%</b>       |

Variance in Reported Losses -\$557,292

| Accident Period | (A)                          | (B)                            | (C)                          | (D)                | (E)                                | (F)                              | (G)                 |                    |
|-----------------|------------------------------|--------------------------------|------------------------------|--------------------|------------------------------------|----------------------------------|---------------------|--------------------|
|                 | Actual Paid Losses 1/31/2018 | Expected Paid Losses 6/30/2018 | Actual Paid Losses 6/30/2018 | Percent Difference | Expected Ultimate Losses 1/31/2018 | Actual Ultimate Losses 6/30/2018 | Year-End Adjustment | Percent Difference |
| 2008/09         | \$2,582,887                  | \$2,582,887                    | \$2,582,887                  | 0.0%               | \$2,582,887                        | \$2,582,887                      | \$0                 | 0.0%               |
| 2009/10         | \$1,959,433                  | \$1,969,882                    | \$1,975,228                  | 0.3%               | \$2,000,000                        | \$2,000,000                      | \$0                 | 0.0%               |
| 2010/11         | \$2,643,180                  | \$2,653,907                    | \$2,647,472                  | -0.2%              | \$2,685,000                        | \$2,685,000                      | \$0                 | 0.0%               |
| 2011/12         | \$2,418,812                  | \$2,433,287                    | \$2,407,637                  | -1.1%              | \$2,469,000                        | \$2,444,000                      | -\$25,000           | -1.0%              |
| 2012/13         | \$1,359,673                  | \$1,404,623                    | \$1,363,345                  | -2.9%              | \$1,512,000                        | \$1,487,000                      | -\$25,000           | -1.7%              |
| 2013/14         | \$1,385,257                  | \$1,435,900                    | \$1,391,633                  | -3.1%              | \$1,547,000                        | \$1,522,000                      | -\$25,000           | -1.6%              |
| 2014/15         | \$2,119,657                  | \$2,417,136                    | \$2,172,095                  | -10.1%             | \$3,059,000                        | \$3,034,000                      | -\$25,000           | -0.8%              |
| 2015/16         | \$1,967,924                  | \$2,349,418                    | \$2,143,984                  | -8.7%              | \$3,358,000                        | \$3,283,000                      | -\$75,000           | -2.2%              |
| 2016/17         | \$1,314,443                  | \$1,698,684                    | \$1,593,416                  | -6.2%              | \$3,568,000                        | \$3,568,000                      | \$0                 | 0.0%               |
| 2017/18         | \$246,480                    | \$659,718                      | \$446,804                    | -32.3%             | \$2,873,000                        | \$2,523,000                      | -\$350,000          | -12.2%             |
| <b>Total</b>    | <b>\$17,997,746</b>          | <b>\$19,605,441</b>            | <b>\$18,724,501</b>          | <b>-4.5%</b>       | <b>\$25,653,887</b>                | <b>\$25,128,887</b>              | <b>-\$525,000</b>   | <b>-2.0%</b>       |

- (A) and (E) - From Previous actuarial report as of 01/31/18
- (B) - Derived from (E) and (A) using loss development patterns
- (C) - Provided by OSIG, limited to SIR
- (D) = [(C) / (B)] - 1
- (F) - (E) + (G)
- (G) - Judgmentally Selected based on experience

**Distribution of Losses for 7/1/18-19  
 Assuming a \$100,000 SIR**

| <i>Percentile</i>       | <i>SIR Layer<br/>\$100,000</i> | <i>Layer<br/>\$900,000 xs<br/>\$100,000</i> | <i>Losses<br/>Limited to<br/>\$1,000,000</i> | <i>Losses<br/>Excess of<br/>\$1,000,000</i> | <i>Total<br/>Incurred<br/>Losses</i> |
|-------------------------|--------------------------------|---|--|---|--------------------------------------|
| 20.0%                   | \$3,112,000                    | \$552,000                                   | \$3,841,000                                  | \$0   | \$3,842,000                          |
| 30.0%                   | \$3,296,000                    | \$666,000                                   | \$4,106,000                                  | \$0   | \$4,108,000                          |
| 40.0%                   | \$3,458,000                    | \$773,000                                   | \$4,347,000                                  | \$0   | \$4,350,000                          |
| 50.0%                   | \$3,608,000                    | \$885,000                                   | \$4,569,000                                  | \$0   | \$4,573,000                          |
| 60.0%                   | \$3,771,000                    | \$1,012,000                                 | \$4,802,000                                  | \$0   | \$4,815,000                          |
| 70.0%                   | \$3,961,000                    | \$1,157,000                                 | \$5,068,000                                  | \$0   | \$5,087,000                          |
| 75.0%                   | \$4,072,000                    | \$1,239,000                                 | \$5,214,000                                  | \$0   | \$5,236,000                          |
| 80.0%                   | \$4,196,000                    | \$1,338,000                                 | \$5,384,000                                  | \$0   | \$5,416,000                          |
| 85.0%                   | \$4,351,000                    | \$1,452,000                                 | \$5,582,000                                  | \$0   | \$5,630,000                          |
| 90.0%                   | \$4,540,000                    | \$1,599,000                                 | \$5,841,000                                  | \$0   | \$5,914,000                          |
| 95.0%                   | \$4,857,000                    | \$1,836,000                                 | \$6,246,000                                  | \$0   | \$6,349,000                          |
| 99.0%                   | \$5,585,000                    | \$2,341,000                                 | \$7,099,000                                  | \$879,000                                   | \$7,332,000                          |
| <b>Expected</b>         | <b>\$3,679,000</b>             | <b>\$961,000</b>                            | <b>\$4,640,000</b>                           | <b>\$23,000</b>                             | <b>\$4,663,000</b>                   |
| <i>Students</i>         | 448,230                        |   |  |   |                                      |
| <b>Cost Per Student</b> | <b>\$8.21</b>                  | <b>\$2.14</b>                               | <b>\$10.35</b>                               | <b>\$0.05</b>                               | <b>\$10.40</b>                       |



**Estimated Outstanding Losses for SIR and Corridor**

| Accident<br>Period            | SIR       | Corridor    | (A)                           | (B)                       | (C)                           | (D)                         | (E)            | (F)                   |
|-------------------------------|-----------|-------------|-------------------------------|---------------------------|-------------------------------|-----------------------------|----------------|-----------------------|
|                               |           |             | Limited<br>Ultimate<br>Losses | Limited<br>Paid<br>Losses | Limited<br>Reported<br>Losses | Limited<br>Case<br>Reserves | IBNR<br>Losses | Outstanding<br>Losses |
| <b><u>SIR Losses</u></b>      |           |             |                               |                           |                               |                             |                |                       |
| 7/1/11-12                     | \$250,000 |             | \$3,201,043                   | \$3,201,043               | \$3,201,043                   | \$0                         | \$0            | \$0                   |
| 7/1/12-13                     | \$250,000 |             | \$2,629,175                   | \$2,629,175               | \$2,629,175                   | \$0                         | \$0            | \$0                   |
| 7/1/13-14                     | \$250,000 |             | \$2,496,352                   | \$2,496,177               | \$2,496,177                   | \$0                         | \$0            | \$0                   |
| 7/1/14-15                     | \$250,000 |             | \$3,490,913                   | \$3,386,650               | \$3,488,282                   | \$102,000                   | \$3,000        | \$104,000             |
| 7/1/15-16                     | \$250,000 |             | \$3,437,000                   | \$3,403,375               | \$3,419,370                   | \$16,000                    | \$18,000       | \$34,000              |
| 7/1/16-17                     | \$250,000 |             | \$4,520,000                   | \$3,611,655               | \$4,366,030                   | \$754,000                   | \$154,000      | \$908,000             |
| 7/1/17-18                     | \$250,000 |             | \$4,501,000                   | \$2,885,050               | \$4,064,314                   | \$1,179,000                 | \$437,000      | \$1,616,000           |
| <b><u>Corridor Losses</u></b> |           |             |                               |                           |                               |                             |                |                       |
| 7/1/11-12                     |           | \$2,700,000 | \$817,446                     | \$817,446                 | \$817,446                     | \$0                         | \$0            | \$0                   |
| 7/1/12-13                     |           | \$2,400,000 | \$2,400,000                   | \$2,400,000               | \$2,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/13-14                     |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/14-15                     |           | \$1,400,000 | \$1,400,000                   | \$1,026,623               | \$1,400,000                   | \$373,000                   | \$0            | \$373,000             |
| 7/1/15-16                     |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/16-17                     |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/17-18                     |           | \$1,400,000 | \$1,400,000                   | \$396,542                 | \$1,400,000                   | \$1,003,000                 | \$0            | \$1,003,000           |
| <b>Total</b>                  |           |             | \$34,493,000                  | \$30,454,000              | \$33,882,000                  | \$3,427,000                 | \$612,000      | \$4,038,000           |

**Total Estimated IBNR as of June 30, 2018 \$612,000**

**Percentile Distribution of IBNR  
 For Property Coverages  
 As of June 30, 2018**

| <i>percentile</i> | <i>Ultimate<br/>Losses</i> | <i>IBNR<br/>Reserve</i> | <i>Total<br/>Reserve</i> |
|-------------------|----------------------------|-------------------------|--------------------------|
| Expected          | \$34,493,000               | \$612,000               | \$4,038,000              |
| 40%               | \$34,388,000               | \$507,000               | \$3,934,000              |
| 50%               | \$34,488,000               | \$607,000               | \$4,034,000              |
| 55%               | \$34,537,000               | \$656,000               | \$4,083,000              |
| 60%               | \$34,589,000               | \$708,000               | \$4,135,000              |
| 65%               | \$34,641,000               | \$760,000               | \$4,187,000              |
| 75%               | \$34,764,000               | \$883,000               | \$4,310,000              |
| 85%               | \$34,908,000               | \$1,027,000             | \$4,454,000              |
| 90%               | \$35,014,000               | \$1,133,000             | \$4,560,000              |
| 95%               | \$35,161,000               | \$1,280,000             | \$4,707,000              |

|  |              |
|--|--------------|
| <i>Total Expected Ultimate Losses</i>    | \$34,493,000 |
| <i>Total Paid Losses as of 6/30/18</i>   | \$30,454,000 |
| <i>Total Case Reserves as of 6/30/18</i> | \$3,427,000  |
| <i>Total IBNR Reserves as of 6/30/18</i> | \$612,000    |
| <i>Total Outstanding as of 6/30/18</i>   | \$4,038,000  |

*Figures in this Table are limited to Aggregate Stop Loss Limits*

**Comparison of Results with Previous Estimates as of 1/31/18**

| Accident<br>Period | (A)                                       | (B)  | (C)                                       | (D)                   | (E)   | (F)                                       | (G)                    |                       |
|--------------------|---|--|---|-----------------------|---|---|------------------------|-----------------------|
|                    | Actual<br>Reported<br>Losses<br>1/31/2018 | Projected<br>Reported<br>Losses<br>6/30/2018 | Actual<br>Reported<br>Losses<br>6/30/2018 | Percent<br>Difference | Expected<br>Ultimate<br>Losses<br>1/31/2018 | Actual<br>Ultimate<br>Losses<br>6/30/2018 | Year-End<br>Adjustment | Percent<br>Difference |
| 7/1/11-12          | \$4,018,489                               | \$4,018,489                                  | \$4,018,489                               | 0.0%                  | \$4,018,489                                 | \$4,018,489                               | \$0                    | 0.0%                  |
| 7/1/12-13          | \$5,029,175                               | \$5,029,175                                  | \$5,029,175                               | 0.0%                  | \$5,029,175                                 | \$5,029,175                               | \$0                    | 0.0%                  |
| 7/1/13-14          | \$3,895,352                               | \$3,895,352                                  | \$3,896,177                               | 0.0%                  | \$3,895,352                                 | \$3,896,352                               | \$1,000                | 0.0%                  |
| 7/1/14-15          | \$4,662,027                               | \$4,669,469                                  | \$4,888,282                               | 4.7%                  | \$4,678,000                                 | \$4,890,913                               | \$212,913              | 4.6%                  |
| 7/1/15-16          | \$4,794,734                               | \$4,837,000                                  | \$4,819,370                               | -0.4%                 | \$4,837,000                                 | \$4,837,000                               | \$0                    | 0.0%                  |
| 7/1/16-17          | \$5,751,577                               | \$5,920,000                                  | \$5,766,030                               | -2.6%                 | \$5,920,000                                 | \$5,920,000                               | \$0                    | 0.0%                  |
| 7/1/17-18          | \$4,061,279                               | \$6,351,000                                  | \$5,464,314                               | -14.0%                | \$6,351,000                                 | \$5,901,000                               | -\$450,000             | -7.1%                 |
| <b>Total</b>       | <b>\$32,212,632</b>                       | <b>\$34,720,485</b>                          | <b>\$33,881,837</b>                       | <b>-2.4%</b>          | <b>\$34,729,015</b>                         | <b>\$34,492,928</b>                       | <b>-\$236,087</b>      | <b>-0.7%</b>          |

- (A) and (E) - From Previous actuarial report as of 1/31/2018  
 Losses below \$250,000 SIR plus Corridor Losses
- (B) - Derived from (A) and (E) using loss development patterns
- (C) - Provided by OSIG, limited to SIR and Corridor
- (D) = [(C) / (B)] - 1
- (F) - (E) + (G)
- (G) - Judgmentally Selected based on experience

**Distribution of Losses for 7/1/18-19  
 With a \$250,000 SIR and \$1,400,000 Corridor**

| <i>Percentile</i>         | <i>SIR Layer<br/>\$250,000<br/>All Perils</i> | <i>Cost of<br/>Corridor<br/>Ltd. \$1.4M</i> | <i>Total<br/>Retained<br/>Losses</i> | <i>Insured<br/>Excess<br/>Losses</i> | <i>Total<br/>Incurred<br/>Losses</i> |
|---------------------------|---|---|--------------------------------------|--------------------------------------|--------------------------------------|
| 20.0%                     | \$5,158,000                                   | \$1,400,000                                 | \$6,551,000                          | \$3,160,000                          | \$10,309,000                         |
| 30.0%                     | \$5,493,000                                   | \$1,400,000                                 | \$6,888,000                          | \$4,324,000                          | \$11,747,000                         |
| 40.0%                     | \$5,789,000                                   | \$1,400,000                                 | \$7,187,000                          | \$5,624,000                          | \$13,211,000                         |
| 50.0%                     | \$6,063,000                                   | \$1,400,000                                 | \$7,463,000                          | \$7,054,000                          | \$14,721,000                         |
| 60.0%                     | \$6,384,000                                   | \$1,400,000                                 | \$7,780,000                          | \$8,756,000                          | \$16,658,000                         |
| 70.0%                     | \$6,711,000                                   | \$1,400,000                                 | \$8,109,000                          | \$11,137,000                         | \$19,036,000                         |
| 75.0%                     | \$6,893,000                                   | \$1,400,000                                 | \$8,291,000                          | \$12,663,000                         | \$20,654,000                         |
| 80.0%                     | \$7,114,000                                   | \$1,400,000                                 | \$8,512,000                          | \$14,643,000                         | \$22,723,000                         |
| 85.0%                     | \$7,368,000                                   | \$1,400,000                                 | \$8,768,000                          | \$17,412,000                         | \$25,349,000                         |
| 90.0%                     | \$7,694,000                                   | \$1,400,000                                 | \$9,094,000                          | \$21,207,000                         | \$29,065,000                         |
| 95.0%                     | \$8,251,000                                   | \$1,400,000                                 | \$9,651,000                          | \$26,147,000                         | \$34,278,000                         |
| 99.0%                     | \$9,445,000                                   | \$1,400,000                                 | \$10,845,000                         | \$36,816,000                         | \$45,426,000                         |
| <b>Expected</b>           | <b>\$6,143,000</b>                            | <b>\$1,400,000</b>                          | <b>\$7,543,000</b>                   | <b>\$9,475,000</b>                   | <b>\$17,018,000</b>                  |
| <i>TIV in \$100s</i>      | \$118,067,243                                 |   |                                      |                                      |                                      |
| <b>Cost Per \$100 TIV</b> | <b>\$0.052</b>                                | <b>\$0.012</b>                              | <b>\$0.064</b>                       | <b>\$0.080</b>                       | <b>\$0.144</b>                       |
| <i>APD</i>                | \$826,000                                     | \$0   | \$826,000                            | \$0                                  | \$826,000                            |
| <i>Other Property</i>     | \$5,317,000                                   | \$1,400,000                                 | \$6,717,000                          | \$9,475,000                          | \$16,192,000                         |

**Comparison of Results with Previous Estimates as of 1/31/18**

|              | (A)<br>Actual<br>Reported<br>Losses<br>1/31/2018 | (B)<br>Expected<br>Reported<br>Losses<br>6/30/2018 | (C)<br>Actual<br>Reported<br>Losses<br>6/30/2018 | (D)<br>Percent<br>Difference | (E)<br>Ultimate<br>Losses<br>1/31/2018 | (F)<br>Ultimate<br>Losses<br>6/30/2018 | (G)<br>Year-end<br>Adjustment | Percent<br>Difference |
|--------------|--|--|--|------------------------------|--|--|-------------------------------|-----------------------|
| 7/1/02-03    | \$65,087   | \$65,087   | \$65,087   | 0.0%                         | \$65,087                               | \$65,087                               | \$0                           | 0.0%                  |
| 7/1/03-04    | \$357,297  | \$357,297  | \$357,297  | 0.0%                         | \$357,297                              | \$357,297                              | \$0                           | 0.0%                  |
| 7/1/04-05    | \$618,336  | \$618,336  | \$618,336  | 0.0%                         | \$618,336                              | \$618,336                              | \$0                           | 0.0%                  |
| 7/1/05-06    | \$450,928  | \$450,928  | \$450,928  | 0.0%                         | \$450,928                              | \$450,928                              | \$0                           | 0.0%                  |
| 7/1/06-07    | \$535,205  | \$535,205  | \$535,205  | 0.0%                         | \$535,205                              | \$535,205                              | \$0                           | 0.0%                  |
| 7/1/07-08    | \$759,907  | \$759,907  | \$759,907  | 0.0%                         | \$759,907                              | \$759,907                              | \$0                           | 0.0%                  |
| 7/1/08-09    | \$1,423,346                                      | \$1,423,346  | \$1,423,346                                      | 0.0%                         | \$1,423,346                            | \$1,423,346                            | \$0                           | 0.0%                  |
| 7/1/09-10    | \$706,085  | \$706,054  | \$703,413  | -0.4%                        | \$706,000                              | \$706,000                              | \$0                           | 0.0%                  |
| 7/1/10-11    | \$843,333  | \$843,210  | \$843,333  | 0.0%                         | \$843,000                              | \$843,000                              | \$0                           | 0.0%                  |
| 7/1/11-12    | \$973,586  | \$973,739  | \$973,586  | 0.0%                         | \$974,000                              | \$974,000                              | \$0                           | 0.0%                  |
| 7/1/12-13    | \$625,317  | \$625,573  | \$625,317  | 0.0%                         | \$626,000                              | \$626,000                              | \$0                           | 0.0%                  |
| 7/1/13-14    | \$700,899  | \$701,692  | \$674,842  | -3.8%                        | \$703,000                              | \$678,000                              | -\$25,000                     | -3.6%                 |
| 7/1/14-15    | \$1,164,683                                      | \$1,168,223  | \$1,221,735                                      | 4.6%                         | \$1,174,000                            | \$1,224,000                            | \$50,000                      | 4.3%                  |
| 7/1/15-16    | \$1,129,687                                      | \$1,140,430  | \$1,159,787                                      | 1.7%                         | \$1,158,000                            | \$1,183,000                            | \$25,000                      | 2.2%                  |
| 7/1/16-17    | \$1,065,183                                      | \$1,102,504  | \$1,124,122                                      | 2.0%                         | \$1,166,000                            | \$1,166,000                            | \$0                           | 0.0%                  |
| 7/1/17-18    | \$531,156  | \$974,035  | \$925,038  | -5.0%                        | \$1,143,000                            | \$1,093,000                            | -\$50,000                     | -4.4%                 |
| <b>Total</b> | <b>\$11,950,035</b>                              | <b>\$12,445,567</b>                                | <b>\$12,461,279</b>                              | <b>0.1%</b>                  | <b>\$12,703,000</b>                    | <b>\$12,703,000</b>                    | <b>\$0</b>                    | <b>0.0%</b>           |

Variance in Reported Losses \$15,712

|              | (A)<br>Actual<br>Paid<br>Losses<br>1/31/2018 | (B)<br>Expected<br>Paid<br>Losses<br>6/30/2018 | (C)<br>Actual<br>Paid<br>Losses<br>6/30/2018 | (D)<br>Percent<br>Difference | (E)<br>Ultimate<br>Losses<br>1/31/2018 | (F)<br>Ultimate<br>Losses<br>6/30/2018 | (G)<br>Year-end<br>Adjustment | Percent<br>Difference |
|--------------|--|--|--|------------------------------|--|--|-------------------------------|-----------------------|
| 7/1/02-03    | \$65,087                                     | \$65,087                                       | \$65,087                                     | 0.0%                         | \$65,087                               | \$65,087                               | \$0                           | 0.0%                  |
| 7/1/03-04    | \$357,297                                    | \$357,297                                      | \$357,297                                    | 0.0%                         | \$357,297                              | \$357,297                              | \$0                           | 0.0%                  |
| 7/1/04-05    | \$618,336                                    | \$618,336                                      | \$618,336                                    | 0.0%                         | \$618,336                              | \$618,336                              | \$0                           | 0.0%                  |
| 7/1/05-06    | \$450,928                                    | \$450,928                                      | \$450,928                                    | 0.0%                         | \$450,928                              | \$450,928                              | \$0                           | 0.0%                  |
| 7/1/06-07    | \$535,205                                    | \$535,205                                      | \$535,205                                    | 0.0%                         | \$535,205                              | \$535,205                              | \$0                           | 0.0%                  |
| 7/1/07-08    | \$759,907                                    | \$759,907                                      | \$759,907                                    | 0.0%                         | \$759,907                              | \$759,907                              | \$0                           | 0.0%                  |
| 7/1/08-09    | \$1,423,346                                  | \$1,423,346                                    | \$1,423,346                                  | 0.0%                         | \$1,423,346                            | \$1,423,346                            | \$0                           | 0.0%                  |
| 7/1/09-10    | \$687,646                                    | \$692,768                                      | \$703,413                                    | 1.5%                         | \$706,000                              | \$706,000                              | \$0                           | 0.0%                  |
| 7/1/10-11    | \$843,333                                    | \$843,237                                      | \$843,333                                    | 0.0%                         | \$843,000                              | \$843,000                              | \$0                           | 0.0%                  |
| 7/1/11-12    | \$947,823                                    | \$955,683                                      | \$947,823                                    | -0.8%                        | \$974,000                              | \$974,000                              | \$0                           | 0.0%                  |
| 7/1/12-13    | \$625,317                                    | \$625,530                                      | \$625,317                                    | 0.0%                         | \$626,000                              | \$626,000                              | \$0                           | 0.0%                  |
| 7/1/13-14    | \$673,722                                    | \$683,145                                      | \$674,842                                    | -1.2%                        | \$703,000                              | \$678,000                              | -\$25,000                     | -3.6%                 |
| 7/1/14-15    | \$862,433                                    | \$964,834                                      | \$874,245                                    | -9.4%                        | \$1,174,000                            | \$1,224,000                            | \$50,000                      | 4.3%                  |
| 7/1/15-16    | \$889,240                                    | \$976,228                                      | \$924,765                                    | -5.3%                        | \$1,158,000                            | \$1,183,000                            | \$25,000                      | 2.2%                  |
| 7/1/16-17    | \$833,576                                    | \$929,391                                      | \$853,354                                    | -8.2%                        | \$1,166,000                            | \$1,166,000                            | \$0                           | 0.0%                  |
| 7/1/17-18    | \$217,543                                    | \$536,129                                      | \$390,369                                    | -27.2%                       | \$1,143,000                            | \$1,093,000                            | -\$50,000                     | -4.4%                 |
| <b>Total</b> | <b>\$10,790,739</b>                          | <b>\$11,417,050</b>                            | <b>\$11,047,566</b>                          | <b>-3.2%</b>                 | <b>\$12,703,000</b>                    | <b>\$12,703,000</b>                    | <b>\$0</b>                    | <b>0.0%</b>           |

(A) and (E) - From Previous actuarial report as of 01/31/2018

(B) - Derived from (E) and (A) using loss development patterns

(C) - Provided by OSIG, limited to SIR

(D) = [(C) / (B)] - 1

(F) = (E) + adjustment in (G)

(G) - Judgmentally selected based on experience

**Estimated Outstanding Losses**

| <i>Accident Period</i>     | <i>(A)<br/>Estimated<br/>Ultimate<br/>Losses</i> | <i>(B)<br/>Limited<br/>Paid<br/>Losses</i> | <i>(C)<br/>Limited<br/>Reported<br/>Losses</i> | <i>(D)<br/>Limited<br/>Case<br/>Reserves</i> | <i>(E)<br/>IBNR<br/>Losses</i> | <i>(F)<br/>Outstanding<br/>Losses</i> |
|----------------------------|--|--|--|--|--------------------------------|---------------------------------------|
| <b>As of June 30, 2018</b> |  |  |  |  |                                |                                       |
| 7/1/02-03                  | \$65,087   | \$65,087                                   | \$65,087                                       | \$0  | \$0                            | \$0                                   |
| 7/1/03-04                  | \$357,297  | \$357,297                                  | \$357,297                                      | \$0  | \$0                            | \$0                                   |
| 7/1/04-05                  | \$618,336  | \$618,336                                  | \$618,336                                      | \$0  | \$0                            | \$0                                   |
| 7/1/05-06                  | \$450,928  | \$450,928                                  | \$450,928                                      | \$0  | \$0                            | \$0                                   |
| 7/1/06-07                  | \$535,205  | \$535,205                                  | \$535,205                                      | \$0  | \$0                            | \$0                                   |
| 7/1/07-08                  | \$759,907  | \$759,907                                  | \$759,907                                      | \$0  | \$0                            | \$0                                   |
| 7/1/08-09                  | \$1,423,346                                      | \$1,423,346                                | \$1,423,346                                    | \$0  | \$0                            | \$0                                   |
| 7/1/09-10                  | \$706,000  | \$703,413                                  | \$703,413                                      | \$0  | \$3,000                        | \$3,000                               |
| 7/1/10-11                  | \$843,000  | \$843,333                                  | \$843,333                                      | \$0  | \$0                            | \$0                                   |
| 7/1/11-12                  | \$974,000  | \$947,823                                  | \$973,586                                      | \$25,762                                     | \$0                            | \$26,000                              |
| 7/1/12-13                  | \$626,000  | \$625,317                                  | \$625,317                                      | \$0  | \$1,000                        | \$1,000                               |
| 7/1/13-14                  | \$678,000  | \$674,842                                  | \$674,842                                      | \$0  | \$3,000                        | \$3,000                               |
| 7/1/14-15                  | \$1,224,000                                      | \$874,245                                  | \$1,221,735                                    | \$347,490                                    | \$2,000                        | \$350,000                             |
| 7/1/15-16                  | \$1,183,000                                      | \$924,765                                  | \$1,159,787                                    | \$235,022                                    | \$23,000                       | \$258,000                             |
| 7/1/16-17                  | \$1,166,000                                      | \$853,354                                  | \$1,124,122                                    | \$270,769                                    | \$42,000                       | \$313,000                             |
| 7/1/17-18                  | \$1,093,000                                      | \$390,369                                  | \$925,038                                      | \$534,669                                    | \$168,000                      | \$703,000                             |
| <b>Total</b>               | <b>\$12,703,000</b>                              | <b>\$11,047,566</b>                        | <b>\$12,461,279</b>                            | <b>\$1,413,713</b>                           | <b>\$242,000</b>               | <b>\$1,657,000</b>                    |

**Total Estimated IBNR as of June 30, 2018 \$242,000**

- (A) - Table 1
- (B) and (C) - Provided by OSIG, limited to SIR
- (D) = (C) - (B)
- (E) = (A) - (C)
- (F) = (A) - (B)

**Distribution of Forecast Losses for 7/1/18-19  
Assuming a \$100,000 SIR**

| <i>Percentile</i>        | <i>SIR Layer<br/>\$100,000</i> | <i>Layer<br/>\$900,000 xs<br/>\$100,000</i> | <i>Losses<br/>Limited to<br/>\$1,000,000</i> | <i>Losses<br/>Excess of<br/>\$1,000,000</i> | <i>Total<br/>Incurred<br/>Losses</i> |
|--------------------------|--------------------------------|---|--|---|--------------------------------------|
| 20.0%                    | \$1,052,000                    | \$36,000                                    | \$1,133,000                                  | \$0   | \$1,133,000                          |
| 30.0%                    | \$1,130,000                    | \$61,000                                    | \$1,231,000                                  | \$0   | \$1,231,000                          |
| 40.0%                    | \$1,203,000                    | \$86,000                                    | \$1,317,000                                  | \$0   | \$1,317,000                          |
| 50.0%                    | \$1,271,000                    | \$112,000                                   | \$1,410,000                                  | \$0   | \$1,410,000                          |
| 60.0%                    | \$1,342,000                    | \$144,000                                   | \$1,492,000                                  | \$0   | \$1,492,000                          |
| 70.0%                    | \$1,423,000                    | \$181,000                                   | \$1,590,000                                  | \$0   | \$1,590,000                          |
| 75.0%                    | \$1,466,000                    | \$204,000                                   | \$1,648,000                                  | \$0   | \$1,648,000                          |
| 80.0%                    | \$1,517,000                    | \$232,000                                   | \$1,712,000                                  | \$0   | \$1,712,000                          |
| 85.0%                    | \$1,576,000                    | \$266,000                                   | \$1,791,000                                  | \$0   | \$1,791,000                          |
| 90.0%                    | \$1,663,000                    | \$309,000                                   | \$1,900,000                                  | \$0   | \$1,900,000                          |
| 95.0%                    | \$1,793,000                    | \$381,000                                   | \$2,063,000                                  | \$0   | \$2,063,000                          |
| 99.0%                    | \$2,061,000                    | \$549,000                                   | \$2,409,000                                  | \$0   | \$2,409,000                          |
| <b>Expected</b>          | <b>\$1,291,000</b>             | <b>\$142,000</b>                            | <b>\$1,433,000</b>                           | <b>\$0</b>                                  | <b>\$1,433,000</b>                   |
| <i>Vehicles</i>          | 11,011                         |   |  |   |                                      |
| <i>Students</i>          | 448,230                        |   |  |   |                                      |
| <b>Cost Per Vehicle*</b> | <b>\$117</b>                   | <b>\$13</b>                                 | <b>\$130</b>                                 | <b>\$0</b>                                  | <b>\$130</b>                         |
| <b>Cost Per Student</b>  | <b>\$2.88</b>                  | <b>\$0.32</b>                               | <b>\$3.20</b>                                | <b>\$0.00</b>                               | <b>\$3.20</b>                        |

\* - Cost per Vehicle based on Forecast study as of 1/31/2018  
Forecast losses adjusted for change in exposure

**Comparison of Results with Previous Estimates as of 1/31/18**

|              | (A)<br>Actual<br>Reported<br>Losses<br>1/31/2018 | (B)<br>Projected<br>Reported<br>Losses<br>6/30/2018 | (C)<br>Actual<br>Reported<br>Losses<br>6/30/2018 | (D)<br>Percent<br>Difference | (E)<br>Expected<br>Ultimate<br>Losses<br>1/31/2018 | (F)<br>Actual<br>Ultimate<br>Losses<br>6/30/2018 | (G)<br>Year-End<br>Adjustment | Percent<br>Difference |
|--------------|--|---|--|------------------------------|--|--|-------------------------------|-----------------------|
| 7/1/02-03    | \$168,909  | \$168,909   | \$168,909  | 0.0%                         | \$168,909  | \$168,909  | \$0                           | 0.0%                  |
| 7/1/03-04    | \$840,274  | \$840,274   | \$840,274  | 0.0%                         | \$840,274  | \$840,274  | \$0                           | 0.0%                  |
| 7/1/04-05    | \$488,972  | \$488,972   | \$488,972  | 0.0%                         | \$488,972  | \$488,972  | \$0                           | 0.0%                  |
| 7/1/05-06    | \$1,253,449                                      | \$1,253,449   | \$1,253,449                                      | 0.0%                         | \$1,253,449  | \$1,253,449                                      | \$0                           | 0.0%                  |
| 7/1/06-07    | \$953,237  | \$953,237   | \$953,237  | 0.0%                         | \$953,237  | \$953,237  | \$0                           | 0.0%                  |
| 7/1/07-08    | \$1,432,614                                      | \$1,432,614   | \$1,432,614                                      | 0.0%                         | \$1,432,614  | \$1,432,614                                      | \$0                           | 0.0%                  |
| 7/1/08-09    | \$1,159,541                                      | \$1,159,541   | \$1,159,541                                      | 0.0%                         | \$1,159,541  | \$1,159,541                                      | \$0                           | 0.0%                  |
| 7/1/09-10    | \$1,292,498                                      | \$1,292,898   | \$1,292,498                                      | 0.0%                         | \$1,294,000  | \$1,294,000                                      | \$0                           | 0.0%                  |
| 7/1/10-11    | \$1,838,086                                      | \$1,839,134   | \$1,838,086                                      | -0.1%                        | \$1,842,000  | \$1,842,000                                      | \$0                           | 0.0%                  |
| 7/1/11-12    | \$1,489,325                                      | \$1,490,852   | \$1,459,814                                      | -2.1%                        | \$1,495,000  | \$1,470,000                                      | -\$25,000                     | -1.7%                 |
| 7/1/12-13    | \$878,345  | \$880,412   | \$847,052  | -3.8%                        | \$886,000  | \$861,000  | -\$25,000                     | -2.8%                 |
| 7/1/13-14    | \$826,108  | \$830,934   | \$821,705  | -1.1%                        | \$844,000  | \$844,000  | \$0                           | 0.0%                  |
| 7/1/14-15    | \$1,815,129                                      | \$1,833,801   | \$1,737,044                                      | -5.3%                        | \$1,885,000  | \$1,810,000                                      | -\$75,000                     | -4.0%                 |
| 7/1/15-16    | \$2,020,067                                      | \$2,066,858   | \$1,937,319                                      | -6.3%                        | \$2,200,000  | \$2,100,000                                      | -\$100,000                    | -4.5%                 |
| 7/1/16-17    | \$2,029,363                                      | \$2,120,241   | \$2,103,443                                      | -0.8%                        | \$2,402,000  | \$2,402,000                                      | \$0                           | 0.0%                  |
| 7/1/17-18    | \$400,116  | \$1,172,298   | \$917,464  | -21.7%                       | \$1,730,000  | \$1,430,000                                      | -\$300,000                    | -17.3%                |
| <b>Total</b> | <b>\$18,886,034</b>                              | <b>\$19,824,424</b>                                 | <b>\$19,251,420</b>                              | <b>-2.9%</b>                 | <b>\$20,874,996</b>                                | <b>\$20,349,996</b>                              | <b>-\$525,000</b>             | <b>-2.5%</b>          |

Variance In Reported Losses -\$573,004

|              | (A)<br>Actual<br>Paid<br>Losses<br>1/31/2018 | (B)<br>Projected<br>Paid<br>Losses<br>6/30/2018 | (C)<br>Actual<br>Paid<br>Losses<br>6/30/2018 | (D)<br>Percent<br>Difference | (E)<br>Expected<br>Ultimate<br>Losses<br>1/31/2018 | (F)<br>Actual<br>Ultimate<br>Losses<br>6/30/2018 | (G)<br>Year-End<br>Adjustment | Percent<br>Difference |
|--------------|--|---|--|------------------------------|--|--|-------------------------------|-----------------------|
| 7/1/02-03    | \$168,909                                    | \$168,909                                       | \$168,909                                    | 0.0%                         | \$168,909  | \$168,909  | \$0                           | 0.0%                  |
| 7/1/03-04    | \$840,274                                    | \$840,274                                       | \$840,274                                    | 0.0%                         | \$840,274  | \$840,274  | \$0                           | 0.0%                  |
| 7/1/04-05    | \$488,972                                    | \$488,972                                       | \$488,972                                    | 0.0%                         | \$488,972  | \$488,972  | \$0                           | 0.0%                  |
| 7/1/05-06    | \$1,253,449                                  | \$1,253,449                                     | \$1,253,449                                  | 0.0%                         | \$1,253,449  | \$1,253,449                                      | \$0                           | 0.0%                  |
| 7/1/06-07    | \$953,237                                    | \$953,237                                       | \$953,237                                    | 0.0%                         | \$953,237  | \$953,237  | \$0                           | 0.0%                  |
| 7/1/07-08    | \$1,432,614                                  | \$1,432,614                                     | \$1,432,614                                  | 0.0%                         | \$1,432,614  | \$1,432,614                                      | \$0                           | 0.0%                  |
| 7/1/08-09    | \$1,159,541                                  | \$1,159,541                                     | \$1,159,541                                  | 0.0%                         | \$1,159,541  | \$1,159,541                                      | \$0                           | 0.0%                  |
| 7/1/09-10    | \$1,271,788                                  | \$1,277,114                                     | \$1,271,815                                  | -0.4%                        | \$1,294,000  | \$1,294,000                                      | \$0                           | 0.0%                  |
| 7/1/10-11    | \$1,799,847                                  | \$1,810,670                                     | \$1,804,139                                  | -0.4%                        | \$1,842,000  | \$1,842,000                                      | \$0                           | 0.0%                  |
| 7/1/11-12    | \$1,470,989                                  | \$1,477,604                                     | \$1,459,814                                  | -1.2%                        | \$1,495,000  | \$1,470,000                                      | -\$25,000                     | -1.7%                 |
| 7/1/12-13    | \$734,356                                    | \$779,093                                       | \$738,029                                    | -5.3%                        | \$886,000  | \$861,000  | -\$25,000                     | -2.8%                 |
| 7/1/13-14    | \$711,535                                    | \$752,755                                       | \$716,792                                    | -4.8%                        | \$844,000  | \$844,000  | \$0                           | 0.0%                  |
| 7/1/14-15    | \$1,257,224                                  | \$1,452,302                                     | \$1,297,850                                  | -10.6%                       | \$1,885,000  | \$1,810,000                                      | -\$75,000                     | -4.0%                 |
| 7/1/15-16    | \$1,078,684                                  | \$1,373,190                                     | \$1,219,220                                  | -11.2%                       | \$2,200,000  | \$2,100,000                                      | -\$100,000                    | -4.5%                 |
| 7/1/16-17    | \$480,867                                    | \$769,294                                       | \$740,062                                    | -3.8%                        | \$2,402,000  | \$2,402,000                                      | \$0                           | 0.0%                  |
| 7/1/17-18    | \$28,936                                     | \$123,589                                       | \$56,435                                     | -54.3%                       | \$1,730,000  | \$1,430,000                                      | -\$300,000                    | -17.3%                |
| <b>Total</b> | <b>\$15,131,223</b>                          | <b>\$16,112,607</b>                             | <b>\$15,601,151</b>                          | <b>-3.2%</b>                 | <b>\$20,874,996</b>                                | <b>\$20,349,996</b>                              | <b>-\$525,000</b>             | <b>-2.5%</b>          |

- (A) and (E) - From Previous actuarial report as of 01/31/2018
- (B) - Derived from (E) and (A) using loss development patterns
- (C) - Provided by OSIG, limited to SIR
- (D) = [(C) / (B)] - 1
- (F) = (E) + (G)
- (G) - Judgmentally selected based on experience



**Estimated Outstanding Losses**

| <i>Accident<br/>Period</i> | <i>(A)<br/>Estimated<br/>Ultimate<br/>Losses</i> | <i>(B)<br/>Limited<br/>Paid<br/>Losses</i> | <i>(C)<br/>Limited<br/>Reported<br/>Losses</i> | <i>(D)<br/>Limited<br/>Case<br/>Reserves</i> | <i>(E)<br/>IBNR<br/>Losses</i> | <i>(F)<br/>Outstanding<br/>Losses</i> |
|----------------------------|--|--|--|--|--------------------------------|---------------------------------------|
| <b>As of June 30, 2018</b> |  |  |  |  |                                |                                       |
| 7/1/02-03                  | \$168,909  | \$168,909                                  | \$168,909                                      | \$0  | \$0                            | \$0                                   |
| 7/1/03-04                  | \$840,274  | \$840,274                                  | \$840,274                                      | \$0  | \$0                            | \$0                                   |
| 7/1/04-05                  | \$488,972  | \$488,972                                  | \$488,972                                      | \$0  | \$0                            | \$0                                   |
| 7/1/05-06                  | \$1,253,449                                      | \$1,253,449                                | \$1,253,449                                    | \$0  | \$0                            | \$0                                   |
| 7/1/06-07                  | \$953,237  | \$953,237                                  | \$953,237                                      | \$0  | \$0                            | \$0                                   |
| 7/1/07-08                  | \$1,432,614                                      | \$1,432,614                                | \$1,432,614                                    | \$0  | \$0                            | \$0                                   |
| 7/1/08-09                  | \$1,159,541                                      | \$1,159,541                                | \$1,159,541                                    | \$0  | \$0                            | \$0                                   |
| 7/1/09-10                  | \$1,294,000                                      | \$1,271,815                                | \$1,292,498                                    | \$20,683                                     | \$2,000                        | \$22,000                              |
| 7/1/10-11                  | \$1,842,000                                      | \$1,804,139                                | \$1,838,086                                    | \$33,947                                     | \$4,000                        | \$38,000                              |
| 7/1/11-12                  | \$1,470,000                                      | \$1,459,814                                | \$1,459,814                                    | \$0  | \$10,000                       | \$10,000                              |
| 7/1/12-13                  | \$861,000  | \$738,029                                  | \$847,052                                      | \$109,023                                    | \$14,000                       | \$123,000                             |
| 7/1/13-14                  | \$844,000  | \$716,792                                  | \$821,705                                      | \$104,913                                    | \$22,000                       | \$127,000                             |
| 7/1/14-15                  | \$1,810,000                                      | \$1,297,850                                | \$1,737,044                                    | \$439,194                                    | \$73,000                       | \$512,000                             |
| 7/1/15-16                  | \$2,100,000                                      | \$1,219,220                                | \$1,937,319                                    | \$718,099                                    | \$163,000                      | \$881,000                             |
| 7/1/16-17                  | \$2,402,000                                      | \$740,062                                  | \$2,103,443                                    | \$1,363,380                                  | \$299,000                      | \$1,662,000                           |
| 7/1/17-18                  | \$1,430,000                                      | \$56,435                                   | \$917,464                                      | \$861,030                                    | \$513,000                      | \$1,374,000                           |
| <b>Total</b>               | <b>\$20,350,000</b>                              | <b>\$15,601,151</b>                        | <b>\$19,251,420</b>                            | <b>\$3,650,269</b>                           | <b>\$1,100,000</b>             | <b>\$4,749,000</b>                    |

**Total Estimated IBNR as of June 30, 2018 \$1,100,000**

(A) - Table 1

(B) and (C) - Provided by OSIG, limited to SIR

(D) = (C) - (B)

(E) = (A) - (C)

(F) = (A) - (B)

**Distribution of Forecast Losses for 7/1/18-19  
 Assuming a \$100,000 SIR**

| Percentile               | SIR Layer<br>\$100,000 | Layer<br>\$900,000 xs<br>\$100,000 | Losses<br>Limited to<br>\$1,000,000 | Losses<br>Excess of<br>\$1,000,000 | Total<br>Incurred<br>Losses |
|--------------------------|------------------------|------------------------------------|-------------------------------------|------------------------------------|-----------------------------|
| 20.0%                    | \$1,864,000            | \$421,000                          | \$2,452,000                         | \$0                                | \$2,452,000                 |
| 30.0%                    | \$2,026,000            | \$530,000                          | \$2,707,000                         | \$0                                | \$2,708,000                 |
| 40.0%                    | \$2,170,000            | \$631,000                          | \$2,922,000                         | \$0                                | \$2,926,000                 |
| 50.0%                    | \$2,319,000            | \$734,000                          | \$3,124,000                         | \$0                                | \$3,131,000                 |
| 60.0%                    | \$2,466,000            | \$859,000                          | \$3,347,000                         | \$0                                | \$3,355,000                 |
| 70.0%                    | \$2,631,000            | \$1,003,000                        | \$3,603,000                         | \$0                                | \$3,619,000                 |
| 75.0%                    | \$2,725,000            | \$1,086,000                        | \$3,731,000                         | \$0                                | \$3,753,000                 |
| 80.0%                    | \$2,842,000            | \$1,183,000                        | \$3,888,000                         | \$0                                | \$3,921,000                 |
| 85.0%                    | \$2,979,000            | \$1,291,000                        | \$4,075,000                         | \$0                                | \$4,121,000                 |
| 90.0%                    | \$3,172,000            | \$1,442,000                        | \$4,329,000                         | \$0                                | \$4,387,000                 |
| 95.0%                    | \$3,472,000            | \$1,677,000                        | \$4,725,000                         | \$0                                | \$4,845,000                 |
| 99.0%                    | \$4,141,000            | \$2,156,000                        | \$5,499,000                         | \$879,000                          | \$5,865,000                 |
| <b>Expected</b>          | <b>\$2,388,000</b>     | <b>\$819,000</b>                   | <b>\$3,207,000</b>                  | <b>\$23,000</b>                    | <b>\$3,230,000</b>          |
| <i>Students</i>          | 448,230                |                                    |                                     |                                    |                             |
| <b>Cost Per Student*</b> | <b>\$5.33</b>          | <b>\$1.83</b>                      | <b>\$7.15</b>                       | <b>\$0.05</b>                      | <b>\$7.21</b>               |

\*- Cost per Student taken from forecast study as of 1/31/2018  
 Forecast losses are adjusted for change in exposure estimate

**Comparison of Results with Previous Estimates as of 01/31/18  
SIR Losses Only**

| Accident<br>Period          | (A)                                       | (B)  | (C)                                       | (D)                   | (E)   | (F)                                       | (G)                    |                       |
|-----------------------------|---|--|---|-----------------------|---|---|------------------------|-----------------------|
|                             | Actual<br>Reported<br>Losses<br>1/31/2018 | Projected<br>Reported<br>Losses<br>6/30/2018 | Actual<br>Reported<br>Losses<br>6/30/2018 | Percent<br>Difference | Expected<br>Ultimate<br>Losses<br>1/31/2018 | Actual<br>Ultimate<br>Losses<br>6/30/2018 | Year-end<br>Adjustment | Percent<br>Difference |
| 7/1/02-03                   | \$312,045                                 | \$312,045                                    | \$312,045                                 | 0.0%                  | \$312,045                                   | \$312,045                                 | \$0                    | 0.0%                  |
| 7/1/03-04                   | \$1,287,169                               | \$1,287,169                                  | \$1,287,169                               | 0.0%                  | \$1,287,169                                 | \$1,287,169                               | \$0                    | 0.0%                  |
| 7/1/04-05                   | \$1,266,993                               | \$1,266,993                                  | \$1,266,993                               | 0.0%                  | \$1,266,993                                 | \$1,266,993                               | \$0                    | 0.0%                  |
| 7/1/05-06                   | \$2,616,997                               | \$2,616,997                                  | \$2,616,997                               | 0.0%                  | \$2,616,997                                 | \$2,616,997                               | \$0                    | 0.0%                  |
| 7/1/06-07                   | \$2,604,514                               | \$2,604,514                                  | \$2,604,514                               | 0.0%                  | \$2,604,514                                 | \$2,604,514                               | \$0                    | 0.0%                  |
| 7/1/07-08                   | \$3,915,481                               | \$3,915,481                                  | \$3,915,481                               | 0.0%                  | \$3,915,481                                 | \$3,915,481                               | \$0                    | 0.0%                  |
| 7/1/08-09                   | \$4,561,347                               | \$4,561,347                                  | \$4,561,347                               | 0.0%                  | \$4,561,347                                 | \$4,561,347                               | \$0                    | 0.0%                  |
| 7/1/09-10                   | \$4,870,042                               | \$4,870,042                                  | \$4,870,042                               | 0.0%                  | \$4,870,042                                 | \$4,870,042                               | \$0                    | 0.0%                  |
| 7/1/10-11                   | \$3,569,472                               | \$3,569,472                                  | \$3,569,472                               | 0.0%                  | \$3,569,472                                 | \$3,569,472                               | \$0                    | 0.0%                  |
| 7/1/11-12                   | \$3,201,043                               | \$3,201,043                                  | \$3,201,043                               | 0.0%                  | \$3,201,043                                 | \$3,201,043                               | \$0                    | 0.0%                  |
| 7/1/12-13                   | \$2,629,175                               | \$2,629,175                                  | \$2,629,175                               | 0.0%                  | \$2,629,175                                 | \$2,629,175                               | \$0                    | 0.0%                  |
| 7/1/13-14                   | \$2,495,352                               | \$2,495,352                                  | \$2,496,177                               | 0.0%                  | \$2,495,352                                 | \$2,496,352                               | \$1,000                | 0.0%                  |
| 7/1/14-15                   | \$3,491,913                               | \$3,491,913                                  | \$3,488,282                               | -0.1%                 | \$3,491,913                                 | \$3,490,913                               | -\$1,000               | 0.0%                  |
| 7/1/15-16                   | \$3,394,734                               | \$3,411,199                                  | \$3,419,370                               | 0.2%                  | \$3,437,000                                 | \$3,437,000                               | \$0                    | 0.0%                  |
| 7/1/16-17                   | \$4,351,577                               | \$4,416,737                                  | \$4,366,030                               | -1.1%                 | \$4,520,000                                 | \$4,520,000                               | \$0                    | 0.0%                  |
| 7/1/17-18                   | \$2,661,279                               | \$4,581,504                                  | \$4,064,314                               | -11.3%                | \$4,951,000                                 | \$4,501,000                               | -\$450,000             | -9.1%                 |
| <b>Total</b>                | <b>\$47,229,131</b>                       | <b>\$49,230,981</b>                          | <b>\$48,668,450</b>                       | <b>-1.1%</b>          | <b>\$49,729,541</b>                         | <b>\$49,279,541</b>                       | <b>-\$450,000</b>      | <b>-0.9%</b>          |
| Variance in Reported Losses |   |  | -\$562,531                                |                       |   |   |                        |                       |

- (A) and (E) - From Previous actuarial report as of 01/31/2018  
Limited to \$250,000 for 11-12 through 16-17
- (B) - Derived from (A) and (E) using loss development patterns
- (C) - Provided by OSIG, limited to SIR
- (D) = [(C) / (B)] - 1
- (F) - (E) + (G)
- (G) = Judgmentally selected based on experience

**Comparison of Results with Previous Estimates as of 01/31/18  
 SIR Losses and Corridor**

|                                    | (A)                                       | (B)  | (C)                                       | (D)                   | (E)   | (F)                                       | (G)                    |                       |
|------------------------------------|---|--|---|-----------------------|---|---|------------------------|-----------------------|
| Accident<br>Period                 | Actual<br>Reported<br>Losses<br>1/31/2018 | Projected<br>Reported<br>Losses<br>6/30/2018 | Actual<br>Reported<br>Losses<br>6/30/2018 | Percent<br>Difference | Expected<br>Ultimate<br>Losses<br>1/31/2018 | Actual<br>Ultimate<br>Losses<br>6/30/2018 | Year-end<br>Adjustment | Percent<br>Difference |
| 7/1/02-03                          | \$312,045                                 | \$312,045                                    | \$312,045                                 | 0.0%                  | \$312,045                                   | \$312,045                                 | \$0                    | 0.0%                  |
| 7/1/03-04                          | \$1,287,169                               | \$1,287,169                                  | \$1,287,169                               | 0.0%                  | \$1,287,169                                 | \$1,287,169                               | \$0                    | 0.0%                  |
| 7/1/04-05                          | \$1,266,993                               | \$1,266,993                                  | \$1,266,993                               | 0.0%                  | \$1,266,993                                 | \$1,266,993                               | \$0                    | 0.0%                  |
| 7/1/05-06                          | \$2,616,997                               | \$2,616,997                                  | \$2,616,997                               | 0.0%                  | \$2,616,997                                 | \$2,616,997                               | \$0                    | 0.0%                  |
| 7/1/06-07                          | \$2,604,514                               | \$2,604,514                                  | \$2,604,514                               | 0.0%                  | \$2,604,514                                 | \$2,604,514                               | \$0                    | 0.0%                  |
| 7/1/07-08                          | \$3,915,481                               | \$3,915,481                                  | \$3,915,481                               | 0.0%                  | \$3,915,481                                 | \$3,915,481                               | \$0                    | 0.0%                  |
| 7/1/08-09                          | \$4,561,347                               | \$4,561,347                                  | \$4,561,347                               | 0.0%                  | \$4,561,347                                 | \$4,561,347                               | \$0                    | 0.0%                  |
| 7/1/09-10                          | \$4,870,042                               | \$4,870,042                                  | \$4,870,042                               | 0.0%                  | \$4,870,042                                 | \$4,870,042                               | \$0                    | 0.0%                  |
| 7/1/10-11                          | \$3,569,472                               | \$3,569,472                                  | \$3,569,472                               | 0.0%                  | \$3,569,472                                 | \$3,569,472                               | \$0                    | 0.0%                  |
| 7/1/11-12                          | \$4,018,489                               | \$4,018,489                                  | \$4,018,489                               | 0.0%                  | \$4,018,489                                 | \$4,018,489                               | \$0                    | 0.0%                  |
| 7/1/12-13                          | \$5,029,175                               | \$5,029,175                                  | \$5,029,175                               | 0.0%                  | \$5,029,175                                 | \$5,029,175                               | \$0                    | 0.0%                  |
| 7/1/13-14                          | \$3,895,352                               | \$3,895,352                                  | \$3,896,177                               | 0.0%                  | \$3,895,352                                 | \$3,896,352                               | \$1,000                | 0.0%                  |
| 7/1/14-15                          | \$4,662,027                               | \$4,669,469                                  | \$4,888,282                               | 4.7%                  | \$4,678,000                                 | \$4,890,913                               | \$212,913              | 4.6%                  |
| 7/1/15-16                          | \$4,794,734                               | \$4,837,000                                  | \$4,819,370                               | -0.4%                 | \$4,837,000                                 | \$4,837,000                               | \$0                    | 0.0%                  |
| 7/1/16-17                          | \$5,751,577                               | \$5,920,000                                  | \$5,766,030                               | -2.6%                 | \$5,920,000                                 | \$5,920,000                               | \$0                    | 0.0%                  |
| 7/1/17-18                          | \$4,061,279                               | \$6,351,000                                  | \$5,464,314                               | -14.0%                | \$6,351,000                                 | \$5,901,000                               | -\$450,000             | -7.1%                 |
| <b>Total</b>                       | <b>\$57,216,691</b>                       | <b>\$59,724,543</b>                          | <b>\$58,885,896</b>                       | <b>-1.4%</b>          | <b>\$59,733,074</b>                         | <b>\$59,496,987</b>                       | <b>-\$236,087</b>      | <b>-0.4%</b>          |
| <b>Variance in Reported Losses</b> |   |  | <b>-\$838,648</b>                         |                       |   |   |                        |                       |

- (A) and (E) - From Previous actuarial report as of 01/31/2018  
 Includes Corridor Losses for 11-12 through 16-17
- (B) - Derived from (A) and (E) using loss development patterns
- (C) - Provided by OSIG, limited to SIR and Corridor
- (D) = [(C) / (B)] - 1
- (F) = (E) + (G)
- (G) = Judgmentally Selected Based on Experience

**Estimated Outstanding Losses**

| Accident<br>Period         | SIR                        | (A)                           | (B)                       | (C)                           | (D)                         | (E)              | (F)                   |
|----------------------------|----------------------------|-------------------------------|---------------------------|-------------------------------|-----------------------------|------------------|-----------------------|
|                            |                            | Limited<br>Ultimate<br>Losses | Limited<br>Paid<br>Losses | Limited<br>Reported<br>Losses | Limited<br>Case<br>Reserves | IBNR<br>Losses   | Outstanding<br>Losses |
| <b>As of June 30, 2018</b> |                            |                               |                           |                               |                             |                  |                       |
| 7/1/02-03                  | \$100k/\$200k              | \$312,045                     | \$312,045                 | \$312,045                     | \$0                         | \$0              | \$0                   |
| 7/1/03-04                  | \$100k/\$200k              | \$1,287,169                   | \$1,287,169               | \$1,287,169                   | \$0                         | \$0              | \$0                   |
| 7/1/04-05                  | \$100k/\$200k              | \$1,266,993                   | \$1,266,993               | \$1,266,993                   | \$0                         | \$0              | \$0                   |
| 7/1/05-06                  | \$100k/\$200k              | \$2,616,997                   | \$2,616,997               | \$2,616,997                   | \$0                         | \$0              | \$0                   |
| 7/1/06-07                  | \$100k/\$200k              | \$2,604,514                   | \$2,604,514               | \$2,604,514                   | \$0                         | \$0              | \$0                   |
| 7/1/07-08                  | \$100k/\$200k              | \$3,915,481                   | \$3,915,481               | \$3,915,481                   | \$0                         | \$0              | \$0                   |
| 7/1/08-09                  | \$100k/\$200k              | \$4,561,347                   | \$4,561,347               | \$4,561,347                   | \$0                         | \$0              | \$0                   |
| 7/1/09-10                  | \$100k/\$200k              | \$4,870,042                   | \$4,870,042               | \$4,870,042                   | \$0                         | \$0              | \$0                   |
| 7/1/10-11                  | \$100k/\$200k              | \$3,569,472                   | \$3,569,472               | \$3,569,472                   | \$0                         | \$0              | \$0                   |
| 7/1/11-12                  | \$250,000 /\$2.7M corridor | \$4,018,489                   | \$4,018,489               | \$4,018,489                   | \$0                         | \$0              | \$0                   |
| 7/1/12-13                  | \$250,000 /\$2.4M corridor | \$5,029,175                   | \$5,029,175               | \$5,029,175                   | \$0                         | \$0              | \$0                   |
| 7/1/13-14                  | \$250,000 /\$1.4M corridor | \$3,896,352                   | \$3,896,177               | \$3,896,177                   | \$0                         | \$0              | \$0                   |
| 7/1/14-15                  | \$250,000 /\$1.4M corridor | \$4,890,913                   | \$4,413,273               | \$4,888,282                   | \$475,009                   | \$3,000          | \$478,000             |
| 7/1/15-16                  | \$250,000 /\$1.4M corridor | \$4,837,000                   | \$4,803,375               | \$4,819,370                   | \$15,996                    | \$18,000         | \$34,000              |
| 7/1/16-17                  | \$250,000 /\$1.4M corridor | \$5,920,000                   | \$5,011,655               | \$5,766,030                   | \$754,375                   | \$154,000        | \$908,000             |
| 7/1/17-18                  | \$250,000 /\$1.4M corridor | \$5,901,000                   | \$3,281,592               | \$5,464,314                   | \$2,182,723                 | \$437,000        | \$2,619,000           |
| <b>Total</b>               |                            | <b>\$59,496,987</b>           | <b>\$55,457,793</b>       | <b>\$58,885,896</b>           | <b>\$3,428,102</b>          | <b>\$612,000</b> | <b>\$4,039,000</b>    |

**Total Estimated IBNR as of June 30, 2018 \$612,000**

- (A) - Table 1
- (B) and (C) - Provided by OSIG, limited to SIR and Corridor
- (D) = (C) - (B)
- (E) = (A) - (C)
- (F) = (A) - (B)

**Estimated Outstanding Losses for SIR and Corridor**

| Accident<br>Period           | SIR       | Corridor    | (A)                           | (B)                       | (C)                           | (D)                         | (E)            | (F)                   |
|------------------------------|-----------|-------------|-------------------------------|---------------------------|-------------------------------|-----------------------------|----------------|-----------------------|
|                              |           |             | Limited<br>Ultimate<br>Losses | Limited<br>Paid<br>Losses | Limited<br>Reported<br>Losses | Limited<br>Case<br>Reserves | IBNR<br>Losses | Outstanding<br>Losses |
| <b>As of June 30, 2018</b>   |           |             |                               |                           |                               |                             |                |                       |
| <b>Stop Loss Years Total</b> |           |             | \$25,004,059                  | \$25,004,059              | \$25,004,059                  | \$0                         | \$0            | \$0                   |
| <b>SIR Losses</b>            |           |             |                               |                           |                               |                             |                |                       |
| 7/1/11-12                    | \$250,000 |             | \$3,201,043                   | \$3,201,043               | \$3,201,043                   | \$0                         | \$0            | \$0                   |
| 7/1/12-13                    | \$250,000 |             | \$2,629,175                   | \$2,629,175               | \$2,629,175                   | \$0                         | \$0            | \$0                   |
| 7/1/13-14                    | \$250,000 |             | \$2,496,352                   | \$2,496,177               | \$2,496,177                   | \$0                         | \$0            | \$0                   |
| 7/1/14-15                    | \$250,000 |             | \$3,490,913                   | \$3,386,650               | \$3,488,282                   | \$102,000                   | \$3,000        | \$104,000             |
| 7/1/15-16                    | \$250,000 |             | \$3,437,000                   | \$3,403,375               | \$3,419,370                   | \$16,000                    | \$18,000       | \$34,000              |
| 7/1/16-17                    | \$250,000 |             | \$4,520,000                   | \$3,611,655               | \$4,366,030                   | \$754,000                   | \$154,000      | \$908,000             |
| 7/1/17-18                    | \$250,000 |             | \$4,501,000                   | \$2,885,050               | \$4,064,314                   | \$1,179,000                 | \$437,000      | \$1,616,000           |
| <b>Corridor Losses</b>       |           |             |                               |                           |                               |                             |                |                       |
| 7/1/11-12                    |           | \$2,700,000 | \$817,446                     | \$817,446                 | \$817,446                     | \$0                         | \$0            | \$0                   |
| 7/1/12-13                    |           | \$2,400,000 | \$2,400,000                   | \$2,400,000               | \$2,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/13-14                    |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/14-15                    |           | \$1,400,000 | \$1,400,000                   | \$1,026,623               | \$1,400,000                   | \$373,000                   | \$0            | \$373,000             |
| 7/1/15-16                    |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/16-17                    |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/17-18                    |           | \$1,400,000 | \$1,400,000                   | \$396,542                 | \$1,400,000                   | \$1,003,000                 | \$0            | \$1,003,000           |
| <b>Total</b>                 |           |             | \$59,497,000                  | \$55,458,000              | \$58,886,000                  | \$3,427,000                 | \$612,000      | \$4,038,000           |

**Total Estimated IBNR as of June 30, 2018 \$612,000**

**Distribution of Losses for 7/1/18-19**  
**With a \$250,000 SIR and \$1,400,000 Corridor**

| <i>Percentile</i>         | <i>SIR Layer<br/>\$250,000<br/>All Perils</i> | <i>Cost of<br/>Corridor<br/>Ltd. \$1.4M</i> | <i>Total<br/>Retained<br/>Losses</i> | <i>Insured<br/>Excess<br/>Losses</i> | <i>Total<br/>Incurred<br/>Losses</i> |
|---------------------------|---|---|--------------------------------------|--------------------------------------|--------------------------------------|
| 20.0%                     | \$5,158,000                                   | \$1,400,000                                 | \$6,551,000                          | \$3,160,000                          | \$10,309,000                         |
| 30.0%                     | \$5,493,000                                   | \$1,400,000                                 | \$6,888,000                          | \$4,324,000                          | \$11,747,000                         |
| 40.0%                     | \$5,789,000                                   | \$1,400,000                                 | \$7,187,000                          | \$5,624,000                          | \$13,211,000                         |
| 50.0%                     | \$6,063,000                                   | \$1,400,000                                 | \$7,463,000                          | \$7,054,000                          | \$14,721,000                         |
| 60.0%                     | \$6,384,000                                   | \$1,400,000                                 | \$7,780,000                          | \$8,756,000                          | \$16,658,000                         |
| 70.0%                     | \$6,711,000                                   | \$1,400,000                                 | \$8,109,000                          | \$11,137,000                         | \$19,036,000                         |
| 75.0%                     | \$6,893,000                                   | \$1,400,000                                 | \$8,291,000                          | \$12,663,000                         | \$20,654,000                         |
| 80.0%                     | \$7,114,000                                   | \$1,400,000                                 | \$8,512,000                          | \$14,643,000                         | \$22,723,000                         |
| 85.0%                     | \$7,368,000                                   | \$1,400,000                                 | \$8,768,000                          | \$17,412,000                         | \$25,349,000                         |
| 90.0%                     | \$7,694,000                                   | \$1,400,000                                 | \$9,094,000                          | \$21,207,000                         | \$29,065,000                         |
| 95.0%                     | \$8,251,000                                   | \$1,400,000                                 | \$9,651,000                          | \$26,147,000                         | \$34,278,000                         |
| 99.0%                     | \$9,445,000                                   | \$1,400,000                                 | \$10,845,000                         | \$36,816,000                         | \$45,426,000                         |
| <b>Expected</b>           | <b>\$6,143,000</b>                            | <b>\$1,400,000</b>                          | <b>\$7,543,000</b>                   | <b>\$9,475,000</b>                   | <b>\$17,018,000</b>                  |
| <i>TIV in \$100s</i>      | \$118,067,243                                 |   |                                      |                                      |                                      |
| <b>Cost Per \$100 TIV</b> | <b>\$0.052</b>                                | <b>\$0.012</b>                              | <b>\$0.064</b>                       | <b>\$0.080</b>                       | <b>\$0.144</b>                       |



# Statement of Actuarial Opinion

---

Oklahoma Schools Insurance Group

---

December 10, 2018

Based on data as of June 30, 2018

---



---

**STATEMENT OF ACTUARIAL OPINION****Net Retained Liabilities as of June 30, 2018  
Premium Adequacy for 7/1/18-19****Oklahoma Schools Insurance Group**

I, Laura T. Sprouse, am a Fellow of the Casualty Actuarial Society and a Member of the American Academy of Actuaries and meet the Academy's qualification standards for prescribed Statements of Actuarial Opinion. Although no formal appointment was made by the Board of Directors (or equivalent authority) of Oklahoma Schools Insurance Group (OSIG), I have been asked to opine on the adequacy of the reserves for loss and loss adjustment expenses (including IBNR), and the adequacy of premiums for the Oklahoma Schools Insurance Group. This opinion is prepared in accordance with *Actuarial Standards of Practice No. 36 and No. 43*.

The scope of this review is to evaluate outstanding losses and allocated loss expense reserves (including IBNR) for OSIG's retained liabilities for automobile liability, general liability, and property including auto physical damage evaluated as of June 30, 2018, and to evaluate the premiums for the period July 1, 2018, through June 30, 2019.

The review was based upon summaries of loss and expense data and other related information supplied by Jennifer McKenzie, Arthur J. Gallagher. The data were not audited for accuracy, but were checked for reasonableness and consistency through comparison to previous loss runs. Based on these data, the required reserves were estimated using generally accepted actuarial assumptions and methods. The review included such examination of the assumptions and methods used and such tests of the calculations as I considered necessary.

***Loss and ALAE Reserves as of June 30, 2018***

My analysis produced the following estimates of unpaid liabilities for losses and allocated loss adjustment expenses as of June 30, 2018, net of reinsurance.

|                           |                    |
|---------------------------|--------------------|
| Case Reserves             | \$8,491,000        |
| IBNR Reserves             | <u>\$1,952,000</u> |
| Total Loss & ALAE Reserve | \$10,443,000       |

In my opinion, OSIG's carried reserve amount of \$10,870,371 is a reasonable estimate of the net outstanding loss and allocated loss adjustment expense for accident periods ending June 30, 2018.

Due to the nature of third party liability claims and OSIG's relatively large retention, it is possible that OSIG could experience a fluctuation of material size from the expected outstanding losses. We have observed some emergence of property losses in the third and fourth report year. However, any such loss would be capped at \$250,000 since the corridor has been used up for each of the last six years. We have selected a materiality threshold of \$1,182,000 which is about 10% of surplus. While it is possible that losses could develop by more than this, the probability of this amount of adverse development is less than 5%. Therefore, I would conclude there is not a significant risk of material adverse development.

### *Premium adequacy for 7/1/18-19*

My analysis produced a forecast of the ultimate retained losses for the period 7/1/18-19 of \$11,222,000. OSIG has budgeted roughly \$22,161,000 for reinsurance premiums and other expenses for a total budget of \$33,383,000. OSIG expects to collect about \$32,622,000 in member contributions and earn another \$205,000 in investment income. The expected shortfall of \$556,000 is less than 5% of surplus. OSIG currently has a reserve-to-surplus ratio of 0.92, and I would consider this to be a suitable use of surplus.

### *Actuarial Reports*

The reserve opinion was based on the actuarial study for OSIG dated March 23, 2018, and the letter dated August 24, 2018, that summarized our reserve review as of June 30, 2018. The premium adequacy opinion for 7/1/18-19 was based on my actuarial study dated March 23, 2018, and the August 24 letter.

This opinion was prepared solely for the purpose of filing with regulatory agencies and is not intended for any other purpose.

Sincerely,

---

Laura T. Sprouse, FCAS, MAAA

Select Actuarial Services  
28 White Bridge Rd, Suite 205  
Nashville, Tennessee 37205  
(615) 620-7584  
laura.sprouse@selectactuarial.com

December 10, 2018



August 24, 2018

Ms. Jennifer McKenzie  
Oklahoma Schools Insurance Group  
Arthur J. Gallagher Risk Management Services, Inc.  
1300 S. Main  
Tulsa, OK 74119

RE: OSIG Actuarial Update as of 6/30/18

Dear Jennifer,

The purpose of this review is to update the IBNR estimate as of June 30, 2018, based on the actual loss data for the Oklahoma Schools Insurance Group (OSIG) as of June 30, 2018, and to revise the forecast ultimate losses for 7/1/18-19 based on the exposures written on July 1, 2018. I have compared the current data to the data used in the prior actuarial report as of January 31, 2018, and the projected paid and reported losses as of June 30, 2018. For those accident periods where actual losses deviated from expected losses by a significant amount, the ultimate losses for those periods were increased or decreased accordingly. Since IBNR is calculated as the difference in the ultimate losses and the limited reported losses, the level of IBNR may fluctuate although ultimate losses may be relatively stable, or vice versa. Changes in ultimate losses generally track the changes in reported and paid losses compared to expectations. The change in ultimate losses (before applying the aggregate stop loss limits) is shown below.

| Change in Selected Ultimate Losses for years 02/03 through 17/18<br>Compared to Report as of 1/31/18 |                   |
|--|-------------------|
| Automobile Liability   | \$0               |
| General Liability with E&O   | -\$525,000        |
| Property including APD   | -\$236,000        |
| <b>Total</b>   | <b>-\$761,000</b> |

The comparisons of the actual versus expected reported losses as of June 30, 2018, are shown in Table 1 for each line. We have selected a new estimate of ultimate losses based upon the comparison of actual versus expected losses. The change in the ultimate losses is given in terms of a dollar amount as well as an overall percentage change. Experience since the previous actuarial report is better than expected in total. Ultimate losses for liability were decreased \$525,000 in total including decreases for general liability of \$300,000 in the 17-18 year, \$100,000 for 15-16 and smaller decreases on years 14-15, 12-13 and 11-12. Experience for automobile

liability varied by year, but experience in total was close to expected. Adjustments to ultimate losses on individual years had an offsetting effect, so that there was \$0 overall change.

There was an increase in excess property losses in the 14-15 year, and we now expect that OSIG will exceed the corridor deductible of \$1,400,000 for that year. The 17-18 year property claims are better than expected, and the ultimate losses were decreased for this year. In total, ultimate losses for Property were decreased by \$236,000.

The IBNR is calculated in Table A and in Table 2 for each line of business as the difference in the selected ultimate losses and the limited reported losses as of June 30, 2018.

| <b>OSIG Reserve Estimates as of June 30, 2018</b> |                    |                    |
|---|--------------------|--------------------|
|   | <i>Liability</i>   | <i>Property</i>    |
| <i>Case Reserves</i>                              | \$5,064,000        | \$3,427,000        |
| <i>IBNR Reserves</i>                              | \$1,340,000        | \$612,000          |
| <b><i>Total Reserve</i></b>                       | <b>\$6,405,000</b> | <b>\$4,038,000</b> |

The Liability reserves are higher than the projected based on 1/31/18 data. This is because even though the reported and paid losses are less than projected in the prior study, the ultimate losses were also reduced, but not by the same degree. For property, there is \$1,376,000 in case reserves for claims in the corridor and \$2,051,000 in the SIR layer. No IBNR is needed for the excess losses since the corridor has been exceeded. All IBNR for property claims is related to losses within the \$250,000 SIR.

We adjusted the forecast losses for 7/1/18-19 for the change in the amount of exposures to be underwritten in this period. The selected loss rates from the 1/31/18 study were applied to the current exposure estimates to derive the ultimate losses for the 7/1/18-19 year. The liability losses are capped at the \$100,000 deductible.

| <b>Forecast losses for OSIG's Liability Program 7/1/18-19</b> |                        |  |
|---|------------------------|--|
|   | <i>Ultimate Losses</i> | <i>Loss Rate</i>                             |
| <i>Automobile Liability</i>                                   | \$1,291,000            | \$117 per vehicle<br>or (\$2.88 per student) |
| <i>General Liability (including E&amp;O)</i>                  | \$2,388,000            | \$5.33 per student                           |
| <b><i>Total Forecast</i></b>                                  | <b>\$3,679,000</b>     | <b>\$8.21 per student</b>                    |

The Property forecast for 7/1/18-19 is shown below. We expect that OSIG will utilize the full \$1,400,000 corridor deductible again this year. The portion of the \$7,543,000 property forecast associated with Auto Physical Damage claims is \$826,000. The rates per \$100 TIV have changed slightly for property. This is because the APD losses which are all assumed to be included in the SIR layer are projected using vehicle counts. In addition, the corridor is spread over a larger exposure base than before.

| <b>Forecast losses for OSIG's Property Program 7/1/18-19</b> |                        |                              |
|--|------------------------|------------------------------|
|  | <i>Ultimate Losses</i> | <i>Loss Rate</i>             |
| <i>Losses within the \$250,000 Deductible</i>                | \$6,143,000            | \$0.052 per \$100 TIV        |
| <i>Corridor deductible</i>                                   | \$1,400,000            | \$0.012 per \$100 TIV        |
| <b><i>Total Forecast</i></b>                                 | <b>\$7,543,000</b>     | <b>\$0.064 per \$100 TIV</b> |

Table A summarizes the IBNR and Outstanding losses for Liability and Property. Table B shows the IBNR for each of Liability and Property at various confidence levels. Table C shows the comparison of experience between 1/31/18 and 6/30/18. The updated loss projection for the 7/1/18-19 year is in Table D.

If you or your auditors have any questions, I would be happy to answer them. As always, it has been a pleasure serving you and the Oklahoma Schools Insurance Group.

Sincerely,

Laura T. Sprouse, FCAS, MAAA

**Estimated Outstanding Losses for Liability  
As of June 30, 2018**

| Accident<br>Period | Coverage | (A)                             | (B)                       | (C)                           | (D)              | (E)            | (F)                   |
|--------------------|----------|---------------------------------|---------------------------|-------------------------------|------------------|----------------|-----------------------|
|                    |          | Estimated<br>Ultimate<br>Losses | Limited<br>Paid<br>Losses | Limited<br>Reported<br>Losses | Case<br>Reserves | IBNR<br>Losses | Outstanding<br>Losses |
| 2002/03            | AL       | \$65,087                        | \$65,087                  | \$65,087                      | \$0              | \$0            | \$0                   |
| 2003/04            | AL       | \$357,297                       | \$357,297                 | \$357,297                     | \$0              | \$0            | \$0                   |
| 2004/05            | AL       | \$618,336                       | \$618,336                 | \$618,336                     | \$0              | \$0            | \$0                   |
| 2005/06            | AL       | \$450,928                       | \$450,928                 | \$450,928                     | \$0              | \$0            | \$0                   |
| 2006/07            | AL       | \$535,205                       | \$535,205                 | \$535,205                     | \$0              | \$0            | \$0                   |
| 2007/08            | AL       | \$759,907                       | \$759,907                 | \$759,907                     | \$0              | \$0            | \$0                   |
| 2008/09            | AL       | \$1,423,346                     | \$1,423,346               | \$1,423,346                   | \$0              | \$0            | \$0                   |
| 2009/10            | AL       | \$706,000                       | \$703,413                 | \$703,413                     | \$0              | \$3,000        | \$3,000               |
| 2010/11            | AL       | \$843,000                       | \$843,333                 | \$843,333                     | \$0              | \$0            | \$0                   |
| 2011/12            | AL       | \$974,000                       | \$947,823                 | \$973,586                     | \$25,762         | \$0            | \$26,000              |
| 2012/13            | AL       | \$626,000                       | \$625,317                 | \$625,317                     | \$0              | \$1,000        | \$1,000               |
| 2013/14            | AL       | \$678,000                       | \$674,842                 | \$674,842                     | \$0              | \$3,000        | \$3,000               |
| 2014/15            | AL       | \$1,224,000                     | \$874,245                 | \$1,221,735                   | \$347,490        | \$2,000        | \$350,000             |
| 2015/16            | AL       | \$1,183,000                     | \$924,765                 | \$1,159,787                   | \$235,022        | \$23,000       | \$258,000             |
| 2016/17            | AL       | \$1,166,000                     | \$853,354                 | \$1,124,122                   | \$270,769        | \$42,000       | \$313,000             |
| 2017/18            | AL       | \$1,093,000                     | \$390,369                 | \$925,038                     | \$534,669        | \$168,000      | \$703,000             |
|                    |          | \$12,703,000                    | \$11,048,000              | \$12,461,000                  | \$1,414,000      | \$242,000      | \$1,657,000           |

|         |        |              |              |              |             |             |             |
|---------|--------|--------------|--------------|--------------|-------------|-------------|-------------|
| 2002/03 | GL/E&O | \$168,909    | \$168,909    | \$168,909    | \$0         | \$0         | \$0         |
| 2003/04 | GL/E&O | \$840,274    | \$840,274    | \$840,274    | \$0         | \$0         | \$0         |
| 2004/05 | GL/E&O | \$488,972    | \$488,972    | \$488,972    | \$0         | \$0         | \$0         |
| 2005/06 | GL/E&O | \$1,253,449  | \$1,253,449  | \$1,253,449  | \$0         | \$0         | \$0         |
| 2006/07 | GL/E&O | \$953,237    | \$953,237    | \$953,237    | \$0         | \$0         | \$0         |
| 2007/08 | GL/E&O | \$1,432,614  | \$1,432,614  | \$1,432,614  | \$0         | \$0         | \$0         |
| 2008/09 | GL/E&O | \$1,159,541  | \$1,159,541  | \$1,159,541  | \$0         | \$0         | \$0         |
| 2009/10 | GL/E&O | \$1,294,000  | \$1,271,815  | \$1,292,498  | \$20,683    | \$2,000     | \$22,000    |
| 2010/11 | GL/E&O | \$1,842,000  | \$1,804,139  | \$1,838,086  | \$33,947    | \$4,000     | \$38,000    |
| 2011/12 | GL/E&O | \$1,470,000  | \$1,459,814  | \$1,459,814  | \$0         | \$10,000    | \$10,000    |
| 2012/13 | GL/E&O | \$861,000    | \$738,029    | \$847,052    | \$109,023   | \$14,000    | \$123,000   |
| 2013/14 | GL/E&O | \$844,000    | \$716,792    | \$821,705    | \$104,913   | \$22,000    | \$127,000   |
| 2014/15 | GL/E&O | \$1,810,000  | \$1,297,850  | \$1,737,044  | \$439,194   | \$73,000    | \$512,000   |
| 2015/16 | GL/E&O | \$2,100,000  | \$1,219,220  | \$1,937,319  | \$718,099   | \$163,000   | \$881,000   |
| 2016/17 | GL/E&O | \$2,402,000  | \$740,062    | \$2,103,443  | \$1,363,380 | \$299,000   | \$1,662,000 |
| 2017/18 | GL/E&O | \$1,430,000  | \$56,435     | \$917,464    | \$861,030   | \$513,000   | \$1,374,000 |
|         |        | \$20,350,000 | \$15,601,000 | \$19,251,000 | \$3,650,000 | \$1,100,000 | \$4,749,000 |

| <b>Total Liability Losses Limited to Policy Aggregate Stop Loss</b> |                    |                               |                           |                               |                    |                    |                       |
|---|--------------------|-------------------------------|---------------------------|-------------------------------|--------------------|--------------------|-----------------------|
| Accident<br>Period  | Aggregate<br>Limit | Ultimate<br>Limited<br>Losses | Limited<br>Paid<br>Losses | Limited<br>Reported<br>Losses | Case<br>Reserves   | IBNR<br>Losses     | Outstanding<br>Losses |
| Prior   |                    | \$10,507,103                  | \$10,507,103              | \$10,507,103                  | \$0                | \$0                | \$0                   |
| 2009/10   | \$3,549,580        | \$2,000,000                   | \$1,975,228               | \$1,995,911                   | \$20,683           | \$4,000            | \$25,000              |
| 2010/11   | \$3,869,920        | \$2,685,000                   | \$2,647,472               | \$2,681,419                   | \$33,947           | \$4,000            | \$38,000              |
| 2011/12   | \$3,416,075        | \$2,444,000                   | \$2,407,637               | \$2,433,399                   | \$25,762           | \$11,000           | \$36,000              |
| 2012/13   | \$2,788,172        | \$1,487,000                   | \$1,363,345               | \$1,472,369                   | \$109,023          | \$15,000           | \$124,000             |
| 2013/14   | \$3,473,373        | \$1,522,000                   | \$1,391,633               | \$1,496,546                   | \$104,913          | \$25,000           | \$130,000             |
| 2014/15   | \$3,994,646        | \$3,034,000                   | \$2,172,095               | \$2,958,779                   | \$786,684          | \$75,000           | \$862,000             |
| 2015/16   | \$4,017,890        | \$3,283,000                   | \$2,143,984               | \$3,097,106                   | \$953,121          | \$186,000          | \$1,139,000           |
| 2016/17   | \$4,147,089        | \$3,568,000                   | \$1,593,416               | \$3,227,565                   | \$1,634,149        | \$340,000          | \$1,975,000           |
| 2017/18   | \$4,271,645        | \$2,523,000                   | \$446,804                 | \$1,842,502                   | \$1,395,699        | \$680,000          | \$2,076,000           |
| <b>Total</b>  |                    | <b>\$33,053,000</b>           | <b>\$26,649,000</b>       | <b>\$31,713,000</b>           | <b>\$5,064,000</b> | <b>\$1,340,000</b> | <b>\$6,405,000</b>    |

**Percentile Distribution of IBNR  
 For Liability Coverages  
 As of June 30, 2018**

| <i>percentile</i> | <i>Ultimate<br/>Losses</i> | <i>IBNR<br/>Reserve</i> | <i>Total<br/>Reserve</i> |
|-------------------|----------------------------|-------------------------|--------------------------|
| Expected          | \$33,053,000               | \$1,340,000             | \$6,405,000              |
| 40%               | \$32,649,000               | \$936,000               | \$6,000,000              |
| 50%               | \$32,896,000               | \$1,183,000             | \$6,247,000              |
| 55%               | \$33,011,000               | \$1,298,000             | \$6,362,000              |
| 60%               | \$33,141,000               | \$1,428,000             | \$6,492,000              |
| 65%               | \$33,275,000               | \$1,562,000             | \$6,626,000              |
| 75%               | \$33,558,000               | \$1,845,000             | \$6,909,000              |
| 85%               | \$33,894,000               | \$2,181,000             | \$7,245,000              |
| 90%               | \$34,146,000               | \$2,433,000             | \$7,497,000              |
| 95%               | \$34,501,000               | \$2,788,000             | \$7,852,000              |

|  |              |
|--|--------------|
| <i>Total Expected Ultimate Losses</i>    | \$33,053,000 |
| <i>Total Paid Losses as of 6/30/18</i>   | \$26,649,000 |
| <i>Total Case Reserves as of 6/30/18</i> | \$5,064,000  |
| <i>Total IBNR Reserves as of 6/30/18</i> | \$1,340,000  |
| <i>Total Outstanding as of 6/30/18</i>   | \$6,405,000  |

*Figures in this Table are limited to Aggregate Stop Loss Limits*

Comparison of Results with Previous Estimates as of 1/31/18

| Accident Period | (A)                              | (B)                                | (C)                              | (D)                | (E)                                | (F)                              | (G)                 |                    |
|-----------------|----------------------------------|------------------------------------|----------------------------------|--------------------|------------------------------------|----------------------------------|---------------------|--------------------|
|                 | Actual Reported Losses 1/31/2018 | Expected Reported Losses 6/30/2018 | Actual Reported Losses 6/30/2018 | Percent Difference | Expected Ultimate Losses 1/31/2018 | Actual Ultimate Losses 6/30/2018 | Year-End Adjustment | Percent Difference |
| 2008/09         | \$2,582,887                      | \$2,582,887                        | \$2,582,887                      | 0.0%               | \$2,582,887                        | \$2,582,887                      | \$0                 | 0.0%               |
| 2009/10         | \$1,998,584                      | \$1,998,952                        | \$1,995,911                      | -0.2%              | \$2,000,000                        | \$2,000,000                      | \$0                 | 0.0%               |
| 2010/11         | \$2,681,419                      | \$2,682,344                        | \$2,681,419                      | 0.0%               | \$2,685,000                        | \$2,685,000                      | \$0                 | 0.0%               |
| 2011/12         | \$2,462,911                      | \$2,464,592                        | \$2,433,399                      | -1.3%              | \$2,469,000                        | \$2,444,000                      | -\$25,000           | -1.0%              |
| 2012/13         | \$1,503,662                      | \$1,505,984                        | \$1,472,369                      | -2.2%              | \$1,512,000                        | \$1,487,000                      | -\$25,000           | -1.7%              |
| 2013/14         | \$1,527,007                      | \$1,532,626                        | \$1,496,546                      | -2.4%              | \$1,547,000                        | \$1,522,000                      | -\$25,000           | -1.6%              |
| 2014/15         | \$2,979,812                      | \$3,002,024                        | \$2,958,779                      | -1.4%              | \$3,059,000                        | \$3,034,000                      | -\$25,000           | -0.8%              |
| 2015/16         | \$3,149,754                      | \$3,207,288                        | \$3,097,106                      | -3.4%              | \$3,358,000                        | \$3,283,000                      | -\$75,000           | -2.2%              |
| 2016/17         | \$3,094,546                      | \$3,222,744                        | \$3,227,565                      | 0.1%               | \$3,568,000                        | \$3,568,000                      | \$0                 | 0.0%               |
| 2017/18         | \$931,272                        | \$2,146,334                        | \$1,842,502                      | -14.2%             | \$2,873,000                        | \$2,523,000                      | -\$350,000          | -12.2%             |
| <b>Total</b>    | <b>\$22,911,853</b>              | <b>\$24,345,775</b>                | <b>\$23,788,483</b>              | <b>-2.3%</b>       | <b>\$25,653,887</b>                | <b>\$25,128,887</b>              | <b>-\$525,000</b>   | <b>-2.0%</b>       |

Variance in Reported Losses -\$557,292

| Accident Period | (A)                          | (B)                            | (C)                          | (D)                | (E)                                | (F)                              | (G)                 |                    |
|-----------------|------------------------------|--------------------------------|------------------------------|--------------------|------------------------------------|----------------------------------|---------------------|--------------------|
|                 | Actual Paid Losses 1/31/2018 | Expected Paid Losses 6/30/2018 | Actual Paid Losses 6/30/2018 | Percent Difference | Expected Ultimate Losses 1/31/2018 | Actual Ultimate Losses 6/30/2018 | Year-End Adjustment | Percent Difference |
| 2008/09         | \$2,582,887                  | \$2,582,887                    | \$2,582,887                  | 0.0%               | \$2,582,887                        | \$2,582,887                      | \$0                 | 0.0%               |
| 2009/10         | \$1,959,433                  | \$1,969,882                    | \$1,975,228                  | 0.3%               | \$2,000,000                        | \$2,000,000                      | \$0                 | 0.0%               |
| 2010/11         | \$2,643,180                  | \$2,653,907                    | \$2,647,472                  | -0.2%              | \$2,685,000                        | \$2,685,000                      | \$0                 | 0.0%               |
| 2011/12         | \$2,418,812                  | \$2,433,287                    | \$2,407,637                  | -1.1%              | \$2,469,000                        | \$2,444,000                      | -\$25,000           | -1.0%              |
| 2012/13         | \$1,359,673                  | \$1,404,623                    | \$1,363,345                  | -2.9%              | \$1,512,000                        | \$1,487,000                      | -\$25,000           | -1.7%              |
| 2013/14         | \$1,385,257                  | \$1,435,900                    | \$1,391,633                  | -3.1%              | \$1,547,000                        | \$1,522,000                      | -\$25,000           | -1.6%              |
| 2014/15         | \$2,119,657                  | \$2,417,136                    | \$2,172,095                  | -10.1%             | \$3,059,000                        | \$3,034,000                      | -\$25,000           | -0.8%              |
| 2015/16         | \$1,967,924                  | \$2,349,418                    | \$2,143,984                  | -8.7%              | \$3,358,000                        | \$3,283,000                      | -\$75,000           | -2.2%              |
| 2016/17         | \$1,314,443                  | \$1,698,684                    | \$1,593,416                  | -6.2%              | \$3,568,000                        | \$3,568,000                      | \$0                 | 0.0%               |
| 2017/18         | \$246,480                    | \$659,718                      | \$446,804                    | -32.3%             | \$2,873,000                        | \$2,523,000                      | -\$350,000          | -12.2%             |
| <b>Total</b>    | <b>\$17,997,746</b>          | <b>\$19,605,441</b>            | <b>\$18,724,501</b>          | <b>-4.5%</b>       | <b>\$25,653,887</b>                | <b>\$25,128,887</b>              | <b>-\$525,000</b>   | <b>-2.0%</b>       |

- (A) and (E) - From Previous actuarial report as of 01/31/18
- (B) - Derived from (E) and (A) using loss development patterns
- (C) - Provided by OSIG, limited to SIR
- (D) = [(C) / (B)] - 1
- (F) - (E) + (G)
- (G) - Judgmentally Selected based on experience



**Distribution of Losses for 7/1/18-19  
 Assuming a \$100,000 SIR**

| <i>Percentile</i>       | <i>SIR Layer<br/>\$100,000</i> | <i>Layer<br/>\$900,000 xs<br/>\$100,000</i> | <i>Losses<br/>Limited to<br/>\$1,000,000</i> | <i>Losses<br/>Excess of<br/>\$1,000,000</i> | <i>Total<br/>Incurred<br/>Losses</i> |
|-------------------------|--------------------------------|---|--|---|--------------------------------------|
| 20.0%                   | \$3,112,000                    | \$552,000                                   | \$3,841,000                                  | \$0   | \$3,842,000                          |
| 30.0%                   | \$3,296,000                    | \$666,000                                   | \$4,106,000                                  | \$0   | \$4,108,000                          |
| 40.0%                   | \$3,458,000                    | \$773,000                                   | \$4,347,000                                  | \$0   | \$4,350,000                          |
| 50.0%                   | \$3,608,000                    | \$885,000                                   | \$4,569,000                                  | \$0   | \$4,573,000                          |
| 60.0%                   | \$3,771,000                    | \$1,012,000                                 | \$4,802,000                                  | \$0   | \$4,815,000                          |
| 70.0%                   | \$3,961,000                    | \$1,157,000                                 | \$5,068,000                                  | \$0   | \$5,087,000                          |
| 75.0%                   | \$4,072,000                    | \$1,239,000                                 | \$5,214,000                                  | \$0   | \$5,236,000                          |
| 80.0%                   | \$4,196,000                    | \$1,338,000                                 | \$5,384,000                                  | \$0   | \$5,416,000                          |
| 85.0%                   | \$4,351,000                    | \$1,452,000                                 | \$5,582,000                                  | \$0   | \$5,630,000                          |
| 90.0%                   | \$4,540,000                    | \$1,599,000                                 | \$5,841,000                                  | \$0   | \$5,914,000                          |
| 95.0%                   | \$4,857,000                    | \$1,836,000                                 | \$6,246,000                                  | \$0   | \$6,349,000                          |
| 99.0%                   | \$5,585,000                    | \$2,341,000                                 | \$7,099,000                                  | \$879,000                                   | \$7,332,000                          |
| <b>Expected</b>         | <b>\$3,679,000</b>             | <b>\$961,000</b>                            | <b>\$4,640,000</b>                           | <b>\$23,000</b>                             | <b>\$4,663,000</b>                   |
| <i>Students</i>         | 448,230                        |   |  |   |                                      |
| <b>Cost Per Student</b> | <b>\$8.21</b>                  | <b>\$2.14</b>                               | <b>\$10.35</b>                               | <b>\$0.05</b>                               | <b>\$10.40</b>                       |

**Estimated Outstanding Losses for SIR and Corridor**

| Accident<br>Period            | SIR       | Corridor    | (A)                           | (B)                       | (C)                           | (D)                         | (E)            | (F)                   |
|-------------------------------|-----------|-------------|-------------------------------|---------------------------|-------------------------------|-----------------------------|----------------|-----------------------|
|                               |           |             | Limited<br>Ultimate<br>Losses | Limited<br>Paid<br>Losses | Limited<br>Reported<br>Losses | Limited<br>Case<br>Reserves | IBNR<br>Losses | Outstanding<br>Losses |
| <b><u>SIR Losses</u></b>      |           |             |                               |                           |                               |                             |                |                       |
| 7/1/11-12                     | \$250,000 |             | \$3,201,043                   | \$3,201,043               | \$3,201,043                   | \$0                         | \$0            | \$0                   |
| 7/1/12-13                     | \$250,000 |             | \$2,629,175                   | \$2,629,175               | \$2,629,175                   | \$0                         | \$0            | \$0                   |
| 7/1/13-14                     | \$250,000 |             | \$2,496,352                   | \$2,496,177               | \$2,496,177                   | \$0                         | \$0            | \$0                   |
| 7/1/14-15                     | \$250,000 |             | \$3,490,913                   | \$3,386,650               | \$3,488,282                   | \$102,000                   | \$3,000        | \$104,000             |
| 7/1/15-16                     | \$250,000 |             | \$3,437,000                   | \$3,403,375               | \$3,419,370                   | \$16,000                    | \$18,000       | \$34,000              |
| 7/1/16-17                     | \$250,000 |             | \$4,520,000                   | \$3,611,655               | \$4,366,030                   | \$754,000                   | \$154,000      | \$908,000             |
| 7/1/17-18                     | \$250,000 |             | \$4,501,000                   | \$2,885,050               | \$4,064,314                   | \$1,179,000                 | \$437,000      | \$1,616,000           |
| <b><u>Corridor Losses</u></b> |           |             |                               |                           |                               |                             |                |                       |
| 7/1/11-12                     |           | \$2,700,000 | \$817,446                     | \$817,446                 | \$817,446                     | \$0                         | \$0            | \$0                   |
| 7/1/12-13                     |           | \$2,400,000 | \$2,400,000                   | \$2,400,000               | \$2,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/13-14                     |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/14-15                     |           | \$1,400,000 | \$1,400,000                   | \$1,026,623               | \$1,400,000                   | \$373,000                   | \$0            | \$373,000             |
| 7/1/15-16                     |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/16-17                     |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/17-18                     |           | \$1,400,000 | \$1,400,000                   | \$396,542                 | \$1,400,000                   | \$1,003,000                 | \$0            | \$1,003,000           |
| <b>Total</b>                  |           |             | \$34,493,000                  | \$30,454,000              | \$33,882,000                  | \$3,427,000                 | \$612,000      | \$4,038,000           |

**Total Estimated IBNR as of June 30, 2018 \$612,000**

**Percentile Distribution of IBNR  
 For Property Coverages  
 As of June 30, 2018**

| <i>percentile</i> | <i>Ultimate<br/>Losses</i> | <i>IBNR<br/>Reserve</i> | <i>Total<br/>Reserve</i> |
|-------------------|----------------------------|-------------------------|--------------------------|
| Expected          | \$34,493,000               | \$612,000               | \$4,038,000              |
| 40%               | \$34,388,000               | \$507,000               | \$3,934,000              |
| 50%               | \$34,488,000               | \$607,000               | \$4,034,000              |
| 55%               | \$34,537,000               | \$656,000               | \$4,083,000              |
| 60%               | \$34,589,000               | \$708,000               | \$4,135,000              |
| 65%               | \$34,641,000               | \$760,000               | \$4,187,000              |
| 75%               | \$34,764,000               | \$883,000               | \$4,310,000              |
| 85%               | \$34,908,000               | \$1,027,000             | \$4,454,000              |
| 90%               | \$35,014,000               | \$1,133,000             | \$4,560,000              |
| 95%               | \$35,161,000               | \$1,280,000             | \$4,707,000              |

|  |              |
|--|--------------|
| <i>Total Expected Ultimate Losses</i>    | \$34,493,000 |
| <i>Total Paid Losses as of 6/30/18</i>   | \$30,454,000 |
| <i>Total Case Reserves as of 6/30/18</i> | \$3,427,000  |
| <i>Total IBNR Reserves as of 6/30/18</i> | \$612,000    |
| <i>Total Outstanding as of 6/30/18</i>   | \$4,038,000  |

*Figures in this Table are limited to Aggregate Stop Loss Limits*

**Comparison of Results with Previous Estimates as of 1/31/18**

| Accident<br>Period | (A)                                       | (B)  | (C)                                       | (D)                   | (E)   | (F)                                       | (G)                    |                       |
|--------------------|---|--|---|-----------------------|---|---|------------------------|-----------------------|
|                    | Actual<br>Reported<br>Losses<br>1/31/2018 | Projected<br>Reported<br>Losses<br>6/30/2018 | Actual<br>Reported<br>Losses<br>6/30/2018 | Percent<br>Difference | Expected<br>Ultimate<br>Losses<br>1/31/2018 | Actual<br>Ultimate<br>Losses<br>6/30/2018 | Year-End<br>Adjustment | Percent<br>Difference |
| 7/1/11-12          | \$4,018,489                               | \$4,018,489                                  | \$4,018,489                               | 0.0%                  | \$4,018,489                                 | \$4,018,489                               | \$0                    | 0.0%                  |
| 7/1/12-13          | \$5,029,175                               | \$5,029,175                                  | \$5,029,175                               | 0.0%                  | \$5,029,175                                 | \$5,029,175                               | \$0                    | 0.0%                  |
| 7/1/13-14          | \$3,895,352                               | \$3,895,352                                  | \$3,896,177                               | 0.0%                  | \$3,895,352                                 | \$3,896,352                               | \$1,000                | 0.0%                  |
| 7/1/14-15          | \$4,662,027                               | \$4,669,469                                  | \$4,888,282                               | 4.7%                  | \$4,678,000                                 | \$4,890,913                               | \$212,913              | 4.6%                  |
| 7/1/15-16          | \$4,794,734                               | \$4,837,000                                  | \$4,819,370                               | -0.4%                 | \$4,837,000                                 | \$4,837,000                               | \$0                    | 0.0%                  |
| 7/1/16-17          | \$5,751,577                               | \$5,920,000                                  | \$5,766,030                               | -2.6%                 | \$5,920,000                                 | \$5,920,000                               | \$0                    | 0.0%                  |
| 7/1/17-18          | \$4,061,279                               | \$6,351,000                                  | \$5,464,314                               | -14.0%                | \$6,351,000                                 | \$5,901,000                               | -\$450,000             | -7.1%                 |
| <b>Total</b>       | <b>\$32,212,632</b>                       | <b>\$34,720,485</b>                          | <b>\$33,881,837</b>                       | <b>-2.4%</b>          | <b>\$34,729,015</b>                         | <b>\$34,492,928</b>                       | <b>-\$236,087</b>      | <b>-0.7%</b>          |

- (A) and (E) - From Previous actuarial report as of 1/31/2018  
 Losses below \$250,000 SIR plus Corridor Losses
- (B) - Derived from (A) and (E) using loss development patterns
- (C) - Provided by OSIG, limited to SIR and Corridor
- (D) = [(C) / (B)] - 1
- (F) - (E) + (G)
- (G) - Judgmentally Selected based on experience

**Distribution of Losses for 7/1/18-19**  
**With a \$250,000 SIR and \$1,400,000 Corridor**

| <i>Percentile</i>         | <i>SIR Layer<br/>\$250,000<br/>All Perils</i> | <i>Cost of<br/>Corridor<br/>Ltd. \$1.4M</i> | <i>Total<br/>Retained<br/>Losses</i> | <i>Insured<br/>Excess<br/>Losses</i> | <i>Total<br/>Incurred<br/>Losses</i> |
|---------------------------|---|---|--------------------------------------|--------------------------------------|--------------------------------------|
| 20.0%                     | \$5,158,000                                   | \$1,400,000                                 | \$6,551,000                          | \$3,160,000                          | \$10,309,000                         |
| 30.0%                     | \$5,493,000                                   | \$1,400,000                                 | \$6,888,000                          | \$4,324,000                          | \$11,747,000                         |
| 40.0%                     | \$5,789,000                                   | \$1,400,000                                 | \$7,187,000                          | \$5,624,000                          | \$13,211,000                         |
| 50.0%                     | \$6,063,000                                   | \$1,400,000                                 | \$7,463,000                          | \$7,054,000                          | \$14,721,000                         |
| 60.0%                     | \$6,384,000                                   | \$1,400,000                                 | \$7,780,000                          | \$8,756,000                          | \$16,658,000                         |
| 70.0%                     | \$6,711,000                                   | \$1,400,000                                 | \$8,109,000                          | \$11,137,000                         | \$19,036,000                         |
| 75.0%                     | \$6,893,000                                   | \$1,400,000                                 | \$8,291,000                          | \$12,663,000                         | \$20,654,000                         |
| 80.0%                     | \$7,114,000                                   | \$1,400,000                                 | \$8,512,000                          | \$14,643,000                         | \$22,723,000                         |
| 85.0%                     | \$7,368,000                                   | \$1,400,000                                 | \$8,768,000                          | \$17,412,000                         | \$25,349,000                         |
| 90.0%                     | \$7,694,000                                   | \$1,400,000                                 | \$9,094,000                          | \$21,207,000                         | \$29,065,000                         |
| 95.0%                     | \$8,251,000                                   | \$1,400,000                                 | \$9,651,000                          | \$26,147,000                         | \$34,278,000                         |
| 99.0%                     | \$9,445,000                                   | \$1,400,000                                 | \$10,845,000                         | \$36,816,000                         | \$45,426,000                         |
| <b>Expected</b>           | <b>\$6,143,000</b>                            | <b>\$1,400,000</b>                          | <b>\$7,543,000</b>                   | <b>\$9,475,000</b>                   | <b>\$17,018,000</b>                  |
| <i>TIV in \$100s</i>      | \$118,067,243                                 |   |                                      |                                      |                                      |
| <b>Cost Per \$100 TIV</b> | <b>\$0.052</b>                                | <b>\$0.012</b>                              | <b>\$0.064</b>                       | <b>\$0.080</b>                       | <b>\$0.144</b>                       |
| <i>APD</i>                | \$826,000                                     | \$0   | \$826,000                            | \$0                                  | \$826,000                            |
| <i>Other Property</i>     | \$5,317,000                                   | \$1,400,000                                 | \$6,717,000                          | \$9,475,000                          | \$16,192,000                         |

**Comparison of Results with Previous Estimates as of 1/31/18**

|              | (A)<br>Actual<br>Reported<br>Losses<br>1/31/2018 | (B)<br>Expected<br>Reported<br>Losses<br>6/30/2018 | (C)<br>Actual<br>Reported<br>Losses<br>6/30/2018 | (D)<br>Percent<br>Difference | (E)<br>Ultimate<br>Losses<br>1/31/2018 | (F)<br>Ultimate<br>Losses<br>6/30/2018 | (G)<br>Year-end<br>Adjustment | Percent<br>Difference |
|--------------|--|--|--|------------------------------|--|--|-------------------------------|-----------------------|
| 7/1/02-03    | \$65,087   | \$65,087   | \$65,087   | 0.0%                         | \$65,087                               | \$65,087                               | \$0                           | 0.0%                  |
| 7/1/03-04    | \$357,297  | \$357,297  | \$357,297  | 0.0%                         | \$357,297                              | \$357,297                              | \$0                           | 0.0%                  |
| 7/1/04-05    | \$618,336  | \$618,336  | \$618,336  | 0.0%                         | \$618,336                              | \$618,336                              | \$0                           | 0.0%                  |
| 7/1/05-06    | \$450,928  | \$450,928  | \$450,928  | 0.0%                         | \$450,928                              | \$450,928                              | \$0                           | 0.0%                  |
| 7/1/06-07    | \$535,205  | \$535,205  | \$535,205  | 0.0%                         | \$535,205                              | \$535,205                              | \$0                           | 0.0%                  |
| 7/1/07-08    | \$759,907  | \$759,907  | \$759,907  | 0.0%                         | \$759,907                              | \$759,907                              | \$0                           | 0.0%                  |
| 7/1/08-09    | \$1,423,346                                      | \$1,423,346  | \$1,423,346                                      | 0.0%                         | \$1,423,346                            | \$1,423,346                            | \$0                           | 0.0%                  |
| 7/1/09-10    | \$706,085  | \$706,054  | \$703,413  | -0.4%                        | \$706,000                              | \$706,000                              | \$0                           | 0.0%                  |
| 7/1/10-11    | \$843,333  | \$843,210  | \$843,333  | 0.0%                         | \$843,000                              | \$843,000                              | \$0                           | 0.0%                  |
| 7/1/11-12    | \$973,586  | \$973,739  | \$973,586  | 0.0%                         | \$974,000                              | \$974,000                              | \$0                           | 0.0%                  |
| 7/1/12-13    | \$625,317  | \$625,573  | \$625,317  | 0.0%                         | \$626,000                              | \$626,000                              | \$0                           | 0.0%                  |
| 7/1/13-14    | \$700,899  | \$701,692  | \$674,842  | -3.8%                        | \$703,000                              | \$678,000                              | -\$25,000                     | -3.6%                 |
| 7/1/14-15    | \$1,164,683                                      | \$1,168,223  | \$1,221,735                                      | 4.6%                         | \$1,174,000                            | \$1,224,000                            | \$50,000                      | 4.3%                  |
| 7/1/15-16    | \$1,129,687                                      | \$1,140,430  | \$1,159,787                                      | 1.7%                         | \$1,158,000                            | \$1,183,000                            | \$25,000                      | 2.2%                  |
| 7/1/16-17    | \$1,065,183                                      | \$1,102,504  | \$1,124,122                                      | 2.0%                         | \$1,166,000                            | \$1,166,000                            | \$0                           | 0.0%                  |
| 7/1/17-18    | \$531,156  | \$974,035  | \$925,038  | -5.0%                        | \$1,143,000                            | \$1,093,000                            | -\$50,000                     | -4.4%                 |
| <b>Total</b> | <b>\$11,950,035</b>                              | <b>\$12,445,567</b>                                | <b>\$12,461,279</b>                              | <b>0.1%</b>                  | <b>\$12,703,000</b>                    | <b>\$12,703,000</b>                    | <b>\$0</b>                    | <b>0.0%</b>           |

Variance in Reported Losses \$15,712

|              | (A)<br>Actual<br>Paid<br>Losses<br>1/31/2018 | (B)<br>Expected<br>Paid<br>Losses<br>6/30/2018 | (C)<br>Actual<br>Paid<br>Losses<br>6/30/2018 | (D)<br>Percent<br>Difference | (E)<br>Ultimate<br>Losses<br>1/31/2018 | (F)<br>Ultimate<br>Losses<br>6/30/2018 | (G)<br>Year-end<br>Adjustment | Percent<br>Difference |
|--------------|--|--|--|------------------------------|--|--|-------------------------------|-----------------------|
| 7/1/02-03    | \$65,087                                     | \$65,087                                       | \$65,087                                     | 0.0%                         | \$65,087                               | \$65,087                               | \$0                           | 0.0%                  |
| 7/1/03-04    | \$357,297                                    | \$357,297                                      | \$357,297                                    | 0.0%                         | \$357,297                              | \$357,297                              | \$0                           | 0.0%                  |
| 7/1/04-05    | \$618,336                                    | \$618,336                                      | \$618,336                                    | 0.0%                         | \$618,336                              | \$618,336                              | \$0                           | 0.0%                  |
| 7/1/05-06    | \$450,928                                    | \$450,928                                      | \$450,928                                    | 0.0%                         | \$450,928                              | \$450,928                              | \$0                           | 0.0%                  |
| 7/1/06-07    | \$535,205                                    | \$535,205                                      | \$535,205                                    | 0.0%                         | \$535,205                              | \$535,205                              | \$0                           | 0.0%                  |
| 7/1/07-08    | \$759,907                                    | \$759,907                                      | \$759,907                                    | 0.0%                         | \$759,907                              | \$759,907                              | \$0                           | 0.0%                  |
| 7/1/08-09    | \$1,423,346                                  | \$1,423,346                                    | \$1,423,346                                  | 0.0%                         | \$1,423,346                            | \$1,423,346                            | \$0                           | 0.0%                  |
| 7/1/09-10    | \$687,646                                    | \$692,768                                      | \$703,413                                    | 1.5%                         | \$706,000                              | \$706,000                              | \$0                           | 0.0%                  |
| 7/1/10-11    | \$843,333                                    | \$843,237                                      | \$843,333                                    | 0.0%                         | \$843,000                              | \$843,000                              | \$0                           | 0.0%                  |
| 7/1/11-12    | \$947,823                                    | \$955,683                                      | \$947,823                                    | -0.8%                        | \$974,000                              | \$974,000                              | \$0                           | 0.0%                  |
| 7/1/12-13    | \$625,317                                    | \$625,530                                      | \$625,317                                    | 0.0%                         | \$626,000                              | \$626,000                              | \$0                           | 0.0%                  |
| 7/1/13-14    | \$673,722                                    | \$683,145                                      | \$674,842                                    | -1.2%                        | \$703,000                              | \$678,000                              | -\$25,000                     | -3.6%                 |
| 7/1/14-15    | \$862,433                                    | \$964,834                                      | \$874,245                                    | -9.4%                        | \$1,174,000                            | \$1,224,000                            | \$50,000                      | 4.3%                  |
| 7/1/15-16    | \$889,240                                    | \$976,228                                      | \$924,765                                    | -5.3%                        | \$1,158,000                            | \$1,183,000                            | \$25,000                      | 2.2%                  |
| 7/1/16-17    | \$833,576                                    | \$929,391                                      | \$853,354                                    | -8.2%                        | \$1,166,000                            | \$1,166,000                            | \$0                           | 0.0%                  |
| 7/1/17-18    | \$217,543                                    | \$536,129                                      | \$390,369                                    | -27.2%                       | \$1,143,000                            | \$1,093,000                            | -\$50,000                     | -4.4%                 |
| <b>Total</b> | <b>\$10,790,739</b>                          | <b>\$11,417,050</b>                            | <b>\$11,047,566</b>                          | <b>-3.2%</b>                 | <b>\$12,703,000</b>                    | <b>\$12,703,000</b>                    | <b>\$0</b>                    | <b>0.0%</b>           |

(A) and (E) - From Previous actuarial report as of 01/31/2018

(B) - Derived from (E) and (A) using loss development patterns

(C) - Provided by OSIG, limited to SIR

(D) = [(C) / (B)] - 1

(F) = (E) + adjustment in (G)

(G) - Judgmentally selected based on experience

**Estimated Outstanding Losses**

| <i>Accident<br/>Period</i> | <i>(A)<br/>Estimated<br/>Ultimate<br/>Losses</i> | <i>(B)<br/>Limited<br/>Paid<br/>Losses</i> | <i>(C)<br/>Limited<br/>Reported<br/>Losses</i> | <i>(D)<br/>Limited<br/>Case<br/>Reserves</i> | <i>(E)<br/>IBNR<br/>Losses</i> | <i>(F)<br/>Outstanding<br/>Losses</i> |
|----------------------------|--|--|--|--|--------------------------------|---------------------------------------|
| <b>As of June 30, 2018</b> |  |  |  |  |                                |                                       |
| 7/1/02-03                  | \$65,087   | \$65,087                                   | \$65,087                                       | \$0  | \$0                            | \$0                                   |
| 7/1/03-04                  | \$357,297  | \$357,297                                  | \$357,297                                      | \$0  | \$0                            | \$0                                   |
| 7/1/04-05                  | \$618,336  | \$618,336                                  | \$618,336                                      | \$0  | \$0                            | \$0                                   |
| 7/1/05-06                  | \$450,928  | \$450,928                                  | \$450,928                                      | \$0  | \$0                            | \$0                                   |
| 7/1/06-07                  | \$535,205  | \$535,205                                  | \$535,205                                      | \$0  | \$0                            | \$0                                   |
| 7/1/07-08                  | \$759,907  | \$759,907                                  | \$759,907                                      | \$0  | \$0                            | \$0                                   |
| 7/1/08-09                  | \$1,423,346                                      | \$1,423,346                                | \$1,423,346                                    | \$0  | \$0                            | \$0                                   |
| 7/1/09-10                  | \$706,000  | \$703,413                                  | \$703,413                                      | \$0  | \$3,000                        | \$3,000                               |
| 7/1/10-11                  | \$843,000  | \$843,333                                  | \$843,333                                      | \$0  | \$0                            | \$0                                   |
| 7/1/11-12                  | \$974,000  | \$947,823                                  | \$973,586                                      | \$25,762                                     | \$0                            | \$26,000                              |
| 7/1/12-13                  | \$626,000  | \$625,317                                  | \$625,317                                      | \$0  | \$1,000                        | \$1,000                               |
| 7/1/13-14                  | \$678,000  | \$674,842                                  | \$674,842                                      | \$0  | \$3,000                        | \$3,000                               |
| 7/1/14-15                  | \$1,224,000                                      | \$874,245                                  | \$1,221,735                                    | \$347,490                                    | \$2,000                        | \$350,000                             |
| 7/1/15-16                  | \$1,183,000                                      | \$924,765                                  | \$1,159,787                                    | \$235,022                                    | \$23,000                       | \$258,000                             |
| 7/1/16-17                  | \$1,166,000                                      | \$853,354                                  | \$1,124,122                                    | \$270,769                                    | \$42,000                       | \$313,000                             |
| 7/1/17-18                  | \$1,093,000                                      | \$390,369                                  | \$925,038                                      | \$534,669                                    | \$168,000                      | \$703,000                             |
| <b>Total</b>               | <b>\$12,703,000</b>                              | <b>\$11,047,566</b>                        | <b>\$12,461,279</b>                            | <b>\$1,413,713</b>                           | <b>\$242,000</b>               | <b>\$1,657,000</b>                    |

**Total Estimated IBNR as of June 30, 2018    \$242,000**

- (A) - Table 1
- (B) and (C) - Provided by OSIG, limited to SIR
- (D) = (C) - (B)
- (E) = (A) - (C)
- (F) = (A) - (B)

**Distribution of Forecast Losses for 7/1/18-19  
Assuming a \$100,000 SIR**

| <i>Percentile</i>        | <i>SIR Layer<br/>\$100,000</i> | <i>Layer<br/>\$900,000 xs<br/>\$100,000</i> | <i>Losses<br/>Limited to<br/>\$1,000,000</i> | <i>Losses<br/>Excess of<br/>\$1,000,000</i> | <i>Total<br/>Incurred<br/>Losses</i> |
|--------------------------|--------------------------------|---|--|---|--------------------------------------|
| 20.0%                    | \$1,052,000                    | \$36,000                                    | \$1,133,000                                  | \$0   | \$1,133,000                          |
| 30.0%                    | \$1,130,000                    | \$61,000                                    | \$1,231,000                                  | \$0   | \$1,231,000                          |
| 40.0%                    | \$1,203,000                    | \$86,000                                    | \$1,317,000                                  | \$0   | \$1,317,000                          |
| 50.0%                    | \$1,271,000                    | \$112,000                                   | \$1,410,000                                  | \$0   | \$1,410,000                          |
| 60.0%                    | \$1,342,000                    | \$144,000                                   | \$1,492,000                                  | \$0   | \$1,492,000                          |
| 70.0%                    | \$1,423,000                    | \$181,000                                   | \$1,590,000                                  | \$0   | \$1,590,000                          |
| 75.0%                    | \$1,466,000                    | \$204,000                                   | \$1,648,000                                  | \$0   | \$1,648,000                          |
| 80.0%                    | \$1,517,000                    | \$232,000                                   | \$1,712,000                                  | \$0   | \$1,712,000                          |
| 85.0%                    | \$1,576,000                    | \$266,000                                   | \$1,791,000                                  | \$0   | \$1,791,000                          |
| 90.0%                    | \$1,663,000                    | \$309,000                                   | \$1,900,000                                  | \$0   | \$1,900,000                          |
| 95.0%                    | \$1,793,000                    | \$381,000                                   | \$2,063,000                                  | \$0   | \$2,063,000                          |
| 99.0%                    | \$2,061,000                    | \$549,000                                   | \$2,409,000                                  | \$0   | \$2,409,000                          |
| <b>Expected</b>          | <b>\$1,291,000</b>             | <b>\$142,000</b>                            | <b>\$1,433,000</b>                           | <b>\$0</b>                                  | <b>\$1,433,000</b>                   |
| <i>Vehicles</i>          | 11,011                         |   |  |   |                                      |
| <i>Students</i>          | 448,230                        |   |  |   |                                      |
| <b>Cost Per Vehicle*</b> | <b>\$117</b>                   | <b>\$13</b>                                 | <b>\$130</b>                                 | <b>\$0</b>                                  | <b>\$130</b>                         |
| <b>Cost Per Student</b>  | <b>\$2.88</b>                  | <b>\$0.32</b>                               | <b>\$3.20</b>                                | <b>\$0.00</b>                               | <b>\$3.20</b>                        |

\* - Cost per Vehicle based on Forecast study as of 1/31/2018  
Forecast losses adjusted for change in exposure



**Comparison of Results with Previous Estimates as of 1/31/18**

|              | (A)<br>Actual<br>Reported<br>Losses<br>1/31/2018 | (B)<br>Projected<br>Reported<br>Losses<br>6/30/2018 | (C)<br>Actual<br>Reported<br>Losses<br>6/30/2018 | (D)<br>Percent<br>Difference | (E)<br>Expected<br>Ultimate<br>Losses<br>1/31/2018 | (F)<br>Actual<br>Ultimate<br>Losses<br>6/30/2018 | (G)<br>Year-End<br>Adjustment | Percent<br>Difference |
|--------------|--|---|--|------------------------------|--|--|-------------------------------|-----------------------|
| 7/1/02-03    | \$168,909  | \$168,909   | \$168,909  | 0.0%                         | \$168,909  | \$168,909  | \$0                           | 0.0%                  |
| 7/1/03-04    | \$840,274  | \$840,274   | \$840,274  | 0.0%                         | \$840,274  | \$840,274  | \$0                           | 0.0%                  |
| 7/1/04-05    | \$488,972  | \$488,972   | \$488,972  | 0.0%                         | \$488,972  | \$488,972  | \$0                           | 0.0%                  |
| 7/1/05-06    | \$1,253,449                                      | \$1,253,449   | \$1,253,449                                      | 0.0%                         | \$1,253,449  | \$1,253,449                                      | \$0                           | 0.0%                  |
| 7/1/06-07    | \$953,237  | \$953,237   | \$953,237  | 0.0%                         | \$953,237  | \$953,237  | \$0                           | 0.0%                  |
| 7/1/07-08    | \$1,432,614                                      | \$1,432,614   | \$1,432,614                                      | 0.0%                         | \$1,432,614  | \$1,432,614                                      | \$0                           | 0.0%                  |
| 7/1/08-09    | \$1,159,541                                      | \$1,159,541   | \$1,159,541                                      | 0.0%                         | \$1,159,541  | \$1,159,541                                      | \$0                           | 0.0%                  |
| 7/1/09-10    | \$1,292,498                                      | \$1,292,898   | \$1,292,498                                      | 0.0%                         | \$1,294,000  | \$1,294,000                                      | \$0                           | 0.0%                  |
| 7/1/10-11    | \$1,838,086                                      | \$1,839,134   | \$1,838,086                                      | -0.1%                        | \$1,842,000  | \$1,842,000                                      | \$0                           | 0.0%                  |
| 7/1/11-12    | \$1,489,325                                      | \$1,490,852   | \$1,459,814                                      | -2.1%                        | \$1,495,000  | \$1,470,000                                      | -\$25,000                     | -1.7%                 |
| 7/1/12-13    | \$878,345  | \$880,412   | \$847,052  | -3.8%                        | \$886,000  | \$861,000  | -\$25,000                     | -2.8%                 |
| 7/1/13-14    | \$826,108  | \$830,934   | \$821,705  | -1.1%                        | \$844,000  | \$844,000  | \$0                           | 0.0%                  |
| 7/1/14-15    | \$1,815,129                                      | \$1,833,801   | \$1,737,044                                      | -5.3%                        | \$1,885,000  | \$1,810,000                                      | -\$75,000                     | -4.0%                 |
| 7/1/15-16    | \$2,020,067                                      | \$2,066,858   | \$1,937,319                                      | -6.3%                        | \$2,200,000  | \$2,100,000                                      | -\$100,000                    | -4.5%                 |
| 7/1/16-17    | \$2,029,363                                      | \$2,120,241   | \$2,103,443                                      | -0.8%                        | \$2,402,000  | \$2,402,000                                      | \$0                           | 0.0%                  |
| 7/1/17-18    | \$400,116  | \$1,172,298   | \$917,464  | -21.7%                       | \$1,730,000  | \$1,430,000                                      | -\$300,000                    | -17.3%                |
| <b>Total</b> | <b>\$18,886,034</b>                              | <b>\$19,824,424</b>                                 | <b>\$19,251,420</b>                              | <b>-2.9%</b>                 | <b>\$20,874,996</b>                                | <b>\$20,349,996</b>                              | <b>-\$525,000</b>             | <b>-2.5%</b>          |

Variance In Reported Losses -\$573,004

|              | (A)<br>Actual<br>Paid<br>Losses<br>1/31/2018 | (B)<br>Projected<br>Paid<br>Losses<br>6/30/2018 | (C)<br>Actual<br>Paid<br>Losses<br>6/30/2018 | (D)<br>Percent<br>Difference | (E)<br>Expected<br>Ultimate<br>Losses<br>1/31/2018 | (F)<br>Actual<br>Ultimate<br>Losses<br>6/30/2018 | (G)<br>Year-End<br>Adjustment | Percent<br>Difference |
|--------------|--|---|--|------------------------------|--|--|-------------------------------|-----------------------|
| 7/1/02-03    | \$168,909                                    | \$168,909                                       | \$168,909                                    | 0.0%                         | \$168,909  | \$168,909  | \$0                           | 0.0%                  |
| 7/1/03-04    | \$840,274                                    | \$840,274                                       | \$840,274                                    | 0.0%                         | \$840,274  | \$840,274  | \$0                           | 0.0%                  |
| 7/1/04-05    | \$488,972                                    | \$488,972                                       | \$488,972                                    | 0.0%                         | \$488,972  | \$488,972  | \$0                           | 0.0%                  |
| 7/1/05-06    | \$1,253,449                                  | \$1,253,449                                     | \$1,253,449                                  | 0.0%                         | \$1,253,449  | \$1,253,449                                      | \$0                           | 0.0%                  |
| 7/1/06-07    | \$953,237                                    | \$953,237                                       | \$953,237                                    | 0.0%                         | \$953,237  | \$953,237  | \$0                           | 0.0%                  |
| 7/1/07-08    | \$1,432,614                                  | \$1,432,614                                     | \$1,432,614                                  | 0.0%                         | \$1,432,614  | \$1,432,614                                      | \$0                           | 0.0%                  |
| 7/1/08-09    | \$1,159,541                                  | \$1,159,541                                     | \$1,159,541                                  | 0.0%                         | \$1,159,541  | \$1,159,541                                      | \$0                           | 0.0%                  |
| 7/1/09-10    | \$1,271,788                                  | \$1,277,114                                     | \$1,271,815                                  | -0.4%                        | \$1,294,000  | \$1,294,000                                      | \$0                           | 0.0%                  |
| 7/1/10-11    | \$1,799,847                                  | \$1,810,670                                     | \$1,804,139                                  | -0.4%                        | \$1,842,000  | \$1,842,000                                      | \$0                           | 0.0%                  |
| 7/1/11-12    | \$1,470,989                                  | \$1,477,604                                     | \$1,459,814                                  | -1.2%                        | \$1,495,000  | \$1,470,000                                      | -\$25,000                     | -1.7%                 |
| 7/1/12-13    | \$734,356                                    | \$779,093                                       | \$738,029                                    | -5.3%                        | \$886,000  | \$861,000  | -\$25,000                     | -2.8%                 |
| 7/1/13-14    | \$711,535                                    | \$752,755                                       | \$716,792                                    | -4.8%                        | \$844,000  | \$844,000  | \$0                           | 0.0%                  |
| 7/1/14-15    | \$1,257,224                                  | \$1,452,302                                     | \$1,297,850                                  | -10.6%                       | \$1,885,000  | \$1,810,000                                      | -\$75,000                     | -4.0%                 |
| 7/1/15-16    | \$1,078,684                                  | \$1,373,190                                     | \$1,219,220                                  | -11.2%                       | \$2,200,000  | \$2,100,000                                      | -\$100,000                    | -4.5%                 |
| 7/1/16-17    | \$480,867                                    | \$769,294                                       | \$740,062                                    | -3.8%                        | \$2,402,000  | \$2,402,000                                      | \$0                           | 0.0%                  |
| 7/1/17-18    | \$28,936                                     | \$123,589                                       | \$56,435                                     | -54.3%                       | \$1,730,000  | \$1,430,000                                      | -\$300,000                    | -17.3%                |
| <b>Total</b> | <b>\$15,131,223</b>                          | <b>\$16,112,607</b>                             | <b>\$15,601,151</b>                          | <b>-3.2%</b>                 | <b>\$20,874,996</b>                                | <b>\$20,349,996</b>                              | <b>-\$525,000</b>             | <b>-2.5%</b>          |

- (A) and (E) - From Previous actuarial report as of 01/31/2018
- (B) - Derived from (E) and (A) using loss development patterns
- (C) - Provided by OSIG, limited to SIR
- (D) = [(C) / (B)] - 1
- (F) = (E) + (G)
- (G) - Judgmentally selected based on experience

**Estimated Outstanding Losses**

| <i>Accident<br/>Period</i> | <i>(A)<br/>Estimated<br/>Ultimate<br/>Losses</i> | <i>(B)<br/>Limited<br/>Paid<br/>Losses</i> | <i>(C)<br/>Limited<br/>Reported<br/>Losses</i> | <i>(D)<br/>Limited<br/>Case<br/>Reserves</i> | <i>(E)<br/>IBNR<br/>Losses</i> | <i>(F)<br/>Outstanding<br/>Losses</i> |
|----------------------------|--|--|--|--|--------------------------------|---------------------------------------|
| <b>As of June 30, 2018</b> |  |  |  |  |                                |                                       |
| 7/1/02-03                  | \$168,909  | \$168,909                                  | \$168,909                                      | \$0  | \$0                            | \$0                                   |
| 7/1/03-04                  | \$840,274  | \$840,274                                  | \$840,274                                      | \$0  | \$0                            | \$0                                   |
| 7/1/04-05                  | \$488,972  | \$488,972                                  | \$488,972                                      | \$0  | \$0                            | \$0                                   |
| 7/1/05-06                  | \$1,253,449                                      | \$1,253,449                                | \$1,253,449                                    | \$0  | \$0                            | \$0                                   |
| 7/1/06-07                  | \$953,237  | \$953,237                                  | \$953,237                                      | \$0  | \$0                            | \$0                                   |
| 7/1/07-08                  | \$1,432,614                                      | \$1,432,614                                | \$1,432,614                                    | \$0  | \$0                            | \$0                                   |
| 7/1/08-09                  | \$1,159,541                                      | \$1,159,541                                | \$1,159,541                                    | \$0  | \$0                            | \$0                                   |
| 7/1/09-10                  | \$1,294,000                                      | \$1,271,815                                | \$1,292,498                                    | \$20,683                                     | \$2,000                        | \$22,000                              |
| 7/1/10-11                  | \$1,842,000                                      | \$1,804,139                                | \$1,838,086                                    | \$33,947                                     | \$4,000                        | \$38,000                              |
| 7/1/11-12                  | \$1,470,000                                      | \$1,459,814                                | \$1,459,814                                    | \$0  | \$10,000                       | \$10,000                              |
| 7/1/12-13                  | \$861,000  | \$738,029                                  | \$847,052                                      | \$109,023                                    | \$14,000                       | \$123,000                             |
| 7/1/13-14                  | \$844,000  | \$716,792                                  | \$821,705                                      | \$104,913                                    | \$22,000                       | \$127,000                             |
| 7/1/14-15                  | \$1,810,000                                      | \$1,297,850                                | \$1,737,044                                    | \$439,194                                    | \$73,000                       | \$512,000                             |
| 7/1/15-16                  | \$2,100,000                                      | \$1,219,220                                | \$1,937,319                                    | \$718,099                                    | \$163,000                      | \$881,000                             |
| 7/1/16-17                  | \$2,402,000                                      | \$740,062                                  | \$2,103,443                                    | \$1,363,380                                  | \$299,000                      | \$1,662,000                           |
| 7/1/17-18                  | \$1,430,000                                      | \$56,435                                   | \$917,464                                      | \$861,030                                    | \$513,000                      | \$1,374,000                           |
| <b>Total</b>               | <b>\$20,350,000</b>                              | <b>\$15,601,151</b>                        | <b>\$19,251,420</b>                            | <b>\$3,650,269</b>                           | <b>\$1,100,000</b>             | <b>\$4,749,000</b>                    |

**Total Estimated IBNR as of June 30, 2018 \$1,100,000**

(A) - Table 1

(B) and (C) - Provided by OSIG, limited to SIR

(D) = (C) - (B)

(E) = (A) - (C)

(F) = (A) - (B)

**Distribution of Forecast Losses for 7/1/18-19  
 Assuming a \$100,000 SIR**

| <i>Percentile</i>        | <i>SIR Layer<br/>\$100,000</i> | <i>Layer<br/>\$900,000 xs<br/>\$100,000</i> | <i>Losses<br/>Limited to<br/>\$1,000,000</i> | <i>Losses<br/>Excess of<br/>\$1,000,000</i> | <i>Total<br/>Incurred<br/>Losses</i> |
|--------------------------|--------------------------------|---|--|---|--------------------------------------|
| 20.0%                    | \$1,864,000                    | \$421,000                                   | \$2,452,000                                  | \$0   | \$2,452,000                          |
| 30.0%                    | \$2,026,000                    | \$530,000                                   | \$2,707,000                                  | \$0   | \$2,708,000                          |
| 40.0%                    | \$2,170,000                    | \$631,000                                   | \$2,922,000                                  | \$0   | \$2,926,000                          |
| 50.0%                    | \$2,319,000                    | \$734,000                                   | \$3,124,000                                  | \$0   | \$3,131,000                          |
| 60.0%                    | \$2,466,000                    | \$859,000                                   | \$3,347,000                                  | \$0   | \$3,355,000                          |
| 70.0%                    | \$2,631,000                    | \$1,003,000                                 | \$3,603,000                                  | \$0   | \$3,619,000                          |
| 75.0%                    | \$2,725,000                    | \$1,086,000                                 | \$3,731,000                                  | \$0   | \$3,753,000                          |
| 80.0%                    | \$2,842,000                    | \$1,183,000                                 | \$3,888,000                                  | \$0   | \$3,921,000                          |
| 85.0%                    | \$2,979,000                    | \$1,291,000                                 | \$4,075,000                                  | \$0   | \$4,121,000                          |
| 90.0%                    | \$3,172,000                    | \$1,442,000                                 | \$4,329,000                                  | \$0   | \$4,387,000                          |
| 95.0%                    | \$3,472,000                    | \$1,677,000                                 | \$4,725,000                                  | \$0   | \$4,845,000                          |
| 99.0%                    | \$4,141,000                    | \$2,156,000                                 | \$5,499,000                                  | \$879,000                                   | \$5,865,000                          |
| <b>Expected</b>          | <b>\$2,388,000</b>             | <b>\$819,000</b>                            | <b>\$3,207,000</b>                           | <b>\$23,000</b>                             | <b>\$3,230,000</b>                   |
| <i>Students</i>          | 448,230                        |   |  |   |                                      |
| <b>Cost Per Student*</b> | <b>\$5.33</b>                  | <b>\$1.83</b>                               | <b>\$7.15</b>                                | <b>\$0.05</b>                               | <b>\$7.21</b>                        |

\*- Cost per Student taken from forecast study as of 1/31/2018  
 Forecast losses are adjusted for change in exposure estimate

**Comparison of Results with Previous Estimates as of 01/31/18  
 SIR Losses Only**

| Accident<br>Period          | (A)                                       | (B)  | (C)                                       | (D)                   | (E)   | (F)                                       | (G)                    |                       |
|-----------------------------|---|--|---|-----------------------|---|---|------------------------|-----------------------|
|                             | Actual<br>Reported<br>Losses<br>1/31/2018 | Projected<br>Reported<br>Losses<br>6/30/2018 | Actual<br>Reported<br>Losses<br>6/30/2018 | Percent<br>Difference | Expected<br>Ultimate<br>Losses<br>1/31/2018 | Actual<br>Ultimate<br>Losses<br>6/30/2018 | Year-end<br>Adjustment | Percent<br>Difference |
| 7/1/02-03                   | \$312,045                                 | \$312,045                                    | \$312,045                                 | 0.0%                  | \$312,045                                   | \$312,045                                 | \$0                    | 0.0%                  |
| 7/1/03-04                   | \$1,287,169                               | \$1,287,169                                  | \$1,287,169                               | 0.0%                  | \$1,287,169                                 | \$1,287,169                               | \$0                    | 0.0%                  |
| 7/1/04-05                   | \$1,266,993                               | \$1,266,993                                  | \$1,266,993                               | 0.0%                  | \$1,266,993                                 | \$1,266,993                               | \$0                    | 0.0%                  |
| 7/1/05-06                   | \$2,616,997                               | \$2,616,997                                  | \$2,616,997                               | 0.0%                  | \$2,616,997                                 | \$2,616,997                               | \$0                    | 0.0%                  |
| 7/1/06-07                   | \$2,604,514                               | \$2,604,514                                  | \$2,604,514                               | 0.0%                  | \$2,604,514                                 | \$2,604,514                               | \$0                    | 0.0%                  |
| 7/1/07-08                   | \$3,915,481                               | \$3,915,481                                  | \$3,915,481                               | 0.0%                  | \$3,915,481                                 | \$3,915,481                               | \$0                    | 0.0%                  |
| 7/1/08-09                   | \$4,561,347                               | \$4,561,347                                  | \$4,561,347                               | 0.0%                  | \$4,561,347                                 | \$4,561,347                               | \$0                    | 0.0%                  |
| 7/1/09-10                   | \$4,870,042                               | \$4,870,042                                  | \$4,870,042                               | 0.0%                  | \$4,870,042                                 | \$4,870,042                               | \$0                    | 0.0%                  |
| 7/1/10-11                   | \$3,569,472                               | \$3,569,472                                  | \$3,569,472                               | 0.0%                  | \$3,569,472                                 | \$3,569,472                               | \$0                    | 0.0%                  |
| 7/1/11-12                   | \$3,201,043                               | \$3,201,043                                  | \$3,201,043                               | 0.0%                  | \$3,201,043                                 | \$3,201,043                               | \$0                    | 0.0%                  |
| 7/1/12-13                   | \$2,629,175                               | \$2,629,175                                  | \$2,629,175                               | 0.0%                  | \$2,629,175                                 | \$2,629,175                               | \$0                    | 0.0%                  |
| 7/1/13-14                   | \$2,495,352                               | \$2,495,352                                  | \$2,496,177                               | 0.0%                  | \$2,495,352                                 | \$2,496,352                               | \$1,000                | 0.0%                  |
| 7/1/14-15                   | \$3,491,913                               | \$3,491,913                                  | \$3,488,282                               | -0.1%                 | \$3,491,913                                 | \$3,490,913                               | -\$1,000               | 0.0%                  |
| 7/1/15-16                   | \$3,394,734                               | \$3,411,199                                  | \$3,419,370                               | 0.2%                  | \$3,437,000                                 | \$3,437,000                               | \$0                    | 0.0%                  |
| 7/1/16-17                   | \$4,351,577                               | \$4,416,737                                  | \$4,366,030                               | -1.1%                 | \$4,520,000                                 | \$4,520,000                               | \$0                    | 0.0%                  |
| 7/1/17-18                   | \$2,661,279                               | \$4,581,504                                  | \$4,064,314                               | -11.3%                | \$4,951,000                                 | \$4,501,000                               | -\$450,000             | -9.1%                 |
| <b>Total</b>                | <b>\$47,229,131</b>                       | <b>\$49,230,981</b>                          | <b>\$48,668,450</b>                       | <b>-1.1%</b>          | <b>\$49,729,541</b>                         | <b>\$49,279,541</b>                       | <b>-\$450,000</b>      | <b>-0.9%</b>          |
| Variance in Reported Losses |   |  | -\$562,531                                |                       |   |   |                        |                       |

- (A) and (E) - From Previous actuarial report as of 01/31/2018  
 Limited to \$250,000 for 11-12 through 16-17
- (B) - Derived from (A) and (E) using loss development patterns
- (C) - Provided by OSIG, limited to SIR
- (D) = [(C) / (B)] - 1
- (F) - (E) + (G)
- (G) = Judgmentally selected based on experience

**Comparison of Results with Previous Estimates as of 01/31/18  
SIR Losses and Corridor**

|                                    | (A)                                       | (B)  | (C)                                       | (D)                   | (E)   | (F)                                       | (G)                    |                       |
|------------------------------------|---|--|---|-----------------------|---|---|------------------------|-----------------------|
| Accident<br>Period                 | Actual<br>Reported<br>Losses<br>1/31/2018 | Projected<br>Reported<br>Losses<br>6/30/2018 | Actual<br>Reported<br>Losses<br>6/30/2018 | Percent<br>Difference | Expected<br>Ultimate<br>Losses<br>1/31/2018 | Actual<br>Ultimate<br>Losses<br>6/30/2018 | Year-end<br>Adjustment | Percent<br>Difference |
| 7/1/02-03                          | \$312,045                                 | \$312,045                                    | \$312,045                                 | 0.0%                  | \$312,045                                   | \$312,045                                 | \$0                    | 0.0%                  |
| 7/1/03-04                          | \$1,287,169                               | \$1,287,169                                  | \$1,287,169                               | 0.0%                  | \$1,287,169                                 | \$1,287,169                               | \$0                    | 0.0%                  |
| 7/1/04-05                          | \$1,266,993                               | \$1,266,993                                  | \$1,266,993                               | 0.0%                  | \$1,266,993                                 | \$1,266,993                               | \$0                    | 0.0%                  |
| 7/1/05-06                          | \$2,616,997                               | \$2,616,997                                  | \$2,616,997                               | 0.0%                  | \$2,616,997                                 | \$2,616,997                               | \$0                    | 0.0%                  |
| 7/1/06-07                          | \$2,604,514                               | \$2,604,514                                  | \$2,604,514                               | 0.0%                  | \$2,604,514                                 | \$2,604,514                               | \$0                    | 0.0%                  |
| 7/1/07-08                          | \$3,915,481                               | \$3,915,481                                  | \$3,915,481                               | 0.0%                  | \$3,915,481                                 | \$3,915,481                               | \$0                    | 0.0%                  |
| 7/1/08-09                          | \$4,561,347                               | \$4,561,347                                  | \$4,561,347                               | 0.0%                  | \$4,561,347                                 | \$4,561,347                               | \$0                    | 0.0%                  |
| 7/1/09-10                          | \$4,870,042                               | \$4,870,042                                  | \$4,870,042                               | 0.0%                  | \$4,870,042                                 | \$4,870,042                               | \$0                    | 0.0%                  |
| 7/1/10-11                          | \$3,569,472                               | \$3,569,472                                  | \$3,569,472                               | 0.0%                  | \$3,569,472                                 | \$3,569,472                               | \$0                    | 0.0%                  |
| 7/1/11-12                          | \$4,018,489                               | \$4,018,489                                  | \$4,018,489                               | 0.0%                  | \$4,018,489                                 | \$4,018,489                               | \$0                    | 0.0%                  |
| 7/1/12-13                          | \$5,029,175                               | \$5,029,175                                  | \$5,029,175                               | 0.0%                  | \$5,029,175                                 | \$5,029,175                               | \$0                    | 0.0%                  |
| 7/1/13-14                          | \$3,895,352                               | \$3,895,352                                  | \$3,896,177                               | 0.0%                  | \$3,895,352                                 | \$3,896,352                               | \$1,000                | 0.0%                  |
| 7/1/14-15                          | \$4,662,027                               | \$4,669,469                                  | \$4,888,282                               | 4.7%                  | \$4,678,000                                 | \$4,890,913                               | \$212,913              | 4.6%                  |
| 7/1/15-16                          | \$4,794,734                               | \$4,837,000                                  | \$4,819,370                               | -0.4%                 | \$4,837,000                                 | \$4,837,000                               | \$0                    | 0.0%                  |
| 7/1/16-17                          | \$5,751,577                               | \$5,920,000                                  | \$5,766,030                               | -2.6%                 | \$5,920,000                                 | \$5,920,000                               | \$0                    | 0.0%                  |
| 7/1/17-18                          | \$4,061,279                               | \$6,351,000                                  | \$5,464,314                               | -14.0%                | \$6,351,000                                 | \$5,901,000                               | -\$450,000             | -7.1%                 |
| <b>Total</b>                       | <b>\$57,216,691</b>                       | <b>\$59,724,543</b>                          | <b>\$58,885,896</b>                       | <b>-1.4%</b>          | <b>\$59,733,074</b>                         | <b>\$59,496,987</b>                       | <b>-\$236,087</b>      | <b>-0.4%</b>          |
| <b>Variance in Reported Losses</b> |   |  | <b>-\$838,648</b>                         |                       |   |   |                        |                       |

- (A) and (E) - From Previous actuarial report as of 01/31/2018  
Includes Corridor Losses for 11-12 through 16-17
- (B) - Derived from (A) and (E) using loss development patterns
- (C) - Provided by OSIG, limited to SIR and Corridor
- (D) = [(C) / (B)] - 1
- (F) = (E) + (G)
- (G) = Judgmentally Selected Based on Experience

**Estimated Outstanding Losses**

| Accident<br>Period         | SIR                        | (A)                           | (B)                       | (C)                           | (D)                         | (E)              | (F)                   |
|----------------------------|----------------------------|-------------------------------|---------------------------|-------------------------------|-----------------------------|------------------|-----------------------|
|                            |                            | Limited<br>Ultimate<br>Losses | Limited<br>Paid<br>Losses | Limited<br>Reported<br>Losses | Limited<br>Case<br>Reserves | IBNR<br>Losses   | Outstanding<br>Losses |
| <b>As of June 30, 2018</b> |                            |                               |                           |                               |                             |                  |                       |
| 7/1/02-03                  | \$100k/\$200k              | \$312,045                     | \$312,045                 | \$312,045                     | \$0                         | \$0              | \$0                   |
| 7/1/03-04                  | \$100k/\$200k              | \$1,287,169                   | \$1,287,169               | \$1,287,169                   | \$0                         | \$0              | \$0                   |
| 7/1/04-05                  | \$100k/\$200k              | \$1,266,993                   | \$1,266,993               | \$1,266,993                   | \$0                         | \$0              | \$0                   |
| 7/1/05-06                  | \$100k/\$200k              | \$2,616,997                   | \$2,616,997               | \$2,616,997                   | \$0                         | \$0              | \$0                   |
| 7/1/06-07                  | \$100k/\$200k              | \$2,604,514                   | \$2,604,514               | \$2,604,514                   | \$0                         | \$0              | \$0                   |
| 7/1/07-08                  | \$100k/\$200k              | \$3,915,481                   | \$3,915,481               | \$3,915,481                   | \$0                         | \$0              | \$0                   |
| 7/1/08-09                  | \$100k/\$200k              | \$4,561,347                   | \$4,561,347               | \$4,561,347                   | \$0                         | \$0              | \$0                   |
| 7/1/09-10                  | \$100k/\$200k              | \$4,870,042                   | \$4,870,042               | \$4,870,042                   | \$0                         | \$0              | \$0                   |
| 7/1/10-11                  | \$100k/\$200k              | \$3,569,472                   | \$3,569,472               | \$3,569,472                   | \$0                         | \$0              | \$0                   |
| 7/1/11-12                  | \$250,000 /\$2.7M corridor | \$4,018,489                   | \$4,018,489               | \$4,018,489                   | \$0                         | \$0              | \$0                   |
| 7/1/12-13                  | \$250,000 /\$2.4M corridor | \$5,029,175                   | \$5,029,175               | \$5,029,175                   | \$0                         | \$0              | \$0                   |
| 7/1/13-14                  | \$250,000 /\$1.4M corridor | \$3,896,352                   | \$3,896,177               | \$3,896,177                   | \$0                         | \$0              | \$0                   |
| 7/1/14-15                  | \$250,000 /\$1.4M corridor | \$4,890,913                   | \$4,413,273               | \$4,888,282                   | \$475,009                   | \$3,000          | \$478,000             |
| 7/1/15-16                  | \$250,000 /\$1.4M corridor | \$4,837,000                   | \$4,803,375               | \$4,819,370                   | \$15,996                    | \$18,000         | \$34,000              |
| 7/1/16-17                  | \$250,000 /\$1.4M corridor | \$5,920,000                   | \$5,011,655               | \$5,766,030                   | \$754,375                   | \$154,000        | \$908,000             |
| 7/1/17-18                  | \$250,000 /\$1.4M corridor | \$5,901,000                   | \$3,281,592               | \$5,464,314                   | \$2,182,723                 | \$437,000        | \$2,619,000           |
| <b>Total</b>               |                            | <b>\$59,496,987</b>           | <b>\$55,457,793</b>       | <b>\$58,885,896</b>           | <b>\$3,428,102</b>          | <b>\$612,000</b> | <b>\$4,039,000</b>    |

**Total Estimated IBNR as of June 30, 2018 \$612,000**

- (A) - Table 1
- (B) and (C) - Provided by OSIG, limited to SIR and Corridor
- (D) = (C) - (B)
- (E) = (A) - (C)
- (F) = (A) - (B)

**Estimated Outstanding Losses for SIR and Corridor**

| Accident<br>Period           | SIR       | Corridor    | (A)                           | (B)                       | (C)                           | (D)                         | (E)            | (F)                   |
|------------------------------|-----------|-------------|-------------------------------|---------------------------|-------------------------------|-----------------------------|----------------|-----------------------|
|                              |           |             | Limited<br>Ultimate<br>Losses | Limited<br>Paid<br>Losses | Limited<br>Reported<br>Losses | Limited<br>Case<br>Reserves | IBNR<br>Losses | Outstanding<br>Losses |
| <b>As of June 30, 2018</b>   |           |             |                               |                           |                               |                             |                |                       |
| <b>Stop Loss Years Total</b> |           |             | \$25,004,059                  | \$25,004,059              | \$25,004,059                  | \$0                         | \$0            | \$0                   |
| <b>SIR Losses</b>            |           |             |                               |                           |                               |                             |                |                       |
| 7/1/11-12                    | \$250,000 |             | \$3,201,043                   | \$3,201,043               | \$3,201,043                   | \$0                         | \$0            | \$0                   |
| 7/1/12-13                    | \$250,000 |             | \$2,629,175                   | \$2,629,175               | \$2,629,175                   | \$0                         | \$0            | \$0                   |
| 7/1/13-14                    | \$250,000 |             | \$2,496,352                   | \$2,496,177               | \$2,496,177                   | \$0                         | \$0            | \$0                   |
| 7/1/14-15                    | \$250,000 |             | \$3,490,913                   | \$3,386,650               | \$3,488,282                   | \$102,000                   | \$3,000        | \$104,000             |
| 7/1/15-16                    | \$250,000 |             | \$3,437,000                   | \$3,403,375               | \$3,419,370                   | \$16,000                    | \$18,000       | \$34,000              |
| 7/1/16-17                    | \$250,000 |             | \$4,520,000                   | \$3,611,655               | \$4,366,030                   | \$754,000                   | \$154,000      | \$908,000             |
| 7/1/17-18                    | \$250,000 |             | \$4,501,000                   | \$2,885,050               | \$4,064,314                   | \$1,179,000                 | \$437,000      | \$1,616,000           |
| <b>Corridor Losses</b>       |           |             |                               |                           |                               |                             |                |                       |
| 7/1/11-12                    |           | \$2,700,000 | \$817,446                     | \$817,446                 | \$817,446                     | \$0                         | \$0            | \$0                   |
| 7/1/12-13                    |           | \$2,400,000 | \$2,400,000                   | \$2,400,000               | \$2,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/13-14                    |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/14-15                    |           | \$1,400,000 | \$1,400,000                   | \$1,026,623               | \$1,400,000                   | \$373,000                   | \$0            | \$373,000             |
| 7/1/15-16                    |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/16-17                    |           | \$1,400,000 | \$1,400,000                   | \$1,400,000               | \$1,400,000                   | \$0                         | \$0            | \$0                   |
| 7/1/17-18                    |           | \$1,400,000 | \$1,400,000                   | \$396,542                 | \$1,400,000                   | \$1,003,000                 | \$0            | \$1,003,000           |
| <b>Total</b>                 |           |             | \$59,497,000                  | \$55,458,000              | \$58,886,000                  | \$3,427,000                 | \$612,000      | \$4,038,000           |

**Total Estimated IBNR as of June 30, 2018 \$612,000**

**Distribution of Losses for 7/1/18-19**  
**With a \$250,000 SIR and \$1,400,000 Corridor**

| <i>Percentile</i>         | <i>SIR Layer<br/>\$250,000<br/>All Perils</i> | <i>Cost of<br/>Corridor<br/>Ltd. \$1.4M</i> | <i>Total<br/>Retained<br/>Losses</i> | <i>Insured<br/>Excess<br/>Losses</i> | <i>Total<br/>Incurred<br/>Losses</i> |
|---------------------------|---|---|--------------------------------------|--------------------------------------|--------------------------------------|
| 20.0%                     | \$5,158,000                                   | \$1,400,000                                 | \$6,551,000                          | \$3,160,000                          | \$10,309,000                         |
| 30.0%                     | \$5,493,000                                   | \$1,400,000                                 | \$6,888,000                          | \$4,324,000                          | \$11,747,000                         |
| 40.0%                     | \$5,789,000                                   | \$1,400,000                                 | \$7,187,000                          | \$5,624,000                          | \$13,211,000                         |
| 50.0%                     | \$6,063,000                                   | \$1,400,000                                 | \$7,463,000                          | \$7,054,000                          | \$14,721,000                         |
| 60.0%                     | \$6,384,000                                   | \$1,400,000                                 | \$7,780,000                          | \$8,756,000                          | \$16,658,000                         |
| 70.0%                     | \$6,711,000                                   | \$1,400,000                                 | \$8,109,000                          | \$11,137,000                         | \$19,036,000                         |
| 75.0%                     | \$6,893,000                                   | \$1,400,000                                 | \$8,291,000                          | \$12,663,000                         | \$20,654,000                         |
| 80.0%                     | \$7,114,000                                   | \$1,400,000                                 | \$8,512,000                          | \$14,643,000                         | \$22,723,000                         |
| 85.0%                     | \$7,368,000                                   | \$1,400,000                                 | \$8,768,000                          | \$17,412,000                         | \$25,349,000                         |
| 90.0%                     | \$7,694,000                                   | \$1,400,000                                 | \$9,094,000                          | \$21,207,000                         | \$29,065,000                         |
| 95.0%                     | \$8,251,000                                   | \$1,400,000                                 | \$9,651,000                          | \$26,147,000                         | \$34,278,000                         |
| 99.0%                     | \$9,445,000                                   | \$1,400,000                                 | \$10,845,000                         | \$36,816,000                         | \$45,426,000                         |
| <b>Expected</b>           | <b>\$6,143,000</b>                            | <b>\$1,400,000</b>                          | <b>\$7,543,000</b>                   | <b>\$9,475,000</b>                   | <b>\$17,018,000</b>                  |
| <i>TIV in \$100s</i>      | \$118,067,243                                 |   |                                      |                                      |                                      |
| <b>Cost Per \$100 TIV</b> | <b>\$0.052</b>                                | <b>\$0.012</b>                              | <b>\$0.064</b>                       | <b>\$0.080</b>                       | <b>\$0.144</b>                       |



# Loss Forecast for 7/1/18-19

---

Oklahoma Schools Insurance Group

---

March 23, 2018

Based on loss data evaluated as of January 31, 2018

---





# Loss Forecast for 7/1/18-19

---

Oklahoma Schools Insurance Group

---

March 23, 2018

Based on data Evaluated as of January 31, 2018

*Prepared by*

---

*Laura T. Sprouse, FCAS, MAAA*

*Select Actuarial Services  
28 White Bridge Road, Suite 205  
Nashville, TN 37205  
(615) 269-4469 x 113  
(615) 269-4878 (fax)  
laura.sprouse@selectactuarial.com*

---



## Table of Contents

|           |                                 |
|-----------|---------------------------------|
| Section 1 | Executive Summary               |
| Section 2 | Introduction & Considerations   |
| Section 3 | Analysis                        |
| Section 4 | Exhibits – Automobile Liability |
| Section 5 | Exhibits – General Liability    |
| Section 6 | Exhibits – Auto Physical Damage |
| Section 7 | Exhibits - Property             |



## Executive Summary

Select Actuarial Services has prepared this report for the Oklahoma Schools Insurance Group (OSIG) at the request of Ms. Jennifer McKenzie, Arthur J. Gallagher. The purpose of this report is to evaluate the projected costs associated with OSIG's projected property and liability exposures for the period July 1, 2018, through June 30, 2019, based on data valued as of January 31, 2018.

The forecast for OSIG's retained losses for the 7/1/18-19 program year are shown in the Table below for Liability and for Property. Results for alternate SIR levels are shown in the Tables following this Executive Summary.

For purposes of our analysis, losses for automobile liability were projected separate from the general liability and E&O. Likewise, auto physical damage losses were projected separately from the other property claims. Results for these individual pieces are contained in the Exhibit VII for each line's Exhibit Section of the report. The results presented in the Executive summary are on a combined basis for Liability and Property.

Throughout this report the term losses will refer to loss and allocated loss adjustment expenses.

| <b>OSIG 7/1/18-19 Forecast Retained Losses</b> |                           |                                |
|--|---------------------------|--------------------------------|
|  | <b>Liability</b>          | <b>Property</b>                |
| <i>SIR</i>                                     | \$100,000                 | \$250,000 plus \$1.4M Corridor |
| <i>Estimated Exposures</i>                     | 377,140 <i>students</i>   | \$9,053,414,500 <i>TIV</i>     |
| <i>Loss Rate</i>                               | \$8.45 <i>per student</i> | \$0.069 <i>per \$100 TIV</i>   |
| <b>Forecast Losses</b>                         | <b>\$3,187,000</b>        | <b>\$6,240,000</b>             |
| <b>75%-ile Losses</b>                          | <b>\$3,544,000</b>        | <b>\$6,851,000</b>             |

## Key Assumptions

Unless otherwise stated, the figures in this report represent expected values. Key assumptions included:

- 1) Loss and exposure data for the OSIG's members as of 1/31/18 is predictive of experience for the 7/1/18-19 period. Former OSIG members' data has been excluded.
- 2) Reasonable measures of the exposure to loss are:
  - Number of vehicles for automobile liability and auto physical damage;
  - Total Insured Value (TIV) for property; and
  - Student counts for all other liability.
- 3) Loss development factors based on OSIG's experience, supplemented by the experience of public entities in the state of Oklahoma are used to develop reported and paid losses to ultimate;
- 4) Cost trends based on country wide insurance data are appropriate for trending losses to current cost levels.
- 5) Various statistical distributions can be used to model the underlying loss generating process.



## Results of this Analysis

### **Automobile Liability Limited to \$100,000**

We project ultimate losses of \$1,178,000 for 7/1/18-19. With an estimated exposure base of 10,046 vehicles, the cost per vehicle is \$117. This rate is 4% less than last year's forecast loss rate of \$122.

### **General Liability including E&O Limited to \$100,000**

Forecast losses for general liability including E&O are \$2,009,000. This forecast is based on projected counts of 377,140 students at a cost of \$5.33 per student. This is a 1.7% decrease over last year's selected rate of \$5.42. The reduction is due to a slight decrease in expected large claim activity.

### **Combined Liability Results**

The combined AL and GL/E&O claims for OSIG's members are expected to total \$4,024,000. Of this amount, OSIG retains the first \$100,000 per occurrence, or about \$3,187,000. The insured amounts excess of \$100,000 are expected to total \$818,000 with most of the exposure from the GL/E&O claims. While it is possible that OSIG's members could experience losses in excess of \$1,000,000 the likelihood is less than 5% based on its experience to date.

The greater risk to OSIG is the volatility in its retained layer. There is a 75% probability that the retained losses will be less than the 75<sup>th</sup> percentile \$3,544,000. There is a 10% probability that losses could exceed the 90<sup>th</sup> percentile estimate of \$3,961,000.

### **Auto Physical Damage limited to \$250,000**

The forecast losses for auto physical damage claims are \$770,000. This forecast reflects a \$250,000 deductible for most members, but \$100,000 SIR for about 25% of the members (based on exposure counts). The cost per vehicle at the \$100,000 SIR is \$74.15, while the cost per vehicle at the \$250,000 SIR is \$76.60. These rates are increased over the previous rates due to increased loss activity for the latest three years.

### **Property Losses limited to \$250,000**

The total forecast for retained property losses (excluding APD) is \$4,077,000. The cost per \$100 TIV is \$0.045. This rate is 6% greater than the rate from last year's report due to an increase in both small and large losses. We expect that OSIG will have about 6.9 claims that will reach the \$250,000 SIR. These losses are expected to exhaust the corridor deductible of \$1,400,000

## Combined Property Forecast

Combining the small property and APD losses (less than \$250,000) and the large claims, we estimate the total cost of claims for OSIG members to be \$13,179,000. Of this amount, OSIG retains \$4,840,000 for losses with in the SIR. The losses in excess of the SIR are expected to total \$8,339,000, with OSIG retaining a corridor deductible of \$1,400,000. Thus the total retained losses for OSIG are \$6,240,000, with the insured losses expected to total \$6,939,000.

The 75<sup>th</sup> percentile estimate of OSIG's retained SIR and corridor losses is \$6,851,000. There is a 10% probability that these retained losses could exceed \$7,528,000. The volatility in the experience is largely due to occurrence of extreme seasonal weather events. OSIG's SIR and Corridor provide stability, the unlimited losses at the 90<sup>th</sup> percentile are \$23,109,000.

**Distribution of Losses for 7/1/18-19  
Assuming a \$100,000 SIR**

| <i>Percentile</i>       | <i>SIR Layer<br/>\$100,000</i> | <i>Layer<br/>\$900,000 xs<br/>\$100,000</i> | <i>Losses<br/>Limited to<br/>\$1,000,000</i> | <i>Losses<br/>Excess of<br/>\$1,000,000</i> | <i>Total<br/>Incurred<br/>Losses</i> |
|-------------------------|--------------------------------|---|--|---|--------------------------------------|
| 25.0%                   | \$2,765,000                    | \$499,000                                   | \$3,408,000                                  | \$0   | \$3,409,000                          |
| 30.0%                   | \$2,844,000                    | \$547,000                                   | \$3,525,000                                  | \$0   | \$3,527,000                          |
| 35.0%                   | \$2,921,000                    | \$596,000                                   | \$3,645,000                                  | \$0   | \$3,648,000                          |
| 40.0%                   | \$2,997,000                    | \$646,000                                   | \$3,747,000                                  | \$0   | \$3,748,000                          |
| 45.0%                   | \$3,068,000                    | \$698,000                                   | \$3,849,000                                  | \$0   | \$3,853,000                          |
| 50.0%                   | \$3,134,000                    | \$749,000                                   | \$3,953,000                                  | \$0   | \$3,957,000                          |
| 55.0%                   | \$3,207,000                    | \$805,000                                   | \$4,064,000                                  | \$0   | \$4,068,000                          |
| 60.0%                   | \$3,283,000                    | \$860,000                                   | \$4,168,000                                  | \$0   | \$4,178,000                          |
| 65.0%                   | \$3,358,000                    | \$917,000                                   | \$4,281,000                                  | \$0   | \$4,294,000                          |
| 70.0%                   | \$3,449,000                    | \$983,000                                   | \$4,406,000                                  | \$0   | \$4,420,000                          |
| 75.0%                   | \$3,544,000                    | \$1,069,000                                 | \$4,533,000                                  | \$0   | \$4,556,000                          |
| 80.0%                   | \$3,661,000                    | \$1,170,000                                 | \$4,697,000                                  | \$0   | \$4,728,000                          |
| 85.0%                   | \$3,795,000                    | \$1,292,000                                 | \$4,884,000                                  | \$0   | \$4,933,000                          |
| 90.0%                   | \$3,961,000                    | \$1,439,000                                 | \$5,134,000                                  | \$0   | \$5,176,000                          |
| 95.0%                   | \$4,240,000                    | \$1,657,000                                 | \$5,472,000                                  | \$0   | \$5,575,000                          |
| <b>Expected</b>         | <b>\$3,187,000</b>             | <b>\$818,000</b>                            | <b>\$4,005,000</b>                           | <b>\$19,000</b>                             | <b>\$4,024,000</b>                   |
| <i>Students</i>         | 377,140                        |   |  |   |                                      |
| <b>Cost Per Student</b> | <b>\$8.45</b>                  | <b>\$2.17</b>                               | <b>\$10.62</b>                               | <b>\$0.05</b>                               | <b>\$10.67</b>                       |

|                            |             |           |             |          |             |
|----------------------------|-------------|-----------|-------------|----------|-------------|
| <i>GL Forecast</i>         | \$2,009,000 | \$689,000 | \$2,698,000 | \$19,000 | \$2,717,000 |
| <i>AL Forecast</i>         | \$1,178,000 | \$129,000 | \$1,307,000 | \$0      | \$1,307,000 |
| <i>GL Cost per Student</i> | \$5.33      | \$1.83    | \$7.15      | \$0.05   | \$7.20      |
| <i>AL Cost per Student</i> | \$3.12      | \$0.34    | \$3.47      | \$0.00   | \$3.47      |
| <i>AL Cost Per Vehicle</i> | \$117.26    | \$12.84   | \$130.10    | \$0.00   | \$130.10    |
| <i>Vehicle Count</i>       | 10,046      |           |             |          |             |

**Distribution of Losses for 7/1/18-19**  
**With a \$250,000 SIR and \$1,400,000 Corridor**

| <i>Percentile</i>         | <i>SIR Layer<br/>\$250,000<br/>All Perils</i> | <i>Cost of<br/>Corridor<br/>Ltd. \$1.4M</i> | <i>Total<br/>Retained<br/>Losses</i> | <i>Insured<br/>Excess<br/>Losses</i> | <i>Total<br/>Incurred<br/>Losses</i> |
|---------------------------|---|---|--------------------------------------|--------------------------------------|--------------------------------------|
| 25.0%                     | \$4,184,000                                   | \$1,400,000                                 | \$5,555,000                          | \$2,108,000                          | \$8,093,000                          |
| 30.0%                     | \$4,310,000                                   | \$1,400,000                                 | \$5,685,000                          | \$2,607,000                          | \$8,709,000                          |
| 35.0%                     | \$4,430,000                                   | \$1,400,000                                 | \$5,811,000                          | \$3,086,000                          | \$9,284,000                          |
| 40.0%                     | \$4,551,000                                   | \$1,400,000                                 | \$5,938,000                          | \$3,551,000                          | \$9,824,000                          |
| 45.0%                     | \$4,671,000                                   | \$1,400,000                                 | \$6,058,000                          | \$4,096,000                          | \$10,410,000                         |
| 50.0%                     | \$4,785,000                                   | \$1,400,000                                 | \$6,174,000                          | \$4,649,000                          | \$11,084,000                         |
| 55.0%                     | \$4,903,000                                   | \$1,400,000                                 | \$6,294,000                          | \$5,310,000                          | \$11,752,000                         |
| 60.0%                     | \$5,032,000                                   | \$1,400,000                                 | \$6,426,000                          | \$6,039,000                          | \$12,527,000                         |
| 65.0%                     | \$5,166,000                                   | \$1,400,000                                 | \$6,560,000                          | \$6,889,000                          | \$13,407,000                         |
| 70.0%                     | \$5,298,000                                   | \$1,400,000                                 | \$6,695,000                          | \$7,815,000                          | \$14,453,000                         |
| 75.0%                     | \$5,455,000                                   | \$1,400,000                                 | \$6,851,000                          | \$9,088,000                          | \$15,740,000                         |
| 80.0%                     | \$5,634,000                                   | \$1,400,000                                 | \$7,031,000                          | \$10,665,000                         | \$17,363,000                         |
| 85.0%                     | \$5,846,000                                   | \$1,400,000                                 | \$7,243,000                          | \$12,753,000                         | \$19,511,000                         |
| 90.0%                     | \$6,133,000                                   | \$1,400,000                                 | \$7,528,000                          | \$16,487,000                         | \$23,109,000                         |
| 95.0%                     | \$6,540,000                                   | \$1,400,000                                 | \$7,937,000                          | \$21,955,000                         | \$28,639,000                         |
| <b>Expected</b>           | <b>\$4,840,000</b>                            | <b>\$1,400,000</b>                          | <b>\$6,240,000</b>                   | <b>\$6,939,000</b>                   | <b>\$13,179,000</b>                  |
| TIV                       | \$9,053,414,500                               |   |                                      |                                      |                                      |
| <b>Cost Per \$100 TIV</b> | <b>\$0.053</b>                                | <b>\$0.015</b>                              | <b>\$0.069</b>                       | <b>\$0.077</b>                       | <b>\$0.146</b>                       |

|                |             |             |             |             |              |
|----------------|-------------|-------------|-------------|-------------|--------------|
| APD            | \$763,000   | \$0         | \$763,000   | \$0         | \$763,000    |
| Other Property | \$4,077,000 | \$1,400,000 | \$5,477,000 | \$6,939,000 | \$12,416,000 |

---

## Introduction

Select Actuarial Services has prepared this report for the Oklahoma Schools Insurance Group at the request of Ms. Jennifer McKenzie, Arthur J. Gallagher Risk Management Services. Select Actuarial Services is an independent firm, offering professional actuarial consulting services to a variety of insurance and non-insurance industry clients. The purpose of this report is to evaluate the projected liabilities associated with OSIG's property and liability program for the year July 1, 2018, through June 30, 2019.

This report is an actuarial analysis of data, conditions, and practices communicated as of March 1, 2018, to Select Actuarial Services as described in the section entitled "Considerations." While Select Actuarial Services believes these communications to be reliable, it has not attempted to audit the information and cannot guarantee the accuracy of any information supplied. However, the data have been reviewed for reasonableness and consistency. The actuarial estimates in this report are based upon appropriate actuarial assumptions and procedures described in the section of this report entitled "Analysis." Select Actuarial Services assumes no responsibility for any loss or damage that might arise from the use of or reliance upon this report other than for the purposes set forth herein.

This report was prepared for the use of and is only to be relied upon by the management of Oklahoma Schools Insurance Group. This report also may be provided to Oklahoma Schools Insurance Group's auditors and insurance brokers. No portion of the report may be provided to any other party without Select Actuarial Services' prior written consent. In the event such consent is provided, the report must be provided in its entirety. We recommend that any such party have its own actuary review this report to ensure that the party understands the assumptions and uncertainties inherent in our estimates.

---

## Considerations

The specific objective of this report is to project the expected losses arising from OSIG's property and liability exposures for the period 7/1/18-19. Appropriate actuarial methods for performing a loss forecast can only be identified in light of the coverage involved, claims information available, and other considerations. Key considerations motivating the selection of techniques employed in this analysis are set forth below.

### Coverage

This forecast for 7/1/18-19 projects losses reflecting OSIG's current insurance program and includes an alternate scenario at a higher retention. OSIG retains \$100,000 *above* the member deductibles for each liability occurrence. We have estimated costs limited to \$100,000, as well as for the layer from \$100,000 to \$1,000,000, and excess of \$1,000,000. We have calculated alternate scenarios using a \$125,000 and \$200,000 SIR.

Beginning with the 7/1/11-12 policy year the property coverage has been restructured to include a corridor deductible for *losses only* in excess of \$250,000 per claim. Also the \$250,000 SIR is applied to ground up losses of all types of perils, so that OSIG retains \$250,000 minus the member deductibles. The treatment of losses below the \$250,000 SIR is essentially unchanged from the old program, and the loss runs still report data net of member deductibles. These member deductibles vary by member and most members have a larger deductible for Wind and Hail related losses than all other perils. We have modeled the member deductibles on large claims based on the historical distribution of such amounts.

### Available Data

Available loss and loss expense information consisted of historical loss and exposure data for current OSIG members. Data for former OSIG members was excluded from our analysis. Newer members provided some historical data for years prior to joining OSIG. Claims data were evaluated as of January 31, 2018. OSIG's historical exposure information was also provided in the form of vehicle count, number of students, and total insured values for property. As with the loss data, we have excluded the exposures of former OSIG members, using only the current members' data.

### Development, Reporting and Settlement Patterns and Trends

Since annual evaluations of OSIG data are available, we have used this historical experience to build loss development triangles to observe OSIG's

own development experience. This experience is still somewhat sparse, and displays volatility from year to year. Thus, we have weighted OSIG experience with a benchmark pattern based on Oklahoma public entity experience.

## Trends and External Influences

Trends are defined as changes over time in underlying costs. Trend factors are used to adjust losses and exposures from past years to the level at which they would have been, had they occurred during a future period. This is vital since historical losses may have occurred in a different environment in terms of both monetary inflation and benefit levels.

In this analysis, trends have been measured by examining changes in the Consumer Price Index from the U.S. Department of Labor, Bureau of Labor Statistics and in the U.S. Claims Cost Indices or “Masterson Index” as compiled by Willis Towers Watson.

## Subrogation and Recoveries

Subrogation and recoveries are assumed to be reflected in the primary loss reports.

## Loss Models

Statistical distributions are often used by the insurance industry to model the loss generating process. The variation in the aggregate losses for auto physical damage, and aggregate small losses for the other lines was modeled using a lognormal distribution for each policy year. Large claims were modeled using a frequency/severity approach. The Poisson distribution has been used the model the projected number of large claims. The set of large claims for each line was fit to various distributions to find the best fit. In most cases, the Inverse Weibull curve was selected for the severity distribution. The variation estimated in this modeling technique is the variation inherent in the historical experience; it does not include potential variation due to unanticipated changes in the environment or to misestimation of parameters.





---

## Analysis

Actuarial procedures employed to forecast losses consist of a number of steps. Exhibits representing the various steps in the process are explained in this section of the report.

### Synopsis of Procedures

**Monte Carlo simulation** was used to estimate of the distribution of overall costs for each line and for all lines combined by layer. This simulation technique starts by constructing a single potential outcome. The aggregate losses for APD, or aggregate small losses for other lines, are simulated using a lognormal distribution. The large losses are modeled separately by randomly selecting the number and size of the large claims according to the Poisson distribution for claim frequency and an Inverse Weibull curve for the claim severities.

Next, a list of claims is generated, according to the number of large claims determined by the Poisson distribution. The size of each claim is determined by the statistical distribution fit to the observed claims. Random numbers between 0 and 1 are generated for each claim. These numbers determine the outcome of the claim size distribution, producing a size for each claim. Because the various possible claim sizes are assigned probabilities, the random-number selection process selects the more likely claim sizes more often than the unexpected costs. Each simulated large claim is then divided into SIR and excess portions according to the particular programs insurance structure. The sum of these costs for all the claims in a coverage is a single outcome. This is combined with a randomly generated estimate of the aggregate small losses, based on the lognormal distribution assigned to these losses. The results by coverage are also summed for each outcome to produce aggregate results for each layer.

We then repeat the process 10,000 times, generating 10,000 different possible outcomes. The outcomes are averaged to determine the expected cost, and sorted to estimate the distribution of potential outcomes. The expected costs and are divided by the projected exposures to produce estimated costs per exposure.

Detailed descriptions of the exhibits and statistical analysis follow.

---

## Exhibit I

Exhibit I summarizes OSIG's loss data as of the valuation date as of January 31, 2018. Claims are grouped by occurrence, and those occurrences with \$0 in incurred losses are excluded. The term "losses" refers to losses and allocated loss adjustment expenses net of the underlying member deductibles. Exposure data is also shown in the form of vehicle counts for automobile liability and auto physical damage, student count for general liability and E&O and total insured values or TIV for property.

## Exhibit II

This exhibit displays the list of claims expected to exceed the SIR for each line of business. The losses are developed to ultimate and trended to the 7/1/18-19 level. The member deductibles for each claim are shown. This historical deductible experience is used to simulate the member deductibles on large claims in our model.

## Exhibit III

The small losses are developed to ultimate and trended to the cost level of the 7/1/18-19 year. The reported amounts for large claims from Exhibit II are subtracted out and the remaining claims are multiplied by the development and trend factors. This method is repeated for paid losses.

## Exhibit IV

The ultimate small losses developed in Exhibit III are compared to the underlying exposures to obtain loss rates for the small losses. Experience is compared from year to year and a single loss rate for small losses is selected for the 7/1/18-19 year.

The selected small loss rate times the projected exposure for 7/1/18-19 results in the ultimate small losses for the forecast period. The variance in the historical loss rates will provide the basis for the potential variation in the forecast small loss experience.

## Exhibit V

The number of claims exceeding the \$100,000 SIR for liability and \$250,000 for property claims for each year is compared to the underlying exposures for each year. The large claim frequencies are compared and a single frequency rate is selected for the 7/1/18-19 forecast period. The frequency times the exposure estimates the number of large claims expected.

A similar procedure is used to project the total claim frequency for the forecast period.

## Exhibit VI

This exhibit calculates the total forecast as the sum of the aggregate small losses with the large loss estimates. The projected number of large claims is multiplied by the expected claim size at various limits. These claim sizes are from the severity distribution fit to the claims in Exhibit II. For property claims we also estimate the member deductibles on large claims and subtract these amounts from the large claim costs.

## Exhibit VII

This exhibit contains the output of the Monte Carlo simulation. The small and large claim experience is separately modeled and summed to provide an overall expected cost. The model simulates 10,000 outcomes and the 10,000 outcomes for each layer are averaged and sorted to produce the expected value and percentiles. The expected costs are divided by the expected number of claims to calculate the average cost per claim. Note that, although the average results by layer can be summed to the total, the percentile outcomes for the layers do not necessarily add to the same percentile outcome for the total losses. This is because a given scenario may produce a high volume of losses in one layer but little or no loss in another layer. The outcomes for each layer are sorted to calculate the percentiles for the individual layer.

The percentile of the distribution shows the amount that losses will be less than with that probability. For example, the 75<sup>th</sup> percentile for total losses is the value that losses will be less than 75% of the time. Similarly, the 90<sup>th</sup> percentile losses represent a level that actual losses might exceed with 10% probably, or about once in ten years.

## Appendix A

This exhibit shows the loss development factors used to develop claims to an ultimate basis. The factors are based on OSIG experience. Due to the sparseness of the data, OSIG's experience is supplemented with public entity experience in the state of Oklahoma.

## Appendix B

The trend factors are calculated based on external economic indices.



---

## Automobile Liability Exhibits

The “Analysis” section of this report presents a discussion of the following exhibits:

|             |   |
|-------------|---|
| Exhibit I   | Summary of Experience   |
| Exhibit II  | Claims that Develop and Trend over \$100,000                            |
| Exhibit III | Ultimate Small Losses   |
| Exhibit IV  | Forecast Losses Less than \$100,000                                     |
| Exhibit V   | Large Claim Frequency<br>Total Claim Frequency                          |
| Exhibit VI  | Forecast Ultimate Losses  |
| Exhibit VII | Results of Monte Carlo Simulation<br>Forecast Losses for Various Layers |
| Appendix A  | Loss Development Factors  |
| Appendix B  | Trend Factors   |



**Summary of Loss and Exposure Data  
Total Experience Net of Member Deductibles**

| (A)<br>Accident<br>Period | (B)<br>Evaluation<br>Date | (C)<br>Maturity<br>(months) | (D)<br>Reported<br>NonZero<br>Claims | (E)<br>Loss<br>and Expense<br>Payments | (F)<br>Loss<br>and Expense<br>Reserves | (G)<br>Loss<br>and Expense<br>Incurred | (H)<br>Vehicles |
|---------------------------|---------------------------|-----------------------------|--------------------------------------|--|--|--|-----------------|
| 7/1/07-08                 | 1/31/2018                 | 127                         | 132                                  | \$501,636                              | \$0                                    | \$501,636                              | 5,440           |
| 7/1/08-09                 | 1/31/2018                 | 115                         | 148                                  | \$910,996                              | \$0                                    | \$910,996                              | 5,182           |
| 7/1/09-10                 | 1/31/2018                 | 103                         | 136                                  | \$524,623                              | \$18,440                               | \$543,063                              | 5,887           |
| 7/1/10-11                 | 1/31/2018                 | 91                          | 138                                  | \$719,013                              | \$0                                    | \$719,013                              | 6,443           |
| 7/1/11-12                 | 1/31/2018                 | 79                          | 151                                  | \$807,169                              | \$25,762                               | \$832,932                              | 5,902           |
| 7/1/12-13                 | 1/31/2018                 | 67                          | 151                                  | \$633,098                              | \$0                                    | \$633,098                              | 6,210           |
| 7/1/13-14                 | 1/31/2018                 | 55                          | 172                                  | \$678,602                              | \$27,177                               | \$705,779                              | 6,847           |
| 7/1/14-15                 | 1/31/2018                 | 43                          | 208                                  | \$990,994                              | \$285,912                              | \$1,276,906                            | 8,572           |
| 7/1/15-16                 | 1/31/2018                 | 31                          | 216                                  | \$854,975                              | \$282,300                              | \$1,137,276                            | 9,173           |
| 7/1/16-17                 | 1/31/2018                 | 19                          | 195                                  | \$785,160                              | \$249,647                              | \$1,034,806                            | 9,781           |
| 7/1/17-18                 | 1/31/2018                 | 7                           | 113                                  | \$217,543                              | \$328,612                              | \$546,156                              | 10,013          |
| 7/1/18-19                 |                           |                             |                                      |  |  |  | 10,046          |

- Loss and policy information provided by Jennifer McKenzie, Arthur J. Gallagher  
- Loss and Exposure data contains only current OSIG members as of 1/31/2018

**Large Claim Listing**  
**Claims Exceeding Threshold after Development and Trend**

| (A)           | (B)        | (C)         | (D)          | (E)                | (F)             | (G)                                  |
|---------------|------------|-------------|--------------|--------------------|-----------------|--------------------------------------|
| Occurrence #  | Loss Date  | Net Paid    | Net Incurred | Severity<br>Factor | Trend<br>Factor | Loss After<br>Development<br>& Trend |
| P625-08-02546 | 10/6/2008  | \$78,627    | \$78,627     | 1.000              | 1.399           | \$109,992                            |
| 02638         | 11/14/2008 | \$104,466   | \$104,466    | 1.000              | 1.399           | \$146,139                            |
| 02940         | 5/7/2009   | \$106,504   | \$106,504    | 1.000              | 1.399           | \$148,991                            |
| 90075         | 8/18/2010  | \$134,999   | \$134,999    | 1.000              | 1.294           | \$174,767                            |
| 90305         | 12/8/2010  | \$103,684   | \$103,684    | 1.000              | 1.294           | \$134,227                            |
| P625-11-90851 | 9/9/2011   | \$96,221    | \$96,221     | 1.000              | 1.250           | \$120,340                            |
| 91477         | 9/19/2012  | \$135,786   | \$135,786    | 1.001              | 1.217           | \$165,330                            |
| 92239         | 1/7/2014   | \$130,707   | \$130,707    | 1.003              | 1.184           | \$155,122                            |
| 93008         | 3/23/2015  | \$206,102   | \$206,102    | 1.008              | 1.149           | \$238,693                            |
| P625-15-93064 | 4/9/2015   | \$6,504     | \$90,000     | 1.008              | 1.149           | \$104,232                            |
| 93063         | 4/20/2015  | \$178,945   | \$258,150    | 1.008              | 1.149           | \$298,971                            |
| 93477         | 11/19/2015 | \$75,266    | \$202,250    | 1.024              | 1.107           | \$229,303                            |
| 94052         | 9/29/2016  | \$126,307   | \$126,307    | 1.080              | 1.066           | \$145,452                            |
| 94363         | 3/23/2017  | \$18,040    | \$118,040    | 1.080              | 1.066           | \$135,931                            |
| 94562         | 7/10/2017  | \$0         | \$115,000    | 1.206              | 1.033           | \$143,251                            |
|               |            | \$1,502,159 | \$2,006,844  |                    |                 | \$2,450,741                          |

- Loss and policy information provided by Jennifer McKenzie, Arthur J. Gallagher



**Estimation of Ultimate Small Losses  
At the Forecast Loss Level**

| <i>Accident Period</i> | <i>(A)<br/>Reported Losses</i> | <i>(B)<br/>Reported on Large Losses</i> | <i>(C)<br/>Trend Factor to 7/1/18-19</i> | <i>(D)<br/>Reported Develop. Factor</i> | <i>(E)<br/>Ultimate on Small Claims</i> |
|------------------------|--------------------------------|---|--|---|---|
| 7/1/07-08              | \$501,636                      | \$0                                     | 1.462                                    | 1.000                                   | \$733,637                               |
| 7/1/08-09              | \$910,996                      | \$289,597                               | 1.399                                    | 1.000                                   | \$869,288                               |
| 7/1/09-10              | \$543,063                      | \$0                                     | 1.342                                    | 1.000                                   | \$728,928                               |
| 7/1/10-11              | \$719,013                      | \$238,683                               | 1.294                                    | 1.000                                   | \$621,824                               |
| 7/1/11-12              | \$832,932                      | \$96,221                                | 1.250                                    | 1.000                                   | \$921,375                               |
| 7/1/12-13              | \$633,098                      | \$135,786                               | 1.217                                    | 1.001                                   | \$605,515                               |
| 7/1/13-14              | \$705,779                      | \$130,707                               | 1.184                                    | 1.003                                   | \$682,488                               |
| 7/1/14-15              | \$1,276,906                    | \$554,252                               | 1.149                                    | 1.008                                   | \$836,926                               |
| 7/1/15-16              | \$1,137,276                    | \$202,250                               | 1.107                                    | 1.026                                   | \$1,062,219                             |
| 7/1/16-17              | \$1,034,806                    | \$244,347                               | 1.066                                    | 1.084                                   | \$913,375                               |
| 7/1/17-18              | \$546,156                      | \$115,000                               | 1.033                                    | 2.083                                   | \$927,366                               |
| <b>Total</b>           | <b>\$8,841,661</b>             | <b>\$2,006,844</b>                      |  |   | <b>\$8,902,941</b>                      |

| <i>Accident Period</i> | <i>(A)<br/>Paid Losses</i> | <i>(B)<br/>Paid on Large Losses</i> | <i>(C)<br/>Trend Factor to 7/1/18-19</i> | <i>(D)<br/>Paid Develop. Factor</i> | <i>(E)<br/>Ultimate on Small Claims</i> |
|------------------------|----------------------------|-------------------------------------|--|-------------------------------------|---|
| 7/1/07-08              | \$501,636                  | \$0                                 | 1.462                                    | 1.000                               | \$733,737                               |
| 7/1/08-09              | \$910,996                  | \$289,597                           | 1.399                                    | 1.000                               | \$869,534                               |
| 7/1/09-10              | \$524,623                  | \$0                                 | 1.342                                    | 1.001                               | \$704,605                               |
| 7/1/10-11              | \$719,013                  | \$238,683                           | 1.294                                    | 1.001                               | \$622,659                               |
| 7/1/11-12              | \$807,169                  | \$96,221                            | 1.250                                    | 1.003                               | \$891,888                               |
| 7/1/12-13              | \$633,098                  | \$135,786                           | 1.217                                    | 1.008                               | \$609,936                               |
| 7/1/13-14              | \$678,602                  | \$130,707                           | 1.184                                    | 1.021                               | \$661,995                               |
| 7/1/14-15              | \$990,994                  | \$391,551                           | 1.149                                    | 1.055                               | \$726,797                               |
| 7/1/15-16              | \$854,975                  | \$75,266                            | 1.107                                    | 1.157                               | \$998,687                               |
| 7/1/16-17              | \$785,160                  | \$144,347                           | 1.066                                    | 1.471                               | \$1,005,288                             |
| 7/1/17-18              | \$217,543                  | \$0                                 | 1.033                                    | 3.746                               | \$841,527                               |
| <b>Total</b>           | <b>\$7,623,811</b>         | <b>\$1,502,159</b>                  |  |                                     | <b>\$8,666,654</b>                      |

- (A) - Exhibit I
- (B) - Exhibit II
- (C) - Appendix B
- (D) - Appendix A
- (E) = (C)\*(D)\*[(A) - (B)]

**Calculation of Forecast Ultimate Losses for 7/1/18-19  
Less than \$100,000 per Occurrence**

| (A)<br>Accident<br>Period | (B)<br>Trended<br>Ultimate<br>Losses | (C)<br>Exposures<br>(Vehicles) | (D)<br>Exposure<br>Trend<br>Factors | (E)<br>Trended<br>Exposures | (F)<br>Loss<br>Rate |
|---------------------------|--------------------------------------|--------------------------------|-------------------------------------|-----------------------------|---------------------|
| 7/1/07-08                 | \$734,000                            | 5,440                          | 1.000                               | 5,440                       | \$135               |
| 7/1/08-09                 | \$869,000                            | 5,182                          | 1.000                               | 5,182                       | \$168               |
| 7/1/09-10                 | \$717,000                            | 5,887                          | 1.000                               | 5,887                       | \$122               |
| 7/1/10-11                 | \$622,000                            | 6,443                          | 1.000                               | 6,443                       | \$97                |
| 7/1/11-12                 | \$907,000                            | 5,902                          | 1.000                               | 5,902                       | \$154               |
| 7/1/12-13                 | \$608,000                            | 6,210                          | 1.000                               | 6,210                       | \$98                |
| 7/1/13-14                 | \$672,000                            | 6,847                          | 1.000                               | 6,847                       | \$98                |
| 7/1/14-15                 | \$782,000                            | 8,572                          | 1.000                               | 8,572                       | \$91                |
| 7/1/15-16                 | \$1,030,000                          | 9,173                          | 1.000                               | 9,173                       | \$112               |
| 7/1/16-17                 | \$959,000                            | 9,781                          | 1.000                               | 9,781                       | \$98                |
| 7/1/17-18                 | \$884,000                            | 10,013                         | 1.000                               | 10,013                      | \$88                |
| <b>Total</b>              | <b>\$8,784,000</b>                   | <b>79,449</b>                  |                                     | <b>79,449</b>               | <b>\$111</b>        |

|  | <u>7/1/17-18</u> | <u>7/1/18-19</u> |
|--|------------------|------------------|
| (1) Selected Loss Rate<br>{ Weighted Average - last five years } | \$94             | \$97             |
| (2) Forecast Exposure<br>{ Exhibit I }                           | 10,013           | 10,046           |
| <b>(3) Forecast Small Losses</b><br>{ Line (1) x Line (2) }      | <b>\$945,000</b> | <b>\$979,000</b> |

Column (B) - Average of Columns (E) from Exhibit III;  
Column (C) - Exhibit I  
Column (D) - N/A  
Column (E) = (C) \* (D)  
Column (F) = (B) / (E)

**Projected Large Claim Frequency  
 Claims Exceeding \$100,000 per Occurrence**

| (A)<br>Accident<br>Period | (B)<br>Number of<br>Claims<br>> \$100,000 | (C)<br>CCDF | (D)<br>Ultimate<br>Claims | (E)<br>Exposures<br>(Vehicles) | (F)<br>Frequency<br>per 1,000<br>Vehicles |
|---------------------------|---|-------------|---------------------------|--------------------------------|---|
| 7/1/07-08                 | 0   | 1.000       | 0.0                       | 5,440                          | 0.00                                      |
| 7/1/08-09                 | 3   | 1.000       | 3.0                       | 5,182                          | 0.58                                      |
| 7/1/09-10                 | 0   | 1.000       | 0.0                       | 5,887                          | 0.00                                      |
| 7/1/10-11                 | 2   | 1.000       | 2.0                       | 6,443                          | 0.31                                      |
| 7/1/11-12                 | 1   | 1.000       | 1.0                       | 5,902                          | 0.17                                      |
| 7/1/12-13                 | 1   | 1.000       | 1.0                       | 6,210                          | 0.16                                      |
| 7/1/13-14                 | 1   | 1.000       | 1.0                       | 6,847                          | 0.15                                      |
| 7/1/14-15                 | 3   | 1.000       | 3.0                       | 8,572                          | 0.35                                      |
| 7/1/15-16                 | 1   | 1.002       | 1.0                       | 9,173                          | 0.11                                      |
| 7/1/16-17                 | 2   | 1.003       | 2.0                       | 9,781                          | 0.21                                      |
| 7/1/17-18                 | 1   | 1.727       | 1.7                       | 10,013                         | 0.17                                      |
| <b>Total</b>              | <b>15</b>                                 |             | <b>15.7</b>               | <b>79,449</b>                  | <b>0.20</b>                               |

|   | <u>7/1/17-18</u> | <u>7/1/18-19</u> |
|---|------------------|------------------|
| <i>Selected Frequency<br/>{ All Years Average }</i> | 0.20             | 0.20             |
| <i>Forecast Exposure</i>                            | 10,013           | 10,046           |
| <b>Forecast Number of Large Claims</b>              | <b>2.0</b>       | <b>2.0</b>       |

(B) - Exhibit II  
 (C) - Appendix A  
 (D) - (B) \* (C)  
 (E) = Exhibit I  
 (F) = (D) / (E) \* 1,000

**Projected Total Claim Frequency**

| (A)<br>Accident<br>Period | (B)<br>Number of<br>Nonzero<br>Claims | (C)<br>CCDF | (D)<br>Ultimate<br>Claims                       | (E)<br>Exposures<br>(Vehicles) | (F)<br>Frequency<br>per 1,000<br>Vehicles |
|---------------------------|---------------------------------------|-------------|---|--------------------------------|---|
| 7/1/07-08                 | 132                                   | 1.000       | 132.0   | 5,440                          | 24.3                                      |
| 7/1/08-09                 | 148                                   | 1.000       | 148.0   | 5,182                          | 28.6                                      |
| 7/1/09-10                 | 136                                   | 1.000       | 136.0   | 5,887                          | 23.1                                      |
| 7/1/10-11                 | 138                                   | 1.000       | 138.0   | 6,443                          | 21.4                                      |
| 7/1/11-12                 | 151                                   | 1.000       | 151.0   | 5,902                          | 25.6                                      |
| 7/1/12-13                 | 151                                   | 1.000       | 151.0   | 6,210                          | 24.3                                      |
| 7/1/13-14                 | 172                                   | 1.000       | 172.0   | 6,847                          | 25.1                                      |
| 7/1/14-15                 | 208                                   | 1.000       | 208.0   | 8,572                          | 24.3                                      |
| 7/1/15-16                 | 216                                   | 1.002       | 216.4   | 9,173                          | 23.6                                      |
| 7/1/16-17                 | 195                                   | 1.003       | 195.7   | 9,781                          | 20.0                                      |
| 7/1/17-18                 | 113                                   | 1.727       | 195.1   | 10,013                         | 19.5                                      |
| <b>Total</b>              | <b>1,760</b>                          |             | <b>1,843.2</b>                                  | <b>79,449</b>                  | <b>23.2</b>                               |
|                           |                                       |             |   | <u>7/1/17-18</u>               | <u>7/1/18-19</u>                          |
|                           |                                       |             | <i>Selected Frequency<br/>Four year average</i> | 21.8                           | 21.8                                      |
|                           |                                       |             | <i>Forecast Exposure</i>                        | 10,013                         | 10,046                                    |
|                           |                                       |             | <b>Forecast Total Claims</b>                    | <b>218.7</b>                   | <b>219.4</b>                              |

(B) - Exhibit I  
 (C) - Appendix A  
 (D) - (B) \* (C)  
 (E) = Exhibit I  
 (F) = (D) / (E) \* 1,000

**Forecast Ultimate Losses for 7/1/18-19**  
**Total Experience Net of Member Deductibles**

|  | <u>7/1/17-18</u> | <u>7/1/18-19</u> |
|--|------------------|------------------|
| (1) Forecast Small Losses<br>{Exhibit IV}  | \$945,000        | \$979,000        |
| (2) Forecast Number of Claims over \$100,000<br>{Exhibit V}                              | 2.0              | 2.0              |
| (3) Expected Severity of Losses over \$100,000:<br>{ Derived from Claims in Exhibit II } |                  |                  |
| Limited to \$100,000   | \$100,000        | \$100,000        |
| Limited to \$125,000   | \$119,000        | \$123,000        |
| Limited to \$200,000   | \$149,000        | \$154,000        |
| Limited to \$1,000,000   | \$160,000        | \$165,000        |
| Unlimited  | \$160,000        | \$165,000        |
| (4) Projected Total Losses<br>{ Line(1) + [Line(2) * Line (3)] }                         |                  |                  |
| Limited to \$100,000   | \$1,143,000      | \$1,178,000      |
| Limited to \$125,000   | \$1,181,000      | \$1,224,000      |
| Limited to \$200,000   | \$1,240,000      | \$1,285,000      |
| Limited to \$1,000,000   | \$1,262,000      | \$1,307,000      |
| Unlimited  | \$1,262,000      | \$1,307,000      |
| (5) Forecast Vehicle Counts  | 10,013           | 10,046           |
| (6) Projected Cost per Vehicle<br>{ Line (4) / Line (5) }                                |                  |                  |
| Limited to \$100,000   | \$114            | \$117            |
| Limited to \$125,000   | \$118            | \$122            |
| Limited to \$200,000   | \$124            | \$128            |
| Limited to \$1,000,000   | \$126            | \$130            |
| Unlimited  | \$126            | \$130            |
| (7) Projected total Claims   | 218.7            | 219.4            |
| (8) Average Severity   |                  |                  |
| Limited to \$100,000   | \$5,200          | \$5,400          |
| Limited to \$125,000   | \$5,400          | \$5,600          |
| Limited to \$1,000,000   | \$5,700          | \$6,000          |
| Unlimited  | \$5,800          | \$6,000          |

**Distribution of Forecast Losses for 7/1/18-19  
Assuming a \$100,000 SIR**

| <i>Percentile</i>       | <i>SIR Layer<br/>\$100,000</i> | <i>Layer<br/>\$900,000 xs<br/>\$100,000</i> | <i>Losses<br/>Limited to<br/>\$1,000,000</i> | <i>Losses<br/>Excess of<br/>\$1,000,000</i> | <i>Total<br/>Incurred<br/>Losses</i> |
|-------------------------|--------------------------------|---|--|---|--------------------------------------|
| 20.0%                   | \$959,000                      | \$26,000                                    | \$1,025,000                                  | \$0   | \$1,025,000                          |
| 30.0%                   | \$1,029,000                    | \$51,000                                    | \$1,113,000                                  | \$0   | \$1,113,000                          |
| 40.0%                   | \$1,094,000                    | \$74,000                                    | \$1,195,000                                  | \$0   | \$1,195,000                          |
| 50.0%                   | \$1,158,000                    | \$99,000                                    | \$1,274,000                                  | \$0   | \$1,274,000                          |
| 60.0%                   | \$1,222,000                    | \$129,000                                   | \$1,359,000                                  | \$0   | \$1,359,000                          |
| 70.0%                   | \$1,295,000                    | \$164,000                                   | \$1,454,000                                  | \$0   | \$1,454,000                          |
| 75.0%                   | \$1,340,000                    | \$185,000                                   | \$1,513,000                                  | \$0   | \$1,513,000                          |
| 80.0%                   | \$1,391,000                    | \$211,000                                   | \$1,578,000                                  | \$0   | \$1,578,000                          |
| 85.0%                   | \$1,455,000                    | \$244,000                                   | \$1,657,000                                  | \$0   | \$1,657,000                          |
| 90.0%                   | \$1,531,000                    | \$290,000                                   | \$1,761,000                                  | \$0   | \$1,761,000                          |
| 95.0%                   | \$1,641,000                    | \$369,000                                   | \$1,908,000                                  | \$0   | \$1,908,000                          |
| 99.0%                   | \$1,895,000                    | \$566,000                                   | \$2,237,000                                  | \$0   | \$2,237,000                          |
| <b>Expected</b>         | <b>\$1,178,000</b>             | <b>\$129,000</b>                            | <b>\$1,307,000</b>                           | <b>\$0</b>                                  | <b>\$1,307,000</b>                   |
| <i>Vehicles</i>         | 10,046                         |   |  |   |                                      |
| <i>Students</i>         | 377,140                        |   |  |   |                                      |
| <b>Cost Per Vehicle</b> | <b>\$117</b>                   | <b>\$13</b>                                 | <b>\$130</b>                                 | <b>\$0</b>                                  | <b>\$130</b>                         |
| <b>Cost Per Student</b> | <b>\$3.12</b>                  | <b>\$0.34</b>                               | <b>\$3.47</b>                                | <b>\$0.00</b>                               | <b>\$3.47</b>                        |

Percentiles based on combined distributions for small and large losses  
Aggregate small losses modeled using a lognormal distribution  
Large claim size modeled using an inverse Weibull distribution  
Large claim counts modeled using a Poisson Distribution

Lognormal  
Mu = 13.77009  
Sigma = 0.22000  
Inverse Weibull  
Tau = 4.536372519  
Theta = 137737.4042  
Poisson  
Lambda = 1.99

**Estimation of Cumulative Reported Loss Development Factors  
Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |               |          |         |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------------|----------|---------|---------|---------------|---------------------------|
|                               |                             | X'<br>LN(1/(X+C))                 | Y'<br>LN(Y-1) | (X')^2   | (Y')^2  | X' x Y' | X             | Cumulative<br>Factor<br>Y |
| 12                            | <b>1.161</b>                | -6.8690                           | -1.8250       | 47.183   | 3.3306  | 12.5360 | <b>127</b>    | <b>1.000</b>              |
| 24                            | <b>1.056</b>                | -6.8814                           | -2.8886       | 47.354   | 8.3442  | 19.8779 | <b>115</b>    | <b>1.000</b>              |
| 36                            | <b>1.015</b>                | -6.8937                           | -4.1964       | 47.522   | 17.6096 | 28.9284 | <b>103</b>    | <b>1.000</b>              |
| 48                            | <b>1.005</b>                | -6.9058                           | -5.2983       | 47.689   | 28.0722 | 36.5889 | <b>91</b>     | <b>1.000</b>              |
|                               |                             |                                   |               |          |         |         | <b>79</b>     | <b>1.000</b>              |
|                               |                             |                                   |               |          |         |         | <b>67</b>     | <b>1.001</b>              |
|                               |                             |                                   |               |          |         |         | <b>55</b>     | <b>1.003</b>              |
|                               |                             |                                   |               |          |         |         | <b>43</b>     | <b>1.008</b>              |
|                               |                             |                                   |               |          |         |         | <b>31</b>     | <b>1.026</b>              |
|                               |                             |                                   |               |          |         |         | <b>19</b>     | <b>1.084</b>              |
|                               |                             |                                   |               |          |         |         | <b>7</b>      | <b>2.083</b>              |
| Sum                           |                             | -27.5498                          | -14.2083      | 189.7491 | 57.3566 | 97.9311 |               |                           |
| Average                       |                             | -6.8875                           | -3.5521       | 47.4373  | 14.3392 | 24.4828 |               |                           |

|            |                   |              |                |
|------------|-------------------|--------------|----------------|
| <b>N =</b> | <b>4</b>          |              |                |
| <b>A =</b> | <b>7.792E+284</b> |              |                |
| <b>B =</b> | <b>95.759</b>     | <b>R^2 =</b> | <b>0.99837</b> |
| <b>C =</b> | <b>950</b>        |              |                |

\* - Appendix A4 from IBNR Study

**Estimation of Cumulative Paid Loss Development Factors  
Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |               |          |         |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------------|----------|---------|---------|---------------|---------------------------|
|                               |                             | X'<br>LN(1/(X+C))                 | Y'<br>LN(Y-1) | (X')^2   | (Y')^2  | X' x Y' | X             | Cumulative<br>Factor<br>Y |
| 12                            | <b>1.918</b>                | -5.2311                           | -0.0850       | 27.364   | 0.0072  | 0.4449  | <b>127</b>    | <b>1.000</b>              |
| 24                            | <b>1.313</b>                | -5.2933                           | -1.1615       | 28.019   | 1.3492  | 6.1484  | <b>115</b>    | <b>1.000</b>              |
| 36                            | <b>1.088</b>                | -5.3519                           | -2.4308       | 28.642   | 5.9089  | 13.0094 | <b>103</b>    | <b>1.001</b>              |
| 48                            | <b>1.042</b>                | -5.4072                           | -3.1818       | 29.238   | 10.1238 | 17.2045 | <b>91</b>     | <b>1.001</b>              |
| 60                            | <b>1.013</b>                | -5.4596                           | -4.3173       | 29.807   | 18.6389 | 23.5706 | <b>79</b>     | <b>1.003</b>              |
|                               |                             |                                   |               |          |         |         | <b>67</b>     | <b>1.008</b>              |
|                               |                             |                                   |               |          |         |         | <b>55</b>     | <b>1.021</b>              |
|                               |                             |                                   |               |          |         |         | <b>43</b>     | <b>1.055</b>              |
|                               |                             |                                   |               |          |         |         | <b>31</b>     | <b>1.157</b>              |
|                               |                             |                                   |               |          |         |         | <b>19</b>     | <b>1.471</b>              |
|                               |                             |                                   |               |          |         |         | <b>7</b>      | <b>3.746</b>              |
| Sum                           |                             | -26.7430                          | -11.1765      | 143.0705 | 36.0280 | 60.3777 |               |                           |
| Average                       |                             | -5.3486                           | -2.2353       | 28.6141  | 7.2056  | 12.0755 |               |                           |

|            |                  |              |                |
|------------|------------------|--------------|----------------|
| <b>N =</b> | <b>5</b>         |              |                |
| <b>A =</b> | <b>4.943E+41</b> |              |                |
| <b>B =</b> | <b>18.367</b>    | <b>R^2 =</b> | <b>0.99634</b> |
| <b>C =</b> | <b>175</b>       |              |                |

\* - Appendix A5 from IBNR Study



**Estimation of Cumulative Reported Claim Development Factors  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |          |         |         |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|----------|---------|---------|---------|---------------|---------------------------|
|                               |                             | X'                                | Y'       | (X')^2  | (Y')^2  | X' x Y' | X             | Cumulative<br>Factor<br>Y |
|                               |                             | LN(1/(X+C))                       | LN(Y-1)  |         |         |         |               |                           |
| 12                            | <b>1.006</b>                | -2.4849                           | -5.1822  | 6.175   | 26.8550 | 12.8772 | <b>127</b>    | <b>1.000</b>              |
| 24                            | <b>1.003</b>                | -3.1781                           | -5.9354  | 10.100  | 35.2292 | 18.8631 | <b>115</b>    | <b>1.000</b>              |
|                               |                             |                                   |          |         |         |         | <b>103</b>    | <b>1.000</b>              |
|                               |                             |                                   |          |         |         |         | <b>91</b>     | <b>1.000</b>              |
|                               |                             |                                   |          |         |         |         | <b>79</b>     | <b>1.000</b>              |
|                               |                             |                                   |          |         |         |         | <b>67</b>     | <b>1.000</b>              |
|                               |                             |                                   |          |         |         |         | <b>55</b>     | <b>1.000</b>              |
|                               |                             |                                   |          |         |         |         | <b>43</b>     | <b>1.000</b>              |
|                               |                             |                                   |          |         |         |         | <b>31</b>     | <b>1.002</b>              |
|                               |                             |                                   |          |         |         |         | <b>19</b>     | <b>1.003</b>              |
|                               |                             |                                   |          |         |         |         | <b>7</b>      | <b>1.727</b>              |
| Sum                           |                             | -5.6630                           | -11.1176 | 16.2748 | 62.0842 | 31.7403 |               |                           |
| Average                       |                             | -2.8315                           | -5.5588  | 8.1374  | 31.0421 | 15.8702 |               |                           |

|     |           |       |         |
|-----|-----------|-------|---------|
| N = | 2         |       |         |
| A = | 8.359E-02 |       |         |
| B = | 1.087     | R^2 = | 1.00000 |
| C = | 0         |       |         |

\* - Appendix A6 from IBNR study

**U.S. Claims Cost Index  
Automobile Liability**

| (A)    | (B)   | (C)                           | (D)                | (E)                   | (F)                                |
|--------|-------|-------------------------------|--------------------|-----------------------|------------------------------------|
| Year   | Index | Annual<br>Percent<br>Increase | Accident<br>Period | Interpolated<br>Index | Trend<br>Factor<br>to<br>7/1/18-19 |
| 2000   | 80.9  | 5.0%                          |                    |                       |                                    |
| 2001   | 84.0  | 3.9%                          |                    |                       |                                    |
| 2002   | 88.1  | 4.8%                          |                    |                       |                                    |
| 2003   | 91.5  | 3.9%                          |                    |                       |                                    |
| 2004   | 95.6  | 4.5%                          |                    |                       |                                    |
| 2005   | 100.0 | 4.6%                          |                    |                       |                                    |
| 2006   | 104.3 | 4.3%                          |                    |                       |                                    |
| 2007   | 109.2 | 4.7%                          |                    |                       |                                    |
| 2008   | 113.7 | 4.0%                          | 7/1/07-08          | 111.5                 | 1.462                              |
| 2009   | 119.4 | 5.0%                          | 7/1/08-09          | 116.5                 | 1.399                              |
| 2010   | 123.5 | 3.5%                          | 7/1/09-10          | 121.4                 | 1.342                              |
| 2011   | 128.3 | 3.9%                          | 7/1/10-11          | 125.9                 | 1.294                              |
| 2012   | 132.4 | 3.2%                          | 7/1/11-12          | 130.4                 | 1.250                              |
| 2013   | 135.6 | 2.4%                          | 7/1/12-13          | 134.0                 | 1.217                              |
| 2014   | 139.8 | 3.1%                          | 7/1/13-14          | 137.7                 | 1.184                              |
| 2015   | 143.9 | 2.9%                          | 7/1/14-15          | 141.9                 | 1.149                              |
| 2016   | 150.4 | 4.5%                          | 7/1/15-16          | 147.2                 | 1.107                              |
| 2017*  | 155.3 | 3.3%                          | 7/1/16-17          | 152.9                 | 1.066                              |
| 2018** | 160.4 | 3.3%                          | 7/1/17-18          | 157.9                 | 1.033                              |
| 2019** | 165.6 | 3.3%                          | 7/1/18-19          | 163.0                 | 1.000                              |

(B) and (C) - Towers Watson Claim Cost Index compiled by Jeremy Pecora, FCAS, MAAA

\* - Numbers are preliminary

\*\* - future trend estimated based on latest year

(E) - Linear interpolation of column (B)

(F) - [(E), forecast period] / [(E), current period]

---

## General Liability Exhibits

The “Analysis” section of this report presents a discussion of the following exhibits:

|             |   |
|-------------|---|
| Exhibit I   | Summary of Experience   |
| Exhibit II  | Claims that Develop and Trend over \$100,000                            |
| Exhibit III | Ultimate Small Losses   |
| Exhibit IV  | Forecast Losses Less than \$100,000                                     |
| Exhibit V   | Large Claim Frequency<br>Total Claim Frequency                          |
| Exhibit VI  | Forecast Ultimate Losses  |
| Exhibit VII | Results of Monte Carlo Simulation<br>Forecast Losses for Various Layers |
| Appendix A  | Loss Development Factors  |
| Appendix B  | Trend Factors   |



**Summary of Loss and Exposure Data**  
**Total Experience Net of Member Deductibles**

| (A)                | (B)                | (C)                  | (D)                | (E)                                 | (F)                                 | (G)                                 | (H)      |
|--------------------|--------------------|----------------------|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|----------|
| Accident<br>Period | Evaluation<br>Date | Maturity<br>(months) | Reported<br>Claims | Net Loss<br>and Expense<br>Payments | Net Loss<br>and Expense<br>Reserves | Net Loss<br>and Expense<br>Incurred | Students |
| 7/1/07-08          | 1/31/2018          | 127                  | 121                | \$1,271,972                         | \$0                                 | \$1,271,972                         | 222,197  |
| 7/1/08-09          | 1/31/2018          | 115                  | 110                | \$1,856,219                         | \$0                                 | \$1,856,219                         | 223,801  |
| 7/1/09-10          | 1/31/2018          | 103                  | 111                | \$1,314,584                         | \$0                                 | \$1,314,584                         | 227,106  |
| 7/1/10-11          | 1/31/2018          | 91                   | 87                 | \$1,753,378                         | \$38,239                            | \$1,791,617                         | 256,676  |
| 7/1/11-12          | 1/31/2018          | 79                   | 71                 | \$3,187,108                         | \$18,337                            | \$3,205,445                         | 244,401  |
| 7/1/12-13          | 1/31/2018          | 67                   | 102                | \$994,654                           | \$148,989                           | \$1,143,644                         | 253,985  |
| 7/1/13-14          | 1/31/2018          | 55                   | 78                 | \$796,563                           | \$114,572                           | \$911,136                           | 290,075  |
| 7/1/14-15          | 1/31/2018          | 43                   | 103                | \$1,375,885                         | \$474,963                           | \$1,850,848                         | 348,947  |
| 7/1/15-16          | 1/31/2018          | 31                   | 113                | \$1,040,707                         | \$891,990                           | \$1,932,697                         | 361,838  |
| 7/1/16-17          | 1/31/2018          | 19                   | 120                | \$465,524                           | \$2,405,496                         | \$2,871,020                         | 370,097  |
| 7/1/17-18          | 1/31/2018          | 7                    | 50                 | \$28,936                            | \$371,180                           | \$400,116                           | 376,303  |
| 7/1/18-19          |                    |                      |                    |                                     |                                     |                                     | 377,140  |
|                    |                    |                      | 1066               | \$14,085,530                        | \$4,463,766                         | \$18,549,297                        |          |

- Loss and policy information provided by Jennifer McKenzies, Arthur J. Gallagher
- Loss and Exposure data contains only current OSIG members as of 1/31/2018
- Claims are grouped by occurrence, claims with \$0 incurred are excluded
- Losses are net of member deductibles

**Large Claim Listing**  
**Claims Exceeding Threshold after Development and Trend**

| (A)<br>Occurrence # | (C)<br>Loss Date | (E)<br>Net<br>Paid | (F)<br>Net<br>Incurred | (G)<br>Severity<br>Factor | (H)<br>Trend<br>Factor | (I)<br>Loss After<br>Development<br>& Trend |
|---------------------|------------------|--------------------|------------------------|---------------------------|------------------------|---|
| 02387               | 7/31/2007        | \$102,095          | \$102,095              | 1.000                     | 1.366                  | \$139,525                                   |
| P625-07-01847       | 8/24/2007        | \$76,067           | \$76,067               | 1.000                     | 1.366                  | \$103,955                                   |
| 02047               | 10/19/2007       | \$109,798          | \$109,798              | 1.000                     | 1.366                  | \$150,052                                   |
| 01968               | 11/2/2007        | \$121,452          | \$121,452              | 1.000                     | 1.366                  | \$165,979                                   |
| P625-08-02155       | 3/7/2008         | \$75,234           | \$75,234               | 1.000                     | 1.366                  | \$102,816                                   |
| 02595               | 10/20/2008       | \$1,075,745        | \$1,075,745            | 1.000                     | 1.326                  | \$1,427,338                                 |
| P625-08-02785       | 12/8/2008        | \$96,997           | \$96,997               | 1.000                     | 1.326                  | \$128,699                                   |
| 03267               | 11/4/2009        | \$107,144          | \$107,144              | 1.001                     | 1.296                  | \$139,020                                   |
| 03567               | 2/18/2010        | \$117,345          | \$117,345              | 1.001                     | 1.296                  | \$152,255                                   |
| P625-10-03568       | 3/11/2010        | \$86,866           | \$86,866               | 1.001                     | 1.296                  | \$112,709                                   |
| 90906               | 5/10/2010        | \$304,711          | \$304,711              | 1.001                     | 1.296                  | \$395,364                                   |
| P625-10-03653       | 5/19/2010        | \$89,348           | \$89,348               | 1.001                     | 1.296                  | \$115,929                                   |
| P625-10-03728       | 6/17/2010        | \$85,569           | \$85,569               | 1.001                     | 1.296                  | \$111,026                                   |
| P625-10-90080       | 8/19/2010        | \$94,545           | \$94,545               | 1.002                     | 1.258                  | \$119,191                                   |
| 90084               | 8/22/2010        | \$115,615          | \$115,615              | 1.002                     | 1.258                  | \$145,754                                   |
| 90118               | 9/1/2010         | \$136,645          | \$136,645              | 1.002                     | 1.258                  | \$172,266                                   |
| 90205               | 10/14/2010       | \$123,444          | \$123,444              | 1.002                     | 1.258                  | \$155,623                                   |
| 90236               | 10/25/2010       | \$290,942          | \$290,942              | 1.002                     | 1.258                  | \$366,785                                   |
| 90297               | 12/6/2010        | \$157,221          | \$157,221              | 1.002                     | 1.258                  | \$198,205                                   |
| 90313               | 12/14/2010       | \$104,163          | \$104,163              | 1.002                     | 1.258                  | \$131,317                                   |
| 90708               | 3/22/2011        | \$141,522          | \$141,522              | 1.002                     | 1.258                  | \$178,414                                   |
| P625-11-91010       | 8/25/2011        | \$84,730           | \$84,730               | 1.004                     | 1.216                  | \$103,511                                   |
| 91394               | 9/1/2011         | \$149,418          | \$149,418              | 1.004                     | 1.216                  | \$182,537                                   |
| 91388               | 10/25/2011       | \$443,010          | \$443,010              | 1.004                     | 1.216                  | \$541,205                                   |
| P625-11-90962       | 10/26/2011       | \$95,962           | \$95,962               | 1.004                     | 1.216                  | \$117,233                                   |
| P625-11-90991       | 10/28/2011       | \$97,912           | \$97,912               | 1.004                     | 1.216                  | \$119,614                                   |
| 91040               | 11/11/2011       | \$1,708,795        | \$1,708,795            | 1.004                     | 1.216                  | \$2,087,555                                 |
| 91564               | 5/28/2012        | \$210,533          | \$210,533              | 1.004                     | 1.216                  | \$257,199                                   |
| 91445               | 8/29/2012        | \$420,468          | \$420,468              | 1.009                     | 1.183                  | \$501,874                                   |
| 91791               | 10/25/2012       | \$68,679           | \$105,000              | 1.009                     | 1.183                  | \$125,329                                   |
| 92222               | 12/23/2013       | \$145,266          | \$145,266              | 1.019                     | 1.152                  | \$170,651                                   |
| 92382               | 1/29/2014        | \$100,352          | \$100,352              | 1.019                     | 1.152                  | \$117,887                                   |
| 92867               | 4/4/2014         | \$176,221          | \$176,221              | 1.019                     | 1.152                  | \$207,014                                   |
| P625-15-93017       | 1/9/2015         | \$6,804            | \$97,169               | 1.042                     | 1.121                  | \$113,461                                   |
| 92999               | 3/2/2015         | \$240,862          | \$240,862              | 1.042                     | 1.121                  | \$281,248                                   |
| 93289               | 3/22/2015        | \$211,827          | \$211,827              | 1.042                     | 1.121                  | \$247,344                                   |
| P625-15-94241       | 4/16/2015        | \$6,121            | \$91,112               | 1.042                     | 1.121                  | \$106,389                                   |
| 93143               | 5/15/2015        | \$141,576          | \$141,576              | 1.042                     | 1.121                  | \$165,315                                   |
| 93680               | 3/7/2016         | \$92,066           | \$170,000              | 1.090                     | 1.086                  | \$201,095                                   |
| 94063               | 3/24/2016        | \$51,960           | \$127,000              | 1.090                     | 1.086                  | \$150,230                                   |
| 94446               | 5/5/2016         | \$0                | \$103,000              | 1.090                     | 1.086                  | \$121,840                                   |
| P625-16-93885       | 7/8/2016         | \$55,449           | \$87,000               | 1.181                     | 1.053                  | \$108,173                                   |
| P625-16-94291       | 12/16/2016       | \$52,546           | \$97,000               | 1.181                     | 1.053                  | \$120,607                                   |
| 94280               | 1/27/2017        | \$50,400           | \$1,053,000            | 1.181                     | 1.053                  | \$1,309,269                                 |
| P625-17-94383       | 2/1/2017         | \$2,084            | \$82,085               | 1.181                     | 1.053                  | \$102,062                                   |
| 94748               | 4/5/2017         | \$12,346           | \$110,000              | 1.181                     | 1.053                  | \$136,771                                   |
|                     |                  | \$8,237,855        | \$9,961,765            |                           |                        |   |

- Loss and policy information provided by Jennifer McKenzie, Arthur J. Gallagher

**Estimation of Ultimate Losses for 7/1/18-19  
 Less than \$100,000 per Occurrence**

| <i>Accident Period</i> | <i>(A)<br/>Reported Losses</i> | <i>(B)<br/>Reported on Large Losses</i> | <i>(C)<br/>Trend Factor to 7/1/18-19</i> | <i>(D)<br/>Reported Develop. Factor</i> | <i>(E)<br/>Ultimate on Small Claims</i> |
|------------------------|--------------------------------|---|--|---|---|
| 7/1/07-08              | \$1,271,972                    | \$484,645                               | 1.366                                    | 1.000                                   | \$1,076,000                             |
| 7/1/08-09              | \$1,856,219                    | \$1,172,742                             | 1.326                                    | 1.000                                   | \$907,000                               |
| 7/1/09-10              | \$1,314,584                    | \$790,982                               | 1.296                                    | 1.001                                   | \$679,000                               |
| 7/1/10-11              | \$1,791,617                    | \$1,164,097                             | 1.258                                    | 1.002                                   | \$791,000                               |
| 7/1/11-12              | \$3,205,445                    | \$2,790,361                             | 1.216                                    | 1.004                                   | \$507,000                               |
| 7/1/12-13              | \$1,143,644                    | \$525,468                               | 1.183                                    | 1.009                                   | \$738,000                               |
| 7/1/13-14              | \$911,136                      | \$421,838                               | 1.152                                    | 1.019                                   | \$575,000                               |
| 7/1/14-15              | \$1,850,848                    | \$782,546                               | 1.121                                    | 1.042                                   | \$1,248,000                             |
| 7/1/15-16              | \$1,932,697                    | \$400,000                               | 1.086                                    | 1.092                                   | \$1,817,000                             |
| 7/1/16-17              | \$2,871,020                    | \$1,429,085                             | 1.053                                    | 1.201                                   | \$1,824,000                             |
| 7/1/17-18              | \$400,116                      | \$0                                     | 1.026                                    | 2.358                                   | \$968,000                               |
| <b>Total</b>           | <b>\$18,549,297</b>            | <b>\$9,961,765</b>                      |  |   | <b>\$11,130,000</b>                     |

| <i>Accident Period</i> | <i>(A)<br/>Paid Losses</i> | <i>(B)<br/>Paid on Large Losses</i> | <i>(C)<br/>Trend Factor to 7/1/18-19</i> | <i>(D)<br/>Paid Develop. Factor</i> | <i>(E)<br/>Ultimate on Small Claims</i> |
|------------------------|----------------------------|-------------------------------------|--|-------------------------------------|---|
| 7/1/07-08              | \$1,271,972                | \$484,645                           | 1.366                                    | 1.001                               | \$1,077,000                             |
| 7/1/08-09              | \$1,856,219                | \$1,172,742                         | 1.326                                    | 1.002                               | \$908,000                               |
| 7/1/09-10              | \$1,314,584                | \$790,982                           | 1.296                                    | 1.004                               | \$681,000                               |
| 7/1/10-11              | \$1,753,378                | \$1,164,097                         | 1.258                                    | 1.008                               | \$747,000                               |
| 7/1/11-12              | \$3,187,108                | \$2,790,361                         | 1.216                                    | 1.016                               | \$491,000                               |
| 7/1/12-13              | \$994,654                  | \$489,147                           | 1.183                                    | 1.038                               | \$621,000                               |
| 7/1/13-14              | \$796,563                  | \$421,838                           | 1.152                                    | 1.097                               | \$474,000                               |
| 7/1/14-15              | \$1,375,885                | \$607,191                           | 1.121                                    | 1.280                               | \$1,102,000                             |
| 7/1/15-16              | \$1,040,707                | \$144,026                           | 1.086                                    | 1.935                               | \$1,884,000                             |
| 7/1/16-17              | \$465,524                  | \$172,825                           | 1.053                                    | 4.836                               | \$1,491,000                             |
| 7/1/17-18              | \$28,936                   | \$0                                 | 1.026                                    | 26.252                              | \$780,000                               |
| <b>Total</b>           | <b>\$14,085,530</b>        | <b>\$8,237,855</b>                  |  |                                     | <b>\$10,256,000</b>                     |

- (A) - Exhibit I
- (B) - Exhibit II
- (C) - Appendix A
- (D) - Appendix B
- (E) = (C)\*(D)\*[(A) - (B)]

**Calculation of Forecast Ultimate Losses for 7/1/18-19  
 Less than \$100,000 per Occurrence**

| (A)<br>Accident<br>Period | (B)<br>Trended<br>Ultimate<br>Losses | (C)<br>Exposures<br>(Students) | (D)<br>Exposure<br>Trend<br>Factors | (E)<br>Trended<br>Exposures | (F)<br>Loss<br>Rate |
|---------------------------|--------------------------------------|--------------------------------|-------------------------------------|-----------------------------|---------------------|
| 7/1/07-08                 | \$1,076,000                          | 222,197                        | 1.000                               | 222,197                     | \$4.84              |
| 7/1/08-09                 | \$907,000                            | 223,801                        | 1.000                               | 223,801                     | \$4.05              |
| 7/1/09-10                 | \$679,000                            | 227,106                        | 1.000                               | 227,106                     | \$2.99              |
| 7/1/10-11                 | \$791,000                            | 256,676                        | 1.000                               | 256,676                     | \$3.08              |
| 7/1/11-12                 | \$507,000                            | 244,401                        | 1.000                               | 244,401                     | \$2.07              |
| 7/1/12-13                 | \$738,000                            | 253,985                        | 1.000                               | 253,985                     | \$2.91              |
| 7/1/13-14                 | \$575,000                            | 290,075                        | 1.000                               | 290,075                     | \$1.98              |
| 7/1/14-15                 | \$1,248,000                          | 348,947                        | 1.000                               | 348,947                     | \$3.58              |
| 7/1/15-16                 | \$1,817,000                          | 361,838                        | 1.000                               | 361,838                     | \$5.02              |
| 7/1/16-17                 | \$1,824,000                          | 370,097                        | 1.000                               | 370,097                     | \$4.93              |
| 7/1/17-18                 | \$968,000                            | 376,303                        | 1.000                               | 376,303                     | \$2.57              |
| <b>Total</b>              | <b>\$11,130,000</b>                  | <b>3,175,426</b>               |                                     | <b>3,175,426</b>            | <b>\$3.51</b>       |

|   | <u>7/1/17-18</u>   | <u>7/1/18-19</u>   |
|---|--------------------|--------------------|
| Selected Loss Rate<br>{ Five year weighted average }    | \$3.59             | \$3.68             |
| Forecast Exposure<br>{ Exhibit I }                      | 376,303            | 377,140            |
| <b>Forecast Small Losses</b><br>{ Line (1) x Line (2) } | <b>\$1,350,000</b> | <b>\$1,388,000</b> |

Column (B) - Exhibit III  
 Column (C) - Exhibit I  
 Column (D) - N/A  
 Column (E) = (C) \* (D)  
 Column (F) = (B) / (E)



**Projected Large Claim Frequency  
 Claims Exceeding \$100,000 per Occurrence**

| (A)<br>Accident<br>Period | (B)<br>Number of<br>Claims<br>> \$100,000 | (C)<br>CCDF | (D)<br>Ultimate<br>Claims | (E)<br>Exposures<br>(Students) | (F)<br>Frequency<br>per 1,000<br>Students |
|---------------------------|---|-------------|---------------------------|--------------------------------|---|
| 7/1/07-08                 | 5   | 1.000       | 5.0                       | 222,197                        | 0.023                                     |
| 7/1/08-09                 | 2   | 1.000       | 2.0                       | 223,801                        | 0.009                                     |
| 7/1/09-10                 | 6   | 1.000       | 6.0                       | 227,106                        | 0.026                                     |
| 7/1/10-11                 | 8   | 1.000       | 8.0                       | 256,676                        | 0.031                                     |
| 7/1/11-12                 | 7   | 1.000       | 7.0                       | 244,401                        | 0.029                                     |
| 7/1/12-13                 | 2   | 1.000       | 2.0                       | 253,985                        | 0.008                                     |
| 7/1/13-14                 | 3   | 1.000       | 3.0                       | 290,075                        | 0.010                                     |
| 7/1/14-15                 | 5   | 1.000       | 5.0                       | 348,947                        | 0.014                                     |
| 7/1/15-16                 | 3   | 1.002       | 3.0                       | 361,838                        | 0.008                                     |
| 7/1/16-17                 | 5   | 1.017       | 5.1                       | 370,097                        | 0.014                                     |
| 7/1/17-18                 | 0   | 1.882       | 0.0                       | 376,303                        | 0.000                                     |
| <b>Total</b>              | <b>46</b>                                 |             | <b>46.1</b>               | <b>3,175,426</b>               | <b>0.015</b>                              |

7/1/17-18                      7/1/18-19

Selected Frequency                      0.016                      0.016  
 { All years average excluding 17-18 }

Forecast Exposure                      376,303                      377,140

**Forecast Number of Claims over \$100,000                      6.2                      6.2**

- (B) - Exhibit II
- (C) - Appendix A
- (D) - (B) \* (C)
- (E) = Exhibit I
- (F) = (D) / (E) \* 1,000

**Projected Total Claim Frequency  
 Total Claims**

| (A)<br><i>Accident<br/>Period</i> | (B)<br><i>Number of<br/>Claims</i> | (C)<br><i>CCDF</i> | (D)<br><i>Ultimate<br/>Claims</i> | (E)<br><i>Exposures<br/>(Students)</i> | (F)<br><i>Frequency<br/>per 1,000<br/>Students</i> |
|-----------------------------------|------------------------------------|--------------------|-----------------------------------|--|--|
| 7/1/07-08                         | 121                                | 1.000              | 121.0                             | 222,197                                | 0.54   |
| 7/1/08-09                         | 110                                | 1.000              | 110.0                             | 223,801                                | 0.49   |
| 7/1/09-10                         | 111                                | 1.000              | 111.0                             | 227,106                                | 0.49   |
| 7/1/10-11                         | 87                                 | 1.000              | 87.0                              | 256,676                                | 0.34   |
| 7/1/11-12                         | 71                                 | 1.000              | 71.0                              | 244,401                                | 0.29   |
| 7/1/12-13                         | 102                                | 1.000              | 102.0                             | 253,985                                | 0.40   |
| 7/1/13-14                         | 78                                 | 1.000              | 78.0                              | 290,075                                | 0.27   |
| 7/1/14-15                         | 103                                | 1.000              | 103.0                             | 348,947                                | 0.30   |
| 7/1/15-16                         | 113                                | 1.002              | 113.2                             | 361,838                                | 0.31   |
| 7/1/16-17                         | 120                                | 1.017              | 122.1                             | 370,097                                | 0.33   |
| 7/1/17-18                         | 50                                 | 1.882              | 94.1                              | 376,303                                | 0.25   |
| <b>Total</b>                      | <b>1,066</b>                       |                    | <b>1,112.4</b>                    | <b>3,175,426</b>                       | <b>0.35</b>  |

|  |                  |                  |
|--|------------------|------------------|
|  | <u>7/1/17-18</u> | <u>7/1/18-19</u> |
| <i>Selected Frequency<br/>{ Average of last five years }</i> | 0.29             | 0.29             |
| <i>Forecast Exposure</i>                                     | 376,303          | 377,140          |
| <b>Forecast Number of Claims</b>                             | <b>109.6</b>     | <b>109.9</b>     |

(B) - Exhibit I  
 (C) - Appendix A  
 (D) - (B) \* (C)  
 (E) = Exhibit I  
 (F) = (D) / (E) \* 1,000

**Forecast Ultimate Losses for 7/1/18-19**  
**Total Experience Net of Member Deductibles**

|   | <u>7/1/17-18</u> | <u>7/1/18-19</u> |
|---|------------------|------------------|
| (1) Forecast Losses Less than \$100,000<br>{Exhibit IV}               | \$1,350,000      | \$1,388,000      |
| (2) Forecast Number of Claims over \$100,000<br>{Exhibit V}           | 6.2              | 6.2              |
| (3) Expected Excess Severity<br>{ Derived from Claims in Exhibit II } |                  |                  |
| Limited to \$100,000  | \$100,000        | \$100,000        |
| Limited to \$125,000  | \$120,000        | \$123,000        |
| Limited to \$200,000  | \$161,000        | \$165,000        |
| Limited to \$1,000,000  | \$206,000        | \$211,000        |
| Unlimited   | \$209,000        | \$214,000        |
| (4) Projected Total Losses<br>{ Line(1) + [Line(2) * Line (3)] }      |                  |                  |
| Limited to \$100,000  | \$1,970,000      | \$2,009,000      |
| Limited to \$125,000  | \$2,094,000      | \$2,152,000      |
| Limited to \$200,000  | \$2,348,000      | \$2,413,000      |
| Limited to \$1,000,000  | \$2,626,000      | \$2,698,000      |
| Unlimited   | \$2,645,000      | \$2,717,000      |
| (5) Forecast Exposure (Students)                                      | 376,303          | 377,140          |
| (6) Projected Cost per Student<br>{ Line (4) / Line (5) }             |                  |                  |
| Limited to \$100,000  | \$5.24           | \$5.33           |
| Limited to \$125,000  | \$5.56           | \$5.71           |
| Limited to \$200,000  | \$6.24           | \$6.40           |
| Limited to \$1,000,000  | \$6.98           | \$7.15           |
| Unlimited   | \$7.03           | \$7.20           |
| (7) Projected total Claims  | 109.6            | 109.9            |
| (8) Average Severity  |                  |                  |
| Limited to \$100,000  | \$18,000         | \$18,300         |
| Limited to \$125,000  | \$19,100         | \$19,600         |
| Limited to \$200,000  | \$21,400         | \$22,000         |
| Limited to \$1,000,000  | \$23,900         | \$24,600         |
| Unlimited   | \$24,100         | \$24,700         |

**Distribution of Forecast Losses for 7/1/18-19  
 Assuming a \$100,000 SIR**

| Percentile              | SIR Layer<br>\$100,000 | Layer<br>\$900,000 xs<br>\$100,000 | Losses<br>Limited to<br>\$1,000,000 | Losses<br>Excess of<br>\$1,000,000 | Total<br>Incurred<br>Losses |
|-------------------------|------------------------|------------------------------------|-------------------------------------|------------------------------------|-----------------------------|
| 20.0%                   | \$1,560,000            | \$329,000                          | \$2,025,000                         | \$0                                | \$2,025,000                 |
| 30.0%                   | \$1,697,000            | \$422,000                          | \$2,249,000                         | \$0                                | \$2,250,000                 |
| 40.0%                   | \$1,822,000            | \$515,000                          | \$2,442,000                         | \$0                                | \$2,443,000                 |
| 50.0%                   | \$1,950,000            | \$615,000                          | \$2,643,000                         | \$0                                | \$2,646,000                 |
| 60.0%                   | \$2,079,000            | \$721,000                          | \$2,840,000                         | \$0                                | \$2,846,000                 |
| 70.0%                   | \$2,229,000            | \$848,000                          | \$3,056,000                         | \$0                                | \$3,068,000                 |
| 75.0%                   | \$2,314,000            | \$926,000                          | \$3,184,000                         | \$0                                | \$3,201,000                 |
| 80.0%                   | \$2,420,000            | \$1,026,000                        | \$3,330,000                         | \$0                                | \$3,354,000                 |
| 85.0%                   | \$2,549,000            | \$1,143,000                        | \$3,499,000                         | \$0                                | \$3,544,000                 |
| 90.0%                   | \$2,710,000            | \$1,293,000                        | \$3,730,000                         | \$0                                | \$3,792,000                 |
| 95.0%                   | \$2,958,000            | \$1,519,000                        | \$4,066,000                         | \$0                                | \$4,171,000                 |
| 99.0%                   | \$3,514,000            | \$2,012,000                        | \$4,786,000                         | \$764,000                          | \$5,128,000                 |
| <b>Expected</b>         | <b>\$2,009,000</b>     | <b>\$689,000</b>                   | <b>\$2,698,000</b>                  | <b>\$19,000</b>                    | <b>\$2,717,000</b>          |
| <i>Students</i>         | 377,140                |                                    |                                     |                                    |                             |
| <b>Cost Per Student</b> | <b>\$5.33</b>          | <b>\$1.83</b>                      | <b>\$7.15</b>                       | <b>\$0.05</b>                      | <b>\$7.20</b>               |

Percentiles based on combined distributions for small and large losses  
 Aggregate small losses modeled using a lognormal distribution  
 Large claim size modeled using an inverse Weibull distribution  
 Large claim counts modeled using a Poisson Distribution

Lognormal  
 Mu = 14.08892  
 Sigma = 0.33  
Inverse Weibull  
 Tau = 2.5976  
 Theta = 140778.3  
Poisson  
 Lambda = 6.21

**Estimation of Cumulative Reported Loss Development Factors  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |               |          |         |          | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------------|----------|---------|----------|---------------|---------------------------|
|                               |                             | X'<br>LN(1/(X+C))                 | Y'<br>LN(Y-1) | (X')^2   | (Y')^2  | X' x Y'  | X             | Cumulative<br>Factor<br>Y |
| 12                            | <b>1.303</b>                | -7.2876                           | -1.1956       | 53.109   | 1.4296  | 8.7133   | <b>127</b>    | <b>1.000</b>              |
| 24                            | <b>1.151</b>                | -7.2957                           | -1.8905       | 53.228   | 3.5740  | 13.7927  | <b>115</b>    | <b>1.000</b>              |
| 36                            | <b>1.063</b>                | -7.3038                           | -2.7626       | 53.346   | 7.6321  | 20.1778  | <b>103</b>    | <b>1.001</b>              |
| 48                            | <b>1.033</b>                | -7.3119                           | -3.4183       | 53.464   | 11.6844 | 24.9939  | <b>91</b>     | <b>1.002</b>              |
| 60                            | <b>1.016</b>                | -7.3199                           | -4.1559       | 53.580   | 17.2715 | 30.4206  | <b>79</b>     | <b>1.004</b>              |
| 72                            | <b>1.006</b>                | -7.3278                           | -5.1317       | 53.696   | 26.3346 | 37.6041  | <b>67</b>     | <b>1.009</b>              |
|                               |                             |                                   |               |          |         |          | <b>55</b>     | <b>1.019</b>              |
|                               |                             |                                   |               |          |         |          | <b>43</b>     | <b>1.042</b>              |
|                               |                             |                                   |               |          |         |          | <b>31</b>     | <b>1.092</b>              |
|                               |                             |                                   |               |          |         |          | <b>19</b>     | <b>1.201</b>              |
|                               |                             |                                   |               |          |         |          | <b>7</b>      | <b>2.358</b>              |
| Sum                           |                             | -43.8467                          | -18.5547      | 320.4229 | 67.9262 | 135.7024 |               |                           |
| Average                       |                             | -7.3078                           | -3.0924       | 53.4038  | 11.3210 | 22.6171  |               |                           |

|            |                   |              |                  |
|------------|-------------------|--------------|------------------|
| <b>N =</b> | <b>6</b>          |              |                  |
| <b>A =</b> | <b>2.863E+304</b> |              |                  |
| <b>B =</b> | <b>96.354</b>     | <b>R^2 =</b> | <b>0.9967332</b> |
| <b>C =</b> | <b>1450</b>       |              |                  |

\* - Appendix A4 in IBNR study

**Estimation of Cumulative Paid Loss Development Factors  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |               |          |         |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------------|----------|---------|---------|---------------|---------------------------|
|                               |                             | X'<br>LN(1/(X+C))                 | Y'<br>LN(Y-1) | (X')^2   | (Y')^2  | X' x Y' | X             | Cumulative<br>Factor<br>Y |
| 12                            | <b>12.186</b>               | -4.0604                           | 2.4147        | 16.487   | 5.8306  | -9.8046 | <b>127</b>    | <b>1.001</b>              |
| 24                            | <b>2.607</b>                | -4.2485                           | 0.4744        | 18.050   | 0.2251  | -2.0155 | <b>115</b>    | <b>1.002</b>              |
| 36                            | <b>1.523</b>                | -4.4067                           | -0.6479       | 19.419   | 0.4198  | 2.8550  | <b>103</b>    | <b>1.004</b>              |
| 48                            | <b>1.227</b>                | -4.5433                           | -1.4821       | 20.642   | 2.1965  | 6.7335  | <b>91</b>     | <b>1.008</b>              |
| 60                            | <b>1.066</b>                | -4.6634                           | -2.7132       | 21.748   | 7.3615  | 12.6529 | <b>79</b>     | <b>1.016</b>              |
| 72                            | <b>1.027</b>                | -4.7707                           | -3.6126       | 22.759   | 13.0506 | 17.2344 | <b>67</b>     | <b>1.038</b>              |
| 84                            | <b>1.011</b>                | -4.8675                           | -4.5203       | 23.693   | 20.4327 | 22.0025 | <b>55</b>     | <b>1.097</b>              |
|                               |                             |                                   |               |          |         |         | <b>43</b>     | <b>1.280</b>              |
|                               |                             |                                   |               |          |         |         | <b>31</b>     | <b>1.935</b>              |
|                               |                             |                                   |               |          |         |         | <b>19</b>     | <b>4.836</b>              |
|                               |                             |                                   |               |          |         |         | <b>7</b>      | <b>26.252</b>             |
| Sum                           |                             | -31.5606                          | -10.0869      | 142.7976 | 49.5168 | 49.6582 |               |                           |
| Average                       |                             | -4.5087                           | -1.4410       | 20.3997  | 7.0738  | 7.0940  |               |                           |

|            |                  |                        |
|------------|------------------|------------------------|
| <b>N =</b> | <b>7</b>         |                        |
| <b>A =</b> | <b>4.912E+15</b> |                        |
| <b>B =</b> | <b>8.333</b>     | <b>R^2 = 0.9956799</b> |
| <b>C =</b> | <b>46</b>        |                        |

\* - Appendix A5 from IBNR study

**Estimation of Cumulative Reported Claim Development Factors  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |               |          |         |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------------|----------|---------|---------|---------------|---------------------------|
|                               |                             | X'<br>LN(1/(X+C))                 | Y'<br>LN(Y-1) | (X')^2   | (Y')^2  | X' x Y' | X             | Cumulative<br>Factor<br>Y |
| 12                            | 1.061                       | -6.4003                           | -2.7930       | 40.963   | 7.8008  | 17.8759 | 127           | 1.000                     |
| 24                            | 1.007                       | -6.4200                           | -4.9583       | 41.216   | 24.5847 | 31.8322 | 115           | 1.000                     |
| 36                            | 1.001                       | -6.4394                           | -7.1237       | 41.465   | 50.7467 | 45.8718 | 103           | 1.000                     |
|                               |                             |                                   |               |          |         |         | 91            | 1.000                     |
|                               |                             |                                   |               |          |         |         | 79            | 1.000                     |
|                               |                             |                                   |               |          |         |         | 67            | 1.000                     |
|                               |                             |                                   |               |          |         |         | 55            | 1.000                     |
|                               |                             |                                   |               |          |         |         | 43            | 1.000                     |
|                               |                             |                                   |               |          |         |         | 31            | 1.002                     |
|                               |                             |                                   |               |          |         |         | 19            | 1.017                     |
|                               |                             |                                   |               |          |         |         | 7             | 1.882                     |
| Sum                           |                             | -19.2596                          | -14.8750      | 123.6449 | 83.1322 | 95.5799 |               |                           |
| Average                       |                             | -6.4199                           | -4.9583       | 41.2150  | 27.7107 | 31.8600 |               |                           |

|     |            |                |
|-----|------------|----------------|
| N = | 3          |                |
| A = | 5.030E+306 |                |
| B = | 110.776    | R^2 = 0.999968 |
| C = | 590        |                |

\* - Appendix A6 from IBNR study

**U.S. Claims Cost Index  
 General Liability**

| (A)    | (B)   | (C)                           | (D)                | (E)                   | (F)                                |
|--------|-------|-------------------------------|--------------------|-----------------------|------------------------------------|
| Year   | Index | Annual<br>Percent<br>Increase | Accident<br>Period | Interpolated<br>Index | Trend<br>Factor<br>to<br>7/1/18-19 |
| 2005   | 100.0 | 4.9%                          |                    |                       |                                    |
| 2006   | 104.4 | 4.3%                          |                    |                       |                                    |
| 2007   | 109.0 | 4.5%                          |                    |                       |                                    |
| 2008   | 113.2 | 3.8%                          | 7/1/07-08          | 111.1                 | 1.366                              |
| 2009   | 115.7 | 2.3%                          | 7/1/08-09          | 114.5                 | 1.326                              |
| 2010   | 118.5 | 2.3%                          | 7/1/09-10          | 117.1                 | 1.296                              |
| 2011   | 122.8 | 3.7%                          | 7/1/10-11          | 120.7                 | 1.258                              |
| 2012   | 126.7 | 3.2%                          | 7/1/11-12          | 124.8                 | 1.216                              |
| 2013   | 129.9 | 2.5%                          | 7/1/12-13          | 128.3                 | 1.183                              |
| 2014   | 133.5 | 2.8%                          | 7/1/13-14          | 131.7                 | 1.152                              |
| 2015   | 137.4 | 2.9%                          | 7/1/14-15          | 135.5                 | 1.121                              |
| 2016   | 142.3 | 3.6%                          | 7/1/15-16          | 139.8                 | 1.086                              |
| 2017*  | 146.0 | 2.6%                          | 7/1/16-17          | 144.2                 | 1.053                              |
| 2018** | 149.8 | 2.6%                          | 7/1/17-18          | 147.9                 | 1.026                              |
| 2019** | 153.8 | 2.6%                          | 7/1/18-19          | 151.8                 | 1.000                              |

(B) and (C) - Towers Watson Claim Cost Index compiled by Jeremy Pecora, FCAS, MAAA

\* - numbers are preliminary

\*\* - future trend estimated based on latest year

(E) - Linear interpolation of column (B)

(F) - [(E), forecast period] / [(E), current period]



## Automobile Physical Damage Exhibits

The “Analysis” section of this report presents a discussion of the following exhibits:

|             |  |
|-------------|--|
| Exhibit I   | Summary of Experience  |
| Exhibit II  | Claims that Develop and Trend over \$100,000                                 |
| Exhibit III | Ultimate Losses Limited to \$100,000<br>Ultimate Losses Limited to \$250,000 |
| Exhibit IV  | Forecast Losses Limited to \$100,000<br>Forecast Losses Limited to \$250,000 |
| Exhibit V   | Total Claim Frequency  |
| Exhibit VI  | Forecast Ultimate Losses   |
| Exhibit VII | Results of Monte Carlo Simulation<br>Forecast Losses for Various Layers      |
| Appendix A  | Loss Development Factors   |
| Appendix B  | Trend Factors  |



**Summary of Loss and Exposure Data**  
**Total Experience Net of Member Deductibles**

| (A)                    | (B)                    | (C)                      | (D)                 | (E)                 | (F)                 |                                  |                                  | (G)                   | (H)             |
|------------------------|------------------------|--------------------------|---------------------|---------------------|---------------------|----------------------------------|----------------------------------|-----------------------|-----------------|
| <i>Accident Period</i> | <i>Evaluation Date</i> | <i>Maturity (months)</i> | <i>Total Claims</i> | <i>Loss Payment</i> | <i>Loss Reserve</i> | <i>Expense and Legal Payment</i> | <i>Expense and Legal Reserve</i> | <i>Total Reported</i> | <i>Vehicles</i> |
| 7/1/07-08              | 1/31/2018              | 127                      | 64                  | \$432,080           | \$0                 | \$31,825                         | \$0                              | \$463,905             | 5,440           |
| 7/1/08-09              | 1/31/2018              | 115                      | 69                  | \$276,177           | \$0                 | \$21,296                         | \$0                              | \$297,473             | 5,182           |
| 7/1/09-10              | 1/31/2018              | 103                      | 85                  | \$386,193           | \$0                 | \$11,344                         | \$0                              | \$397,536             | 5,887           |
| 7/1/10-11              | 1/31/2018              | 91                       | 91                  | \$293,235           | \$0                 | \$8,269                          | \$0                              | \$301,504             | 6,443           |
| 7/1/11-12              | 1/31/2018              | 79                       | 87                  | \$350,658           | \$0                 | \$14,397                         | \$0                              | \$365,056             | 5,902           |
| 7/1/12-13              | 1/31/2018              | 67                       | 93                  | \$484,378           | \$0                 | \$24,102                         | \$0                              | \$508,479             | 6,210           |
| 7/1/13-14              | 1/31/2018              | 55                       | 74                  | \$456,649           | \$0                 | \$18,975                         | \$0                              | \$475,624             | 6,847           |
| 7/1/14-15              | 1/31/2018              | 43                       | 138                 | \$696,854           | \$0                 | \$37,902                         | \$0                              | \$734,755             | 8,572           |
| 7/1/15-16              | 1/31/2018              | 31                       | 114                 | \$583,038           | \$1,656             | \$33,163                         | \$9,710                          | \$627,566             | 9,173           |
| 7/1/16-17              | 1/31/2018              | 19                       | 132                 | \$647,930           | \$12,428            | \$40,461                         | \$294                            | \$701,114             | 9,781           |
| 7/1/17-18              | 1/31/2018              | 7                        | 76                  | \$631,040           | \$87,418            | \$17,020                         | \$6,489                          | \$741,968             | 10,013          |
| 7/1/18-19              |                        |                          |                     |                     |                     |                                  |                                  |                       | 10,046          |
|                        |                        |                          | 1023                | \$5,238,232         | \$101,502           | \$258,754                        | \$16,492                         | \$5,614,980           | 89,495          |

- Losses and Exposures for Current Members
- Claims combined into occurrences; Excludes closed claims with no payments

**Large Claim Listing**  
**Claims Exceeding Threshold after Development and Trend**

| CAT# or<br>Occ#   | (B)<br>PY | (D)<br>Loss Date | (D)<br>Paid<br>Pure<br>Losses | (E)<br>Incurred<br>Pure<br>Losses | (F)<br>Severity<br>Factor | (G)<br>Trend<br>Factor | (H)<br>Loss After<br>Development<br>& Trend |
|---|-----------|------------------|-------------------------------|-----------------------------------|---------------------------|------------------------|---|
| <b>ADP only claims over \$100,000</b>                                     |           |                  |                               |                                   |                           |                        |   |
| 92831   | 7/1/14-15 | 12/3/2014        | \$125,772                     | \$125,772                         | 1.004                     | 1.060                  | \$133,807                                   |
| P625-16-938   | 7/1/15-16 | 5/23/2016        | \$157,500                     | \$157,500                         | 1.012                     | 1.042                  | \$166,056                                   |
| 94879   | 7/1/17-18 | 1/11/2018        | \$310,975                     | \$319,100                         | 1.022                     | 1.042                  | \$339,556                                   |
| <br><b>Loss amounts for APD portion of Property Claims over \$250,000</b> |           |                  |                               |                                   |                           |                        |   |
| 0017  | 7/1/07-08 | 4/9/2008         | \$19,325                      | \$19,325                          | 1.000                     | 1.273                  | \$24,607                                    |
| 0022  | 7/1/07-08 | 6/1/2008         | \$33,994                      | \$33,994                          | 1.000                     | 1.273                  | \$43,285                                    |
| 02283   | 7/1/07-08 | 5/10/2008        | \$0                           | \$0                               | 1.000                     | 1.273                  | \$0   |
| 0026  | 7/1/08-09 | 1/27/2009        | \$2,844                       | \$2,844                           | 1.000                     | 1.200                  | \$3,412                                     |
| 0033  | 7/1/08-09 | 4/25/2009        | \$940                         | \$940                             | 1.000                     | 1.200                  | \$1,128                                     |
| 0034  | 7/1/08-09 | 5/13/2009        | \$4,150                       | \$4,150                           | 1.000                     | 1.200                  | \$4,978                                     |
| 0036  | 7/1/08-09 | 6/11/2009        | \$15,704                      | \$15,704                          | 1.000                     | 1.200                  | \$18,838                                    |
| 0041  | 7/1/09-10 | 5/10/2010        | \$73,111                      | \$73,111                          | 1.000                     | 1.137                  | \$83,141                                    |
| 0050  | 7/1/10-11 | 5/24/2011        | \$24,126                      | \$24,126                          | 1.000                     | 1.117                  | \$26,944                                    |
| 90999   | 7/1/11-12 | 11/7/2011        | \$7,881                       | \$7,881                           | 1.000                     | 1.104                  | \$8,701                                     |
| 0052  | 7/1/12-13 | 4/26/2013        | \$12,185                      | \$12,185                          | 1.000                     | 1.096                  | \$13,350                                    |
| 0054  | 7/1/12-13 | 5/30/2013        | \$23,160                      | \$23,160                          | 1.000                     | 1.096                  | \$25,375                                    |
| 91392   | 7/1/12-13 | 7/14/2012        | \$86,817                      | \$86,817                          | 1.000                     | 1.096                  | \$95,119                                    |
| 91393   | 7/1/12-13 | 7/16/2012        | \$29,117                      | \$29,117                          | 1.000                     | 1.096                  | \$31,901                                    |
| 0055  | 7/1/14-15 | 3/25/2015        | \$22,357                      | \$22,357                          | 1.004                     | 1.060                  | \$23,785                                    |
| 0056  | 7/1/14-15 | 5/6/2015         | \$0                           | \$0                               | 1.004                     | 1.060                  | \$0   |
| 0062  | 7/1/14-15 | 3/31/2015        | \$4,354                       | \$4,354                           | 1.004                     | 1.060                  | \$4,632                                     |
| 0060  | 7/1/16-17 | 7/14/2016        | \$5,607                       | \$5,607                           | 1.041                     | 1.026                  | \$5,984                                     |
| 0064  | 7/1/16-17 | 5/27/2017        | \$40,779                      | \$40,779                          | 1.041                     | 1.026                  | \$43,518                                    |
|   |           |                  | \$406,450                     | \$406,450                         |                           |                        | \$458,697                                   |

**Estimation of Ultimate Losses Limited to \$100,000  
 At the Forecast Loss Level**

| <i>Accident<br/>Period</i> | <i>(A)<br/>Reported<br/>Losses</i> | <i>(B)<br/>Excess<br/>Reported<br/>Losses</i> | <i>(C)<br/>Limited<br/>Reported<br/>Losses</i> | <i>(D)<br/>Trend<br/>Factor to<br/>7/1/18-19</i> | <i>(E)<br/>Reported<br/>Develop.<br/>Factor</i> | <i>(F)<br/>Ultimate<br/>Loss</i> |
|----------------------------|------------------------------------|---|--|--|---|----------------------------------|
| 7/1/07-08                  | \$463,905                          | \$53,319                                      | \$410,586                                      | 1.273  | 1.000   | \$523,000                        |
| 7/1/08-09                  | \$297,473                          | \$23,638                                      | \$273,836                                      | 1.200  | 1.000   | \$328,000                        |
| 7/1/09-10                  | \$397,536                          | \$73,111                                      | \$324,425                                      | 1.137  | 1.000   | \$369,000                        |
| 7/1/10-11                  | \$301,504                          | \$24,126                                      | \$277,378                                      | 1.117  | 1.000   | \$310,000                        |
| 7/1/11-12                  | \$365,056                          | \$7,881                                       | \$357,175                                      | 1.104  | 1.000   | \$394,000                        |
| 7/1/12-13                  | \$508,479                          | \$151,278                                     | \$357,201                                      | 1.096  | 1.000   | \$391,000                        |
| 7/1/13-14                  | \$475,624                          | \$0   | \$475,624                                      | 1.079  | 1.000   | \$513,000                        |
| 7/1/14-15                  | \$734,755                          | \$52,482                                      | \$682,273                                      | 1.060  | 1.004   | \$726,000                        |
| 7/1/15-16                  | \$627,566                          | \$57,500                                      | \$570,066                                      | 1.042  | 1.012   | \$601,000                        |
| 7/1/16-17                  | \$701,114                          | \$46,386                                      | \$654,728                                      | 1.026  | 1.041   | \$699,000                        |
| 7/1/17-18                  | \$741,968                          | \$219,100                                     | \$522,868                                      | 1.013  | 1.897   | \$1,005,000                      |
| <b>Total</b>               | <b>\$5,614,980</b>                 | <b>\$708,822</b>                              | <b>\$4,906,158</b>                             |  |   | <b>\$5,859,000</b>               |

- (A) - Exhibit I
- (B) - Exhibit II
- (C) = (A) - (B)
- (D) - Appendix B
- (E) - Appendix A
- (F) = (C) \* (D) \* (E)

**Estimation of Ultimate Losses Limited to \$250,000  
 At the Forecast Loss Level**

| <i>Accident<br/>Period</i> | <i>(A)<br/>Reported<br/>Losses</i> | <i>(B)<br/>Excess<br/>Reported<br/>Losses</i> | <i>(C)<br/>Limited<br/>Reported<br/>Losses</i> | <i>(D)<br/>Trend<br/>Factor to<br/>7/1/18-19</i> | <i>(E)<br/>Reported<br/>Develop.<br/>Factor</i> | <i>(F)<br/>Ultimate<br/>Loss</i> |
|----------------------------|------------------------------------|---|--|--|---|----------------------------------|
| 7/1/07-08                  | \$463,905                          | \$53,319                                      | \$410,586                                      | 1.273  | 1.000   | \$523,000                        |
| 7/1/08-09                  | \$297,473                          | \$23,638                                      | \$273,836                                      | 1.200  | 1.000   | \$328,000                        |
| 7/1/09-10                  | \$397,536                          | \$73,111                                      | \$324,425                                      | 1.137  | 1.000   | \$369,000                        |
| 7/1/10-11                  | \$301,504                          | \$24,126                                      | \$277,378                                      | 1.117  | 1.000   | \$310,000                        |
| 7/1/11-12                  | \$365,056                          | \$7,881                                       | \$357,175                                      | 1.104  | 1.000   | \$394,000                        |
| 7/1/12-13                  | \$508,479                          | \$151,278                                     | \$357,201                                      | 1.096  | 1.000   | \$391,000                        |
| 7/1/13-14                  | \$475,624                          | \$0   | \$475,624                                      | 1.079  | 1.000   | \$513,000                        |
| 7/1/14-15                  | \$734,755                          | \$26,711                                      | \$708,045                                      | 1.060  | 1.004   | \$753,000                        |
| 7/1/15-16                  | \$627,566                          | \$0   | \$627,566                                      | 1.042  | 1.012   | \$662,000                        |
| 7/1/16-17                  | \$701,114                          | \$46,386                                      | \$654,728                                      | 1.026  | 1.041   | \$699,000                        |
| 7/1/17-18                  | \$741,968                          | \$69,100                                      | \$672,868                                      | 1.013  | 1.897   | \$1,293,000                      |
| <i>Total</i>               | \$5,614,980                        | \$475,550                                     | \$5,139,430                                    |  |   | \$6,235,000                      |

- (A) - Exhibit I
- (B) - Exhibit II
- (C) = (A) - (B)
- (D) - Appendix B
- (E) - Appendix A
- (F) = (C) \* (D) \* (E)

**Calculation of Forecast Losses  
Limited to \$100,000**

| (A)                | (B)                                  | (C)                     | (D)                          | (E)                  | (F)            |
|--------------------|--------------------------------------|-------------------------|------------------------------|----------------------|----------------|
| Accident<br>Period | Trended<br>Ultimate<br>Net<br>Losses | Exposures<br>(Vehicles) | Exposure<br>Trend<br>Factors | Trended<br>Exposures | Loss<br>Rate   |
| 7/1/07-08          | \$523,000                            | 5,440                   | 1.000                        | 5,440                | \$96.14        |
| 7/1/08-09          | \$328,000                            | 5,182                   | 1.000                        | 5,182                | \$63.30        |
| 7/1/09-10          | \$369,000                            | 5,887                   | 1.000                        | 5,887                | \$62.68        |
| 7/1/10-11          | \$310,000                            | 6,443                   | 1.000                        | 6,443                | \$48.11        |
| 7/1/11-12          | \$394,000                            | 5,902                   | 1.000                        | 5,902                | \$66.75        |
| 7/1/12-13          | \$391,000                            | 6,210                   | 1.000                        | 6,210                | \$62.97        |
| 7/1/13-14          | \$513,000                            | 6,847                   | 1.000                        | 6,847                | \$74.93        |
| 7/1/14-15          | \$726,000                            | 8,572                   | 1.000                        | 8,572                | \$84.70        |
| 7/1/15-16          | \$601,000                            | 9,173                   | 1.000                        | 9,173                | \$65.52        |
| 7/1/16-17          | \$699,000                            | 9,781                   | 1.000                        | 9,781                | \$71.47        |
| 7/1/17-18          | \$1,005,000                          | 10,013                  | 1.000                        | 10,013               | \$100.37       |
| <b>Total</b>       | <b>\$5,859,000</b>                   | <b>79,449</b>           |                              | <b>79,449</b>        | <b>\$73.74</b> |

7/1/18-19

|   |           |
|---|-----------|
| (1) Selected Loss Rate<br>{ Average of 13-14 through 16-17 }      | \$74.15   |
| (2) Forecast Exposures<br>{ Members purchasing \$100,000 limits } | 2,513     |
| (3) Forecast Losses<br>{ Line (1) x Line (2) }                    | \$186,000 |

Column (B) - Column (F) in Exhibit III, page 1

Column (C) - Exhibit I

Column (D) - N/A

Column (E) = (C) \* (D)

Column (F) = (B) / (E)

**Calculation of Forecast Losses  
 Limited to \$250,000**

| (A)                | (B)                                  | (C)                     | (D)                          | (E)                  | (F)            |
|--------------------|--------------------------------------|-------------------------|------------------------------|----------------------|----------------|
| Accident<br>Period | Trended<br>Ultimate<br>Net<br>Losses | Exposures<br>(Vehicles) | Exposure<br>Trend<br>Factors | Trended<br>Exposures | Loss<br>Rate   |
| 7/1/07-08          | \$523,000                            | 5,440                   | 1.000                        | 5,440                | \$96.14        |
| 7/1/08-09          | \$328,000                            | 5,182                   | 1.000                        | 5,182                | \$63.30        |
| 7/1/09-10          | \$369,000                            | 5,887                   | 1.000                        | 5,887                | \$62.68        |
| 7/1/10-11          | \$310,000                            | 6,443                   | 1.000                        | 6,443                | \$48.11        |
| 7/1/11-12          | \$394,000                            | 5,902                   | 1.000                        | 5,902                | \$66.75        |
| 7/1/12-13          | \$391,000                            | 6,210                   | 1.000                        | 6,210                | \$62.97        |
| 7/1/13-14          | \$513,000                            | 6,847                   | 1.000                        | 6,847                | \$74.93        |
| 7/1/14-15          | \$753,000                            | 8,572                   | 1.000                        | 8,572                | \$87.85        |
| 7/1/15-16          | \$662,000                            | 9,173                   | 1.000                        | 9,173                | \$72.17        |
| 7/1/16-17          | \$699,000                            | 9,781                   | 1.000                        | 9,781                | \$71.47        |
| 7/1/17-18          | \$1,293,000                          | 10,013                  | 1.000                        | 10,013               | \$129.13       |
| <b>Total</b>       | <b>\$6,235,000</b>                   | <b>79,449</b>           |                              | <b>79,449</b>        | <b>\$78.48</b> |

7/1/18-19

- (1) Selected Loss Rate  
 { Average of 13-14 through 16-17 } \$76.60
- (2) Forecast Exposures  
 { Members purchasing \$250,000 limits } 7,533
- (3) Forecast Losses  
 { Line (1) x Line (2) } \$577,000

Column (B) - Column (F) in Exhibit III, Page 2  
 Column (C) - Exhibit I  
 Column (D) - N/A  
 Column (E) = (C) \* (D)  
 Column (F) = (B) / (E)



**Projected Claim Frequency for 7/1/18-19**

| (A)<br><i>Accident<br/>Period</i> | (B)<br><i>Number of<br/>Occurrences</i> | (C)<br><i>CCDF</i> | (D)<br><i>Ultimate<br/>Occurrences</i> | (E)<br><i>Exposures<br/>(Vehicles)</i> | (F)<br><i>Frequency<br/>per 1,000<br/>Vehicles</i> |
|-----------------------------------|---|--------------------|--|--|--|
| 7/1/07-08                         | 61                                      | 1.000              | 61.0                                   | 5,440                                  | 11.2   |
| 7/1/08-09                         | 65                                      | 1.000              | 65.0                                   | 5,182                                  | 12.5   |
| 7/1/09-10                         | 84                                      | 1.000              | 84.0                                   | 5,887                                  | 14.3   |
| 7/1/10-11                         | 90                                      | 1.000              | 90.0                                   | 6,443                                  | 14.0   |
| 7/1/11-12                         | 86                                      | 1.000              | 86.0                                   | 5,902                                  | 14.6   |
| 7/1/12-13                         | 92                                      | 1.000              | 92.0                                   | 6,210                                  | 14.8   |
| 7/1/13-14                         | 74                                      | 1.000              | 74.0                                   | 6,847                                  | 10.8   |
| 7/1/14-15                         | 138                                     | 1.000              | 138.0                                  | 8,572                                  | 16.1   |
| 7/1/15-16                         | 114                                     | 1.000              | 114.0                                  | 9,173                                  | 12.4   |
| 7/1/16-17                         | 132                                     | 1.000              | 132.0                                  | 9,781                                  | 13.5   |
| 7/1/17-18                         | 76                                      | 1.857              | 141.1                                  | 10,013                                 | 14.1   |
| <b>Total</b>                      | <b>1,012</b>                            |                    | <b>1,077.1</b>                         | <b>79,449</b>                          | <b>13.6</b>  |

7/1/18-19

*Selected Frequency  
{ Five year average }* 13.4

*Forecast Exposure* 10,046

**Forecast Number of Occurrences 134.5**

(B) - Exhibit I

(C) - Appendix A

(D) - (B) \* (C)

(E) = Exhibit I

(F) = (D) / (E) \* 1,000

**Forecast Ultimate Losses for  
Total Experience Net of Member Deductibles**

|                             | <i>Vehicles</i> | <i>Loss Rate</i> | <i>Forecast Losses</i> |
|-----------------------------|-----------------|------------------|------------------------|
| <i>Limited to \$100,000</i> | 2,513           | \$74.15          | \$186,000              |
| <i>Limited to \$250,000</i> | 7,533           | \$76.60          | \$577,000              |
| <i>Total</i>                | 10,046          | \$75.95          | \$763,000              |

- From Exhibit IV, page 1 for limited to \$100,000
- From Exhibit IV, page 2 for limited to \$250,000

***Distribution of Forecast Losses for 7/1/18-19  
 Limited to \$100,000 and \$250,000***

| <i>Percentile</i> | <i>Net<br/>Ultimate<br/>Limited<br/>Losses</i> |
|-------------------|--|
| 25.0%             | \$630,000                                      |
| 30.0%             | \$650,000                                      |
| 35.0%             | \$680,000                                      |
| 40.0%             | \$700,000                                      |
| 45.0%             | \$720,000                                      |
| 50.0%             | \$750,000                                      |
| 55.0%             | \$770,000                                      |
| 60.0%             | \$800,000                                      |
| 65.0%             | \$820,000                                      |
| 70.0%             | \$850,000                                      |
| 75.0%             | \$880,000                                      |
| 80.0%             | \$920,000                                      |
| 85.0%             | \$960,000                                      |
| 90.0%             | \$1,020,000                                    |
| 95.0%             | \$1,120,000                                    |
| <i>Expected</i>   | \$763,000                                      |

**Estimation of Cumulative Reported Loss Development Factors  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |               |          |         |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------------|----------|---------|---------|---------------|---------------------------|
|                               |                             | X'<br>LN(1/(X+C))                 | Y'<br>LN(Y-1) | (X')^2   | (Y')^2  | X' x Y' | X             | Cumulative<br>Factor<br>Y |
| 12                            | 1.078                       | -6.8156                           | -2.5447       | 46.453   | 6.4755  | 17.3437 | 127.0         | 1.000                     |
| 24                            | 1.027                       | -6.8287                           | -3.6067       | 46.631   | 13.0086 | 24.6294 | 115.0         | 1.000                     |
| 36                            | 1.007                       | -6.8416                           | -4.9618       | 46.808   | 24.6199 | 33.9470 | 103.0         | 1.000                     |
|                               |                             |                                   |               |          |         |         | 91.0          | 1.000                     |
|                               |                             |                                   |               |          |         |         | 79.0          | 1.000                     |
|                               |                             |                                   |               |          |         |         | 67.0          | 1.000                     |
|                               |                             |                                   |               |          |         |         | 55.0          | 1.000                     |
|                               |                             |                                   |               |          |         |         | 43.0          | 1.004                     |
|                               |                             |                                   |               |          |         |         | 31.0          | 1.012                     |
|                               |                             |                                   |               |          |         |         | 19.0          | 1.041                     |
|                               |                             |                                   |               |          |         |         | 7.0           | 1.897                     |
| Sum                           |                             | -20.4860                          | -11.1133      | 139.8920 | 44.1040 | 75.9202 |               |                           |
| Average                       |                             | -6.8287                           | -3.7044       | 46.6307  | 14.7013 | 25.3067 |               |                           |

|     |            |       |         |
|-----|------------|-------|---------|
| N = | 3          |       |         |
| A = | 1.920E+274 |       |         |
| B = | 93.029     | R^2 = | 0.99459 |
| C = | 900        |       |         |

- Based on Property and APD development limited to \$250,000

**Estimation of Cumulative Reported Claim Development Factors  
 Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |               |        |        |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------------|--------|--------|---------|---------------|---------------------------|
|                               |                             | X'<br>LN(1/(X+C))                 | Y'<br>LN(Y-1) | (X')^2 | (Y')^2 | X' x Y' | X             | Cumulative<br>Factor<br>Y |
|                               |                             |                                   |               |        |        |         | 127.0         | 1.000                     |
|                               |                             |                                   |               |        |        |         | 115.0         | 1.000                     |
|                               |                             |                                   |               |        |        |         | 103.0         | 1.000                     |
|                               |                             |                                   |               |        |        |         | 91.0          | 1.000                     |
|                               |                             |                                   |               |        |        |         | 79.0          | 1.000                     |
|                               |                             |                                   |               |        |        |         | 67.0          | 1.000                     |
|                               |                             |                                   |               |        |        |         | 55.0          | 1.000                     |
|                               |                             |                                   |               |        |        |         | 43.0          | 1.000                     |
|                               |                             |                                   |               |        |        |         | 31.0          | 1.000                     |
|                               |                             |                                   |               |        |        |         | 19.0          | 1.000                     |
|                               |                             |                                   |               |        |        |         | 7.0           | 1.857                     |
| Sum<br>Average                |                             |                                   |               |        |        |         |               |                           |

|     |   |       |
|-----|---|-------|
| N = | 0 |       |
| A = |   |       |
| B = |   | R^2 = |
| C = | 0 |       |

\* - judgmentally selected

**U.S. Claims Cost Index  
Auto Physical Damage**

| (A)<br>Year | (B)<br>Auto<br>Physical<br>Damage<br>Index | (C)<br>Annual<br>Percent<br>Increase | (D)<br>Accident<br>Period | (E)<br>Interpolated<br>Index | (F)<br>Trend<br>Factor<br>to<br>7/1/18-19 |
|-------------|--|--------------------------------------|---------------------------|------------------------------|---|
| 2005        | 100.0                                      | 5.9%                                 |                           |                              |   |
| 2006        | 102.4                                      | 2.4%                                 |                           |                              |   |
| 2007        | 105.1                                      | 2.7%                                 |                           |                              |   |
| 2008        | 107.9                                      | 2.6%                                 | 7/1/07-08                 | 106.5                        | 1.273                                     |
| 2009        | 118.2                                      | 9.6%                                 | 7/1/08-09                 | 113.1                        | 1.200                                     |
| 2010        | 120.3                                      | 1.7%                                 | 7/1/09-10                 | 119.3                        | 1.137                                     |
| 2011        | 122.6                                      | 1.9%                                 | 7/1/10-11                 | 121.4                        | 1.117                                     |
| 2012        | 123.1                                      | 0.4%                                 | 7/1/11-12                 | 122.8                        | 1.104                                     |
| 2013        | 124.5                                      | 1.2%                                 | 7/1/12-13                 | 123.8                        | 1.096                                     |
| 2014        | 126.9                                      | 1.9%                                 | 7/1/13-14                 | 125.7                        | 1.079                                     |
| 2015        | 129.0                                      | 1.6%                                 | 7/1/14-15                 | 127.9                        | 1.060                                     |
| 2016        | 131.4                                      | 1.9%                                 | 7/1/15-16                 | 130.2                        | 1.042                                     |
| 2017*       | 133.1                                      | 1.3%                                 | 7/1/16-17                 | 132.2                        | 1.026                                     |
| 2018**      | 134.8                                      | 1.3%                                 | 7/1/17-18                 | 133.9                        | 1.013                                     |
| 2019**      | 136.5                                      | 1.3%                                 | 7/1/18-19                 | 135.6                        | 1.000                                     |

(B) and (C) - Towers Watson Claim Cost Index compiled by Jeremy Pecora, FCAS, MAAA

\* - numbers are preliminary

\*\* - Future years estimated to be the same as latest year

(C) = [(B) / (B, prior)] - 1

(E) - Linear interpolation of column (B)

(F) - [(E), forecast period] / [(E), current period]

---

## Property Exhibits

The “Analysis” section of this report presents a discussion of the following exhibits:

|             |   |
|-------------|---|
| Exhibit I   | Summary of Experience   |
| Exhibit II  | Claims that Develop and Trend over \$250,000                            |
| Exhibit III | Ultimate Small Losses   |
| Exhibit IV  | Forecast Losses Less than \$250,000                                     |
| Exhibit V   | Total Claim Frequency   |
| Exhibit VI  | Forecast Ultimate Losses  |
| Exhibit VII | Results of Monte Carlo Simulation<br>Forecast Losses for Various Layers |
| Appendix A  | Loss Development Factors  |
| Appendix B  | Trend Factors   |





**Summary of Loss Data as of January 31, 2018**  
**Total Experience Net of Deductibles**

| (A)                | (B)                | (C)                  | (D)                         | (E)                 | (F)             | (G)             | (H)                             | (I)                             | (J)                             | (K)                    |
|--------------------|--------------------|----------------------|-----------------------------|---------------------|-----------------|-----------------|---------------------------------|---------------------------------|---------------------------------|------------------------|
| Accident<br>Period | Evaluation<br>Date | Maturity<br>(months) | Reported<br>Total<br>Claims | Deductibles<br>Paid | Loss<br>Payment | Loss<br>Reserve | Expense<br>and Legal<br>Payment | Expense<br>and Legal<br>Reserve | Total<br>Reported<br>Excl. Ded. | Total Insured<br>Value |
| 7/1/04-05          | 1/31/2018          | 163                  | 61                          | \$234,500           | \$815,362       | \$0             | \$45,289                        | \$0                             | \$860,651                       | \$2,423,646,308        |
| 7/1/05-06          | 1/31/2018          | 151                  | 99                          | \$382,500           | \$2,027,935     | \$0             | \$96,104                        | \$0                             | \$2,124,040                     | \$3,376,377,599        |
| 7/1/06-07          | 1/31/2018          | 139                  | 130                         | \$807,500           | \$4,620,316     | \$0             | \$117,859                       | \$0                             | \$4,738,175                     | \$4,460,074,412        |
| 7/1/07-08          | 1/31/2018          | 127                  | 129                         | \$822,500           | \$12,601,529    | \$0             | \$141,628                       | \$0                             | \$12,743,156                    | \$4,898,581,629        |
| 7/1/08-09          | 1/31/2018          | 115                  | 101                         | \$830,000           | \$11,229,785    | \$0             | \$131,118                       | \$0                             | \$11,360,903                    | \$5,131,707,580        |
| 7/1/09-10          | 1/31/2018          | 103                  | 132                         | \$858,500           | \$13,461,916    | \$0             | \$178,154                       | \$0                             | \$13,640,070                    | \$5,471,205,419        |
| 7/1/10-11          | 1/31/2018          | 91                   | 143                         | \$703,500           | \$21,630,099    | \$0             | \$24,204                        | \$0                             | \$21,654,302                    | \$5,816,648,831        |
| 7/1/11-12          | 1/31/2018          | 79                   | 122                         | \$295,000           | \$2,423,072     | \$0             | \$43,823                        | \$0                             | \$2,466,895                     | \$5,506,779,330        |
| 7/1/12-13          | 1/31/2018          | 67                   | 112                         | \$510,000           | \$4,352,946     | \$0             | \$11,525                        | \$0                             | \$4,364,471                     | \$5,656,200,094        |
| 7/1/13-14          | 1/31/2018          | 55                   | 119                         | \$242,500           | \$4,021,865     | \$0             | \$32,448                        | \$0                             | \$4,054,313                     | \$7,470,150,005        |
| 7/1/14-15          | 1/31/2018          | 43                   | 144                         | \$760,000           | \$3,197,190     | \$0             | \$64,074                        | \$0                             | \$3,261,263                     | \$7,335,441,810        |
| 7/1/15-16          | 1/31/2018          | 31                   | 101                         | \$662,500           | \$4,426,529     | \$132,024       | \$109,445                       | \$6,257                         | \$4,674,255                     | \$7,725,620,317        |
| 7/1/16-17          | 1/31/2018          | 19                   | 134                         | \$802,500           | \$5,158,495     | \$3,116,676     | \$112,641                       | \$39,609                        | \$8,427,421                     | \$8,605,570,318        |
| 7/1/17-18          | 1/31/2018          | 7                    | 72                          | \$361,000           | \$1,028,490     | \$6,029,561     | \$16,927                        | \$97,433                        | \$7,172,412                     | \$9,011,886,407        |
| 7/1/18-19          |                    |                      |                             |                     |                 |                 |                                 |                                 |                                 | \$9,053,414,500        |
|                    |                    |                      | 1,599                       | \$8,272,500         | \$90,995,529    | \$9,278,261     | \$1,125,238                     | \$143,299                       | \$101,542,327                   | \$91,943,304,558       |

- Losses and Exposures for Current Members as of 1/31/2018  
- Claims combined into occurrences; Excludes closed claims with no payments

**Claims that Exceed \$250,000 After Development and Trend  
As of January 31, 2018**

| Occ #<br>Or date | Loss Date  | Deductible | Pure<br>Losses | Pure<br>Losses | Severity<br>Factor | Trend<br>Factor | & trended<br>Gross Loss |              |
|------------------|------------|------------|----------------|----------------|--------------------|-----------------|-------------------------|--------------|
| 0003             | 7/4/2005   | \$10,000   | \$498,691      | \$498,691      | 1.000              | 1.415           | \$719,606               |              |
| 01070            | 4/1/2006   | \$10,000   | \$249,726      | \$249,726      | 1.000              | 1.415           | \$367,414               |              |
| 01069            | 4/9/2006   | \$2,500    | \$196,964      | \$196,964      | 1.000              | 1.415           | \$282,166               |              |
| 0010             | 1/13/2007  | \$82,500   | \$552,070      | \$552,070      | 1.000              | 1.359           | \$862,270               |              |
| 01446            | 1/14/2007  | \$2,500    | \$2,391,851    | \$2,391,851    | 1.000              | 1.359           | \$3,253,508             |              |
| 01603            | 4/1/2007   | \$2,500    | \$450,156      | \$450,156      | 1.000              | 1.359           | \$615,081               |              |
| 0014             | 5/26/2007  | \$50,000   | \$165,938      | \$165,938      | 1.000              | 1.359           | \$293,422               |              |
| 01932            | 10/20/2007 | \$2,500    | \$4,417,502    | \$4,417,502    | 1.000              | 1.310           | \$5,792,016             |              |
| 0017             | 4/9/2008   | \$50,000   | \$611,415      | \$611,415      | 1.000              | 1.310           | \$866,725               |              |
| 02205            | 4/10/2008  | \$2,500    | \$264,208      | \$264,208      | 1.000              | 1.310           | \$349,496               |              |
| 02283            | 5/10/2008  | \$5,000    | \$1,079,655    | \$1,079,655    | 1.000              | 1.310           | \$1,421,343             |              |
| 0020             | 5/22/2008  | \$20,000   | \$737,893      | \$737,893      | 1.000              | 1.310           | \$993,151               |              |
| 0022             | 6/1/2008   | \$30,000   | \$2,626,315    | \$2,626,315    | 1.000              | 1.310           | \$3,480,864             |              |
| 0019             | 6/5/2008   | \$50,000   | \$1,617,657    | \$1,617,657    | 1.000              | 1.310           | \$2,185,315             |              |
| 02442            | 8/5/2008   | \$2,500    | \$253,900      | \$253,900      | 1.000              | 1.257           | \$322,409               |              |
| 0024             | 11/5/2008  | \$20,000   | \$1,354,413    | \$1,354,413    | 1.000              | 1.257           | \$1,728,245             |              |
| 0026             | 1/27/2009  | \$25,000   | \$272,761      | \$272,761      | 1.000              | 1.257           | \$374,417               |              |
| 0027             | 2/10/2009  | \$15,000   | \$238,343      | \$238,343      | 1.000              | 1.257           | \$318,564               |              |
| 02786            | 2/27/2009  | \$2,500    | \$2,319,259    | \$2,319,259    | 1.000              | 1.257           | \$2,919,477             |              |
| 0030             | 3/27/2009  | \$7,500    | \$2,162,396    | \$2,162,396    | 1.000              | 1.257           | \$2,728,518             |              |
| 0031             | 4/9/2009   | \$35,000   | \$855,773      | \$855,773      | 1.000              | 1.257           | \$1,120,095             |              |
| 0033             | 4/25/2009  | \$20,000   | \$240,250      | \$240,250      | 1.000              | 1.257           | \$327,250               |              |
| 0037             | 4/29/2009  | \$25,000   | \$212,817      | \$212,817      | 1.000              | 1.257           | \$299,040               |              |
| 0032             | 5/1/2009   | \$50,000   | \$1,097,400    | \$1,097,400    | 1.000              | 1.257           | \$1,442,788             |              |
| 0034             | 5/13/2009  | \$50,000   | \$452,345      | \$452,345      | 1.000              | 1.257           | \$631,669               |              |
| 0036             | 6/11/2009  | \$45,000   | \$168,166      | \$168,166      | 1.000              | 1.257           | \$268,044               |              |
| 03081            | 7/27/2009  | \$5,000    | \$304,502      | \$304,502      | 1.000              | 1.188           | \$367,538               |              |
| 03122            | 8/21/2009  | \$2,500    | \$4,975,483    | \$4,975,483    | 1.000              | 1.188           | \$5,911,427             |              |
| 0039             | 1/10/2010  | \$27,500   | \$454,634      | \$454,634      | 1.000              | 1.188           | \$572,542               |              |
| 0040             | 1/30/2010  | \$110,000  | \$500,248      | \$500,248      | 1.000              | 1.188           | \$724,679               |              |
| 0041             | 5/10/2010  | \$70,000   | \$2,790,324    | \$2,790,324    | 1.000              | 1.188           | \$3,396,677             |              |
| 0042             | 5/13/2010  | \$50,000   | \$1,775,284    | \$1,775,284    | 1.000              | 1.188           | \$2,167,552             |              |
| 93604            | 6/12/2010  | \$10,000   | \$248,774      | \$248,774      | 1.000              | 1.188           | \$307,298               |              |
| 90050            | 8/4/2010   | \$2,500    | \$247,854      | \$247,854      | 1.000              | 1.149           | \$287,770               |              |
| 90336            | 12/30/2010 | \$2,500    | \$854,448      | \$854,448      | 1.000              | 1.149           | \$985,022               |              |
| 0043             | 2/2/2011   | \$55,000   | \$734,436      | \$734,436      | 1.000              | 1.149           | \$907,420               |              |
| 0044             | 2/3/2011   | \$10,000   | \$536,699      | \$536,699      | 1.000              | 1.149           | \$628,405               |              |
| 0046             | 2/11/2011  | \$75,000   | \$389,121      | \$389,121      | 1.000              | 1.149           | \$533,486               |              |
| 0048             | 4/14/2011  | \$67,500   | \$11,366,776   | \$11,366,776   | 1.000              | 1.149           | \$13,143,170            |              |
| 0050             | 5/23/2011  | \$60,000   | \$5,733,080    | \$5,733,080    | 1.000              | 1.149           | \$6,658,876             |              |
| 90999            | 11/7/2011  | \$5,000    | \$418,868      | \$418,868      | 1.000              | 1.156           | \$489,834               |              |
| 91234            | 4/15/2012  | \$2,500    | \$485,893      | \$485,893      | 1.000              | 1.156           | \$564,401               |              |
| 91392            | 7/14/2012  | \$5,000    | \$483,485      | \$483,485      | 1.000              | 1.150           | \$561,669               |              |
| 91393            | 7/16/2012  | \$2,500    | \$402,217      | \$402,217      | 1.000              | 1.150           | \$465,351               |              |
| 91814            | 4/18/2013  | \$5,000    | \$454,242      | \$454,242      | 1.000              | 1.150           | \$528,045               |              |
| 0052             | 4/26/2013  | \$35,000   | \$990,622      | \$990,622      | 1.000              | 1.150           | \$1,179,277             |              |
| 0054             | 5/30/2013  | \$180,000  | \$901,025      | \$901,025      | 1.000              | 1.150           | \$1,242,982             |              |
| 92144            | 11/6/2013  | \$5,000    | \$299,442      | \$299,442      | 1.001              | 1.115           | \$339,751               |              |
| 92546            | 6/28/2014  | \$5,000    | \$2,284,671    | \$2,284,671    | 1.001              | 1.115           | \$2,555,222             |              |
| 0055             | 3/25/2015  | \$35,000   | \$402,865      | \$402,865      | 1.003              | 1.086           | \$477,203               |              |
| 93164            | 4/11/2015  | \$10,000   | \$331,500      | \$331,500      | 1.003              | 1.086           | \$372,181               |              |
| 0056             | 5/6/2015   | \$10,000   | \$239,457      | \$239,457      | 1.003              | 1.086           | \$271,869               |              |
| 0061             | 5/19/2015  | \$12,500   | \$620,862      | \$620,862      | 1.003              | 1.086           | \$690,264               |              |
| 0063             | 11/17/2015 | \$15,000   | \$792,926      | \$792,926      | 1.017              | 1.056           | \$867,722               |              |
| 0058             | 4/29/2016  | \$37,500   | \$645,098      | \$645,098      | 1.017              | 1.056           | \$733,118               |              |
| 0059             | 5/9/2016   | \$30,000   | \$1,182,853    | \$1,230,443    | 1.017              | 1.056           | \$1,353,729             |              |
| 94123            | 5/13/2016  | \$10,000   | \$245,566      | \$280,000      | 1.017              | 1.056           | \$311,463               |              |
| 0060             | 7/14/2016  | \$100,000  | \$2,195,781    | \$3,443,153    | 1.101              | 1.028           | \$4,009,911             |              |
| 93959            | 8/23/2016  | \$5,000    | \$458,500      | \$458,500      | 1.101              | 1.028           | \$524,559               |              |
| 94256            | 11/16/2016 | \$50,000   | \$0            | \$300,000      | 1.101              | 1.028           | \$396,107               |              |
| 94217            | 12/19/2016 | \$2,500    | \$347,321      | \$361,020      | 1.101              | 1.028           | \$411,408               |              |
| 0064             | 5/27/2017  | \$70,000   | \$345,793      | \$1,266,115    | 1.101              | 1.028           | \$1,512,129             |              |
| 0065             | 6/17/2017  | \$10,000   | \$302,722      | \$302,722      | 1.101              | 1.028           | \$353,919               |              |
| 94628            | 8/29/2017  | \$2,500    | \$260,968      | \$5,344,000    | 1.358              | 1.015           | \$7,370,430             |              |
| P625-17-94679    | 9/21/2017  | \$2,500    | \$121,000      | \$185,000      | 1.358              | 1.015           | \$258,479               |              |
|                  |            |            | \$1,812,500    | \$71,613,204   | \$79,323,653       |                 |                         | \$98,395,778 |

- Loss and policy information provided by Jennifer McKenzie, Arthur J. Gallagher

**Estimation of Ultimate Small Losses  
At the Forecast Loss Level**

|                        | (A)                        | (B)                             | (C)                              | (D)                             | (E)                                 |
|------------------------|----------------------------|---------------------------------|----------------------------------|---------------------------------|-------------------------------------|
| <i>Accident Period</i> | <i>Net Reported Losses</i> | <i>Reported on Large Losses</i> | <i>Trend Factor to 7/1/18-19</i> | <i>Reported Develop. Factor</i> | <i>Ultimate Net on Small Claims</i> |
| 7/1/04-05              | \$860,651                  | \$0                             | 1.501                            | 1.000                           | \$1,291,000                         |
| 7/1/05-06              | \$2,124,040                | \$945,381                       | 1.415                            | 1.000                           | \$1,667,000                         |
| 7/1/06-07              | \$4,738,175                | \$3,560,015                     | 1.359                            | 1.000                           | \$1,601,000                         |
| 7/1/07-08              | \$12,743,156               | \$11,354,644                    | 1.310                            | 1.000                           | \$1,820,000                         |
| 7/1/08-09              | \$11,360,903               | \$9,627,823                     | 1.257                            | 1.000                           | \$2,179,000                         |
| 7/1/09-10              | \$13,640,070               | \$11,049,250                    | 1.188                            | 1.000                           | \$3,077,000                         |
| 7/1/10-11              | \$21,654,302               | \$19,862,413                    | 1.149                            | 1.000                           | \$2,060,000                         |
| 7/1/11-12              | \$2,466,895                | \$904,760                       | 1.156                            | 1.000                           | \$1,805,000                         |
| 7/1/12-13              | \$4,364,471                | \$3,231,592                     | 1.150                            | 1.000                           | \$1,303,000                         |
| 7/1/13-14              | \$4,054,313                | \$2,584,113                     | 1.115                            | 1.001                           | \$1,641,000                         |
| 7/1/14-15              | \$3,261,263                | \$1,594,685                     | 1.086                            | 1.003                           | \$1,816,000                         |
| 7/1/15-16              | \$4,674,255                | \$2,948,467                     | 1.056                            | 1.017                           | \$1,854,000                         |
| 7/1/16-17              | \$8,427,421                | \$6,131,510                     | 1.028                            | 1.101                           | \$2,598,000                         |
| 7/1/17-18              | \$7,172,412                | \$5,529,000                     | 1.015                            | 2.522                           | \$4,207,000                         |
| <b>Total</b>           | <b>\$101,542,327</b>       | <b>\$79,323,653</b>             |                                  |                                 | <b>\$28,919,000</b>                 |

(A) - Exhibit I

(B) - Exhibit II

(C) - Appendix B

(D) - Appendix A

(E) = (C)\*(D)\*[(A) - (B)]

**Calculation of Forecast Losses  
Ground Up Losses Less Than \$250,000**

| (A)                | (B)                           | (C)                     | (D)                          | (E)                     | (F)            |
|--------------------|-------------------------------|-------------------------|------------------------------|-------------------------|----------------|
| Accident<br>Period | Trended<br>Ultimate<br>Losses | Exposures<br>(TIV)      | Exposure<br>Trend<br>Factors | Trended<br>Exposures    | Loss<br>Rate   |
| 7/1/04-05          | \$1,291,000                   | \$2,423,646,308         | 1.314                        | \$3,185,713,631         | \$0.041        |
| 7/1/05-06          | \$1,667,000                   | \$3,376,377,599         | 1.272                        | \$4,296,004,858         | \$0.039        |
| 7/1/06-07          | \$1,601,000                   | \$4,460,074,412         | 1.235                        | \$5,507,762,951         | \$0.029        |
| 7/1/07-08          | \$1,820,000                   | \$4,898,581,629         | 1.195                        | \$5,853,147,471         | \$0.031        |
| 7/1/08-09          | \$2,179,000                   | \$5,131,707,580         | 1.175                        | \$6,029,064,443         | \$0.036        |
| 7/1/09-10          | \$3,077,000                   | \$5,471,205,419         | 1.167                        | \$6,387,021,612         | \$0.048        |
| 7/1/10-11          | \$2,060,000                   | \$5,816,648,831         | 1.140                        | \$6,630,844,951         | \$0.031        |
| 7/1/11-12          | \$1,805,000                   | \$5,506,779,330         | 1.111                        | \$6,118,248,420         | \$0.030        |
| 7/1/12-13          | \$1,303,000                   | \$5,656,200,094         | 1.092                        | \$6,175,327,474         | \$0.021        |
| 7/1/13-14          | \$1,641,000                   | \$7,470,150,005         | 1.075                        | \$8,032,363,899         | \$0.020        |
| 7/1/14-15          | \$1,816,000                   | \$7,335,441,810         | 1.066                        | \$7,820,197,909         | \$0.023        |
| 7/1/15-16          | \$1,854,000                   | \$7,725,620,317         | 1.059                        | \$8,179,181,283         | \$0.023        |
| 7/1/16-17          | \$2,598,000                   | \$8,605,570,318         | 1.041                        | \$8,958,663,734         | \$0.029        |
| 7/1/17-18          | \$4,207,000                   | \$9,011,886,407         | 1.020                        | \$9,192,124,135         | \$0.046        |
| <b>Total</b>       | <b>\$28,919,000</b>           | <b>\$82,889,890,058</b> |                              | <b>\$92,365,666,768</b> | <b>\$0.031</b> |

7/1/18-19

(1) Selected Loss Rate  
{ Average, last five years }

\$0.028

(2) Forecast Exposure  
{ Exhibit I }

\$9,053,414,500

(3) Forecast Losses  
{ Line (1) x Line (2) }

\$2,555,000

Column (B) - Column (E) in Exhibit III

Column (C) - Exhibit I

Column (D) - Appendix B2

Column (E) = (C) \* (D)

Column (F) = (B) / (E) \* 100

**Forecast Claim Frequency  
Claims over \$250,000**

| (A)<br>Accident<br>Period | (B)<br>Number of<br>Large<br>Claims | (C)<br>CCDF | (D)<br>Ultimate<br>Large<br>Claims | (E)<br>Trended<br>Exposures<br>(TIV) | (F)<br>Frequency<br>per \$1M<br>TIV |
|---------------------------|-------------------------------------|-------------|------------------------------------|--------------------------------------|-------------------------------------|
| 7/1/04-05                 | 0                                   | 1.000       | 0.0                                | \$3,185,713,631                      | 0.0000                              |
| 7/1/05-06                 | 3                                   | 1.000       | 3.0                                | \$4,296,004,858                      | 0.0007                              |
| 7/1/06-07                 | 4                                   | 1.000       | 4.0                                | \$5,507,762,951                      | 0.0007                              |
| 7/1/07-08                 | 7                                   | 1.000       | 7.0                                | \$5,853,147,471                      | 0.0012                              |
| 7/1/08-09                 | 12                                  | 1.000       | 12.0                               | \$6,029,064,443                      | 0.0020                              |
| 7/1/09-10                 | 7                                   | 1.000       | 7.0                                | \$6,387,021,612                      | 0.0011                              |
| 7/1/10-11                 | 7                                   | 1.000       | 7.0                                | \$6,630,844,951                      | 0.0011                              |
| 7/1/11-12                 | 2                                   | 1.000       | 2.0                                | \$6,118,248,420                      | 0.0003                              |
| 7/1/12-13                 | 5                                   | 1.000       | 5.0                                | \$6,175,327,474                      | 0.0008                              |
| 7/1/13-14                 | 2                                   | 1.000       | 2.0                                | \$8,032,363,899                      | 0.0002                              |
| 7/1/14-15                 | 4                                   | 1.000       | 4.0                                | \$7,820,197,909                      | 0.0005                              |
| 7/1/15-16                 | 4                                   | 1.000       | 4.0                                | \$8,179,181,283                      | 0.0005                              |
| 7/1/16-17                 | 6                                   | 1.000       | 6.0                                | \$8,958,663,734                      | 0.0007                              |
| 7/1/17-18                 | 2                                   | 1.857       | 3.7                                | \$9,192,124,135                      | 0.0004                              |
| <b>Total</b>              | <b>65</b>                           |             | <b>66.7</b>                        | <b>\$92,365,666,768</b>              | <b>0.0007</b>                       |

7/1/18-19

Selected Frequency 0.0008  
{ All years weighted average excluding 17-18 }

Forecast Exposure \$9,053,414,500

**Forecast Claims over \$250,000 6.9**

- (B) - Exhibit II
- (C) - Appendix A
- (D) - (B) \* (C)
- (E) = Exhibit IV
- (F) = (D) / (E) \* 1,000,000

**Forecast Claim Frequency  
Total Claims**

| (A)<br><i>Accident<br/>Period</i> | (B)<br><i>Number of<br/>Occurrences</i> | (C)<br><i>CCDF</i> | (D)<br><i>Ultimate<br/>Claims</i> | (E)<br><i>Trended<br/>Exposures<br/>(TIV)</i> | (F)<br><i>Frequency<br/>per 1,000,000<br/>TIV</i> |
|-----------------------------------|---|--------------------|-----------------------------------|---|---|
| 7/1/04-05                         | 61                                      | 1.000              | 61.0                              | \$3,185,713,631                               | 0.019   |
| 7/1/05-06                         | 99                                      | 1.000              | 99.0                              | \$4,296,004,858                               | 0.023   |
| 7/1/06-07                         | 130                                     | 1.000              | 130.0                             | \$5,507,762,951                               | 0.024   |
| 7/1/07-08                         | 129                                     | 1.000              | 129.0                             | \$5,853,147,471                               | 0.022   |
| 7/1/08-09                         | 101                                     | 1.000              | 101.0                             | \$6,029,064,443                               | 0.017   |
| 7/1/09-10                         | 132                                     | 1.000              | 132.0                             | \$6,387,021,612                               | 0.021   |
| 7/1/10-11                         | 143                                     | 1.000              | 143.0                             | \$6,630,844,951                               | 0.022   |
| 7/1/11-12                         | 122                                     | 1.000              | 122.0                             | \$6,118,248,420                               | 0.020   |
| 7/1/12-13                         | 112                                     | 1.000              | 112.0                             | \$6,175,327,474                               | 0.018   |
| 7/1/13-14                         | 119                                     | 1.000              | 119.0                             | \$8,032,363,899                               | 0.015   |
| 7/1/14-15                         | 144                                     | 1.000              | 144.0                             | \$7,820,197,909                               | 0.018   |
| 7/1/15-16                         | 101                                     | 1.000              | 101.0                             | \$8,179,181,283                               | 0.012   |
| 7/1/16-17                         | 134                                     | 1.000              | 134.0                             | \$8,958,663,734                               | 0.015   |
| 7/1/17-18                         | 72                                      | 1.857              | 133.7                             | \$9,192,124,135                               | 0.015   |
| <b>Total</b>                      | <b>1,599</b>                            |                    | <b>1,660.7</b>                    | <b>\$92,365,666,768</b>                       | <b>0.018</b>                                      |

7/1/18-19

*Selected Frequency  
{ last five years }* 0.015

*Forecast Exposure* \$9,053,414,500

**Forecast Number of Claims 135.9**

- (B) - Exhibit I
- (C) - Appendix A
- (D) - (B) \* (C)
- (E) = Exhibit I
- (F) = (D) / (E) \* 1,000,000

**Forecast Ultimate Losses for 7/1/18-19  
Total Experience Net of Member Deductibles**

|   | <u>7/1/18-19</u> |  |  |                              |             |                              |             |                                |             |
|---|------------------|--|--|------------------------------|-------------|------------------------------|-------------|--------------------------------|-------------|
| (1) Forecast Small Losses<br>{Exhibit IV}   | \$2,555,000      |  |  |                              |             |                              |             |                                |             |
| (2) Expected Number of claims over \$250,000:<br>{Exhibit V}  | 6.9              |  |  |                              |             |                              |             |                                |             |
| (3) Expected Severity of Losses for Claims over \$250,000:<br>{Derived from Losses in Exhibit II}   |                  |  |  |                              |             |                              |             |                                |             |
| Limited to \$250,000  | \$250,000        |  |  |                              |             |                              |             |                                |             |
| Limited to \$500,000  | \$465,000        |  |  |                              |             |                              |             |                                |             |
| Limited to \$1,000,000  | \$721,000        |  |  |                              |             |                              |             |                                |             |
| Unlimited   | \$1,466,000      |  |  |                              |             |                              |             |                                |             |
| (4) Average Deductible on Large Claims  | \$28,000         |  |  |                              |             |                              |             |                                |             |
| (5) Projected Losses Limited to SIR<br>{ Line(1) +Line(2) * [Line (3) - Line (4)] }   |                  |  |  |                              |             |                              |             |                                |             |
| Limited to \$250,000  | \$4,077,000      |  |  |                              |             |                              |             |                                |             |
| Limited to \$500,000  | \$5,552,000      |  |  |                              |             |                              |             |                                |             |
| Limited to \$1,000,000  | \$7,307,000      |  |  |                              |             |                              |             |                                |             |
| Unlimited   | \$12,416,000     |  |  |                              |             |                              |             |                                |             |
| (6) Cost of Corridor (capped at \$1,400,000)  |                  |  |  |                              |             |                              |             |                                |             |
| Line (5) Difference in \$10M and \$250,000 Capped   | \$1,400,000      |  |  |                              |             |                              |             |                                |             |
| Line (5) Difference in \$10M and \$500,000 Capped   | \$1,400,000      |  |  |                              |             |                              |             |                                |             |
| Line (5) Difference in \$10M and \$1,000,000 Capped   | \$1,400,000      |  |  |                              |             |                              |             |                                |             |
| <table border="0" style="width: 100%;"> <tr> <td>(7) Total Forecast Losses { Line(5) + Line(6) }</td> <td></td> </tr> <tr> <td>    \$250,000 SIR, plus Corridor</td> <td style="text-align: right;">\$5,477,000</td> </tr> <tr> <td>    \$500,000 SIR, plus Corridor</td> <td style="text-align: right;">\$6,952,000</td> </tr> <tr> <td>    \$1,000,000 SIR, plus Corridor</td> <td style="text-align: right;">\$8,707,000</td> </tr> </table> |                  | (7) Total Forecast Losses { Line(5) + Line(6) }        |  | \$250,000 SIR, plus Corridor | \$5,477,000 | \$500,000 SIR, plus Corridor | \$6,952,000 | \$1,000,000 SIR, plus Corridor | \$8,707,000 |
| (7) Total Forecast Losses { Line(5) + Line(6) }   |                  |  |  |                              |             |                              |             |                                |             |
| \$250,000 SIR, plus Corridor  | \$5,477,000      |  |  |                              |             |                              |             |                                |             |
| \$500,000 SIR, plus Corridor  | \$6,952,000      |  |  |                              |             |                              |             |                                |             |
| \$1,000,000 SIR, plus Corridor  | \$8,707,000      |  |  |                              |             |                              |             |                                |             |
| (8) Forecast Total Insured Value  | \$9,053,414,500  |  |  |                              |             |                              |             |                                |             |
| <table border="0" style="width: 100%;"> <tr> <td>(9) Projected Cost per \$100 TIV { Line(7) / Line(8) }</td> <td></td> </tr> <tr> <td>    \$250,000 SIR, plus Corridor</td> <td style="text-align: right;">\$0.060</td> </tr> <tr> <td>    \$500,000 SIR, plus Corridor</td> <td style="text-align: right;">\$0.077</td> </tr> <tr> <td>    \$1,000,000 SIR, plus Corridor</td> <td style="text-align: right;">\$0.096</td> </tr> </table>      |                  | (9) Projected Cost per \$100 TIV { Line(7) / Line(8) } |  | \$250,000 SIR, plus Corridor | \$0.060     | \$500,000 SIR, plus Corridor | \$0.077     | \$1,000,000 SIR, plus Corridor | \$0.096     |
| (9) Projected Cost per \$100 TIV { Line(7) / Line(8) }  |                  |  |  |                              |             |                              |             |                                |             |
| \$250,000 SIR, plus Corridor  | \$0.060          |  |  |                              |             |                              |             |                                |             |
| \$500,000 SIR, plus Corridor  | \$0.077          |  |  |                              |             |                              |             |                                |             |
| \$1,000,000 SIR, plus Corridor  | \$0.096          |  |  |                              |             |                              |             |                                |             |
| (10) Projected Total Occurrences  | 135.9            |  |  |                              |             |                              |             |                                |             |
| (11) Average Severity { Line (5) / Line (10) }  |                  |  |  |                              |             |                              |             |                                |             |
| Limited to \$250,000  | \$30,000         |  |  |                              |             |                              |             |                                |             |
| Limited to \$500,000  | \$40,800         |  |  |                              |             |                              |             |                                |             |
| Limited to \$1,000,000  | \$53,700         |  |  |                              |             |                              |             |                                |             |

**Distribution of Forecast Losses for 7/1/18-19  
With a \$250,000 SIR and \$1,400,000 Corridor**

| Percentile                | SIR Layer<br>\$250,000<br>All Perils | Cost of<br>Corridor<br>Ltd. \$1.4M | Total<br>Retained<br>Losses | Insured<br>Excess<br>Losses | Total<br>Incurred<br>Losses |
|---------------------------|--------------------------------------|------------------------------------|-----------------------------|-----------------------------|-----------------------------|
| 25.0%                     | \$3,420,000                          | \$1,400,000                        | \$4,800,000                 | \$2,110,000                 | \$7,340,000                 |
| 30.0%                     | \$3,540,000                          | \$1,400,000                        | \$4,920,000                 | \$2,610,000                 | \$7,930,000                 |
| 35.0%                     | \$3,660,000                          | \$1,400,000                        | \$5,040,000                 | \$3,090,000                 | \$8,500,000                 |
| 40.0%                     | \$3,780,000                          | \$1,400,000                        | \$5,160,000                 | \$3,550,000                 | \$9,030,000                 |
| 45.0%                     | \$3,890,000                          | \$1,400,000                        | \$5,280,000                 | \$4,100,000                 | \$9,620,000                 |
| 50.0%                     | \$4,020,000                          | \$1,400,000                        | \$5,400,000                 | \$4,650,000                 | \$10,310,000                |
| 55.0%                     | \$4,140,000                          | \$1,400,000                        | \$5,530,000                 | \$5,310,000                 | \$10,980,000                |
| 60.0%                     | \$4,260,000                          | \$1,400,000                        | \$5,650,000                 | \$6,040,000                 | \$11,770,000                |
| 65.0%                     | \$4,380,000                          | \$1,400,000                        | \$5,770,000                 | \$6,890,000                 | \$12,630,000                |
| 70.0%                     | \$4,520,000                          | \$1,400,000                        | \$5,920,000                 | \$7,810,000                 | \$13,680,000                |
| 75.0%                     | \$4,670,000                          | \$1,400,000                        | \$6,070,000                 | \$9,090,000                 | \$14,960,000                |
| 80.0%                     | \$4,850,000                          | \$1,400,000                        | \$6,250,000                 | \$10,660,000                | \$16,600,000                |
| 85.0%                     | \$5,050,000                          | \$1,400,000                        | \$6,450,000                 | \$12,750,000                | \$18,750,000                |
| 90.0%                     | \$5,340,000                          | \$1,400,000                        | \$6,740,000                 | \$16,490,000                | \$22,270,000                |
| 95.0%                     | \$5,740,000                          | \$1,400,000                        | \$7,140,000                 | \$21,950,000                | \$27,910,000                |
| <b>Expected</b>           | <b>\$4,077,000</b>                   | <b>\$1,400,000</b>                 | <b>\$5,477,000</b>          | <b>\$6,939,000</b>          | <b>\$12,416,000</b>         |
| TIV                       | \$9,053,414,500                      |                                    |                             |                             |                             |
| <b>Cost Per \$100 TIV</b> | <b>\$0.045</b>                       | <b>\$0.015</b>                     | <b>\$0.060</b>              | <b>\$0.077</b>              | <b>\$0.137</b>              |

Percentiles based on combined distributions for small and large losses  
 Aggregate small losses modeled using a lognormal distribution  
 Large claim size modeled using an inverse Weibull distribution  
 Large claim counts modeled using a Poisson Distribution

Lognormal  
 Mu = 14.71436  
 Sigma = 0.28000  
Inverse Weibull  
 Tau = 1.39459  
 Theta = 545151.03709  
Poisson  
 Lambda = 6.86



**Estimation of Cumulative Reported Loss Development Factors  
Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |               |         |         |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------------|---------|---------|---------|---------------|---------------------------|
|                               |                             | X'<br>LN(1/(X+C))                 | Y'<br>LN(Y-1) | (X')^2  | (Y')^2  | X' x Y' | X             | Cumulative<br>Factor<br>Y |
| 12                            | <b>1.294</b>                | -4.6728                           | -1.2258       | 21.835  | 1.5026  | 5.7279  | <b>163</b>    | <b>1.000</b>              |
| 24                            | <b>1.057</b>                | -4.7791                           | -2.8584       | 22.840  | 8.1704  | 13.6606 | <b>151</b>    | <b>1.000</b>              |
| 36                            | <b>1.007</b>                | -4.8752                           | -4.9604       | 23.768  | 24.6057 | 24.1830 | <b>139</b>    | <b>1.000</b>              |
| 48                            | <b>1.002</b>                | -4.9628                           | -6.2146       | 24.630  | 38.6214 | 30.8421 | <b>127</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |         |         |         | <b>115</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |         |         |         | <b>103</b>    | <b>1.000</b>              |
|                               |                             |                                   |               |         |         |         | <b>91</b>     | <b>1.000</b>              |
|                               |                             |                                   |               |         |         |         | <b>79</b>     | <b>1.000</b>              |
|                               |                             |                                   |               |         |         |         | <b>67</b>     | <b>1.000</b>              |
|                               |                             |                                   |               |         |         |         | <b>55</b>     | <b>1.001</b>              |
|                               |                             |                                   |               |         |         |         | <b>43</b>     | <b>1.003</b>              |
|                               |                             |                                   |               |         |         |         | <b>31</b>     | <b>1.017</b>              |
| Sum                           |                             | -19.2900                          | -15.2592      | 93.0727 | 72.9001 | 74.4137 | <b>19</b>     | <b>1.101</b>              |
| Average                       |                             | -4.8225                           | -3.8148       | 23.2682 | 18.2250 | 18.6034 | <b>7</b>      | <b>2.522</b>              |

|            |                  |              |                 |
|------------|------------------|--------------|-----------------|
| <b>N =</b> | <b>4</b>         |              |                 |
| <b>A =</b> | <b>2.236E+35</b> |              |                 |
| <b>B =</b> | <b>17.669</b>    | <b>R^2 =</b> | <b>0.993765</b> |
| <b>C =</b> | <b>95</b>        |              |                 |

\* - Property and APD unlimited loss development

**Estimation of Cumulative Reported Claim Development Factors  
Using "The Method of Least Squares"**

Curve :  $Y = A(1/(X+C))^B + 1$  (Modified Inverse Power Curve)

| Months<br>of<br>Maturity<br>X | Cumulative<br>Factors<br>Y* | Transformed Values for Regression |               |        |        |         | Fitted Values |                           |
|-------------------------------|-----------------------------|-----------------------------------|---------------|--------|--------|---------|---------------|---------------------------|
|                               |                             | X'<br>LN(1/(X+C))                 | Y'<br>LN(Y-1) | (X')^2 | (Y')^2 | X' x Y' | X             | Cumulative<br>Factor<br>Y |
|                               |                             |                                   |               |        |        |         | 163           | 1.000                     |
|                               |                             |                                   |               |        |        |         | 151           | 1.000                     |
|                               |                             |                                   |               |        |        |         | 139           | 1.000                     |
|                               |                             |                                   |               |        |        |         | 127           | 1.000                     |
|                               |                             |                                   |               |        |        |         | 115           | 1.000                     |
|                               |                             |                                   |               |        |        |         | 103           | 1.000                     |
|                               |                             |                                   |               |        |        |         | 91            | 1.000                     |
|                               |                             |                                   |               |        |        |         | 79            | 1.000                     |
|                               |                             |                                   |               |        |        |         | 67            | 1.000                     |
|                               |                             |                                   |               |        |        |         | 55            | 1.000                     |
|                               |                             |                                   |               |        |        |         | 43            | 1.000                     |
|                               |                             |                                   |               |        |        |         | 31            | 1.000                     |
| Sum                           |                             | 0.0000                            | 0.0000        | 0.0000 | 0.0000 | 0.0000  | 19            | 1.000                     |
| Average                       |                             |                                   |               |        |        |         | 7             | 1.857                     |

|     |   |       |  |
|-----|---|-------|--|
| N = | 0 |       |  |
| A = |   |       |  |
| B = |   | R^2 = |  |
| C = | 0 |       |  |

\* - Appendix A6 from IBNR study

**U.S. Claims Cost Index**

| (A)    | (B)        | (C)                | (D)                      | (E)                     | (F)             | (G)                | (H)                       |
|--------|------------|--------------------|--------------------------|-------------------------|-----------------|--------------------|---------------------------|
| Year   | Fire Index | Allied Lines Index | Composite Economic Index | Annual Percent Increase | Accident Period | Interpolated Index | Trend Factor to 7/1/18-19 |
| 2000   | 83.0       | 82.1               | 82.6                     |                         |                 |                    |                           |
| 2001   | 83.5       | 84.2               | 83.9                     | 1.6%                    |                 |                    |                           |
| 2002   | 86.7       | 86.0               | 86.4                     | 3.0%                    |                 |                    |                           |
| 2003   | 88.3       | 89.5               | 88.9                     | 3.0%                    |                 |                    |                           |
| 2004   | 92.3       | 93.6               | 93.0                     | 4.5%                    |                 |                    |                           |
| 2005   | 100.0      | 100.0              | 100.0                    | 7.6%                    | 7/1/04-05       | 96.5               | 1.501                     |
| 2006   | 107.7      | 101.7              | 104.7                    | 4.7%                    | 7/1/05-06       | 102.3              | 1.415                     |
| 2007   | 111.6      | 105.2              | 108.4                    | 3.6%                    | 7/1/06-07       | 106.5              | 1.359                     |
| 2008   | 115.8      | 109.3              | 112.5                    | 3.8%                    | 7/1/07-08       | 110.5              | 1.310                     |
| 2009   | 120.2      | 115.2              | 117.7                    | 4.6%                    | 7/1/08-09       | 115.1              | 1.257                     |
| 2010   | 127.3      | 124.9              | 126.1                    | 7.1%                    | 7/1/09-10       | 121.9              | 1.188                     |
| 2011   | 128.2      | 123.4              | 125.8                    | -0.3%                   | 7/1/10-11       | 125.9              | 1.149                     |
| 2012   | 127.2      | 122.3              | 124.8                    | -0.8%                   | 7/1/11-12       | 125.3              | 1.156                     |
| 2013   | 130.3      | 123.9              | 127.1                    | 1.9%                    | 7/1/12-13       | 125.9              | 1.150                     |
| 2014   | 133.5      | 131.6              | 132.5                    | 4.3%                    | 7/1/13-14       | 129.8              | 1.115                     |
| 2015   | 138.0      | 130.1              | 134.0                    | 1.1%                    | 7/1/14-15       | 133.3              | 1.086                     |
| 2016   | 142.3      | 138.0              | 140.2                    | 4.6%                    | 7/1/15-16       | 137.1              | 1.056                     |
| 2017*  | 144.7      | 138.4              | 141.5                    | 1.0%                    | 7/1/16-17       | 140.9              | 1.028                     |
| 2018** | 147.6      | 139.7              | 143.7                    | 1.5%                    | 7/1/17-18       | 142.6              | 1.015                     |
| 2019** | 150.6      | 141.1              | 145.9                    | 1.5%                    | 7/1/18-19       | 144.8              | 1.000                     |

(B) and (C) - Willis Towers Watson Claim Cost Index, October 2017

Jeremy P. Pecora and Emily M. Thompson

\* - 2017 numbers are preliminary

\*\* - future trend estimated at 2.0% for Fire and 1% for Allied Lines

(D) = average of BI and PD

(E) = [(D) / (D, prior)] - 1

(G) - Linear interpolation of column (D)

(H) - [(G), forecast period] / [(G), current period]

**Derivation of Consumer Price Index  
Exposure Trend Factors**

| (A)<br>Year | (B)<br>CPI<br>Index | (C)<br>Accident<br>Period | (D)<br>Interpolated<br>Index | (E)<br>Trend<br>Factor to<br>7/1/18-19 |
|-------------|---------------------|---------------------------|------------------------------|--|
| 1999        | 166.6               |                           |                              |  |
| 2000        | 172.2               |                           |                              |  |
| 2001        | 177.1               |                           |                              |  |
| 2002        | 179.9               |                           |                              |  |
| 2003        | 184.0               |                           |                              |  |
| 2004        | 188.9               |                           |                              |  |
| 2005        | 195.3               | 7/1/04-05                 | 192.1                        | 1.314                                  |
| 2006        | 201.6               | 7/1/05-06                 | 198.5                        | 1.272                                  |
| 2007        | 207.3               | 7/1/06-07                 | 204.5                        | 1.235                                  |
| 2008        | 215.3               | 7/1/07-08                 | 211.3                        | 1.195                                  |
| 2009        | 214.5               | 7/1/08-09                 | 214.9                        | 1.175                                  |
| 2010        | 218.1               | 7/1/09-10                 | 216.3                        | 1.167                                  |
| 2011        | 224.9               | 7/1/10-11                 | 221.5                        | 1.140                                  |
| 2012        | 229.6               | 7/1/11-12                 | 227.3                        | 1.111                                  |
| 2013        | 233.0               | 7/1/12-13                 | 231.3                        | 1.092                                  |
| 2014        | 236.7               | 7/1/13-14                 | 234.8                        | 1.075                                  |
| 2015        | 237.0               | 7/1/14-15                 | 236.9                        | 1.066                                  |
| 2016        | 240.0               | 7/1/15-16                 | 238.5                        | 1.059                                  |
| 2017        | 245.1               | 7/1/16-17                 | 242.6                        | 1.041                                  |
| 2018*       | 250.0               | 7/1/17-18                 | 247.6                        | 1.020                                  |
| 2019*       | 255.0               | 7/1/18-19                 | 252.5                        | 1.000                                  |

\* Forecast at 2.0% annual increase

(B) - based on data from the U. S. Department of Labor, Bureau of Statistics

(D) - Values interpolated from index in (B)

(E) = (D, Forecast period) / (D)